AMC TODAY

SUSTAINING THE STRENGTH OF THE NATION

U.S. ARMY MATERIEL COMMAND MAGAZINE

JULY – SEPTEMBER 2015

IN THIS ISSUE: **THE STORY OF THE ARMY'S ORGANIC INDUSTRIAL BASE**

VANTAGE POINT

GENERAL DENNIS L. VIA
AMC COMMANDING GENERAL

In communities across the nation sit 23 industrial facilities unassumingly manufacturing, repairing and resetting our military's equipment. With great efficiency achieved after decades – and in some cases, centuries – of operations, these depots, arsenals and ammunition plants comprise the Army's Organic Industrial Base (OIB). I am proud to have these facilities, and the employees who operate them, as part of the Army's Materiel Enterprise; they are national treasures, providing continuous readiness to the joint force, in essence, a national security insurance policy.

"OIB FACILITIES ARE NATIONAL TREASURES..."

While serving as the AMC commander, and previously as a brigade and battalion commander, I have seen first hand the readiness impact the OIB has had on our Army and the joint force, especially during the past decade of supporting two wars and multiple global contingencies. From the maintenance depots that reset helicopters, tanks and trucks, to the manufacturing arsenals that fabricate metals and cannon tubes, to the ammunition plants that produce small- and large-caliber munitions, our Army would not be the world's best-equipped fighting force without the unique capabilities provided by the OIB.

For the past 13 years, the OIB workload has surged in support of overseas operations. During Operation Iraqi Freedom and Operation Enduring Freedom, the OIB reset nearly 3.9 million items, a workload three times that of the Vietnam War. Since 2003, the reset workload constituted $29.5 billion of Army equipment and $5.7 billion of equipment for the U.S. Air Force, U.S. Navy and U.S. Marine Corps.

The years ahead, amidst a force primarily based in the continental United States and operating under protracted budget restrictions, will require the OIB to evolve to maintain relevance and build future readiness while gaining efficiencies. Smaller workloads will require our Army and DOD to invest in the OIB to ensure we maintain these critical and unique industrial capabilities.

The articles that follow tell the remarkable story of the OIB – the history, modernization efforts, operations, and above all, the people. The artisans who keep the lines running are proficiently trained, talented, skilled experts, and many are second and third generation employees. Their patriotism is truly admirable.

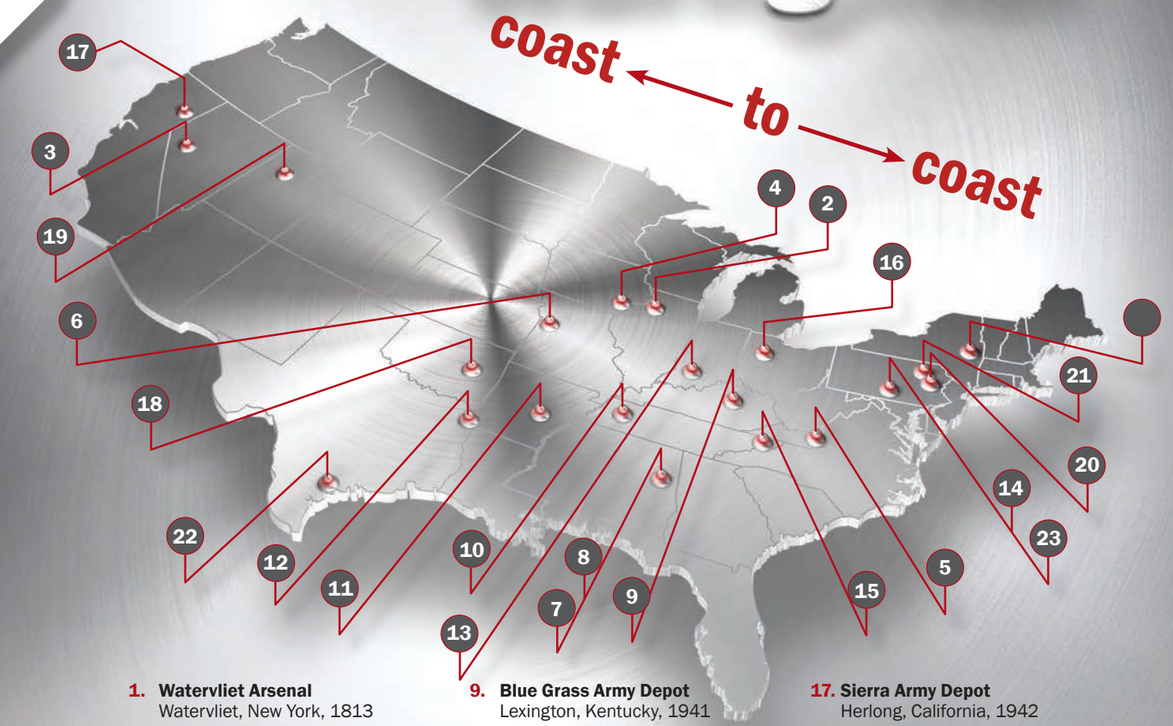
This edition of *AMC Today* will also highlight our important partnerships with industry that help to maintain the OIB. The win-win relationships through Public-Private and Public-Public Partnerships allow us to deliver the equipment our warfighters need, when they need it, at the most affordable price by leveraging the best of what industry and the industrial base has to offer.

As the premier provider of Army and joint readiness, AMC is focused on ensuring our forces always have the combat-ready equipment needed to execute their mission. The OIB is essential in helping us do so. Our Soldiers deserve nothing less.

AMC – Sustaining the Strength of the Nation!

Supporting the Warfighter

The Army's Organic Industrial Base (OIB) consists of 23 geographically dispersed government ammunition plants, manufacturing arsenals and maintenance depots that provide materiel and equipment readiness to U.S. Soldiers, sailors, airmen and Marines.



(SORTED BY DATE OF ESTABLISHMENT)

1. **Watervliet Arsenal**
   Watervliet, New York, 1813
2. **Rock Island Arsenal**
   Rock Island, Illinois, 1862
3. **Hawthorne Army Depot**
   Hawthorne, Nevada, 1930
4. **Iowa Army Ammunition Plant**
   Middletown, Iowa, 1940
5. **Radford Army Ammunition Plant**
   Radford, Virginia, 1940
6. **Lake City Army Ammunition Plant**
   Independence, Missouri, 1940
7. **Anniston Army Ammunition Plant**
   Anniston, Alabama, 1940
8. **Anniston Munitions Center**
   Anniston, Alabama, 1941
9. **Blue Grass Army Depot**
   Lexington, Kentucky, 1941
10. **Milan Army Ammunition Plant**
    Milan, Tennessee, 1941
11. **Pine Bluff Arsenal**
    Pine Bluff, Arkansas, 1941
12. **Red River Army Depot**
    Texarkana, Texas, 1941
13. **Crane Army Ammunition Activity**
    Crane, Indiana, 1941
14. **Letterkenny Army Depot**
    Chambersburg, Pennsylvania, 1941
15. **Holston Army Ammunition Plant**
    Kingsport, Tennessee, 1942
16. **Joint Systems Manufacturing Center**
    Lima, Ohio, 1942
17. **Sierra Army Depot**
    Herlong, California, 1942
18. **McAlester Army Ammunition Plant**
    McAlester, Oklahoma, 1943
19. **Tooele Army Depot**
    Tooele, Utah, 1943
20. **Tobyhanna Army Depot**
    Tobyhanna, Pennsylvania, 1953
21. **Scranton Army Ammunition Plant**
    Scranton, Pennsylvania, 1953
22. **Corpus Christi Army Depot**
    Corpus Christi, Texas, 1961
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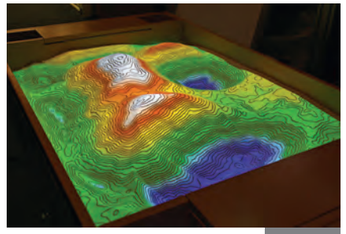
Depots, arsenals and ammunition plants provide critical capabilities

FRONT COVER: Anniston Army Depot employees disassemble M1 Abrams tanks in the Combat Vehicle Repair Facility. The depot is capable of overhauling, repairing or resetting any variant of the M1, to include the Assault Breacher Vehicle and bridging systems supported by the M1 chassis.

BACK COVER: Willie Garrett, a heavy mobile equipment mechanic at Anniston Army Depot, steam cleans combat vehicle tracks in the Nichols Industrial Complex. (U.S. Army photos by Mark Cleghorn)



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AMC TODAY MAGAZINE

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PERSPECTIVES

Featuring this issue's guest columnist

LISHA ADAMS

DEPUTY ASSISTANT SECRETARY OF DEFENSE (MATERIEL READINESS)

IMPORTANCE OF THE ORGANIC INDUSTRIAL BASE AS A NATIONAL DEFENSE ASSET

To protect U.S. national interests and achieve the objectives of the National Security Strategy, the joint force must be successful in missions to counter terrorism, deter and defeat aggression, counter weapons of mass destruction, and defend the homeland. Maintaining readiness and generating combat power across a full range of contingencies is critical to ensuring success in these missions today and in the future. A fully integrated defense industrial base that leverages the competencies, infrastructure and resources of both the public and private sector is essential to our national security.

"A FULLY INTEGRATED DEFENSE INDUSTRIAL BASE THAT LEVERAGES THE COMPETENCIES, INFRASTRUCTURE AND RESOURCES OF BOTH THE PUBLIC AND PRIVATE SECTOR IS ESSENTIAL TO OUR NATIONAL SECURITY."

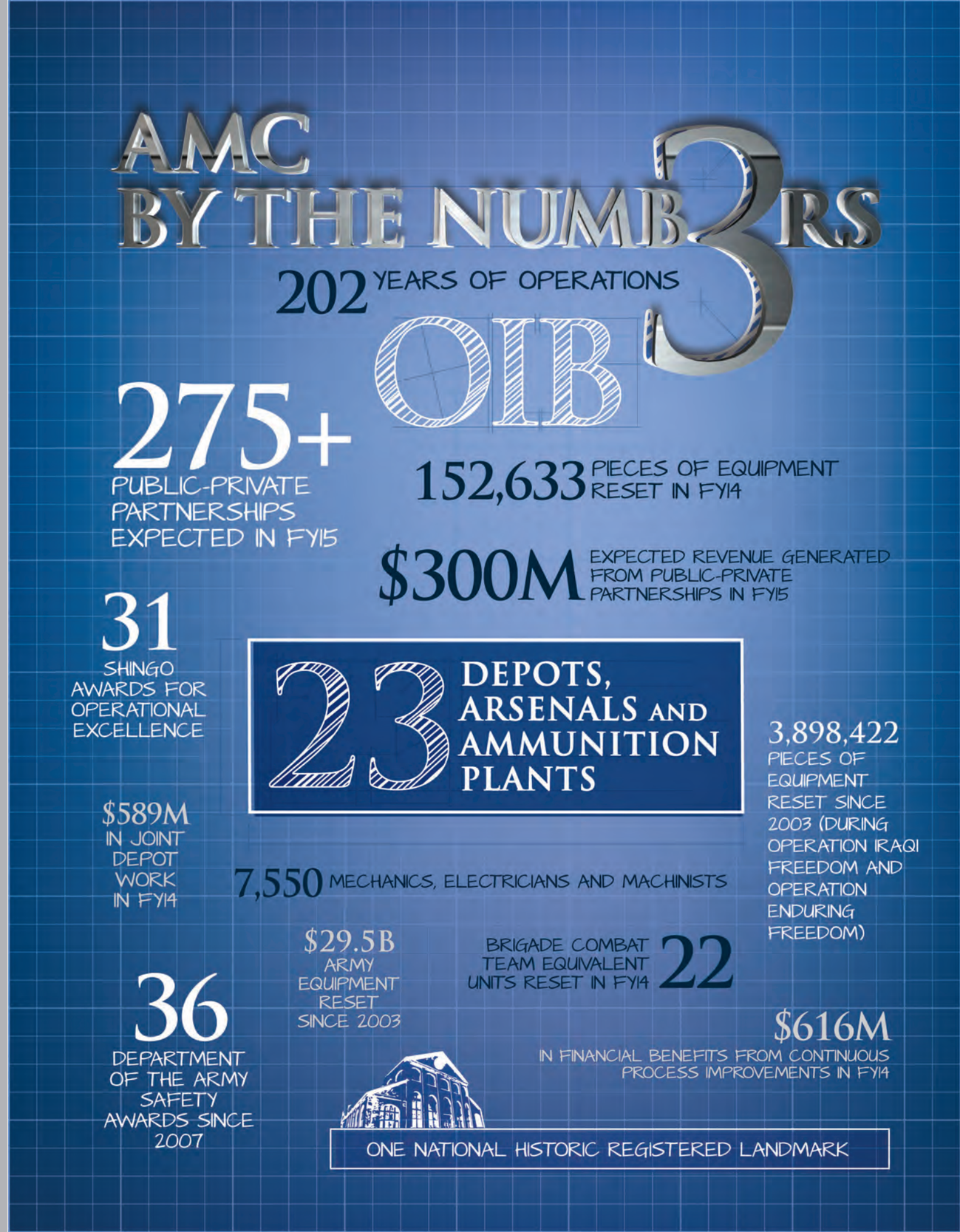
Through statutory and policy framework, the Department of Defense maintains a ready and controlled source of technical competencies and resources in the Organic Industrial Base necessary to ensure an effective and timely response to mobilizations, national defense contingency situations and other sources of emergency requirements.

The Department of the Army's arsenals, depots and ammunition plants offer unique capability to the Department of Defense to fill multiple roles and responsibilities in rapid response to the National Security Strategy. All serve as vital links in the national defense structure, providing manufacturing, maintenance, supply and technical support services for the joint services and our allies.

Arsenals provide manufacturing of artillery systems, combat service support equipment, cannon tubes, mortars, munitions and chemical/biological equipment. Maintenance depots provide major overhaul, or a complete rebuilding of parts, assemblies, subassemblies and end items to provide stocks of serviceable equipment; they also support field maintenance by providing technical assistance or performing maintenance tasks beyond their responsibility. Supply depots provide storage of equipment as well as conventional ammunition and missiles for receipt and issue; load, assembly and packaging of ammunition; and demilitarization. Ammunition plants provide manufacturing of explosives, propellants, small-caliber munitions and projectiles. Across these critical facilities, the Organic Industrial Base plays a key role in keeping our Armed Forces the best-equipped fighting force.

During this time of transition from current war to new and emerging conflicts, and reshaping of the joint force and headquarters, we must maintain our technological superiority. We must continue to field and sustain dominant military capability, a combination of technical and operational effectiveness. Both require that we continue to reduce the cost of doing business and produce quality products at, and in support of, our Organic Industrial Base. Doing this depends on all of our efforts to review processes, control waste and be the best at what we do.

As Chairman of the Joint Chiefs of Staff Gen. Martin Dempsey stated, "The balance between available resources and our security needs has never been more delicate."



A welder in the Anniston Army Depot Combat Vehicle Repair Facility removes the track from an M1 Abrams tank. (U.S. Army photo by Mark Cleghorn)

The Army's OIB: a National Security Insurance Policy

By Kim Hanson, AMC Public Affairs

For more than 200 years, the U.S. military has relied on a set of unique, highly technical facilities to equip its warfighters. Known as the Army's Organic Industrial Base (OIB), a subset of the larger defense industrial base, these depots, arsenals and ammunition plants manufacture, repair and reset the military's equipment.

Today's OIB, managed by the U.S. Army Materiel Command (AMC), includes 23 geographically dispersed facilities, each specializing in a core competency. Together, they are the centerpiece of Army readiness, said Gen. Dennis L. Via, AMC commanding general.

From small arms, explosives and cannon tubes, to trucks and tanks, the OIB provides depot maintenance work and supply support across all DOD services.

"The OIB builds readiness for our Soldiers and Brigade Combat Teams, provides critical surge capabilities in support of global contingencies, and ultimately ensures our warfighters have the best equipment possible," said Via.

Because much of the work done at the OIB facilities by highly skilled artisans cannot be replicated in the private sector, and because it also provides the Army a unique capability to quickly react to conflicts and contingencies with the necessary equipment when they arise, Via equates the OIB to a "national security insurance policy" for the Army and nation.

"Similar to an insurance policy for your home or automobile, although we may not always need it at the moment," he said, "when we do, we need the OIB to be responsive, dependable and reliable."

While the OIB surged for more than a decade in support of Operation Iraqi Freedom and Operation Enduring Freedom, resetting nearly 4 million items – a workload three times that of the Vietnam War – operations at the facilities are now slowing. The workload needed has declined significantly, and the Army and AMC must determine how to preserve the capabilities to meet future requirements.

"Key to our ability to sustain the force of tomorrow is to preserve the industrial base of today," said Via. "We are continually optimizing our OIB processes, but we must also continue to invest in these facilities to enhance capabilities."

The OIB is funded through the Army Working Capital Fund (AWCF), meaning the costs to operate the facilities are paid by the income brought in by the workload. The challenge is that operational costs are increasing at the same time workload is decreasing, said Eddie Lewis, chief of AWCF at AMC. That leads the OIB to have to increase rates to customers.

"If we can reduce rates, we level the playing field with the private sector's defense industrial base and increase competitiveness of our Army arsenals, depots and ammunition plants," Lewis said. With lower rates, the

OIB can attract more business, both through partnerships with the private sector and work from the other military services. All this means the production lines remain warm and ready to ramp up when needed, and the workforce continues to keep their skillsets sharp.

