Rugged, Mobile Devices Support Military's Global Strategy

Services look to agile logistics for deployments.

The U.S. military continues to develop its quick-strike potential, seeking greater capacity to project force globally, quickly and on several fronts simultaneously. Support services are integral to that effort, particularly in the area of logistics and asset maintenance. In its 2018 National Defense Strategy, the Department of Defense identified the development of "resilient and agile logistics" among its key modernization goals.

The emphasis on global quick-strike capacity invigorates the military's focus on the use of mobile technology to speed supply transactions and updates. To meet force projection goals, workers no longer have time to collect logistics data in the field and plug it into a network system using desktop computers at a central office. Using tablets or handhelds, they are able to collect and input data remotely. In many environments, field data collection can benefit from the use of rugged devices.

Mobile solutions also enable agile logistics, a term that has many meanings, according to Scott Heckman, national sales manager, U.S. Army, Panasonic Mobility Solutions. Agile can refer to a scenario in which there are multiple supply lines, for example, yet the term also suggests a real-time view of inventory and every material the military needs for its mission.

"The only way to be agile in that way is to have systems where you scan something and have that information immediately available," he said. "If you are talking about being in-theatre overseas, rugged mobile IT is really the only way to reliably accomplish that."

The Marine Corps, often first to deploy in a military response, has made mobile-friendly logistics a goal, adding mobile infrastructure capacity to rapidly upgrade maintenance and supply buildings. The goal is enabling workers equipped with mobile devices to remotely access multiple logistics systems and order parts on-site.

Elsewhere, the Air Force wants to employ a cloud environment to support users of tablets and handhelds. Mobile IT already supports critical functions such as flight-line maintenance. Modernizing the architecture encompasses more than 350 logistics IT systems with an average age of 18 years. There are also plans to build a mobile app that will allow service members to connect directly with the integrated maintenance data system and track ongoing work in real time.

Among the military services, the Army's push to adopt mobile IT solutions stands out. Frontline troops have used the technology for years to provide decision makers with better situational awareness. Technicians have also used the technology to service and repair equipment, embracing next-generation technology. Augmented reality for example, brings together real-world machines and a virtual environment to assist in repairs and enable

collaboration on equipment needs.

Clearly, the military is sold on the benefits of mobile, whether commercial-grade systems that are common in business, or more rugged mobile systems built for harsh and hostile environments.

For front line troops there's no argument. They need specialized, ruggedized devices that can stand up to challenging environments.

For workers in supply or maintenance depots, the best solution may be less clear. Consumer-grade systems, substantially less expensive than ruggedized versions, have also become more durable over the years.

Recent studies, however, have highlighted the problems with that choice. International Data Corporation (IDC), a market-intelligence firm, for example, found a high rate of failure for consumer devices. The average annual failure rate for consumer notebooks is 18 percent. Within five years of use, 61 percent of the commercial devices required repairs. Tablets and smartphones had similar failure rates. The average cost of those repairs was between $224 and $300.

A 2016 study by Panasonic, *Mission Critical: The True Cost of Mobile Computer Failure*, assessed attributes that users of mobile devices rely on, including battery life, connectivity, durability, average lifespan, screen usability and peripheral needs, such as service and support. The study found that reducing device failure is a significant contributor to lowering the total cost of ownership, concluding that the TCO for rugged systems was lower than for consumer-grade alternatives.

For military organizations, device failures leading to substantial downtime is unacceptable. The importance of continuity will likely become more pronounced as DOD focuses on "resilient" logistics. For that and other reasons, such as lower prices, rugged has become more acceptable to military users than in the past, Heckman said.

As use of rugged systems for logistics and maintenance increases, the mobile devices are evolving to better accommodate the needs of users. Vendors are integrating specialized supply-and-logistics software solutions with purpose-built hardware features such as barcode scanners that enable logistics staff to react more quickly to changes in supply chain requirements and to better support mission goals.

Panasonic has a broad range of rugged products, Heckman said. Options range from long-term solutions, such as Windows professional devices that have a barcode scanning option, to handheld devices designed specifically for logistics tasks.

Panasonic's Toughpad FZ-N1 fully rugged Android handheld, for example, has an angled barcode readers that allows a user's hand to remain in a neutral position when scanning and viewing results. The fatigue-saving feature helps to eliminate errors and improve scan speeds.

In a March 2018 survey, the company found that 77 percent of respondents consider the rugged devices they use to be important to their effective job performance.

The company's rugged mobile devices are widely available to military buyers, Heckman said, on a range of defense contracts, including the Army ADMC and NETCENTS-2, as well as other vehicles, such as the GSA schedules and NASA SEWP.

Is Your Mobile IT Tough Enough?

When it comes to evaluating whether or not to choose rugged devices, Panasonic advises agencies to consider a number of questions:

- **Where and how will your device be used?** Consider all the ways and places your device will be used on the job.
- **Will you deploy a device to each person or will the device be shared?** If everyone in your agency will get a device, it's important to keep IT costs and support time to a minimum.
- **What is your organization's policy on life cycle management?** Look for a manufacturer with a comprehensive service and support program that will maximize mobile workers' uptime and increase their productivity.
- **How much does your organization typically spend on IT support?** Investing in rugged technology promotes device reliability and lowers IT support costs, resulting in more productive workers.
- **What is the impact of downtime if your mobile device fails?** Device downtime reduces productivity, and compromises critical data and mission.