U.S. ARMY COMMUNICATIONS–ELECTRONICS COMMAND

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THE CECOM DASH

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CECOM Empowering Strategic Support Area Readiness

The joint force is preparing for large–scale combat across land, sea, air, space and cyberspace. Under the Multi–Domain Operations concept, Army Materiel Command, or AMC, has reorganized and reshaped to ensure readiness of the Strategic Support Area, where military might is generated, projected and sustained during the fight. As a major subordinate command of AMC, the U.S. Army Communications–Electronics Command, or CECOM, is contributing to Strategic Support Area readiness in four focus areas: Supply Availability and Equipment Readiness, Industrial Base Readiness, Strategic Power Projection and Logistics Information Readiness.

Supply Availability and Equipment Readiness

When he assumed command of AMC in 2016, Gen. Gus Perna gave CECOM leaders a simple, but profound order. Pursue 100% supply availability, he said, and apply any ethical, moral and legal means possible to achieve that critical level of readiness.

Ensuring supply availability for command, control, communications, computers, cyber, intelligence, surveillance and reconnaissance, or C5ISR, parts and systems has always been part of CECOM's mission. However, previous supply availability goals were based on the demands of counterinsurgency operations the Army had been focused on for much of the last 18 years.

These sub–100% goals tended to create mental and financial constraints that led to tradeoffs to achieve them, said Tim Luthman, CECOM Integrated Logistics Support Center Supply Cell lead. However, as the Army shifts its focus to Multi–Domain Operations and near–peer adversaries, anything less than 100% supply availability will not meet the Army's needs — and will put Soldiers' lives at risk.

"Gen. Perna emphasized that we can't be impediments to ourselves," he said. "If you need something, drive toward the need. Don't let someone tell you that you can't."

Driving to 100%

CECOM tapped into that energy and has pursued new tools and strategies to make steady progress. In fiscal year 2017, supply availability was 77%, but it rose to 84% the next year and 90% at the end of fiscal year 2019.

Luthman said new ways of segmenting different populations of readiness–driving and maintenance–significant parts has been critical. For example, because night vision equipment has always played an outsize role in driving supply availability, the command would place greater emphasis on it, sometimes to the detriment of other programs.

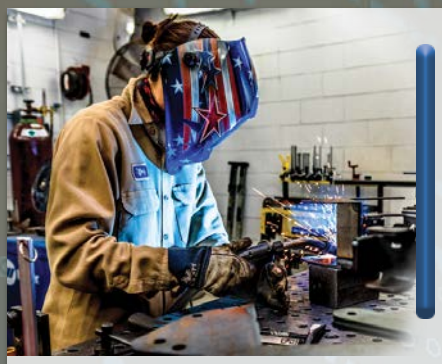
"Better segmentation has allowed us to break apart and develop improvements on programs that were getting washed out in the computation," Luthman said.

In addition, CECOM is using a new supply availability projection tool that enables experts to reverse engineer what went wrong when the command failed to meet a target. Using that diagnostic information, it can determine how to implement more effective get–well plans. CECOM is now sharing this tool with other AMC major subordinate commands.

Pivotal Partnerships

Partnering with Army Contracting Command, the Defense Logistics Agency and the industrial base to build better contract responsiveness and surge capacity has also been key. Strategies include moving to longer–term contracts with multiple vendors, as well as working with vendors to keep supply lines "warm" to avoid costly delays for parts that CECOM only needs intermittently. This engagement has helped CECOM attack its order backlog, which dropped from more than 8,000 in fiscal year 2017 to slightly more than 3,800 in fiscal year 2019.

"We recognize that even though we deal with the nuts and bolts of supply availability, these metrics and numbers translate to life and death on the battlefield," Luthman said. "Soldiers are depending on us to ensure their C5ISR systems — their 'eyes and ears' — work as intended, when intended, and that's what pushes us every single day."



Industrial Base Readiness

There's an energy in the air at the Tobyhanna Army Depot. You can feel it as you walk through expansive buildings, where teams of electronics and logistics artisans overhaul, fabricate and engineer complex hardware, from satellite terminals to radar platforms. Move into recently converted cyber labs, and you'll sense it as software experts forge patches to protect networked systems from the latest threats.

As CECOM's organic industrial depot, Tobyhanna has long excelled at its core mission: providing unmatched C5ISR system readiness across the joint forces. But with AMC's renewed focus on the Strategic Support Area and with an Army–wide mandate to reform and modernize, today Tobyhanna is transforming its operations as it strives to deliver the best value for the warfighter.