As a means of investment into the insurance policy, AMC has requested that non-mission costs – those related to installation management – be removed from the rate structure and absorbed elsewhere by DOD. Essentially, costs such as fire, emergency services, security and other expenses associated with keeping the installations open but not directly involved in operations, would be funded through an appropriated source. Costs associated with the industrial mission would continue to be funded through AWCF, and without the additional expenses, the OIB could offer lower rates to customers.

This is nothing new to the military; other services' industrial activities are tenants on the bases where they reside, absolving them of those expenses. But the request will mean DOD will have to absorb the additional expense – the cost of maintaining an insurance policy for national security, a small cost given the incredible readiness value the OIB provides, Via explained.

"The Army's OIB is a national security asset, providing a critical capability in delivering readiness, not only to the Army, but to the entire joint force," said Via. "Although we are facing challenging fiscal times, support of these critical and unique industrial facilities must remain a priority."

For now and until the policy changes, AMC continues to explore other means for keeping the OIB workforce gainfully employed and the lines running, said Lewis. The command is making a concerted effort to showcase its abilities to private industry to increase Public-Private and Public-Public Partnerships and draw in new business. Increasing interest from U.S. allies also means increased business through Foreign Military Sales. AMC is also putting Lean Six Sigma practices into effect to streamline and optimize OIB processes.

"The bottom line is that we must retain the critical maintenance and manufacturing skills and capabilities necessary to meet any enduring needs, while providing flexibility for future requirements," said Via. "The Army OIB is a national treasure that we simply cannot afford to lose."

OPPOSITE PAGE (top to bottom): A 155 mm artillery tube enters a heat treatment furnace at Watervliet Arsenal as part of a process called "austenitizing." In this step, the tube is heated to 1,550 degrees Fahrenheit for five hours, quenched rapidly with water for 15 minutes, then sent through a tempering process where the tube is reheated up to 1,070 degrees Fahrenheit for 10 hours. Every artillery and tank tube goes through this process to improve the microstructure and hardness of the steel. (U.S. Army photo by John Snyder)

One of the many artisans at Anniston Army Depot demonstrates his work. The installation has several state-of-the-art operations, including the Small Arms Repair Facility and the Combat Vehicle Repair Facility. (U.S. Army photo)

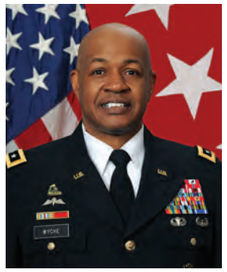
A Mine Resistant Ambush Protected (MRAP) Vehicle sits inside a maintenance facility at Red River Army Depot. The depot is designated by the Secretary of the Army as the Center for Industrial and Technical Excellence for Tactical Wheeled Vehicles including the MRAP, the High Mobility Multipurpose Wheeled Vehicle (HMMWV) and several other vehicles. (U.S. Army photo)

A dockside gantry crane prepares to latch a 20-foot container estimated to be 35,000 pounds each containing various retrograde ammunitions at Jinhae Ammunition Pier. The 19th Expeditionary Sustainment Command and 6th Ordinance Battalion, in coordination with the Republic of Korea Ammunition Support Command, ROK Transcom, Military Surface Deployment and Distribution Command and the 837th Transportation Battalion have conducted two medium ship retrograde operations each year for the last few years. (U.S. Army photo)

U.S. Army photo

"The bottom line is that we must retain the critical maintenance and manufacturing skills and capabilities necessary to meet any enduring needs, while providing flexibility for future requirements," said Via. "The Army OIB is a national treasure that we simply cannot afford to lose."

AMC NEWS & NOTES



1 AMC welcomes new Deputy Commander

Lt. Gen. Larry Wyche officially assumed duties as the U.S. Army Materiel Command (AMC) deputy commanding general April 10. Wyche previously served as AMC's deputy chief of staff for operations and logistics from 2010 to 2012. In 2008, Wyche took command of the Joint Munitions and Lethality Life Cycle Management Command, a major subordinate command of AMC. "He knows our mission; he knows our workforce and he knows our customer – the Soldier," said Gen. Dennis L. Via, AMC commanding general. "He is certainly the right person at the right time to keep AMC moving in the right direction." As the deputy commanding general, Wyche will be responsible for the day-to-day operations of the command including the Organic Industrial Base, Logistics Readiness Centers and major subordinate commands.

AMC's Chief Technology Officer announced

Patrick O'Neill was officially named AMC's chief technology officer (CTO) in March. As the CTO, O'Neill leads all aspects of AMC's Science and Technology (S&T) development and sets the S&T strategic direction for a full range of sophisticated weapons systems and cutting-edge technology. The CTO provides AMC with a "synchronization agent" for research, technology development, innovation and integration. O'Neill served as acting CTO since September 2014. "While serving in the position, Mr. O'Neill brought a visionary and collaborative approach to the Science and Technology enterprise," said John Nerger, then AMC's executive deputy to the commanding general. "His leadership and vision for AMC's S&T development is crucial to the command."

3 AMC's Director for Logistics Integration announced

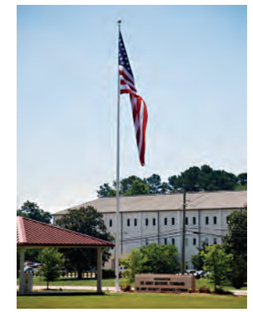
Kevin Bostick was named chief of the Logistics Integration Division within the U.S. AMC G-3/4 Operations and Logistics, March 20. Bostick, who transitioned from his previous role as acting deputy G-4, U.S. Army Forces Command, officially joined the ranks of the Senior Executive Service at a ceremony in April. In his new role, Bostick is responsible for sustaining the joint warfighter through command and control of supply chain management, depot and National Maintenance Program operations, asset management and distribution, reset, and ammunition/chemical stockpile management. "We look forward to Mr. Bostick's leadership and vast experience in support of our warfighters," said John Nerger, then AMC's executive deputy to the commanding general. "He is a welcome addition to the AMC team."

4 SDDC celebrates 50 years

AMC's Military Surface Deployment and Distribution Command (SDDC), headquartered at Scott Air Force Base, Illinois, celebrated its 50th anniversary Feb. 15. The "Celebrating our Heritage" and Awards Luncheon brought more than 300 members of the SDDC workforce together to celebrate the organization's history and present awards to members of the command for exceptional performance. "Knowing where we've been as an organization helps us better understand who we are and how, as a team, we will take SDDC into the future," said SDDC Commanding General Maj. Gen. Susan A. Davidson. "While we're honoring past contributions, I think it's only fitting to also honor current team members who are excelling and helping to continue SDDC's legacy of moving the force." As part of the event, Davidson, with SDDC's senior enlisted advisor, Command Sgt. Maj. Kevin McKeller, and guest speaker William Lucas, former and first SDDC deputy to the commander, presented a combined total of 47 Global Deployment and Distribution Excellence Awards to teams and individuals for outstanding service and contributions to SDDC's mission.

5 USASAC celebrates 50 years

AMC's U.S. Army Security Assistance Command (USASAC), headquartered at Redstone Arsenal, Alabama, celebrated its 50th anniversary July 21. The organization, which has gone through several reorganizations since its creation in 1965, is known as the "Army's face to the world," serving as the primary entry point for U.S. Army materiel- and service-related Foreign Military Sales requirements. USASAC provides materiel, training, education and other services to help U.S. allies strengthen their defensive capabilities, deter aggression, achieve regional stability and promote democratic values. "For five decades, Soldiers and civilians of USASAC have worked together to bolster U.S. foreign policy by carrying out its security assistance mission throughout the world," said Maj. Gen. Mark McDonald, USASAC commanding general. "What the more than 800 personnel of this organization do every day – at Redstone Arsenal; Fort Bragg, North Carolina; New Cumberland, Pennsylvania; and Saudi Arabia, residing in and partnering with 450 countries and international organizations worldwide – is something we're all proud of."

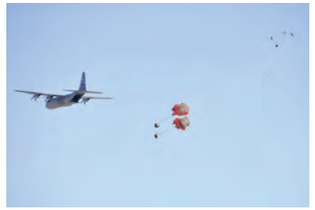


6 Eight AMC employees recognized as top black engineers

The Black Engineer of the Year Awards Science, Technology, Engineering and Math (BEYA STEM) recognized eight AMC employees as some of the top black engineers in the country during their annual Global Competitiveness Conference in February. The conference is the largest gathering of STEM professionals and leaders committed to increasing the percentage of people from historically underrepresented communities in the technology workforce. The award recipients represented two of AMC's major subordinate commands; seven awardees work with the U.S. Army Research, Development and Engineering Command and one with the Joint Munitions Command. They were honored in a range of categories that included technical accomplishments and commitment to community educational outreach.

7 Natick team wins defense award

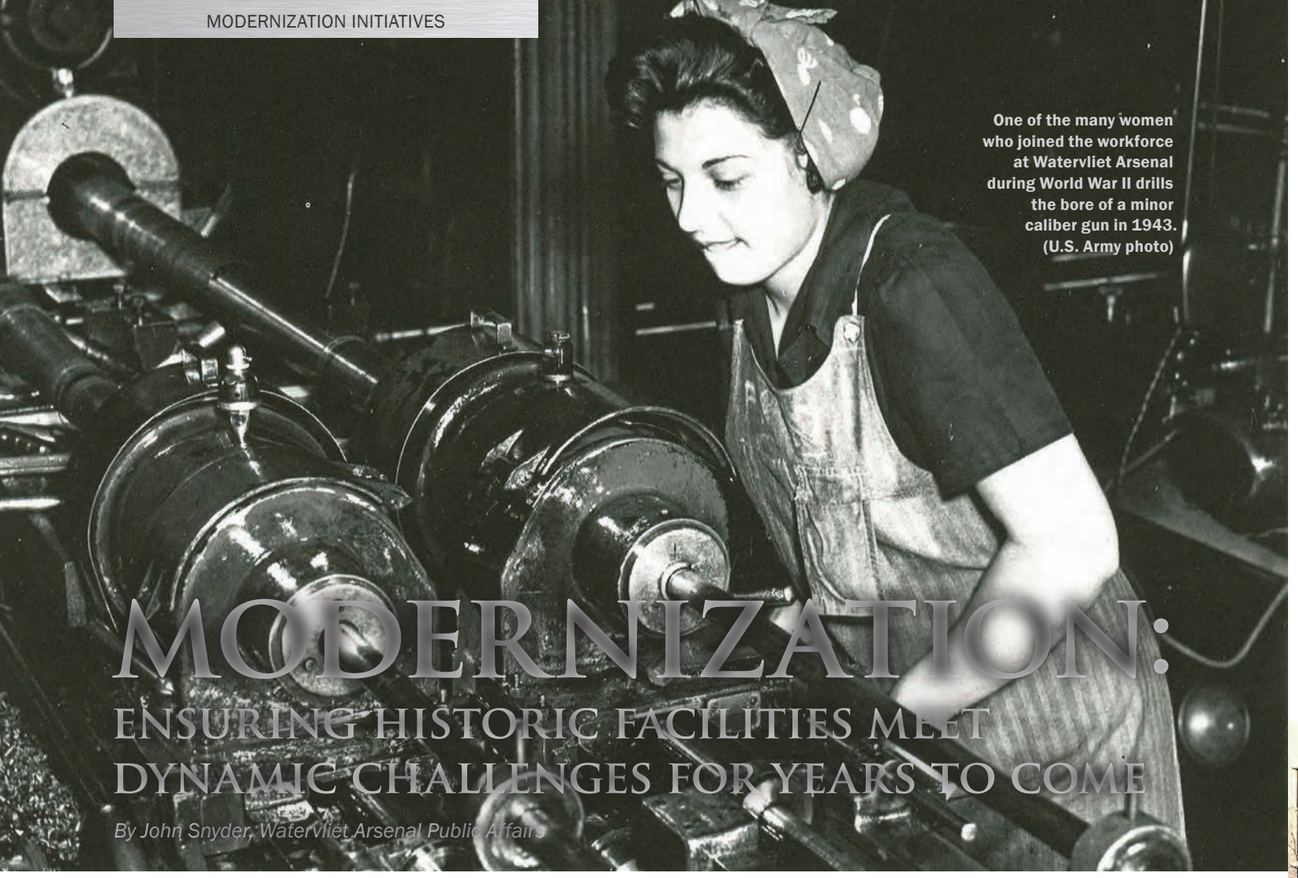
The High Speed Container Delivery System Joint Capability Technology Demonstration (HSCDS JCTD) team was chosen by the Office of the Secretary of Defense for the 2014 JCTD Team of the Year award. The JCTD Program encourages joint service efforts to effectively and efficiently meet the needs of the joint warfighter. Mike Henry, research aerospace engineer in the Aerial Delivery Directorate at the Natick Soldier Research, Development and Engineering Center, was the HSCDS JCTD team technical manager. "Airdrop, by nature, is a joint effort, and HSCDS is no different," Henry said. "U.S. Transportation Command and U.S. Air Force Air Mobility Command work closely together to support the airdrop mission. While the Air Force executes most of the airdrops, it is common for the Army to be the recipient on the ground and can be viewed as the end user." The new system is more efficient at faster aircraft speeds and lower aircraft altitudes than standard airdrop and enhances the safety of ground forces. "By flying faster, the aircrew is exposed to the ground threat for less time, the aircraft is more maneuverable, and it has a greater rate of climb to fly out of terrain, enabling access to more drop zones and reducing the need for ground convoys."



8 New cleaner, lubricant and preservative formula recognized

An Army team from the Armament Research, Development and Engineering Center (ARDEC) received a 2014 Outstanding Achievement Award from the Defense Standardization Program Office for determining that a bio-based material could be used in formulating a cleaner, lubricant and preservative used for weapons and weapons systems. The formulation change was made in an amendment to Military Performance Specification: Lubricant, Cleaner and Preservative for Weapons and Weapons Systems. Requiring this less-toxic formulation did not compromise any performance requirements identified in the specification, officials said. Members of the ARDEC team include Mark Napolitano, Daniel Prillaman and Richard Wu.

(U.S. Army photos)



One of the many women who joined the workforce at Watervliet Arsenal during World War II drills the bore of a minor caliber gun in 1943. (U.S. Army photo)

MODERNIZATION:

ENSURING HISTORIC FACILITIES MEET DYNAMIC CHALLENGES FOR YEARS TO COME

By John Snyder, Watervliet Arsenal Public Affairs

The year was 1813. "Uncle Sam" was first used to refer to the United States, and Congress authorized the use of steamboats to transport mail. The first federal vaccination legislation was enacted. Rubber was patented. On the surface, it seemed like a good year.

However, among those bits of good news was something more troubling; the U.S. was fighting for its very existence in its second war with Britain.

In upstate New York, the village of Troy along the Hudson River was a hub of militia activity. Although it was not a large community during the War of 1812 with about 550 dwellings, Troy was rich with manufacturing artisans who worked in the village's cotton factory, paper mill, firearms factory, and popular for that time period, a distillery.

In 1813, these skilled artisans crossed the Hudson and began to put in place the first bricks and mortar of a future Army arsenal. Factory workers from Troy began working side-by-side with ordnance Soldiers to manufacture critical war items before all the buildings were completed on 12 acres of land purchased for $2,585 – about $31,000 in today's dollars. This site near the meeting place of the Hudson and Mohawk Rivers would eventually become known as the Watervliet Arsenal.

In the beginning, the arsenal's mission was to produce ammunition and small articles of equipment for the Army. Most of the work was performed by enlisted men. Civilian workers were typically hired by the day, week or month, at a rate of $9 a month. Although women have continuously remained a part of the workforce since 1813, children in the early days of the arsenal sweated in the workshops, too. In fact, nearly 300 children were employed at the arsenal during the American Civil War.

Despite the austere conditions of the young arsenal, the workforce stayed day and night to get critical ammunition and supplies packed for Soldiers. When the Capitol was burned, arsenal products were quickly shipped to help repel the British. And when Maj. Gen. Andrew Jackson, who later became the seventh President of the United States, defeated a British invasion in New Orleans on Jan. 8, 1815, the arsenal products were there that infamous day.

CHALLENGES AND GROWTH

After the War of 1812, the arsenal faced severe financial challenges. During the first postwar years, Congress did not appropriate funds for maintenance and operations, and closure was considered. Then arsenal commander, Maj. James Dalliba, who himself had not been paid in over two years, funded the arsenal's operations by purchasing materials on credit.

But the arsenal survived, as it would after every major military conflict, due to visionary leaders and a professional workforce who sought ways to leverage the arsenal's capabilities for other missions. Today, the Army calls this process transformation. A major part of this transformation has been the use of technology to improve manufacturing processes.

RIGHT: The Big Gun Shop at the Watervliet Arsenal in New York has been the site of large-caliber weapon production for more than 100 years and remains in use today.

