

Continuous Improvement Engine Driving ASC Train

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Henry Ford once said, "Coming together is a beginning. Keeping together is progress. Working together is success."

The quote above sums up the Army Sustainment Command's (ASC's) goals. After ASC was formed less than 2 years ago, new and changing missions soon followed, including resetting the modular force, managing pre-positioned stocks, managing materiel, and providing field support. All of these missions support ASC's primary mission — to provide acquisition, logistics, and technology support to Soldiers while ensuring warfighting readiness to sustain a transforming Army.

MG Robert M. Radin, ASC Commanding General, uses the E-Board to illustrate his point that continuous improvement is the engine that drives ASC. (U.S. Army photo by Galen Putnam.)

As its missions changed, ASC Soldiers and civilians came across problems that had never arisen before, and they wrote instruction manuals as they went. The command needed an organization to oversee all the new solutions and best practices that were taking place and to share them across the worldwide footprint of ASC.

Last December, ASC formed the Command Assessment and Continuous Improvement Office (CACIO), the command's expert and principal integrator for all assessments, evaluations, and continuous improvement efforts. CACIO analyzes, improves, standardizes, and replicates efficient and effective best practices across the ASC enterprise while fostering a culture of continuous improvement.

CACIO has a circular process that starts by bringing together sources of assessment and evaluation information into a central repository. These qualitative assessments and evaluations come from different sources that include Organizational Inspection Programs, Army Audit Agency, Army Materiel Command Rapid Review Teams, Internal Audit, and many more. All of the assessments and evaluations are collected in the ASC Enterprise Board. The Enterprise Board database allows the command to categorize the data in a number of ways, such as by opportunity or by finding from across the

command. The data then enable ASC to analyze, track trends, look for patterns, and gain an overall picture of the command.

E-Board Depicts the 'Big Picture'

To help give the command the big picture, CACIO staff created a replica of the Enterprise Board database with a foam board measuring 8 feet tall by 24 feet wide, placed it on a wall, and called it the "E-Board" for short. It provides a friendlier, commandwide format for looking at information and presents data in an easy-to-understand table by location and functional area.

The E-Board assists people at all levels in the command. It helps evaluation and inspection teams prepare by portraying a sense of problems and best practices discovered at a location or in a particular functional area during other teams' trips prior to conducting site visits.

The board also supports ASC staff by identifying trends and improvement opportunities, replicating best practices in their functional areas, and then comparing them to other functional areas throughout ASC. It forces a look outside the "stovepipe," promoting cross-functional cooperation and collaboration between the headquarters' staff and among the Army Field Support Brigades and their subordinate battalions.

It allows brigade commanders to look at the "state of the command" for their area of operation in terms of various assessments and continuous improvement

initiatives. Commanders can share lessons learned and replicate best practices from other brigades. "The board facilitates standardization of best practices across the command," said Jerry DeLaCruz, CACIO Director. "When we figure out what the new and improved processes are at one location, we then can standardize that as the way of doing business across the command."

Improving Processes

After a problem or trend has been identified in the E-Board system, it then moves to the process improvement initiative stage. ASC uses Lean Six Sigma (LSS) practices to improve processes and replicate successes. Even a process identified as a best practice can be improved. Just because it is perceived as a best practice today doesn't mean it will be tomorrow.

"We always need to change and adapt so we are always supporting the warfighter in the field," said Richard Jayne, CACIO Lead LSS Technical Specialist.

All LSS Green Belt and Black Belt projects go through the define, measure, analyze, improve, and control (DMAIC) process. The DMAIC process involves *defining* the problem to be addressed, *measuring* process performance, *analyzing* root causes, *improving* the process, and *establishing* controls to sustain the improvements.

All projects *define* the opportunity from both the voice of the business (command) and the Soldier perspective. During the *measure* phase, value stream maps are used to find a deeper understanding and focus that helps identify key inputs, processes, and output metrics. Next, the process is *analyzed* to identify potential root causes, estimate the impact of the causes, and prioritize them. In the *improvement* phase, potential solutions materialize and are evaluated, which leads to



Putting ASC's repair capabilities close to the fight is one best practice that helps return combat-ready equipment quickly. Here, workers at this Kuwait repair facility are restoring a Stryker to fighting readiness. (U.S. Army photo by James Hinnant.)



SPC Micah Mead, a tracked vehicle mechanic, replaces the ball joint on an up-armored HMMWV at Camp Virginia, Kuwait. (U.S. Army photo by SGM Richard Greene.)

a pilot and development of a full-scale implementation plan. The final stage is the *control* phase, during which standard operating procedures are developed, ongoing process measurements are created, and project replication opportunities are identified.

Other related tools ASC uses are Value Stream Analysis (VSA) and Rapid Improvement Events (RIEs). VSA is an operational tool that helps one to rapidly map and see the flow of material and information as a product makes its way through the value stream. The VSA is done by following a product or service through the value stream and carefully drawing a visual representation of every process in the material and information flow.

RIEs are team events focused on implementing the changes identified in the VSA to move the process from the current state toward an improved future state. An RIE is carefully planned with specific, measurable improvements targeted, and it usually lasts a week.

ASC used an RIE in Kuwait to reduce the cycle time for maintenance on up-armored High-Mobility Multipurpose Wheeled Vehicles (HMMWVs). The

old process flow resulted in excessive transportation steps, adding days to cycle time and impeding production. Communication systems were prepared and installed in the same building but at different stages, adding to the cycle time. Following the event, the battalion instituted a 1-piece process flow, which eliminated wasteful transportation steps and resulted in cutting transportation steps from 16 to 5 (69-percent improvement). In addition, preparation and radio installation occur at the same stage, eliminating a transportation step and resulting in a 75-percent improvement, down to a half day. Overall, the team cut cycle time from 17 days to 3 days (82-percent improvement).

After a process improvement has been identified, it is implemented at a site. At that point the ASC Logistics Support and Evaluation Team (ALSET) and/or the Internal Review and Audit Compliance Office (IRACO) evaluate how well the implementation is being carried out and ensure that the standards and controls are in place to sustain the improvement.

The ALSET conducts evaluations and performs the duties of the Maintenance Assistance and Instruction Team to enhance the ASC commander's overall situational awareness of



ASC used an RIE in Kuwait to reduce the cycle time for maintenance on up-armored HMMWVs. Here, PFC Sarah Wheatley inspects for oil leaks at Camp Virginia, Kuwait. (U.S. Army photo by SGM Richard Greene.)

ongoing operations within ASC. The ALSET team serves as the "standards pilot" for all ASC operations. It disseminates policies and procedures established by ASC as well as provides guidance for administrative record requirements, equipment readiness, maintenance, and supply management.

The team provides the ASC commander an additional resource to conduct research and provide recommendations to solve logistics problems. Most importantly, it is helping identify best practices to facilitate enterprise-wide information sharing. The 3- to 7-person evaluation team is highly proficient in the evaluation process and has a deep understanding of Army policies, procedures, and regulatory requirements. In addition, it possesses the technical skills to evaluate equipment readiness.

Combining analysis tools such as the E-Board, LSS methodologies, and ALSET and IRACO technical expertise, in collaboration with the rest of the staff, the CACIO objective is to move a problem or trend from the E-Board to a positive action and practical solution, improving ASC's support to Soldiers.

Continuous improvement is the engine that drives ASC and CACIO is in the driver's seat. As the command continues to change and evolve, sharing enterprisewide information becomes even more critical to synchronizing effectiveness and efficiency.

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