Growing the Right Way

Located in the Pocono Mountains, the depot is the largest industrial employer in northeast Pennsylvania, with more than 4,000 employees. And that base is growing. In fiscal year 2019, Tobyhanna hired approximately 500 new employees to keep up with its workload, which rose 35%. That's its largest year–over–year increase in more than a decade.

The growth is attributable in part to the Army's focus on equipment readiness as a priority. It's also due to growing awareness and dependence on Tobyhanna expertise across the joint forces. In fact, Tobyhanna's Performance to Promise, a measure of the depot's ability to deliver services on time, grew from 49% in fiscal year 2015 to 97% in fiscal year 2019.

"Our customers have a choice of where to go for C5ISR sustainment, whether it's Tobyhanna, other Department of Defense organizations or private industry," said Nick Caprioli, deputy director, Production Management Directorate. "We've shown them time and again that Tobyhanna is the best value, and that's why they keep coming back."

Getting to 2028

Tobyhanna delivers that value via its Toby 2028 strategic plan, guided by four key initiatives: C5ISR Readiness, Shape the Future, Invest in Our People and Strategic Communications.

Improved sales and operations planning is a key part of C5ISR readiness. This approach, initiated in 2018, helps the depot better forecast its workload by formalizing processes and ensuring communication with customers and stakeholders early in the planning cycle.

The Army has also invested millions in Tobyhanna's physical infrastructure to prepare for the future. In 2018, the depot cut the ribbon on an updated, state–of–the–art electronics maintenance enclosure. In addition, it launched five depot maintenance forward facilities, two abroad and three in the United States, to reduce repair turnaround times and bring repair capability services closer to where units are stationed.

"The key for us is flexibility and the ability to quickly transition spaces depending on evolving requirements," said Herb Shirey, director, Installation Service Directorate.

For example, he noted that several years ago, cybersecurity was not a significant part of Tobyhanna's mission. Beginning in 2015, the depot began a pilot project for information assurance vulnerability alert software patching on tactical systems. The pilot project then expanded to include a Cyber Knowledge Center, which provides warfighter reach–back support and technical assistance.

Today the initiative incorporates a team of more than 50 experts creating patches, security protocols and automated software tests. While Tobyhanna's mission has traditionally been hardware, software is driving more functionality as technology advances, so the two fields are increasingly integrating. As such, the depot anticipates continuing to ramp up its hardware and software integration and cyber capabilities.

The Power of People

Investing in people and empowering an agile workforce with 21st century skills has been critical to that transition. sThose efforts include providing Project Management Professional and Certified in Production and Inventory Management certifications; training supervisors on sales and operations planning and other fields; focusing on human factors to improve the work environment, like natural lighting and temperature controls; and much more.

These reforms are designed to support a workforce that the Army will need to surge in case of a return to large–scale combat operations. Accordingly, Tobyhanna is keen on asking the right "what if" questions and aligning its work plans to ensure it is prepared for any contingency.

"It's our innovation and ability to think outside the box that has allowed us to grow our capability," said Robert Katulka, director, Production Engineering Directorate. "The feedback we get is that our people are doing exciting things, and they see themselves having an impact and making a real difference for our warfighters."

Strategic Power Projection

Imagine you're a Soldier with the 1st Cavalry Division, based in Fort Hood, Texas. It's April 2020, and you've just landed in Europe for Defender 2020, the largest U.S. Army–led military exercise in Europe in a quarter century.

You shipped out with barely more than your rifle and toothbrush, but your unit falls in on Army Prepositioned Stock, or APS, in Germany. There, you pick up all the gear you need for the exercise, from weapons to Humvees, tanks and trucks. You also receive the most up–to–date communications and electronics systems, like night vision equipment, GPS receivers, high–frequency radios, vehicle–mounted friendly–force trackers and more. Within 96 hours, your division is ready to simulate a defense of western and central Europe and the Baltics with almost 40,000 troops from 17 allied nations.

That didn't happen by accident. It took years of coordinated efforts by CECOM and other Army organizations laser–focused on keeping forward–positioned equipment ahead of the readiness curve.

The Army Abroad

As a globally responsive force, the Army must be ready to fight anywhere in the world, whenever it is called on. APS sites are one of the Army's most important priorities for strategic power projection, and it maintains seven such sites worldwide.

However, given that the Army uses APS only intermittently, historically these sites were not always outfitted with the latest equipment. In addition, because the Army was focused on counterinsurgency operations for much of the last 18 years, it had scaled down APS sites to be smaller and lighter.