BELOW: A 16-inch gun is ready for shipment from Watervliet Arsenal, New York, in 1902. (U.S. Army photos)

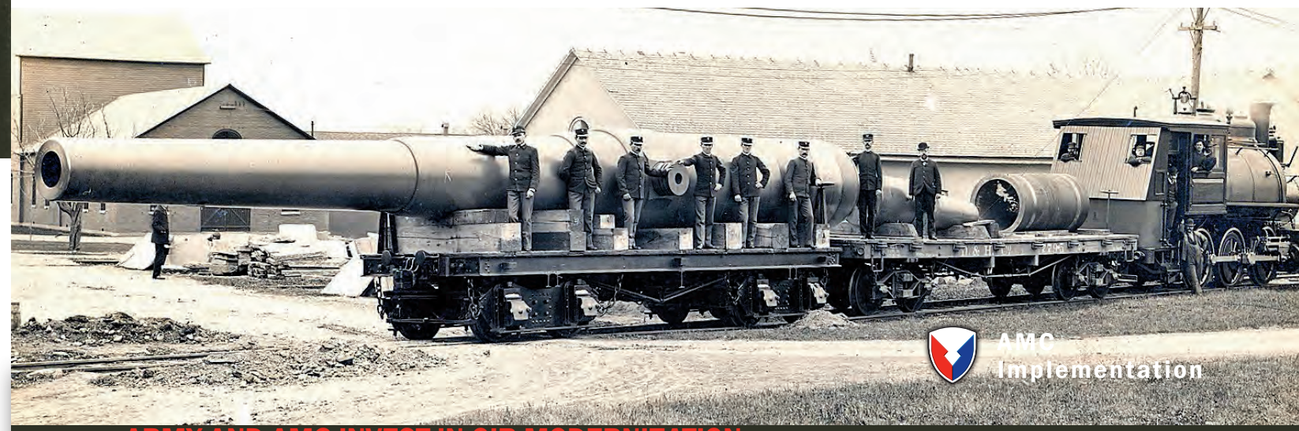
Seventy years after the arsenal's first products were in use, it gained national prominence as the Army's first large-caliber cannon manufacturer in the late 1880s. During this period, production moved from the manufacturing of saddles and gun carriages to cannons.

Present day operations recall remnants of this time through the continued use of historic Building 110, "The Big Gun Shop," for manufacturing missions. This gun shop once produced 16-inch guns for the U.S. Navy's battleships.

NBC correspondent and former TV anchor Tom Brokaw defined the American way of life during World War II as the "Greatest Generation." In many ways, that period in American history was also the greatest generation for the Watervliet Arsenal. Personnel numbers peaked near 9,300 during World War II, as the workforce manufactured more than 23,000 cannons from the day of the attack on Pearl Harbor to the Normandy Invasion in June 1944 with an on-time delivery rate exceeding 99 percent.

CONTINUING A PROUD TRADITION

Since the Battle of New Orleans in 1814, arsenal products have supported U.S. troops at every military conflict and location, including: the landing of Vera Cruz; the hills of Gettysburg and San Juan Hill; the Battles of the Marne



ARMY AND AMC INVEST IN OIB MODERNIZATION

The Army Organic Industrial Base (OIB) has a rich history spanning more than two centuries in support of the nation's defense. The U.S. Army Materiel Command (AMC) operates today's OIB, with infrastructure worth more than $30 billion.

While these 23 depots, arsenals and ammunition plants manufacture, reset and store the state of the art equipment that ensures the U.S. Army remains the best equipped fighting force, more than 60 percent of the facilities were constructed in the World War II era or earlier.

To combat the aging facilities and ensure they support modern industrial processes, AMC is investing heavily in the OIB. However, additional work is necessary, said R.J. Sollohub, facilities division, AMC G 3/4. Capital investments are needed in both OIB facilities and the industrial tools and equipment they house.

Since Fiscal Year 2005, AMC has invested more than $2 billion in the OIB between Military Construction, Army (MCA) and Capital Investment Program (CIP) projects. MCA projects, accounting for around $500 million, encompass requirements from production related facilities at the hard iron depots to infrastructure for ammunition out load at munitions storage depots. CIP projects, accounting for around $1.5 billion, represent investments by the OIB back into their operations and production lines. CIP investments have led to modernized equipment, automation and facilities.

The Army and AMC will continue to invest in the OIB to preserve critical capabilities and maintain the Army's technological advantage, Sollohub said.

Since the late 1800s, the Watervliet Arsenal has been the Army's manufacturer of large-caliber guns. Two of the most recent and most important product lines are the manufacturing of the 120 mm tube for Abrams Tanks and the 155 mm tube for the artillery. (U.S. Army photo)

and the Bulge; the frozen Korean tundra; the jungles of Vietnam; and Grenada, Panama, Iraq and Afghanistan.

Modern day military operations look very different from those of days past at Watervliet. In the 10 years after the first Gulf War ended, the U.S. Army downsized from around 780,000 to less than 500,000 Soldiers. The arsenal workforce fell from approximately 2,000 to about 500 by 2002 where it remains today.

While much has changed at the arsenal since 1813, one constant has withstood the test of time, said Col. Lee H. Schiller Jr., Watervliet Arsenal commander. "There is a tremendous sense of pride by those who work at the arsenal that the work they do has helped hundreds of thousands of U.S. Service members to come home safely since the War of 1812."

LOOKING TO THE FUTURE

Today, Watervliet is also home to over 225 employees of the U.S. Army's Benét Laboratories, a U.S. Army research, development and engineering facility that is part of the Weapons and Software Engineering Center (WSEC) within the Armament Research, Development and Engineering Center (ARDEC).

"Although we were organized with the official Benét Labs name on May 9, 1962, we have actually been providing weapons research, design and development for our military since 1887 as a division of the Watervliet Arsenal," said Lee Bennett, director of Benét Labs. "When the arsenal began cannon production in the 1880s, we were there to help design the first 12-inch and 16-inch guns."

Since 1962, Benét has grown from a mostly one-dimensional research and design facility to an organization that provides a full spectrum of software and engineering design and support for a diverse Army.

"We still design large-caliber weapon systems because that is our core mission, but we also develop such products as Tank Crewmen Cooling Kits and 3-D medical modeling for military and civilian application," Bennett said.

Above all else, Bennett said his team loves a challenge. The multiskilled workforce adjusts as needed to provide technologies for the next generation of weapon systems, new machining technologies for current production and around-the-clock support for existing fielded systems.

"The Watervliet Arsenal heavily relies on Benét Laboratories to conduct research, design and prototype development," said Schiller. "The unique synergy achieved by having a world-class weapons research and design facility within a five-minute walk from those who will manufacture a product is unequaled anywhere in the Department of Defense. This synergy has, in the last year, brought us tens of thousands of direct labor hours manufacturing such items as an improved 105 mm breech to chrome plating 155 mm howitzer tubes."

Today's arsenal is relied upon by U.S. and foreign militaries to produce the most advanced, high-tech, high-powered weaponry for tank, howitzer and mortar systems. It is also the only domestic manufacturer for U.S. Army large-caliber breeches and gun tubes. This National Historic Registered Landmark has an annual economic benefit to the local community in excess of $100 million.

Out of necessity to blunt the British invasion, a small arsenal of highly skilled labor remains standing 200 years later. The arsenal remains the oldest, continuously active arsenal in the United States.

The Watervliet Arsenal, a subordinate organization of the U.S. Army Tank-automotive and Armaments Command (TACOM), is a co-location of arsenal manufacturing and Benét Labs offering military or private industry a one-stop shop for research, design, prototype development and full-service manufacturing support. TACOM, a major subordinate of the U.S. Army Materiel Command, generates, provides and sustains mobility, lethality and survivability for Soldiers and other branches of the U.S. Armed Forces.

OPERATION UPGRADE:

HOW TOBYHANNA IS PUTTING ARMY QUALITY WORK ENVIRONMENT INITIATIVES INTO ACTION

By Anthony Ricchiazzi, Tobyhanna Army Depot Public Affairs

Technician Joe Decindio conducts a final inspection of mechanical build up and wave guide installation on an AN/TPS-75 air surveillance antenna under the bright light of new LED fixtures at Tobyhanna Army Depot. New lights promise to save more than $400,000 in energy and maintenance costs over the next 15 years. (U.S. Army photo by Steve Grzezdzinski)

Tobyhanna Army Depot, DOD's premier full-service maintenance facility for Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Systems, is undergoing a massive, multiyear effort to modernize facilities. The $102 million investment includes everything from replacing thousands of lights to updating nearly 200,000 square feet of industrial and engineering space in the heart of the electronics maintenance complex.

Tobyhanna consistently looks at ways to modernize and update infrastructure to ensure the installation will remain a world-class facility, ready to handle workload requirements for the future. This effort, called Quality Work Environment (QWE), is part of an Army-wide initiative.

"The Army staff was concerned that the infrastructure of Army installations needed upgrading to allow maximum productivity," said Russ Dunkelberger, chief of the Environmental, Safety and Occupational Health Branch at Tobyhanna. "They directed a number of actions to review and update infrastructure standards. This is what later turned into QWE."

QWE includes factors that can improve the ability of a worker to accomplish the mission: facility, safety, health, workplace arrangements, comfort and improved productivity.

Tobyhanna employees worked with personnel from several U.S. Army organizations, including the Army Communications-Electronics Research, Development and Engineering Center; Army Armament Research, Development and Engineering Center; and Army Public Health Command, to determine the need in terms of structural, safety and health standards. Several buildings and associated structures were identified as needing improvement during the process.

Upgrades include building interiors and exteriors, docks and loading ramps, heating, ventilation and air conditioning (HVAC) systems, and electrical systems.

"These efforts are depot-wide, aimed at increasing productivity by improving the work environment. When all the projects are done, Tobyhanna Army Depot will be safer, more efficient and more comfortable for the thousands of employees who work here," said Mechanical Engineer John Lyman, Tobyhanna Installation Services Directorate.

The biggest piece of the modernization is the $44 million upgrade to the Electronics Maintenance and Operations Facility, the center of productivity for electronics workers, planners, production controllers, quality improvement specialists and engineers. It plays a key role in maintaining electronics for the entire Department of Defense.

The facility, built in 1952, was updated in 1982 with an environmentally controlled electronics enclosure on the ground floor and a 59,845 square foot mezzanine built above it for work planners and engineers. HVAC was added to the enclosure and the original administration areas at the time. Since then, only sustainment and maintenance work has been performed.

"The interior has never had a renovation," Lyman said. "The foundation and walls are in great condition, but there are issues in some building systems, components and finishes that typically occur in facilities of this type."

The five-year project will include telecommunications, plumbing, heating and air conditioning systems with support facilities that include uninterruptible power supplies for critical test equipment, emergency generators, information systems and anti-terrorism measures. It also incorporates improved processing/testing equipment needed to modernize operations.

"The project will be phased over the five years to accommodate workable strategic repair and maintenance schedules to keep the electronics mission efficient and seamless as repair of the facility progresses," said Industrial Engineer Ray Watkins, Installation Services Directorate.

The long-term project is designed to sustain current workload, improve capabilities, and increase test speed and efficiency. Once completed, it will provide a productivity improvement benefit estimated at $4 million annually.

"When completed, this project will exceed current safety codes and standards for facility shops, labs and administrative offices," Dunkelberger said.

Another major project is modernizing the installation fire station, which the QWE team identified as having high maintenance costs and needing improvement.

"Upgrading the station will eliminate inadequate sleeping quarters and lighting," Dunkelberger said. "The facility, while still able to ensure fire and safety protection, does not meet quality of life standards and impacts the morale of our fire protection personnel."

In addition to the bunkroom, the aging roof and dayroom will be replaced. The HVAC system will be replaced with an energy efficient system, reducing energy costs. The modernization will further reduce response time on the installation and, in light of mutual aid agreements, to nearby communities.

"The renovated fire station will allow an even faster response to fires, accidents, and environmental, chemical and biological emergencies while reducing costs," Dunkelberger said. As an added benefit of keeping them out of adverse weather conditions, the service life of emergency vehicles and equipment will be extended.

Dunkelberger said that although most of the modernization work underway will be done in three years, QWE is a continuous process for keeping Tobyhanna and other Army installations ahead of the curve in safety, efficiency and employee comfort.

Tobyhanna Army Depot designs, manufactures, maintains, repairs and overhauls dozens of electronic systems across the Department of Defense and is a recognized leader in providing logistics support for Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Systems. The depot is a subordinate organization of the Communications-Electronics Life Cycle Management Command (CECOM), a major subordinate command of the U.S. Army Materiel Command.

LEFT: Tobyhanna is undergoing a massive, multiyear effort to upgrade facilities. The $102 million investment includes everything from replacing thousands of lights to updating nearly 200,000 square feet of industrial and engineering space in the heart of the electronics maintenance complex. (U.S. Army photo by Steve Grzezdzinski)

OPPOSITE PAGE:

1. Employees make progress during the demolition phase of the modernization effort at Tobyhanna Army Depot. The effort is part of an Army-wide Quality Work Environment modernization effort.

2. Electrician John Boylan checks a new power panel in Building 16. The building is one of several at Tobyhanna Army Depot undergoing modernization that will exceed safety codes and standards.

3. A team begins the demolition process in the main communications-electronics repair and testing building at Tobyhanna Army Depot.

4. Mike McDade, a public works technician, adjusts new cable in a nearly-finished building at Tobyhanna Army Depot. The building was modernized to provide safer and more efficient accommodations for emergency personnel. (U.S. Army photos)

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AMC Implementation

RONMENT INITIATIVES SPAN ACROSS AMC

The U.S. Army Materiel Command (AMC) is committed to providing a safe, modern environment for employees across the organization, including the 23 depots, arsenals and ammunition plants that comprise the OIB, said AMC Safety Engineer Kristina McCarthy Martin.

Through a robust and concerted Quality Work Envi ronment (QWE) initiative, AMC has invested time and resources in the OIB to modernize facilities and ensure the workforce has the best possible area to work in.

AMC invested more than $541 million in the OIB between Fiscal Years 2013 and 2015 for QWE improve ments. These projects include upgrades to HVAC, lighting and mass notification systems.

AMC has also conducted QWE assessments across the OIB. Teams of professionals assessed facility structures, safety hazards, health concerns and more. From industrial hygienists to facility engineers, the teams provided feedback on improvements to everything spanning comfort and ease for the workforce to building structures and ventilation.

AMC plans to expand the QWE efforts that have been successful across the OIB to Logistics Readiness Centers and Research, Development and Engineering Centers in FY16 and FY17, McCarthy Martin said.

Eric Andreas overlooks work done on an Apache at Corpus Christi Army Depot. (U.S. Army photo by Ervey Martinez)

CCAD REALIZES COST SAVINGS FROM LEAN SIX SIGMA IMPLEMENTATION

By CCAD Public Affairs

At Corpus Christi Army Depot (CCAD), the world's largest helicopter repair facility, Lean Six Sigma (LSS) is more than a just another program; its Continuous Process Improvement (CPI) principles are interwoven into the very DNA of the depot. For an Army Working Capital Fund organization, finding innovative ways to save time and money is an essential part of doing business – from simple ways to best use resources in everyday operations to significant cost savings on large-scale multimillion dollar projects.

CCAD must carefully manage assets, materiel, tools and labor to execute more than 640 simultaneous programs in order to meet scheduled commitments with its customers. Controlling expenditures is critical to keeping labor rates as low as possible for consumers of the depot's components and aircraft services.

To tackle this formidable task, CCAD leverages program managers and operations professionals in business and finance alongside a team of experts from the U.S. Army Aviation and Missile Command Aviation Logistics Center to focus on cost avoidance and audit readiness. LSS is the key enabler in maintaining the lowest labor rate possible, providing the tools, training and approach necessary to streamline processes and fully embed CPI in the organizational culture.

Over the past five years, the success of CCAD's CPI program is self-evident. CCAD has achieved around $335 million in cost avoidance and continues to leverage LSS to refine processes and eliminate waste. In Fiscal Year 2014, CCAD exceeded its CPI financial target of $36 million by $12.8 million, a result of several major projects led by depot employees.

Cesar Garcia, a LSS Yellow Belt and program manager on UH-60 Black Hawk recapitalization, significantly reduced materiel and labor costs associated with OH-58 Kiowa crash damage repairs by re-utilizing an available (no-cost) fuselage from a divested program. His project not only ***reduced labor hours by 96 percent, from 7,527 to 304, but also achieved a 100 percent cost avoidance by averting the purchase of a $6 million aircraft cabin.***

By addressing sizeable revenue losses associated with poorly processed Product Quality Deficiency Report (PQDR) materials, Pamela Janek, PQDR Cell team lead and LSS Green Belt, ***generated a cost avoidance of $888,000 in 2014 and $7.1 million over a 3-year period.*** Her team analyzed root causes contributing to poorly processed material, took corrective actions and developed standard operating procedures, clearly defining roles and responsibilities for processing PQDRs for financial credit.

Joel Torres, a Non-Destructive Test (NDT) tester and LSS Green Belt, ***eliminated production bottlenecks by reducing the time required for NDT Magnetic Particle/Fluorescent Penetrate Inspections from 16 days to one, a 94 percent reduction in process lead-time.*** His project identified and removed five steps deemed "non-value added" in the inspection process and allowed for the removal of rework needed to apply, and later remove, parts preservation coatings. Improving the lines of communication between engine cleaning and component NDT testing facilitated more effective management and scheduling, and prevented over-processing. Torres' project ***will save the depot an estimated $8.3 million over three years.***

For FY15, CCAD aimed for $32 million CPI cost avoidance and is on track to meet – and possibly once again exceed – that goal. As of March 2015, CCAD artisans and CPI professionals have joined forces to complete significant cost avoidance projects with notable achievements.

The bulk of CCAD production involves UH-60 Black Hawk recapitalization, a program that touches almost every process at the depot. LSS Yellow Belt Rodrick Dunham, an Aviation Intermediate Maintenance Pave Hawk work leader at the HH-60 Crash Damage Division, introduced a project to repair UH-60 Black Hawk landing gear wheels. Repairing the wheel halves instead of purchasing new units ***reduced costs over 64 percent per main wheel, resulting in a total cost reduction of $1.1 million over two years.*** Reducing costs and time on this key program ensures CCAD remains a U.S. Army Center of Excellence for rotary wing aircraft maintenance, repair and overhaul operations.

