

Changing the System to Optimize Throughput

■ By Chief Warrant Officer 2 Keith T. Graham

Early in my 2013 deployment to Afghanistan with the 201st Brigade Support Battalion, I had a late night conversation with my platoon leader, 2nd Lt. Sheldon Seaborn, a systems management graduate of West Point. He made the comment, "It is all about the system," which stuck with me throughout the deployment and became especially relevant as we engaged in a problem related to customer wait time for critical communications parts.

The Mission

The 201st Brigade Support Battalion's electronic maintenance shop was tasked to provide electronic maintenance support for the 3rd Brigade Combat Team, 1st Infantry Division, Combined Task Force (CTF) Duke, which was located in Zabul province in Regional Command South. Like most units deploying toward the end of Operation Enduring Freedom, the electronic maintenance shop was understaffed; it had only four Soldiers to replace 12 Soldiers from the outgoing unit.

This team consisted of one military occupational specialty (MOS) 94F (special electronic device repairer), one MOS 94E (radio and communications security repairer), and two MOS 94A (land combat electronic missile system repairer) Soldiers. This small staff was responsible for the area's electronic maintenance of special electronics, communication devices, night-vision devices, commercial off-the-shelf products, and the Blue Force Tracking (BFT) systems.

To improve efficiency with a smaller staff, I had to improve processes and build a cohesive team. What do you do when system improvements are

needed with a reduced staff? I chose to reach out to my mentors and peers in the field to see if they could help me make a positive change.

Improving Outcomes

I immediately noticed a deficiency in the maintenance procedures for providing ongoing maintenance support for BFT systems. Customer units typically had to deadline vehicles for about two to three days when system disk drives required rewriting or when line replaceable units (LRUs) had to be requisitioned through the supply system.

Deadlines of two to three days were simply unacceptable. I instructed the electronic maintenance shop team to begin building an inventory of disk drives with the latest software upgrade and frequently replaced LRUs. We expanded our inventory to include over 75 disk drives, six computers, keyboards, and display units for the BFT system.

The improved system that I implemented was based on a "float" concept similar to that used by major corporations to minimize downtime. (A float is a system or subsystem that is kept in stock to replace a broken item while repairs are being made). Under the new system, efficiency was increased, reducing downtime from three days to less than two hours.

What Was Different?

The old system required a work order through the maintenance shop. After the work order was produced, the wait time to receive the new equipment was seven days or more.

With the improved system, a normal work order was produced and the LRUs were immediately replaced at

the electronic maintenance shop with a float. The vehicle never hit the deadline report. While the unit used the float, the electronic maintenance shop made the needed repairs to the unit's equipment.

The same float concept was used when disk drives required software upgrades. The result was that the electronic maintenance shop preserved CTF Duke's combat power throughout Forward Operating Base Apache by improving the combat vehicle deadline rate.

Networking for Greater Change

Sometimes the best way to solve a problem is to tap into your network. As it turned out, one of my peers had a similar problem with deadline rates and BFT transceivers in northern Afghanistan. The transceiver is a main component of the BFT system. Without the transceiver, the system is not operational and the vehicle must be deadlined until it is replaced.

Because of the extreme weather conditions, transceivers on the vehicles were vulnerable and regularly required replacement. At that time, transceivers were classified as class II (clothing and individual equipment) items, which meant new transceivers had to arrive through the supply support activity. Because we were not co-located with the supply support activity, receiving new transceivers to replace nonoperational transceivers posed a great problem.

The supply classification required the owning commander of the transceiver to track it and ensure the exchange was annotated on the unit's property books, which required an additional trip to the Kandahar Airfield supply support activity with the



Jauss Warren and Spc. Michael Brewer, both assigned to the 201st Brigade Support Battalion's electronic maintenance shop, prepare hard drives for software upgrades. (Photo by Chief Warrant Officer 2 Keith T. Graham)

unit's supply sergeant. This typically involved a four-hour convoy and an overnight stay.

My peer and I recommended changing the classification of the BFT transceivers based on guidance provided by our senior warrant officer. Through email, we presented a convincing analysis to the project manager explaining the restrictions that the current transceiver classification caused and the positive impact that changing the transceiver classification to class IX (repair parts) would provide. Studies from deployed electronic systems maintenance warrant officers provided the data to shape the BFT project manager's decision.

The System Works

The classification of the transceivers within the Federal Logistics Data (Fed Log) was changed to class IX by the project manager in the logistics support activity. By making the trans-

ceiver class IX, the electronic maintenance shop could use the float system to reduce the operational downtime.

The transceivers were added to the float system, thus eliminating the wait time for replacement in southern Afghanistan. Our customers noted an immediate improvement. This clearly demonstrated the flexibility of our logistics system.

Systems are Army processes that can be strengthened by simply networking to gain new, innovative ideas. I am a believer in systems. I have seen systems work to meet the commander's intent to reduce downtime and optimize maintenance productivity.

By using a flexible system, the 201st Brigade Support Battalion's electronic maintenance shop completed over 1,500 man hours, with a team of four, within six months. This was a remarkable outcome. The shop surpassed its predecessor's man hours by 42 percent

with a fraction of the staff.

Logistics systems are made to adapt to meet real-time needs. In order to ensure maximum throughput, managers must consider and account for the ever changing logistics supply process, personnel levels, and number of customer units. Remaining adaptable and flexible will ensure that we can increase throughput regardless of reduced personnel numbers.

Chief Warrant Officer 2 Keith T. Graham is an electronic systems maintenance warrant officer with the 201st Brigade Support Battalion, 3rd Brigade, 1st Infantry Division. He holds a bachelor's degree in information technology from Columbia Southern University and has a Federal Communications Commission license. He is also Network Plus, A Plus, and Communication Technology Technician certified through the Electronics Technicians Association.