When Perna took command of AMC in 2016, and as the Army moved its strategic focus back to near–peer adversaries, that all changed. Perna directed AMC and its subordinate commands to configure APS sites for large–scale combat and stock them with enough equipment for an entire brigade or division, up to 15,000 Soldiers.

Hands–on Readiness

In 2017, CECOM began working with Army Sustainment Command to modernize C5ISR platforms at APS sites. A team of CECOM technicians from Tobyhanna Army Depot started with APS 4, in South Korea, and has now moved on to APS 2, spread across several sites in Europe.

"We're really focused on making sure units have common systems in order to communicate in the field," said Troy Roberts, CECOM Senior Command Representative for Europe. "The 405th Army Field Support Brigade and Army Sustainment Command have been extremely supportive of our efforts."

Modernizing C5ISR systems for APS 2 became especially urgent this year in preparation for Defender 2020, scheduled to begin in April. The exercise is intended to validate the draw, use and turn–in of unit–size APS 2 equipment sets. CECOM is now at 99% equipment on hand for APS 2, including secondary items such as replacement parts. It has performed installations and repair actions on radio kits in 842 vehicles, a process that can take up to eight man–hours per vehicle.

"Outfitting these platforms is not one size fits all," said Scott Marcle, CECOM Integrated Logistics Support Center Contingency Support Branch chief. "For example, a commander's Humvee may need four radios, but the mail truck only needs one. It's a complex process, and Defender 2020 will show us where the disconnects are."

Following Defender 2020, CECOM will continue to assess C5ISR modernization at APS sites and upgrade them depending on the Army's strategic power projection needs.

Logistics Information Readiness

Data is the lifeblood of any large, complex organization — its most critical natural resource. The U.S. Army is no exception. It relies on its data not only to ensure Soldiers are equipped with the resources they need to achieve their missions, but to glean insights, plan for the future and make better business decisions to save taxpayer dollars.

But when data is separated across multiple systems — and worse yet, when support structures for connected systems are divided across the same fault lines — Army business users can be sapped of their ability to deliver the precision logistics the 21st century battlefield demands. As the Army modernizes to focus on near-peer adversaries, the CECOM Software Engineering Center, or SEC, is reimagining how it sustains enterprise resource planning systems, or ERPs, in which Army data is organized.

Leading the Way to Reform

Since they were introduced beginning in the early 2000s, ERPs have grown into complex ecosystems of people, processes and technology. They now house much of the data used across the Strategic Support Area, from physical equipment to transportation to finance. But because they are often stovepiped and duplicative, so too are their support operations, such as software updates and service desks. This leads to inefficiencies and higher costs.

That's all about to change. The SEC's initiative, known as the Shared Services Center, will bring centralized ERP support teams and standardized tools and processes together under one roof. This effort complements the work AMC and Program Executive Office Enterprise Information Systems are now undertaking to better connect ERPs to improve Soldiers' and civilians' ability to get the data they need.

"Our goal is to bring more efficiency to ERP sustainment through fiscal years 2021 to 2025," said Michelle Dirner, SEC Army Shared Services Center director. "It's all about reducing costs, increasing readiness and bringing more value to business users to enable them to better do their jobs."

In-House and External Expertise

Emulating software best practices used in private industry, the Shared Services Center is focused on creating a common DevOps platform for all ERPs. This will incorporate a single environment for agile software development and continuous delivery, integration and testing, all informed by constant user feedback. It also envisions a single enterprise service desk for all ERPs and empowering a set of "super users" who can solve many business process challenges on their own.

Working with industry partners is important to the Shared Services Center, Dirner said. In December 2019, CECOM will award a major ERP support contract that consolidates 11 previous contracts. Simultaneously, the Shared Services Center is hiring more employees to build its organic in-house support capacity and reduce reliance on contractors.

The Culture Connection

Dirner said that in addition to changes in technology and processes, driving to the envisioned Shared Services Center end state requires a culture change. For example, she noted that before the Logistics Modernization Program, an ERP, transitioned to SEC sustainment, user representatives were so focused on system enhancements that they were unaware of the scale of business operations the system handles every day.

"That showed us that we needed to educate our workforce to foster organizational buy-in," she said. "When there are Soldiers depending on us to help get them the equipment that they need, we have an imperative to change."

ERPs that the Shared Services Center will support include the Logistics Modernization Program and Army Enterprise Systems Integration Program, which have already transitioned to capability support, and the Global Combat Support System-Army, which is in the process of transitioning. The General Fund Enterprise Business System will transition in 2022.