For AH-64 programs, developing innovative methods of reducing Apache component costs is crucial to the depot. Matthew Lapointe, a composite fabricator and LSS Yellow Belt, focused his efforts on a project to purchase AH-64 Apache main rotor head pitch housing shims rather than manufacturing them locally. The rotor head pitch housing requires 100 percent replacement of shims during the composite repair process. The cost to manufacture a single shim locally is $611.71, while the same newly manufactured part costs only $8.16. Purchasing shims ***resulted in a 99 percent cost reduction, a savings of over $1.4 million over three years.***

The exponential power of CPI through leveraging CCAD Public-Private Partnerships is evident through cooperative projects. Collaborating with U.S. Army Aviation and Missile Research, Development and Engineering Center (AMRDEC) Aviation Engineering Directorate (AED) and Boeing Aerospace, CCAD achieved over $7 million in cost avoidance.

Equipment Specialist Eric Andreas, a LSS Yellow Belt at the Administration and Management Office, worked one such partnership-endorsed repair process with AMRDEC and Boeing to implement a cost-saving alternate repair process on the AH-64 Apache. This CPI collaboration with CCAD external partners ***reduced process lead-time by 81 percent and labor by 89 percent for the AH-64 Apache, resulting in a projected cost avoidance of more than $6.9 million over three years.***

AMC Implementation

CONTINUOUS PROCESS IMPROVEMENT STREAMLINES OIB OPERATIONS

The U.S. Army Materiel Command (AMC) is capitalizing on continuous process improvements across the Organic Industrial Base. Through two primary tools – Lean Six Sigma and Value Engineering – AMC is increasing efficiency and effectiveness at its 23 depots, arsenals and ammunition plants, said Susan Cole, director of the Continuous Process Improvement (CPI) Division at AMC.

Lean Six Sigma is a process-focused methodology that relies on a collaborative environment to systematically remove waste in the system, streamline operations and improve quality. Value Engineering is a method to improve the value of products and services by improving the function and reducing total cost of ownership.

The Lean Six Sigma and Value Engineering tools yield financial benefits through cost savings and cost avoidance, ultimately resulting in reduced depot/arsenal rates and improved equipment readiness, said Cole. Since Fiscal Year 2010, AMC has realized around $6.5 billion in financial benefits through these tools. Examples include a $29.8 million benefit at McAlester Army Ammunition Plant on Armor Piercing Round rework and a $30.6 million benefit from Antenna Base reutilization at Tobyhanna Army Depot.

AMC has also been recognized with numerous CPI awards, including three Lean Six Sigma and eight Value Engineering awards in 2013. AMC depots and arsenals have amassed 31 Shingo Medallion awards and hold 18 Quality International Organization for Standardization (ISO) Certifications across the command.

"We have to get better at getting better. A CPI deployment strategy keeps you grounded and ensures you are focused on the right things, enabling you to get the results needed to drive efficiency and quality across the industrial base," said Lt. Gen. Larry Wyche, AMC's deputy commanding general. "Through the application of CPI tools, we can achieve exceptional results."

LEFT: Rodrick Dunham, an aircraft mechanic and a five-year CCAD artisan, reviews paperwork and equipment on an Apache. RIGHT: Matthew Lapointe, a composite fabricator and a six-year CCAD artisan, works on an AH-64 Apache rotor head. The men and women of CCAD use the process improvement principles of Lean Six Sigma to find innovative ways to save time and money across the organization. (U.S. Army photos by Ervey Martinez)

In August 2014, an MH-47 Chinook from the 160th Special Operations Aviation Regiment (Airborne) arrived at CCAD for crash damage repair stemming from a blade strike during training. The standard repair process would include Plastic Media Blasting (PMB) of the entire aircraft in preparation for inspection and repair. The MH-47 belly did not receive damage and, as such, did not require media blasting. Additionally, the belly on this aircraft contained specialized composite beams that if damaged during any aspect of the repair would result in exorbitant repair costs. LSS Yellow Belt Clarence Dean, Structures Branch chief, and LSS Yellow Belt Solomon Lopez, Production Control work lead, worked in tandem with AMRDEC and Boeing to develop a specific process to strip only damaged areas of structure, excluding any PMB on the belly. Leveraging their combined efforts, the team developed a specific stripping process to include only damaged areas of the aircraft. The localized PMB process of the aircraft resulted in cost avoidance in labor hours for the PMB process itself, as well as the additional hours not required to secure and protect the integrity of the specialized composite beams. This project ***resulted in a cost avoidance of $182,000 and, more importantly, significantly contributed to an accelerated repair timeline.*** As a direct consequence of this synergy, CCAD met the customer's requirement to have the aircraft returned back into service as quickly as possible at considerable cost savings.

Delivering readiness to U.S. Army rotary wing aviation now and for Force 2025 and beyond requires implementing continuous process improvements every day. Embracing and integrating shop floor automation into CCAD operations is critical to improving program management, performance efficiency and quality control for supported units and Soldiers. CCAD will continue to pursue new technology to develop the workforce in advanced skills needed in the future and invest in new tools, processes and test equipment that will minimize costs and production time. Reducing costs while maintaining quality and schedule is why CCAD's tag line remains, "Better, Faster and Cost Effective."

Corpus Christi Army Depot, a Department of Defense Center of Industrial and Technical Excellence for rotary wing aircraft, is a principal location of the U.S. Army Aviation and Missile Command (AMCOM). AMCOM and its subordinate organizations provide engineering, logistics and acquisition support to the product life cycle management efforts of 16 aviation and missile project managers. As a subordinate command to the U.S. Army Materiel Command, AMCOM works with partners across the Department of Defense and the private industry to support the nation's aviation and missile warfighters across the globe.

SUPPLYING FIREPOWER TO THE JOINT SERVICES

By 1st Lt. Marshall Z. Howell, Crane Army Ammunition Activity Public Affairs

ABOVE: A white phosphorus projectile burns in a modified rotary kiln furnace at Crane Army Ammunition Activity's white phosphorus-to-phosphoric acid conversion plant. The heated vapors are produced into a phosphoric acid concentration that can be used for agricultural fertilizer. The facility is the only white phosphorus conversion plant in the United States. (U.S. Army photo by 1st Lt. Marshall Howell)

At the close of the 19th century and fresh off his successful participation in the last major cavalry charge in British history, a young officer named Winston Churchill wrote, "Victory is the beautiful, bright colored flower. Transport is the stem without which it could never have blossomed."

Though modern warfare has evolved a long way from the clash of horse and saber, the maxim still rings true. As Gen. Douglas MacArthur observed, "The history of war proves that nine out of ten times an army has been destroyed because its supply lines have been cut off."

Today, more than a quarter of the entire U.S. military's critical munitions supply passes through Crane Army Ammunition Activity, whose influence extends far beyond its physical footprint encompassing 100 square miles of rolling hills and wooded ravines at its secure inland location in southern Indiana. A subordinate of Joint Munitions Command, the activity maintains up to one-third of the conventional ammunition inventory for all five service branches within the Department of Defense.

Originally established as Crane Naval Ammunition Depot in 1941, Crane Army was added to its capabilities as a tenant in 1977, formed to implement the "single manager for conventional ammunition" concept. Crane Army continues to support warfighters worldwide by receiving, storing, shipping, renovating, demilitarizing and producing conventional ammunition, missiles and related components.

ON THE MOVE

As DOD's second largest munitions depot, Crane Army receives, stores and ships a wide variety of conventional ammunition and munitions for warfighter training and combat. With 124 miles of paved roads and 94 miles of active railroads connecting 1,800 storage magazines spread out over 51,000 acres, the activity maintains the capability to leverage 4.9 million square feet of storage space into a strategic mobility platform that can make short-notice shipments in support of the joint force anywhere in the world. The organization's wide reach can also be seen in its command oversight of Iowa Army Ammunition Plant in Iowa, Letterkenny Munitions Center in Pennsylvania, and Milan Army Ammunition Plant in Tennessee.

Former Commandant of the Marine Corps Gen. Robert Barrow once noted, "Amateurs think about tactics, but professionals think about logistics." With a consistent focus on safe and efficient execution, Crane's logistics professionals perform inventory and surveillance operations and intra-depot movement on more than 650,000 tons of explosives and related ordnance items. Professionals excel by focusing on the details; at Crane even the shipping containers are groomed down to the stenciling in a state-of-the-art container repair facility. The facility provides container-inspection stands and International Organization for

Mark Benstin, the program manager for Crane Army Ammunition Activity countermeasures division, briefs Gen. Dennis L. Via, Army Materiel Command commanding general, on the production and upgrade of aircraft countermeasures such as the MJU 32A/B, MJU 57A/B and MJU 61A/B decoy flares for the Navy and Marine Corps. (U.S. Army photo by Tom Peske)

Standardization (ISO) data strips and re-stenciling kits for the Navy and other customers.

In addition, Crane Army supports the reserve component by hosting National Guard and Army Reserve units on the installation to conduct ammunition storage and logistical operations in material handling, driver's training, container inspection and repair, inventory, blocking and bracing, and other related activities.

A FLARE FOR SUCCESS

Crane's manufacturing and engineering infrastructure includes more than 200 production buildings, a chemical laboratory and a 72,000 square-foot machine shop where a variety of pyrotechnic devices are produced. These devices, such as marine location markers, signal, smoke and illuminating projectiles, and infrared flares, were critical to the military's efforts to maintain clean supply lines on IED-choked routes in Iraq and Afghanistan during the last decade of war.

In recent years, Crane engineers have teamed with Naval Surface Warfare Center (NSWC), Crane Division, to build and upgrade aircraft countermeasures such as the MJU 32A/B, MJU 57A/B and MJU 61A/B decoy flares for the Navy and Marine Corps. Without receiving the upgrades from the Crane Army countermeasure team, which include replacing the igniter to improve both shelf life and reliability, the decoy flares would otherwise be destroyed.

"We work very closely with the Navy to produce the MJU countermeasure flare," said Ed Lammert, a Crane Army explosives handler. "They will determine anything from how we produce our flare, whether we need a deviation to a component part, to how we pack our flares and how we ship them."

Working closely with other services has allowed Crane Army to effectively and efficiently react to warfighter needs.

"As a government entity, Crane Army can avoid lengthy contracting processes and rapidly respond to the needs of the ultimate customer – the warfighter," said NSWC's Brad Stevenson, the integrated product team lead for airborne expendable infrared countermeasures.

RECLAIMING THE PAST

Crane's multiple focus areas require flexible employees who can bring their unique skillsets together to support the joint warfighter. Crane Army's demilitarization team supports the larger joint force mission of global readiness by safely disposing of excess or obsolete munitions to ensure only the most advanced materiel is kept ready for use in the military's stockpile.

Crane Army's white phosphorus-to-phosphoric acid conversion plant, the only one in the United States, is a keystone of that demilitarization process. The facility is a unique recycling system that derives phosphoric acid from a wide variety of white phosphorus munitions that then can be sold on the open market.

"The significant thing about this plant is that it converts the lethality of munitions into renewable resources to include steel recycling and phosphoric acid for agricultural fertilizer," said Paul Allswede, Crane Army's demilitarization program manager. "This process generates revenue to offset production costs, saving the taxpayer dollars."

SHAPING THE FUTURE

Every effort Crane Army makes is designed to help support the joint warfighter. To better posture the organization to meet the demands of the joint force in the current environment of reduced workload and fiscal restraints, senior leadership at Crane Army conducted strategic planning sessions over the past year.

In these sessions, leaders developed imperatives nested within the higher strategies of JMC, Army Materiel Command, the Army and DOD that will help guide Crane Army in the years to come. The imperatives look at how Crane Army does business and develops efficiencies to strengthen its long-term relevancy to the Organic Industrial Base.

"Crane Army's strength is in its workforce which has met every challenge and adapted to ever-changing fiscal constraints and worldwide complexity by being innovative and improving," said Norman Thomas, Crane Army's deputy to the commander. "With the world's volatility, uncertainty, complexity and ambiguity, Crane Army understands that we must meet the challenges of tomorrow by being innovative. We must make sure our workforce is knowledgeable, our planning is aligned with strategic goals, our processes and resources are properly managed, and our actions are responsive to the needs of our customers. Within that framework, Crane Army can sustain relevance to the joint warfighter."

Crane Army Ammunition Activity's depot operations includes a state-of-the-art container repair facility that also provides container-inspection stands and ISO data strip and re-stenciling kits for the Navy and other customers.

As the DOD's second largest munitions depot, Crane Army Ammunition Activity receives, stores and ships a wide variety of conventional ammunition and munitions for warfighter training and combat. (U.S. Army photos)

Crane Army Ammunition Activity is a subordinate organization of the Joint Munitions Command (JMC), a major subordinate command of the U.S. Army Materiel Command. JMC manages the production, storage, distribution and demilitarization of conventional ammunition for all U.S. military services.

AMC Implementation

OIB ENABLES READINESS ACROSS THE JOINT FORCE

While the Army's Organic Industrial Base (OIB) provides critical capabilities and equipment to Soldiers, these 23 unique facilities also enable readiness for sailors, airmen and Marines across the U.S. military, said Gerry Bates, chief of the sustainment and operations division, G 3/4, at the U.S. Army Materiel Command (AMC).

The depots, arsenals and ammunition plants that comprise the OIB support all branches of service, manufacturing and repairing equipment for the U.S. Army, Navy, Air Force and Marine Corps. Since 2003, the reset workload at the OIB constituted $5.7 billion of equipment for the other services.

Across the OIB, industrial artisans ensure the entire joint force remains the best equipped military, said Bates. The Red River Army Depot workforce repairs Mine Resistant Ambush Protected (MRAP) vehicles for the Marine Corps, Air Force and Navy. At Anniston Army Depot, M1 Abrams Tanks are reset for the Marines. The skilled workforce at Tobyhanna Army Depot builds and repairs radars for the Marines.

These examples show the scope, breadth and depth of the strategic reach of the Army's OIB, said Bates. The OIB is not only critical to the U.S. Army, it is a national treasure providing vital capabilities in support of all warfighters.

ARSENAL OF THE BRAVE:
Committed to Serving our Country with Pride

THOUSANDS OF AMC SOLDIERS, CIVILIANS AND CONTRACTORS WORK EVERY DAY PROVIDING OPTIMAL SUPPORT TO THE JOINT WARFIGHTER WITH SKILL, PASSION AND DEDICATION. THEY ARE THE BACKBONE OF THE ORGANIZATION, ENSURING MISSION SUCCESS. ARSENAL OF THE BRAVE PROFILES A FEW OF THE MANY OUTSTANDING INDIVIDUALS FROM ACROSS AMC WHO EXHIBIT THESE VALUES.

U.S. ARMY TANK-AUTOMOTIVE AND ARMAMENTS COMMAND (TACOM)

Chief Warrant Officer 4 Richard Wills, II is one of two warrant officers assigned to Anniston Army Depot in Alabama. His technical areas of expertise are small arms and artillery operations, but he is eagerly learning more about the various repair and overhaul processes of combat vehicles that coincide with the depot's mission. Wills began his military career in 1988 as an Army armament repairer. He served in the enlisted ranks until 2003 when he was selected to become a warrant officer. *"Over the next two years, I hope to broaden my understanding of maintenance processes," said Wills. "My previous maintenance experience was limited to field repairs, but the depot is much more efficient than we are in the field. The complete repair process flows well here."*

William Simpson, mechanical equipment repairer, Sierra Army Depot, Herlong, California, was recognized for his commitment, expertise and leadership in the reset of the Inland Petroleum Distribution System. With only seven years as a government employee, Simpson is looked upon by his peers as a leader who takes initiative when performing corrective repair on all water and fuel systems for the Army, as well as any other powered systems associated with depot operations.

Walter Zinko, Sierra Army Depot senior general engineer, has dedicated more than 37 years working within Public Works and serving in the Army. In his current position, Zinko was instrumental for the upgrade of facilities and roadways to support the depot's changing missions. Earlier in his career, he received the award for Department of Public Works Engineer/Resource Management Executive of the Year.

JOINT MUNITIONS COMMAND (JMC)

Roy Flick, Jr., known as Junior to those who work with him at Crane Army Ammunition Activity in Indiana, reached the milestone achievement of 55 years of service to the government. Flick credits his longevity to good health and enjoyment of his work. He said as long as his health continues, he has no immediate plans to retire. While Flick tends to be modest in talking about reaching the milestone, his supervisors have plenty of praise for the man they go to first to learn from his past experiences. Thinking back on all the people who retired before him, he said, *"I used to joke with some of the supervisors back when they were retiring, saying 'I am going to stay longer than you.'"*

Jim Cox, general engineer, JMC Quality Directorate, was inducted into the Ordnance Order of Samuel Sharpe, Nov. 24, 2014. The Samuel Sharpe Award recognizes ordnance personnel nominated by their peers who have demonstrated integrity, moral character and professional competence during their federal careers. Cox was recognized and honored for his 31 years of federal service and going above and beyond in providing quality ammunition to the warfighter.

Ron Neff celebrated 45 years of federal service on Dec. 2, 2014. After serving in the Navy during Vietnam, Neff served at Red River Army Depot in Texas, Blue Grass Army Depot in Kentucky, and Kansas Army Ammunition Plant before serving more than 30 years at Milan Army Ammunition Plant in Tennessee. In addition to outstanding performance of his duties in safety and security as the installation risk manager, Neff has been invaluable in his service to Soldiers by supporting training missions, wounded warrior hunts and other services in his personal time.

Julie Solinski, civilian executive assistant, Iowa Army Ammunition Plant, has more than 30 years of service to the government. She began as a quality assurance and reliability intern and served as a quality assurance representative on a variety of munitions programs. As the civilian executive assistant, Solinski said her primary role is to provide continuity for the plant, as the military commanders rotate every two years to other assignments.

U.S. ARMY AVIATION AND MISSILE COMMAND (AMCOM)

JoAnn Yeager began her career at Letterkenny Army Depot 35 years ago in the depot's Directorate of Public Works (DPW), Heating Section, as a clerk typist. She moved to positions in the depot's personnel office, legal office and Depot System Command's (DESCOM) public affairs office. When DESCOM moved to Illinois in 1994, she did a job swap back to Letterkenny into the Maintenance Directorate, where she spent the next 15 years. She eventually returned to DPW and after four years, she accepted the role as a staff action officer in the newly established Directorate of Operations – Planning and Support. This is where she will say goodbye to Letterkenny in July 2015. *"I enjoyed the opportunities Letterkenny had to offer to move between positions and directorates, and the ability to learn the varied work that the depot performs and how each employee's work really does support the warfighter," said Yeager.*

Kevin Starry is a 40-year employee of the Directorate of Information Management at Letterkenny Army Depot, Pennsylvania. He monitors the Automated Storage and Retrieval System (ASRS) conveyors and cranes for errors, and contacts appropriate personnel if any problems arise. In addition, Starry assists ASRS personnel in resolving inventory problems and is available for off-shift support to keep the ASRS operation running 24 hours-a-day, 7 days-a-week. *"I'm not going to retire for a few more years," said Starry. "But when I do, I'm moving to New Mexico where it is warmer and there is less snow."*

William 'Burgie' Bragunier knew he wanted to work at Letterkenny Army Depot from an early age. He enlisted in the Army, and with no break in service, Bragunier now celebrates 40 years working for the depot. He also served 21 years with the National Guard. He started as a wage grade one laborer with the Directorate of Public Works (DPW). Bragunier still works in DPW for the Construction Division as an equipment operator. He says the job is much the same except now when he clears snow on a road, he pulls a lever to engage the plow instead of picking up a shovel. Bragunier said retirement is in his future, and he plans to hunt and fish. He admits that if he retires before his wife, the fishing may have to wait. *"I'll probably be doing 'honey-do lists' until she retires," Bragunier joked.*

U.S. ARMY COMMUNICATIONS-ELECTRONICS COMMAND (CECOM)

Sgt. 1st Class Jason Hyche, the non-commissioned officer in charge at the U.S. Army Pueblo Chemical Depot, Colorado, is an Army Master Instructor and has been instrumental in developing and teaching various safety and refresher courses for depot employees. Hyche, a subject matter expert in the areas of hazardous waste and emergency response, is also responsible for post-to-post coordination, and for depot augmentation forces stationed at Fort Carson, Colorado. *"Being here at the depot is very different in that I am the only Soldier besides the commander," he said. "But I noticed one thing immediately – the workforce is very dedicated to doing their best."*

Sara Stellatella was named the Tobyhanna Army Depot Employee of the Quarter in the junior category for the fourth quarter of 2014. Stellatella, an administrative assistant in the Production Management Directorate, has worked at the depot for five years handling various administrative responsibilities while ensuring directorate leaders are prepared and well-informed. Stellatella focuses largely on evolving her intrapersonal and organizational skills, and learning how the depot's internal and external functions contribute to the mission.

Deana Haikes from CECOM's Tobyhanna Army Depot was named as the command Employee of the Quarter for fourth quarter Fiscal Year 2014 for outstanding duty performance. Haikes, a lead budget analyst in the Resource Management Directorate, previously earned the depot's 2014 Employee of the Quarter for the third quarter, senior category. Haikes worked alongside three budget experts to prepare the depot's multimillion dollar FY16 budget estimate submission. Attention to detail and timelines were crucial to Haikes' ability to follow up on assigned actions and ensure critical steps and budget requirements were not overlooked.

MILITARY SURFACE DEPLOYMENT AND DISTRIBUTION COMMAND (SDDC)

Denison "Ace" Parker, a traffic management specialist in SDDC's 599th Transportation Brigade's command operations center, has worked for the brigade since it moved to Hawaii in 1991. Parker retired from the U.S. Navy as a senior chief petty officer in 1983 after 24 years in the submarine service, where he fulfilled every job from seaman to chief of the boat. He is originally from Annapolis, Maryland, and has more than 50 years of government service.

Ruby Ragragola, an operations analyst at SDDC's 599th Transportation Brigade, has worked at the brigade for eight years and has completed more than 35 years of government service in total. Originally from Paia, Maui, Ragragola graduated from Farrington High School in Honolulu. She served for nine years in the U.S. Air Force and 22 years in the U.S. Army.

U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND (RDECOM)

Tiffany Sutton, a physicist at the U.S. Army Edgewood Chemical Biological Center for 14 years, has performed research on aerosol-borne biological threats in a series of high-profile studies and taken on roles of increasing responsibility with each assignment. One of her earliest assignments was assessing commercial detection systems for the U.S. Postal Service during the 2001 anthrax attacks. For the past two years she has been supporting Leg 3 of the Project Joint United States Forces Korea Portal Integrated Threat Recognition Advanced Technology Demonstration, where she supported a team of nine, charged with assessing ten different biological agent detection technologies to determine their detection limits and suitability for a field environment. Currently, she is supporting a number of projects that are focused on chemical aerosol threats of interest.

Dr. Ramanathan Nagarajan was recently selected by the Secretary of the Army for the position of senior research scientist for Soldier nanomaterials at the U.S. Army Natick Soldier Research, Development and Engineering Center. He serves as the Army's senior research scientist in nanomaterials-based technologies, especially addressing Soldier domain problem areas affecting individual warfighters and small units. Nagarajan earned his doctorate in chemical engineering from the State University of New York at Buffalo, Amherst, and his Bachelor of Technology and Master of Technology in chemical engineering from the Indian Institute of Technology, Kanpur, India. He is an internationally recognized expert on molecular self-assembly, colloids, polymers and nanomaterials, and is a Pennsylvania State University professor emeritus of chemical engineering.

Giorgio Bertoli, chief engineer, Cyber Offensive Operations Technology Division of the U.S. Army Communications-Electronics Research, Development and Engineering Center Intelligence and Information Warfare Directorate, was lead for the working-level Implementation Planning Team that executed the day-to-day effort to etch out the Army's Cyber Materiel Development Strategy, which was published earlier this year. Doctrinal, operational, acquisition, and research and development communities for Army materiel development worked together for more than two years on a comprehensive strategy, which looks at where Army cyberspace capabilities currently are and what lies ahead.

Chenxi Dong-O'Malley, U.S. Army Natick Soldier Research, Development and Engineering Center force projection and sustainment portfolio manager, recently received honorable mention in the "Lessons Learned" category of the first annual Major General Harold J. "Harry" Greene Awards for Acquisition Writing. Dong-O'Malley was a member of the Competitive Development Group/Army Acquisition Fellowship (CDG/AAF) program of the U.S. Army Acquisition Support Center and wrote about the concept of high-performance teaming through leadership training. Dong-O'Malley has worked on individual chemical and biological (CB) protection science and technology, and as a CB product system engineer for Product Manager Soldier Clothing Individual Equipment under Program Executive Office Soldier. For the past three years, while a member of the CDG/AAF program, she worked in different developmental assignment positions.

U.S. ARMY CONTRACTING COMMAND (ACC)

Katherine "Katie" Thompson,

contract specialist from ACC-Aberdeen Proving Ground, was recently recognized for her successful completion of the Department of Defense Civilian Emerging Leadership Program (DCELP). DCELP is a competitive one-year program that covers topics such as leadership, conflict resolution, team building, emotional intelligence and effective writing. *"DCELP provided me the tools and strategies I need in order to develop as a leader and promote positive change in DOD," Thompson said.*

Master Sgt. Lucas Tighe, a

Mission and Installation Contracting Command Soldier from Fort Carson, Colorado, has been named the U.S. Special Operations Command Outstanding Contingency Contracting Officer for 2014. Tighe, from the 918th Contingency Contracting Battalion, earned the award for the enlisted category as a result of his contributions to contracting and competition during a 2014 deployment to Al Udeid Air Base, Qatar, in support of Special Operations Command Central Forward.

Capt. Miracle Garcia, 905th

Contracting Battalion, U.S. Army Expeditionary Contracting Command, was named the U.S. Special Operations Command Outstanding Contingency Contracting Officer for Fiscal Year 2014 while serving as a contracting officer supporting Army special operations forces. Embedded with U.S. Army Special Operations Command at Fort Bragg, North Carolina, Garcia led the 92nd Civil Affairs Battalion, U.S. Army Special Operations Command Office of Counsel and U.S. European Command points of contact to solve a highly visible humanitarian and civic assistance mission supporting the Bosnian people. With proper legal authority, Garcia enabled Army Special Operations Forces to purchase water filters that helped provide potable water to more than 20,000 Bosnians.

U.S. ARMY SUSTAINMENT COMMAND (ASC)

Ranetta Jackson, food program

manager at the 405th Army Field Support Brigade at the Logistics Readiness Center in Bavaria, directs plans and coordinates the Installation Food Service Program. Jackson, who has been with the Army for more than six years, said that the best part of her job is taking care of and supporting Soldiers. *"What I do has a positive real-world impact on the quality of life of our Soldiers," she said.* Jackson, a grandmother of four, said she is enjoying her time living in Europe which affords her the opportunity to travel and explore new cultures.

Staff Sgt. Tyrone Plessner,

a senior mechanic and contracting officer representative at Camp Arifjan, Kuwait, has worked for the U.S. Army for 15 years. He currently serves as the maintenance quality assurance non-commissioned officer for the largest forward deployed Army prepositioned stocks set worldwide. Plessner said that he enjoys the opportunity to work with the variety of active and reserve Soldiers, Department of Army Civilians, contractors and third country nationals at Camp Arifjan. *"We ensure that the warfighter has the best equipment possible and that the equipment is available at any given time to ensure mission success," Plessner said.*

U.S. ARMY SECURITY ASSISTANCE COMMAND (USASAC)

Sherry Masters joined USASAC

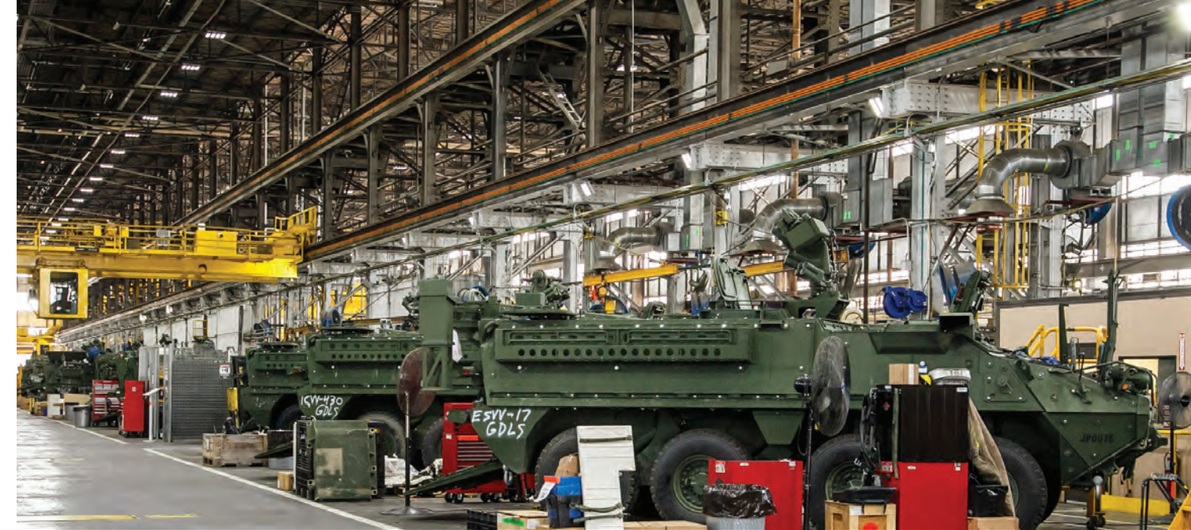
as the Internal Review and Audit Compliance Officer in 2012. With almost 33 years of federal government service, Masters has spent much of her career planning and executing audits of operational, financial and program functional areas. Her duties have included two deployments to Afghanistan serving as the chief of audit for the Afghanistan Engineer District and two deployments to Iraq auditing for Task Force Restore Iraqi Oil and supporting audit efforts within the Gulf Region Division. Masters also supported emergency recovery operations for Pennsylvania, as well as flooding and five hurricane recovery efforts. *"I am proud of the opportunities I've been afforded – those that not only advanced my career, but all the events and individuals over the years that greatly contributed to my self-growth," said Masters.*

Maj. Christopher Peterson, senior

medical operations advisor to the Saudi Arabian Ministry of the National Guard (MNG), is responsible for all aspects of health service support modernization, including policy, doctrine development, organization, training and materiel acquisition for a 120,000-man full-time fighting force. Peterson focuses on assisting field medical units modernize and prepare for war or other contingency operations. He provides oversight for a $6 million training service contract and evaluates 24 contractors who train the MNG. *"I like the autonomy I have as a medical advisor and the ability to travel across the entire Kingdom of Saudi Arabia to advise and assist virtually every unit in the Ministry of the National Guard," he said.*

"OUR PEOPLE ARE OUR GREATEST ASSET. OUR ARMY CANNOT ACCOMPLISH ITS MISSION WITHOUT WHAT YOU DO EACH AND EVERY DAY." – GEN. DENNIS L. VIA

FOREIGN MILITARY SALES SUPPORT OIB SUSTAINMENT



Employees at ANAD, one of the nation's 23 critical OIB facilities, work on Stryker vehicles. Foreign Military Sales bolster workload across the OIB. (U.S. Army photo by Mark Cleghorn)

By Adriane Foss, USASAC Command Information

As the U.S. Army transitions from combat to sustainment, the U.S. Army Security Assistance Command (USASAC) continues to do its part to maintain critical capabilities across the 23 depots, arsenals and ammunition plants that make up the Organic Industrial Base (OIB).

During Operations Iraqi and Enduring Freedom, the OIB surged, resetting nearly 3.9 million items – a workload three times that of the Vietnam War. However, the transition from combat to sustainment led to a decline in workload at OIB facilities nationwide.

The diminished workload is one of the OIB's greatest challenges, although predictable, according to Tim Sullivan, chief of G-3 Operations at USASAC.

"It happens every time we come in and out of combat operations. In this case, we saw a significant increase in workload after the beginning of the war in 2003, which remained relatively stable throughout the war years," said Sullivan. "As we came out of Iraq in 2011 and Afghanistan in 2014, it was a natural occurrence for the workload to decline."

USASAC, a U.S. Army Materiel Command (AMC) subordinate command, provides a multitude of key capabilities to the U.S. Army and its partners across the globe, but one of its greatest values is its Foreign Military Sales (FMS) program. Last year, FMS cases netted the OIB more than $140 million in revenue.

Understanding the ebb and flow of work in the OIB is imperative, said Sullivan, who served as Anniston Army Depot (ANAD) commander from 2012 to 2014. FMS is a critical alternative to bolster OIB labor.

FMS provides workload to OIB facilities, including ANAD, a state-of-the-art maintenance center and munitions storage site covering more than 25 square miles in central Alabama and employing around 4,000 industrial artisans. FMS frequently fills voids where planned or programmed work falls off.

"It also helps to supplement workload shortages during the peacetime years. Depots and arsenals have a core workload that defines the number of hours required to sustain capabilities that reside within the OIB facility," said Sullivan. "FMS helps to offset those shortages in direct labor or core workload hours."

While each OIB facility is unique, they all have one thing in common – an unmatched labor force, according to Sullivan.

"The average experience level at Anniston Army Depot, regardless of system, is 25-plus years," he said. "Nobody can compete with that. The OIB can do it all because it has the facilities, skilled workforce, technical expertise and materiel to successfully execute any program."

He also noted the OIB's strong capability to reverse engineer and remanufacture, and the OIB's responsiveness to surge in support of rapid requirements. The unmatched quality and capabilities the OIB offers is what drives demand from allies for U.S. equipment, said AMC Commander Gen. Dennis L. Via.

"Foreign militaries trust in the equipment that the United States provides to them," Via said. "They know they are getting the highest quality, advanced equipment, and through the OIB, they can also sustain the equipment they purchase."

While FMS is crucial to OIB sustainment, it is equally important to protect and preserve the capabilities that exist in the commercial base, said Sullivan.

"We really shouldn't advocate for one or the other, but rather, educate our partners so that they understand the capabilities of both," he said. "The true solution is that both the commercial base and OIB have strengths. The commercial is strong in research and development, technical and material support, where the OIB has the infrastructure, facilities and skilled workforce."

Albeit a small fraction of total OIB revenue generating only around 3 percent in Fiscal Year 2014, FMS continues to contribute to maintaining core competencies and workload across the OIB.

The U.S. Army Security Assistance Command (USASAC) is responsible for managing security assistance programs and Foreign Military Sales for the Army. USASAC is a subordinate command to the U.S. Army Materiel Command (AMC). With support from AMC, DOD agencies and U.S. industry, the command provides materiel, training, education and other services to help 145 ally countries and multinational organizations strengthen their defensive capabilities, deter aggression, achieve regional stability and promote democratic values.

SDDC TRANSPORTS, TRACKS AMMUNITION ACROSS HIGHWAYS, RAILWAYS, OCEANS

By Sarah Garner, SDDC Public Affairs

Military Ocean Terminal Sunny Point (MOTSU) completed construction on two new ship-to-shore cranes in October 2012 as the focal point of the Center Wharf expansion project. The port's South Wharf still boasts two smaller first generation cranes. MOTSU encompasses 16,000 acres and is the Army's primary east coast deep-water port. (U.S. Army photo by Kim Hanson)

Every day, trucks and rail cars cross the country loaded with cargo to support the warfighter. The Military Surface Deployment and Distribution Command (SDDC), a subordinate organization of the U.S. Army Materiel Command, is a key player in getting much of that military cargo where it needs to be, on time and in good condition.

The Soldiers, sailors, airmen and Department of the Army Civilians who make up SDDC facilitate the movement of all types of supplies and materiel, but one of the most important categories involves ammunition and how it moves from the Organic Industrial Base (OIB) to the warfighter overseas.

When it comes to arms, ammunition and explosives (AA&E) cargo, SDDC is involved at several phases of movement, from the initial requirement at the Joint Munitions Command (JMC), to delivery at a seaport of embarkation (SPOE), to loading the cargo for shipment overseas.

The journey begins with a requirement generated by the services and consolidated by JMC. At this initial phase, a traffic management specialist at SDDC headquarters located at Scott Air Force Base, Illinois, offers the shipment for overseas movement either by a one-time-only vessel or via a Military Sealift Command-chartered vessel.

"SDDC, JMC and port personnel continue coordination throughout the movement process to ensure the cargo will arrive in time to allow for a review of documentation and an update of the load plan," said Claire Bandy from SDDC's Fusion Branch, who has worked with JMC for nine years and is primarily responsible for the coordination of ammunition movements.

Following this phase, JMC depots fill the ammunition requisitions according to the classification and quantity needed. JMC, in coordination with SDDC, then begins the process of planning the movement from the OIB facility, to one of two ammunition terminals operated by SDDC's 596th Transportation Brigade – Military Ocean Terminal Concord, California, or Military Ocean Terminal Sunny Point, North Carolina.

To ensure a coordinated movement, Steve Kerr, 596th Transportation Brigade deputy commander, and his staff are involved in these early phases.

"We prepare a pre-stow plan using the Integrated Computerized Deployment System to ensure the proposed quantities and classes of ammunition will fit on the vessel based on their category," said Kerr. "We then plan for the ammunition to arrive 10 days to two weeks prior to loading, depending on whether or not we have to containerize the ammunition before loading the vessels."

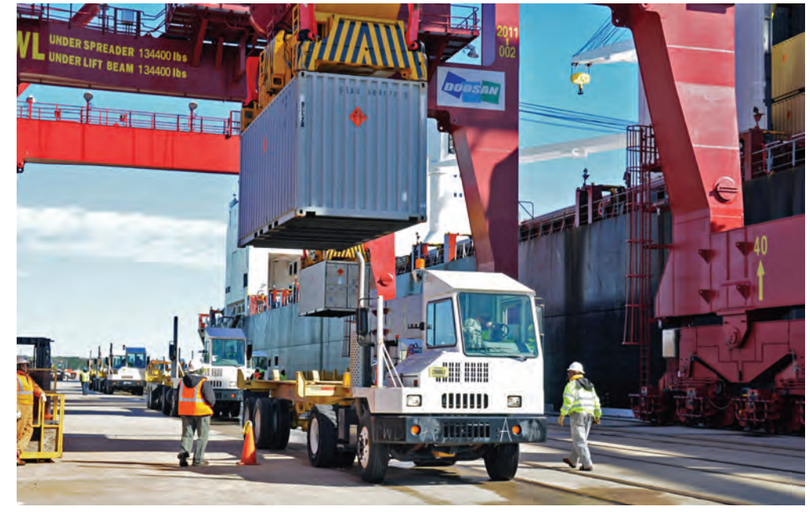
Once the initial planning is complete and the vessel has been selected, the transportation officers at JMC depots schedule the movement of the ammunition to the port via rail car or truck using negotiated rates established by SDDC with the commercial carriers.

As AA&E cargo moves across our nation's highways, it is tracked by SDDC's Defense Transportation Tracking System (DTTS). DTTS is a satellite-based tracking system used to provide in-transit visibility of Department of Defense AA&E shipments moving throughout the Defense Transportation System.

The system is monitored 24 hours-a-day from an operations center at the SDDC headquarters and can initiate a rapid emergency response to in-transit accidents, monitor movements for security issues and provide emergency information for DOD senior leader awareness when required.

When the ammunition arrives at the SPOE, 596th Transportation Brigade personnel take over. They segregate and stage the cargo, then complete the final stow plan and use contracted stevedores to load the vessel. Once loading is complete and the vessel sails, it is monitored by the SDDC command operations center until it is either offloaded by another SDDC brigade or is staged at sea.

The ammunition required to win our nation's wars has a long and varied route from the OIB to its delivery destination. The men and women of SDDC take pride in their role of providing adaptive global deployment and distribution capabilities to meet the nation's objectives.



The Military Surface Deployment and Distribution Command (SDDC), a subordinate organization of the U.S. Army Materiel Command and Army Service Component Command of the U.S. Transportation Command, delivers world-class, origin-to-destination distribution solutions. Whenever and wherever Soldiers, sailors, airmen, Marines and Coast Guardsmen are deployed, SDDC is involved in planning and executing the surface delivery of their equipment and supplies. SDDC partners with the commercial transportation industry as the coordinating link between DOD surface transportation requirements and the capability industry provides, ultimately deploying, sustaining and redeploying U.S. forces and materiel around the globe.

ABOVE: Stevedores guide a container from the crane's spreader bar onto a "bomb cart" trailer during a cargo offload using new ship-to-shore container cranes on the recently renovated center wharf at Military Ocean Terminal Sunny Point, North Carolina.

RIGHT: Personnel assigned to SDDC's Operations Directorate plan, direct, synchronize, coordinate and monitor port operations and global surface movements through subordinate operation commands and strategic seaports. The command's operations center, along with brigade operations centers, maintain operational oversight of all SDDC operations 24 hours-a-day, 365 days-a-year. (U.S. Army photos)

ACROSS THE YEARS

200+ YEARS OF BOMBS AND BULLETS

Since the Revolutionary War, America's ammunition industrial base has risen to the challenge to meet the needs of the nation's military. Ammunition plants and activities produced a wide range of chemicals, artillery ammunition, bombs, grenades, rockets, mines, small-caliber ammunition, powders, explosives and more in support of U.S. warfighters and their allies. The support that began more than 200 years ago continues today as the U.S. military is engaged in operations and training exercises across the globe.

THE FIRST 100 YEARS

The nation learned its first lessons in materiel mobilization during the Revolutionary War. Leaders of the Continental Army made strides to organize, produce, manage and supply the nation's Army, constructing 27 depots and arsenals.

Peacetime following the Revolutionary War led to reductions in military expenditures and major cuts to production, causing readiness challenges for future conflicts. To meet those challenges, the Ordnance Department was formed in 1812 with an initial budget of $20,000. The Ordnance Department grew and developed infrastructure to keep pace with national development, but inventory was often small in comparison to the actual requirements for conflicts that followed, including the Civil War, Spanish-American War and Philippine-American War.

Leaders in the ammunition industrial community learned a valuable lesson during this century: depots and arsenals provided technical assistance and expertise that was invaluable when industrial expansion was required and retained special skillsets that were otherwise lost.

THE WORLD WARS

As the U.S. prepared for the nation's eventual involvement in World War I, ammunition commodities became an important focus. The country had relied heavily on foreign companies and private suppliers to meet ammunition needs, but with the outbreak of hostilities in Europe, the Ordnance Department saw an even greater need to expand plant capacity and capability for the production of munitions.

Supporting the requirements of WWI proved difficult, but by the end of the war, more than 90 government and commercial plants were producing ammonium nitrate, picric acid, smokeless powder and TNT. An additional 93 plants were loading, assembling and packing shells, bombs, grenades, boosters, fuzes and propellant charges.

The backbone of the current ammunition industrial base was established during World War II. More than 80 ammunition plants were constructed during the course of the war, and some of the most remarkable technological advances of the 20th century occurred in the ammunition industry. With virtually no mass production of military ammunition since WWI, the field was wide open for the development of new processes and machinery. This was also an era of doctrinal development as U.S. Army field commanders paved the way for advancing foot Soldiers by use of massed artillery fire and aerial bombing instead of exercising frontal infantry attacks.

1770 1780 1790 1800 1810 1820 1830 1840 1850 1860 1870 1880 1890 1900 1910 1920 1930 1940

Across the Years

200+ Years of Bombs and Bullets

Korea, Vietnam and the Cold War

The years following WWII saw the downsizing and resurging of the ammunition industrial base as the U.S. fluctuated between peace and conflict. Only 14 ammunition plants remained active immediately following WWII, primarily engaged in demilitarization, renovation and production of fertilizer. By 1950, the Ordnance Department faced the arduous task of restoring more than 50 plants to meet the ammunition requirements of the Korean War. Following the Korean War, once again the base faced reductions down to 26 ammunition plants in operation to meet peacetime requirements. Large stockpiles of ammunition and advancements in production process technology supplemented those 26 plants to meet the military's needs during the Vietnam conflict.

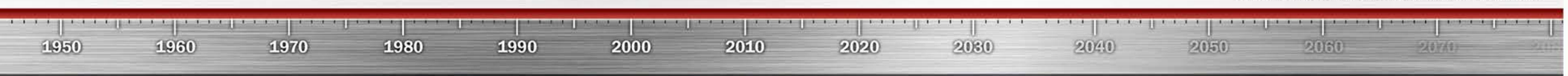
By the end of the Cold War, despite revitalization and modernization throughout the 1980s, the munitions industry was burdened by excess capacity that it did not have funding to maintain.

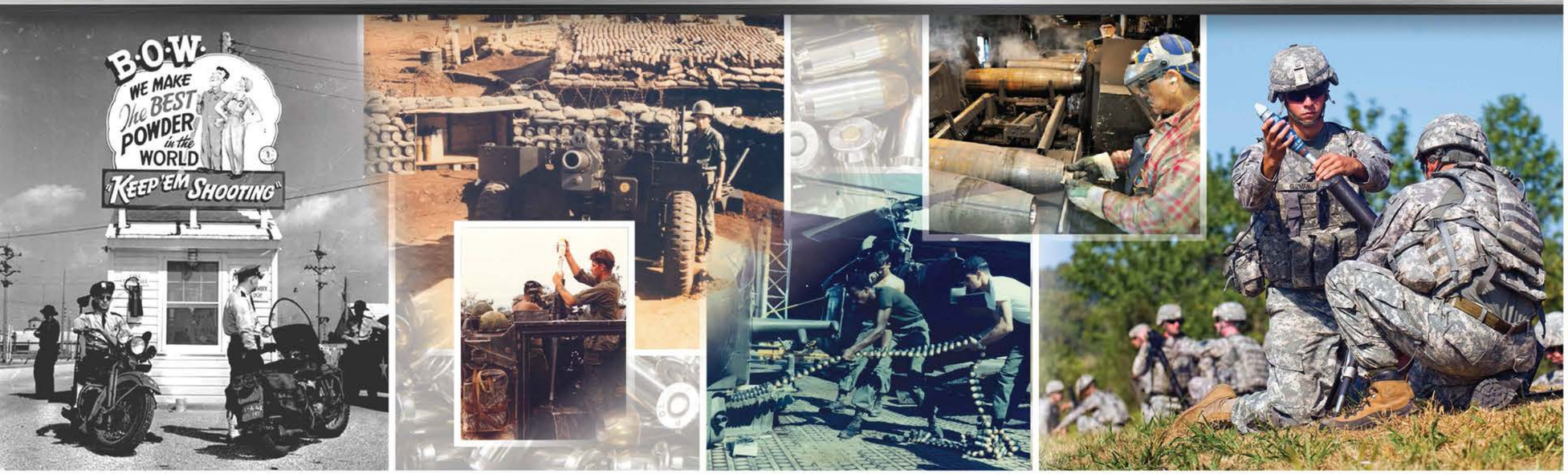
21st Century

As the U.S. military fought wars on two fronts in the first ten years of the 21st century, the Army made significant strides in transforming into a lighter, more lethal land force, supplying warfighters faster, with improved products and with minimized life cycle costs. Despite the industrial base being small compared to years past, leaders at the U.S. Army Materiel Command and its subordinate Joint Munitions Command (JMC) and Joint Munitions and Lethality Life Cycle Management Command implemented initiatives that enabled the ammunition community to develop, acquire, field and sustain value-added ammunition for the joint warfighter.

Today, JMC – the latest in a series of commands dating back to WWII to manage the nation's ammunition plants – is responsible for the production, storage, distribution and demilitarization of conventional ammunition for all U.S. military services. The organization, headquartered at Rock Island Arsenal, Illinois, is responsible for ammunition plants and storage facilities in 12 states where it also employs around 11,500 military, civilian and contractor employees. Currently, 15 U.S. Army-owned ammunition installations and depots produce and store more than 1.6 billion rounds of ammunition for training and combat.

The JMC and AMC History Offices contributed to this article.





Log Chronicles

Highlighting the Contributions of Past Professionals

George Diehl retired as a civilian from the U.S. Army in 1976 after serving more than 30 years at the Tooele Army Depot in Tooele, Utah. Diehl was employed with the Department of Defense in 1941 as a civilian munitions handler at Savanna Ordnance Depot in Savanna, Illinois. In December 1942, he was temporarily transferred to Tooele for a 30-day assignment, but ended up staying for his entire career. "I can only conclude that I didn't quite get the job done," Diehl joked.

In 1946, Diehl was promoted to the role of civilian executive assistant where he stayed for the next 30 years. Diehl led the installation in addressing shifting mission priorities, significant turbulence of personnel, major organizational realignment and many other significant events in the depot's history. After leaving the U.S. Army, Diehl was elected to three consecutive terms as mayor of Tooele, serving from 1983 to 1994. At the age of 96, Diehl said he still likes to pay a visit to the Tooele Army Depot from time to time. "I like to keep them on track," he said.

Q: What were the biggest changes to the ordnance industry during your time with the U.S. Army?

A: The handling of munitions changed tremendously over the years. Prior to World War II, it was all hand loaded. With the introduction of the forklift and of different packaging methods, it was an interesting time.

Q: What innovations were the most important during that time in the advancement of the ammunition industrial base?

A: Mechanization really took over the ammunition business. Previously everything was hand loaded and unloaded, from storage to the boxcars, and from the boxcars to the storage buildings. Mechanization changed everything.

Q: How important were partnerships with private industry to Tooele's mission?

A: Our equipment programs were very closely tied to private industry – vehicle repair, artillery, tanks, weapons, everything. It was vital to completing the mission.

Q: How important are the Army's depots and arsenals to Soldier success?

A: Extremely important to serving the troops in action. Tooele Army Depot was very strategically located for supplying the west coast ports – San Francisco, Los Angeles and Seattle. We had a very active mission. We took great pride in our quick response and practically overnight deliveries.

ASC'S ORGANIZATIONAL INDUSTRIAL BASE: STRETCHING FROM THE HEARTLAND TO THE FRONT LINES

By Sgt. William J. Taylor, 402nd Army Field Support Brigade Public Affairs

A 7,000 mile plane ride and a bumpy convoy trip separate Camp Buehring, Kuwait, from Rock Island Arsenal, Illinois. However, with today's technology coupled with hardworking Soldiers, Department of the Army Civilians and contractors, one would think Rock Island, home of Army Sustainment Command (ASC), was right next door.

ASC's 402nd Army Field Support Brigade (AFSB) Logistics Support Element (LSE)-Kuwait and Brigade Logistics Support Team (BLST) afford units in the U.S. Central Command the reach-back capabilities they need to ensure that mission readiness is the highest priority.

"To understand how this process works, you have to look at the engaging partners within the system," said Chief Warrant Officer 3 Shavonta D. Gaynor, 402nd AFSB's LSE-Kuwait maintenance officer. "Here we are able to utilize resources such as the life cycle management commands (LCMCs) and the Army's Organic Industrial Base (OIB) to adequately address the issues for units on the ground."

A recent training event demonstrated these capabilities, Gaynor explained. A unit had a deadlined M1A2 Abrams Tank requiring a heads-up display part. The unit ordered the part, but the estimated shipping date was around five months. Gaynor found the Tank-automotive and Armaments Command (TACOM) item manager, and after sending critical information about the deadlined tank and how it would affect the unit's overall mission, the item manager was able to have the part released and shipped from the TACOM Armament Partnership Facility warehouse in Fort Hood, Texas.

"The unit received the part three weeks later, and as a result, the tank was repaired and reported as fully mission capable. Using reach-back capabilities by coordinating directly to the LCMC item managers, the

Michael Lane, a Communications-Electronics Command power and environmental Logistics Assistance Representative, teaches Soldiers from the 2nd Battalion, 43rd Air Defense Artillery Regiment, about an Antenna Mast Group during training at Al Udeid Air Base, Qatar. (U.S. Army photo by Staff Sgt. Roger K. Hendricks)

Logistics Assistance Representatives (LARs) from all four LCMCs are also part of the 402nd AFSB and provide training and technical assistance to multiple units within the U.S. Central Command's area of responsibility.

LARs interface directly with the units to create reports and review unit reports, but most importantly, to see firsthand when problems arise, said John Salazar, an Aviation and Missile Command (AMCOM) senior systems technical representative who provides unit commanders with the technical guidance necessary to resolve weapon systems, equipment and systemic logistics problems while in theater. The LARs assist Soldiers in troubleshooting, and if a part needs to be repaired or replaced, they expedite those items from Army arsenal and depot item managers around the world.

"Our LARs go to Corpus Christi Army Depot as well as Fort Hood to receive extensive training to learn how they can provide assistance on the ground while also understanding what capabilities the depots can bring," Salazar said."In addition, the LARs are sent to specialized schools provided by the system's original equipment manufacturer such as the General Electric engine school, composite repair training, Black Hawk, Apache, Chinook, ground support and new equipment training. Also, unmanned aerial systems (UAS) have become a significant part of the LAR coverage, so they are sent to airframe-specific training to support the increasing number of UAS."

One of AMCOM's airframe LARs, Ryan Watson, said that being able to assist Soldiers is the highlight of his job. Recently, Watson met with Soldiers from the 4th Battalion, 501st Aviation Regiment, to discuss proper repairs on a Boeing AH-64 Apache vertical stabilator. Watson worked with Army depots multiple times to have parts ordered.

"We work with and for the Soldiers to keep them ready and safe for operations," Watson said. "We are technical experts in our fields who are able to assist and train the Soldiers to keep aircraft mission-capable."

The 11th Air Defense Artillery Brigade works with Bernard Battle, an AMCOM Patriot LAR who ensures that critically needed parts for the Patriot system are within arm's length.

"We work with the Army depots, contracting logistics support and Theater Supply Support Activity partners to retain and stock critical parts that are known to break down or need replacement on Patriot systems," Battle said. "By being embedded with the unit, we help document the trends when these parts need replacement and reach back to equipment engineers to make new innovations."

The continued collaboration and accomplishment between the Army depots and arsenals, LCMCs, LSE/BLST, LARs and Soldiers shows a healthy partnership as the Army concludes more than a decade of war. As the drawdown of deployed forces continues, the Army's OIB remains a steadfast anchor ensuring the Army stays well-resourced and prepared for future contingency operations.

The 402nd Army Field Support Brigade is one of seven brigades worldwide under the U.S. Army Sustainment Command (ASC). ASC, a subordinate organization of the U.S. Army Materiel Command (AMC), bridges the national sustainment base to the Soldiers in the field, bringing together the capabilities of AMC to provide the right equipment, at the right place and time, and in the right condition.

ABOVE LEFT: Ryan Watson, an Aviation and Missile Command airframe LAR, explains the proper repair techniques for a Boeing AH-64 Apache vertical stabilator to Soldiers from the 4th Battalion, 501st Aviation Regiment, at Camp Buehring, Kuwait. (U.S. Army photo by Sgt. William Taylor)

ABOVE RIGHT: Michael Lane, a Communications-Electronics Command power and environmental LAR, teaches Spc. Joshua Lowry, a wheeled vehicle mechanic from the 2nd Battalion, 43rd Air Defense Artillery Regiment, how to troubleshoot a Potentiometer R2 with a multimeter during training at Al Udeid Air Base, Qatar. (U.S. Army photo by Staff Sgt. Roger K. Hendricks)

BEFORE THE OIB: HOW S&T INNOVATIONS ENSURE SOLDIER READINESS

By Natick Soldier Research, Development and Engineering Center Public Affairs

Dr. Tad Brunye guides a Soldier participating in a navigation virtual reality exercise at the Natick Soldier Research, Development and Engineering Center. Brunye, who is on the Natick Cognitive Science Team, is investigating various influences on choices people make when choosing a route. (U.S. Army photo)

Before the military's equipment gets manufactured, reset and repaired in the Army's Organic Industrial Base facilities, it is conceptualized, researched and designed in research labs and centers around the nation. The U.S. Army Materiel Command (AMC) provides the Army with organic research and development capabilities for the current and future force. The command and its subordinate organizations manage around 80 percent of the Army's Science and Technology (S&T) portfolio, focused across six Research, Development and Engineering Centers and the Army Research Laboratory.

The U.S. Army Natick Soldier Research, Development and Engineering Center (NSRDEC), located in Natick, Massachusetts, focuses on the Soldier domain by developing and using the latest innovations in S&T to maximize joint warfighters' survivability, sustainability, mobility, combat effectiveness and field quality of life.

For more than 60 years, NSRDEC has served the Soldier. Established in 1954, the organization has gone through many name changes and is known locally as Natick Army Labs. NSRDEC follows a simple mandate: to ensure that American Soldiers are the best-fed, best-protected and most highly mobile military in the world.

As part of AMC's Research, Development and Engineering Command, Natick Army Labs leads the Soldier systems integration domain in coordinating Soldier-related efforts and in highlighting Soldier technology capability gaps that need to be addressed. Partnering and collaborating across Army, DOD, government organizations, industry and academia, Natick Army Labs delivers advanced capabilities through S&T generation and application. The organization empowers, unburdens and protects warfighters.

On a visit to Natick Army Labs in 2013, Chief of Staff of the Army Gen. Raymond Odierno called the organization a "very, very important place in the Army."

"What they do here is an incredibly important mission to the Army as they continue to work what I consider to be our center of gravity, which is helping our Soldiers do their job," Odierno said. "That's something that will never change. The Army is about Soldiers. It's about their ability to perform and conduct their mission."

NSRDEC's 500-plus scientists, engineers and equipment designers provide a wide range of equipment, including field feeding and life support systems, clothing, precision airdrop systems, and ballistic, chemical and laser eye protection systems. Using Soldier Systems Engineering Architecture, Natick Army Labs combines Operational Analytics, Human Science and Engineering, Biomechanics, Cognitive Science, Anthropology, Human Factors, and Food Science and Nutrition to optimize Soldier performance and potential.

Natick Army Labs' technical and scientific expertise in the research, development and engineering of novel materials and fibers has led to the creation of new combat uniforms and Soldier equipment that is lighter weight, more durable and more threat resistant than anything Soldiers have ever worn.

Scientists and engineers at Natick Army Labs have also conducted innovative research into food science and packaging, leading to a new understanding of how to maximize a Soldier's performance by developing rations that contain just the right mix of nutrients, are easy to prepare in remote locations, and, most importantly, taste good.

Researchers also use state-of-the-art systems to advance the expeditionary technologies necessary to power, heat, light and support modern structures that protect Soldiers and enhance their quality of life in the field and while deployed.

Many of Natick Army Labs' responsibilities support the other services and involve joint programs and projects for U.S. warfighters including personal protective equipment, aerial delivery, contingency and expeditionary shelters, and field feeding and combat rations.

Warfare in the 21st century has changed the roles of Service members on the battlefield, and Natick Army Labs has been the leader in developing the equipment used by today's warfighters, to include the protection provided by helmets, body armor and flame resistant uniforms and equipment. NSRDEC works closely with its NATO allies and other strategic partners to bring some of these capabilities to joint and combined combat forces around the world.

Natick Soldier Research, Development and Engineering Center (NSRDEC) is a subordinate organization of U.S. Army Materiel Command's Research, Development and Engineering Command. NSRDEC is charged with maximizing the warfighter's survivability, sustainability, mobility, combat effectiveness and field quality of life by treating the Soldier as a system. NSRDEC is the leader in empowering the world's most capable Soldiers.

AMC Implementation

PROTOTYPE INTEGRATION FACILITY PROVIDES STATE-OF-THE-ART CAPABILITIES

The U.S. Army Materiel Command's Research, Development and Engineering Command (RDECOM) offers unique science and technology solutions to warfighters, from exploring the art-of-the-possible to developing the state-of-the-art. Through Prototype Integration Facilities, known as PIFs, RDECOM develops concepts and engineering designs for rapid conversion into prototypes for immediate use by Soldiers, or for transition to full-scale production.

The Larry O. Daniel PIF at Redstone Arsenal, Alabama, is one of the premier facilities for rapid prototyping. Part of the Aviation and Missile Research, Development and Engineering Center's (AMRDEC) Engineering Directorate, their PIF prides itself on its ability to provide innovative, comprehensive, swift results since its inception in 2002.

The AMRDEC PIF develops and integrates technology and rapidly provides fielded products directly to the Soldier. The 60,000 square-foot facility has the unique capability of producing electrical and mechanical parts, subassemblies and associated platform integration under one roof.

"A warfighter's needs are complex, constantly evolving and immediate. Our ability to provide rapid response and integrated hardware solutions addresses those needs in a unique way," said Danny Featherston, AMRDEC PIF program manager.

The AMRDEC PIF provides a single-source capability unlike any other government organization, combining focused, systematic and flexible processes with expert teams drawn from both government and industry.

The AMRDEC PIF's capabilities include design and analysis, prototyping, mechanical fabrication, circuit card assembly, cables and chassis, platform integration and more.

"We are committed to continually improving our processes and standards to meet or exceed the ever-changing challenges in today's budget-minded environment. We offer in-house acquisition expertise and integrated enterprise management," Featherston said.

The AMRDEC PIF is housed in nine different buildings and uses additional off-site contractor facilities to meet surge requirements.

"Our teaming arrangements with other government agencies, industry and academia allow us to draw from pooled resources giving us maximum flexibility to achieve our mission for our customers," Featherston said.

At any given time, the AMRDEC PIF manages more than 200 projects involving hardware improvements.

"Many of the requirements that come to us aren't forecasted," Featherston said. "We address immediate needs that arise from new threats in the field, or new conditions and challenges experienced by the warfighter. We provide solutions in days or weeks or months rather than in years. We integrate new technology on existing systems or change technologies to meet new uses by the warfighter."

The AMRDEC PIF has become a model for other research and development operations throughout the U.S. It is fully funded by government customers.

"We deliver complete solutions to our customers, not simply technology," Featherston said.

BATTLE TECH

MATERIEL READINESS FOR TOMORROW'S WARFIGHTER

AMC experts have developed game-changing technology to provide the decisive edge to today's forces and ensure the Army's advantage well into the future. BattleTech provides a look at some of the amazing technology being used in the command today.

BOMB PRODUCTION TECHNOLOGY IMPROVEMENTS

A new load, assemble and pack production line that began first article acceptance testing last fall is expected to increase surge capacity and improve the efficiency and effectiveness of bomb-loading operations at the McAlester Army Ammunition Plant (MCAAP) in Oklahoma. The new configuration, which gives the installation the capability to do melt-pour and cast-cure on a single line, supports a primary asset of the U.S. Air Force – the BLU-109 C/B 2,000-pound penetrator bomb – also known as a "bunker buster." The technology mitigates employee exposure to hazardous materials in the explosive mix process. The B-line will be MCAAP's primary workhorse for loading, assembling and packing bombs now and into the future.

U.S. Army photo by Kevin Jackson

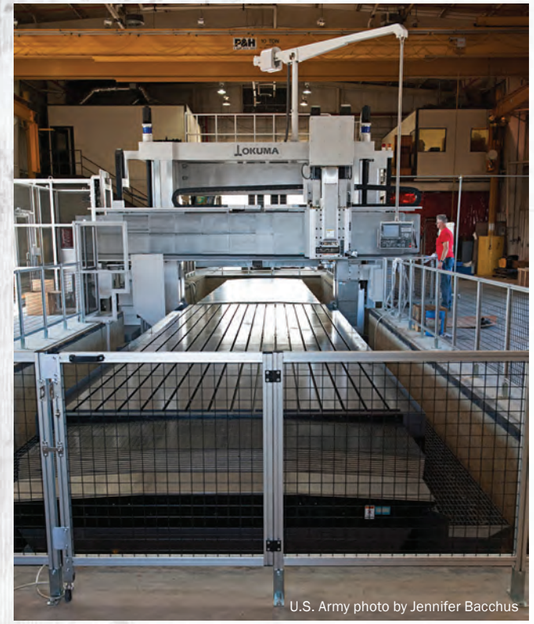
Heath Eldridge, left, and Brad Cochran monitor the transfer of explosives into the body of a BLU-109 C/B penetrator bomb during first article acceptance testing at MCAAP. The 600-gallon mixing bowl rolls on a track to the back of the new B-Line facility and is then elevated for the mix to be transferred into the bomb body that is secured below.

U.S. Air Force photo by Staff Sgt. Marie Cassetty

Senior Airman Raymond Banks guides a 60K loader into position to load an MRAP Egress Trainer. RRAD began producing the MET in 2009 to provide Soldiers the confidence needed to safely escape an MRAP involved in a rollover.

MRAP EGRESS TRAINER

The Mine Resistant Ambush Protected Vehicle (MRAP) was the most sought after vehicle during the height of the wars in Afghanistan and Iraq. In 2009, Red River Army Depot (RRAD) in Texarkana, Texas, fully fabricated the MRAP Egress Trainer (MET) to teach Soldiers how to get out of an MRAP in the event of a rollover. During peak production times for the MET, Red River personnel worked seven days-a-week to ensure the needs of the Soldiers were met. RRAD also produces a similar rollover simulator for the High Mobility Multipurpose Wheeled Vehicle (HMMWV) called the HEAT or HMMWV Egress Assistance Trainer. The depot is the only producer of both rollover systems.


U.S. Army photo by Jennifer Bacchus

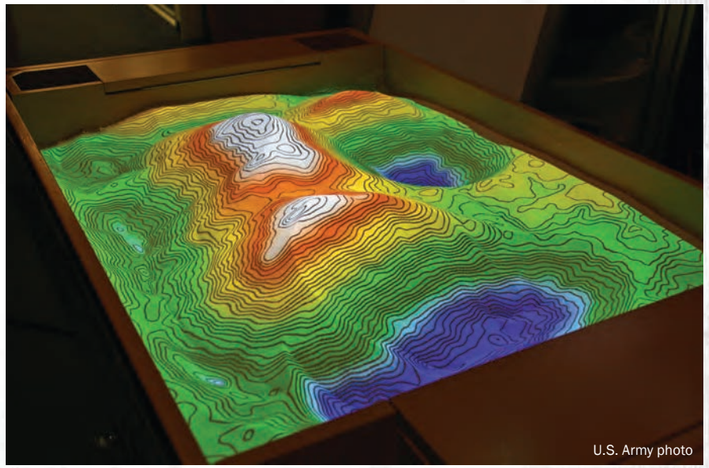
Wayne McCarley inspects the newly installed five-axis vertical machining center for ANAD's Directorate of Production's Manufacturing Division. This machine is capable of cutting large items, such as turrets and small combat vehicles.

FIVE-AXIS VERTICAL MACHINING CENTER

Anniston Army Depot's Manufacturing Division, which creates parts for nearly every combat vehicle family overhauled or repaired on the installation, is now using a new five-axis vertical machining center to continue supporting the organization's sustainment mission. The device's capabilities allow the operator to bring the cutting head to the incision point, rather than turning the part to make it accessible to the cutting head. This large, computer numerically controlled, or CNC, machine increases the installation's machining capacity for large parts. From turret components for the Assault Breacher Vehicle to mine route clearance equipment, bridges or parts for an M1 Abrams Tank, employees have the expertise and equipment to tackle the task.

AUGMENTED REALITY SANDTABLE

The Army Research Laboratory (ARL) is developing the Augmented Reality Sandtable (ARES), a prototype that incorporates the best aspects of the traditional sandtable with existing technologies and software to enable new possibilities for learning and operational support. Working with public and private partners, ARL has taken the traditional sandtable and augmented it with a projector, monitor, laptop and a motion-sensing input device. Sensing gestures, changes are made to the sand "terrain" with ARES projecting moving military units, terrain features and other data onto the sand. One of the goals of the project is to determine if warfighters interacting with a traditional sandtable results in better battlespace visualization than warfighters interacting with a printed map or 3-D graphical rendering of the same terrain. The team behind ARES believes the device will benefit Soldiers in the classroom, in mission planning and in mission command.


U.S. Army photo

ARL is developing the Augmented Reality Sandtable to demonstrate the value of a traditional sandtable augmented with existing technologies to enable new possibilities for learning and operation support.

Anniston Army Depot employees test components of a Stryker Infantry Carrier Vehicle recently overhauled at the installation. ANAD and General Dynamics Land Systems have worked side-by-side since 2002 maintaining, building, repairing and upgrading the Army's Stryker brigades as part of the Defense Department's Public-Private Partnership Program.

Public-Private Partnerships key to Organic Industrial Base

By Ed Worley, ACC Public Affairs

The U.S. Army Contracting Command (ACC) is leveraging Public-Private Partnerships (P3) to preserve the Organic Industrial Base (OIB) and ensure Soldiers have what they need, when they need it. P3 agreements are arrangements between government agencies, or between government agencies and industry or educational partners, to provide products, services, and research and development. P3 agreements can also be used to secure use of facilities or equipment for the partners.

"These partnerships are absolutely critical to the preservation of the nation's Organic Industrial Base which is key to not only the Army, but to overall military readiness," said Teresa Bonds, chief of the Strategic Programs Division, ACC-Warren, Anniston Army Depot, Alabama.

Bonds is one of two ACC contracting officers who has a separate Direct Sales warrant that allows her to establish P3 agreements. She was involved in developing the Army Materiel Command's P3 policy letter.

"Partnering allows the government and the contractor to work together in a 'win-win' relationship to ensure Army readiness," she said. "It also enhances the ability to respond to future contingency operations by improving operational efficiencies, lowering costs, leveraging organic engineering services, accelerating innovation and maximizing use of the capabilities and strengths of both private and public entities."

The Defense Acquisition University's Public-Private Partnering Guidebook explains how P3s differ from regular defense contracts. The book states, "Defense contracts specify the work tasks, articles, services and outcomes to be provided by the private sector entity. They are generally one-sided in their directive requirements – from the government to the contractor. Partnerships enable a more collaborative relationship in which parties from both public and private sectors are able to leverage and maximize the use of their resources in ways that were not specified in their underlying contracts."

Three types of P3 agreements exist: work share, facility use and direct sale. Work shares are co-production arrangements using Army and private sector facilities and/or employees and allow a program manager (PM) or the life cycle management command (LCMC) to use

Continued on page 46

Employees from Anniston Army Depot and General Dynamics Land Systems work on the Stryker Double-V Hull (DVH) Exchange program. Responding to an Army requirement for additional DVH vehicles and to reduce overall vehicle cost, the program changes the hull of a flat-bottom Stryker for the newer DVH design. (U.S. Army photos by Mark Cleghorn)

AMC PUBLIC-PRIVATE PARTNERSHIPS

The Army's Organic Industrial Base (OIB) is a national resource that is the centerpiece of Army readiness. To preserve and enhance the unique capabilities of the OIB, the U.S. Army Materiel Command (AMC) and its subordinate commands are leveraging the power of Public-Private Partnerships (P3s). In Fiscal Year 2015, AMC is projected to have more than 275 P3s, generating about $300 million in revenue. Here's what senior leaders are saying:

"Although the organic and commercial industrial base sectors are often discussed as distinct communities, public-private partnership at Army depots and essential facilities is a potential core strategy to ensure that parts and materials are available to sustain platforms and equipment at appropriate readiness levels."

Hon. Heidi Shyu, Assistant Secretary of the Army for Acquisition, Logistics and Technology

"Public-Private Partnerships offer innovative ways to help the Army preserve its unique capabilities and reduce cost while sustaining critical skillsets in our workforce. As part of our sustainment strategy, we must continue to aggressively pursue new opportunities and implement initiatives to assure attainment of command-wide partnership objectives."

Gen. Dennis L. Via, AMC Commanding General

"We must become more efficient in our business practices to ensure the right skillsets and workforce size to meet projected workload requirements. Competitive rates, working closely with industry and partnering will optimize usage of the Organic Industrial Base."

Hon. Robert M. Speer, Assistant Secretary of the Army for Financial Management and Comptroller

"Raytheon has been proud to be teamed with Theater Readiness Monitoring Directorate (TRMD) in supporting Patriot Missile Recertification, Stockpile Reliability Testing and other maintenance activities at the Patriot Missile Facility for the U.S. Army and our Foreign Military Sales Patriot partner nations at Letterkenny Army Depot. TRMD has demonstrated outstanding performance to all of its global customers and this could not have been accomplished without the men and women who work to make this program a complete success."

Michael Fletcher, Director of Patriot Systems Missile Programs, Raytheon Integrated Air & Missile Defense

"[The Sensor Fuzed Weapon] is an incredibly complex electro-mechanical system. It requires every function to function properly or the system will fail. As such, what gets done at McAlester is so very critical. As far as we're concerned, McAlester is the lynchpin to our program. What gets done here is the critical portion of the process. We have very high confidence in the work that is done here. I see it every time I come here – the working relationship between the Textron team and the McAlester team is fantastic. To me, it's just one team."

Brian Doherty, Director of Manufacturing, Textron Defense Systems

(The Sensor Fuzed Weapon is the largest partnership between McAlester Army Ammunition Plant and Textron. The McAlester workforce is solely responsible for loading, packing and assembling the Sensor Fuzed Weapon.)

"The mission of the AMC Partnership Program is to improve capabilities and performance of AMC's industrial sites through cooperation between the public and private sectors. There are a number of benefits to partnering with AMC, including gaining access to advanced technology industrial equipment. We have invested more than $1.3 billion in our industrial sites in the last decade."

James Dwyer, Deputy Chief of Staff for Logistics, AMC

"These partnerships are win-win opportunities. Partnerships help the depots, arsenals and commercial industry receive more work, develop new technical skills and make use of Army-owned facilities. By sharing investments, taking advantage of the best business practices and promoting the joint use of facilities, we can reduce costs and risk for all."

Gen. Dennis L. Via, AMC Commanding General

RIGHT (from top): Ricky Parker, left, Jerrilyn Harris, center, and Iris Wood replace a fuel pump in the rear of a Stryker at Anniston Army Depot. Partnership with private industry is vital to improving the quality and workflow throughout the Army's Organic Industrial Base. (U.S. Army photo)

The M113 armored personnel carrier program is a Foreign Military Sales/direct sales partnership between Anniston Army Depot and BAE Systems, and an example of a partnership that helps maintain organic and private core skillsets. (U.S. Army photo by Staff Sgt. Megan Leuck)

both private industry and a depot to perform work. In an example of a work share agreement, Bonds said a PM or LCMC "workloads" a depot to perform part of the work. Funding flows from the PM or LCMC to the depot for direct labor and also funds a private industry via a Federal Acquisition Regulation contract for managing parts. The parts and the work come together at the depot for the final product.

Facility use agreements allow a private entity to use government facilities or equipment. In this agreement, the private entity pays the government. For example, General Dynamics Corporation builds the Stryker combat vehicle, but does not have a test track. Anniston Army Depot does, so General Dynamics pays Anniston Army Depot a fee to use its test track on a non-interference basis.

The third partnership is a direct sale. In this case, the private entity approaches the government for a manufacturing or production service, usually involving direct labor. For example, a firm that has a contract to build a vehicle but needs help painting the vehicle could work out an agreement where the government facility does the work. The PM pays the contractor to produce the vehicle, and the contractor pays the government facility to paint it.

Successful programs begin with an internal partnering triad consisting of the business developers, contracting officers and legal counsel, said Bonds.

"It is important that the triad has involvement from the beginning of the partnering opportunity," she said. "Each member of the triad contributes unique advantages to the partnering process."

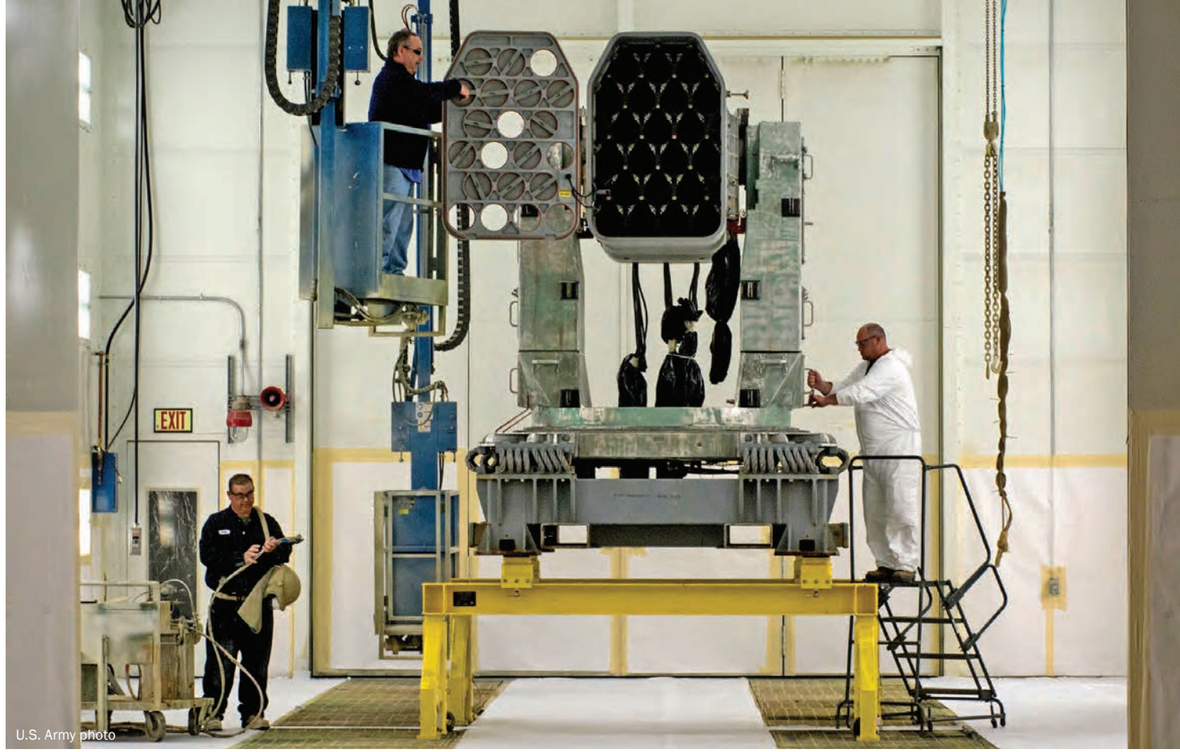
Bonds pointed to two examples of how partnerships evolve over time from building new vehicles to maintenance and reset. The M113 armored personnel carrier program is a Foreign Military Sales/direct sales partnership between Anniston Army Depot and BAE Systems. BAE provided supply chain management and Anniston provided almost 63,000 hours of labor, resulting in more than $4.3 million for the depot. Bonds said the partnership helped maintain the organic and private core skillsets, expanded Anniston's customer base, and improved Anniston's and BAE's P3 relationship.

She also highlighted Anniston's partnership with General Dynamics Land Systems for Stryker vehicles. Bonds said that the partnership began in 2002 as a $13.3 million direct sale/facility use partnership for building new Strykers. In 2006, they added a $49.4 million work share/facility use partnership for battle damage repair and in 2009, they added a Stryker reset partnership for $152.4 million. In 2012, they formed a $19.5 million work share partnership for Stryker double V hull exchange.

"Partnerships require equal amounts of trust, commitment and acceptance of risk," said Bonds. "With shared ownership of risk and commitment, partnerships are a sure-fire tool to ensure everyone involved is working towards the same goal of delivering what our Soldiers need, when they need it."

Headquartered at Redstone Arsenal, Alabama, the U.S. Army Contracting Command (ACC) and its subordinate organizations and contracting centers provide contracting support for the U.S. Army. As the Army's principal buying agent, ACC ensures that Soldiers have what they need to be successful, from food and clothing to bullets and bombs. ACC is a major subordinate command of Army Materiel Command.

OPPOSITE PAGE: From left, Daniel Moore, James Ratowski and Brian Jones prep a Rolling Airframe Missile (RAM) MK-49 Guided Missile Launching System for painting in Tobyhanna Army Depot's state-of-the-art C4ISR Finishing Center. Establishing an organic depot source of repair at the facility resulted in significant cost savings for the RAM program and a Naval Sea Systems Command Excellence Award for Tobyhanna. Whether supporting the joint warfighter or private industry, partnerships are key to the success of the facilities that make up the Army's Organic Industrial Base.



U.S. Army photo

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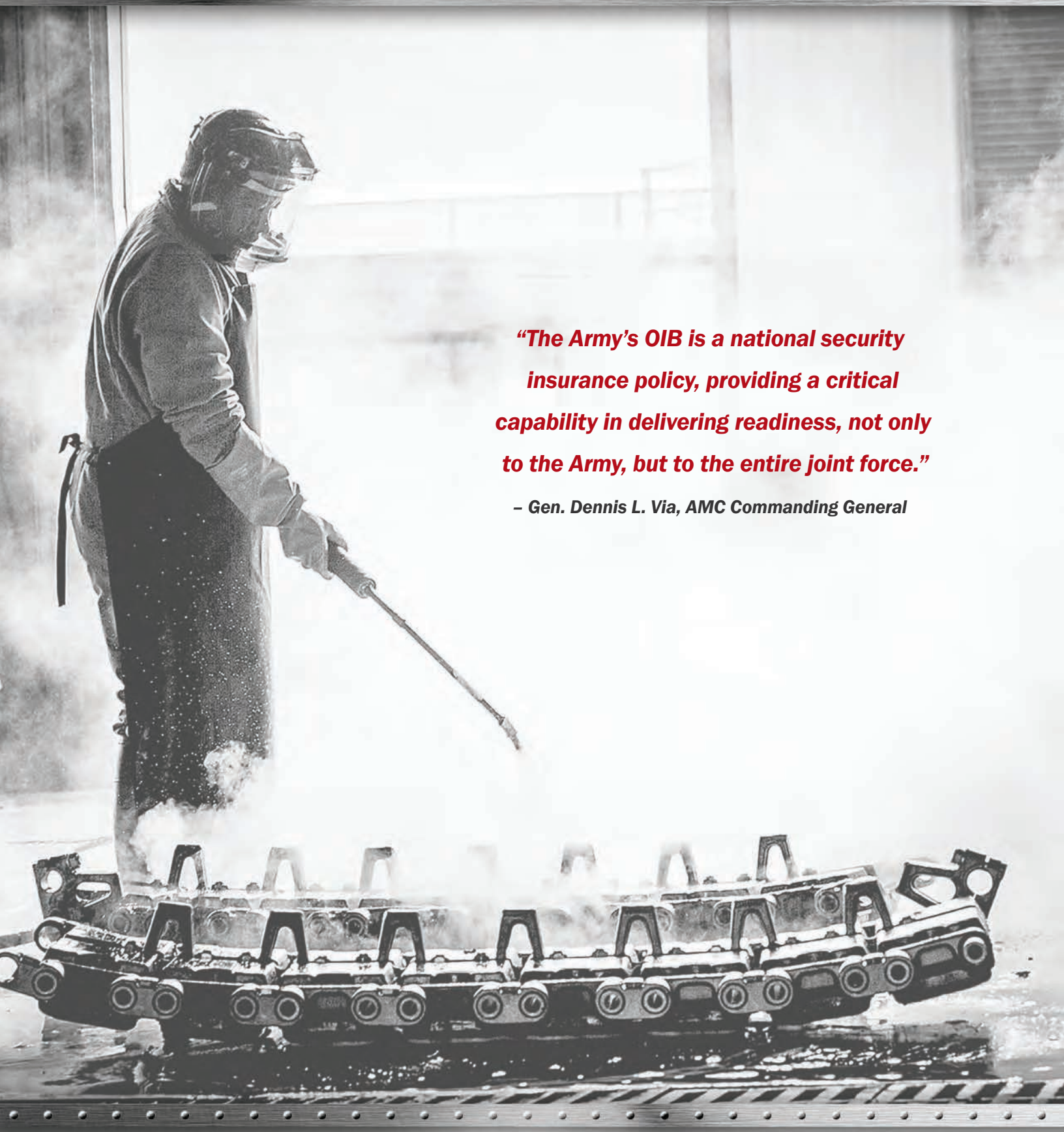

"The Army's OIB is a national security insurance policy, providing a critical capability in delivering readiness, not only to the Army, but to the entire joint force."

– Gen. Dennis L. Via, AMC Commanding General

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AMC TODAY

SUSTAINING THE STRENGTH OF THE NATION

U.S. ARMY MATERIEL COMMAND MAGAZINE

OCTOBER – DECEMBER 2015

IN THIS ISSUE:

A CLOSER LOOK AT AMC'S WORLDWIDE REACH

VANTAGE POINT

GENERAL DENNIS L. VIA
AMC COMMANDING GENERAL

Today more than ever before, our United States Army must be equipped to win in a complex world across multiple mission sets, under widely varied conditions, in unforgiving geographies, and against evolving threats. As a result, the U.S. Army Materiel Command (AMC) is positioned around the world as the Army's enabler to ensure combat readiness. With a presence in nearly 150 countries, AMC is a global logistics and materiel powerhouse, providing predictive readiness to our Army and the joint force.

This edition of *AMC Today* highlights our global presence. From aviation to ground combat vehicles, from communications to contracting, from munitions to research and development, and installation logistics support to the destruction of chemical weapons, AMC develops and delivers global readiness solutions every day and in every theater.

"...AMC DEVELOPS AND DELIVERS GLOBAL READINESS SOLUTIONS EVERY DAY AND IN EVERY THEATER"

The pages that follow detail our worldwide, expansive portfolio of capabilities across AMC's 10 major subordinate commands (MSCs). Our MSCs form a global network that postures AMC to provide world-class support.

Regionally aligned and engaged, AMC provides resources, strategic agility and operational flexibility to Combatant Commanders and the joint force through a team of teams. Our Army Field Support Brigades serve as AMC's "face to the field," integrating and synchronizing logistical support and delivering full materiel enterprise capabilities to units and commanders. Contracting Support Brigades provide flexible and agile contracting support for Army, joint and installation operations within the continental United States and overseas. Transportation Brigades are involved in worldwide port operations around the clock, moving nearly all defense cargo for unit deployments, redeployments, training rotations, exercises, humanitarian assistance missions and other contingencies. Research and Development Forward Elements serve as a critical link between our stateside and overseas research efforts. Meanwhile, our Army Prepositioned Stocks and Activity Sets are strategic enablers for Combatant Commanders, allowing them to train and respond quickly with our allies and partner nations to shape the operational environment within their respective areas of operation.

As the commanding general of AMC, I am continually impressed by the daily worldwide accomplishments of this tremendous organization and its people. AMC's workforce of 63,000 strong continues to provide readiness to the joint warfighter amidst a complex and ever-changing environment. On any given day around the world, the AMC workforce provides 190,000 meals, supplies more than one million gallons of water, obligates nearly $150 million in contracts, resets 230 pieces of equipment, and secures nearly $70 million in Foreign Military Sales. Wherever and whenever the Army calls, AMC provides.

In an ever-increasing complex and uncertain world, AMC will continue to provide the advanced equipment and materiel solutions that will ensure our United States Army remains the most dominant land power force the world has ever known.

AMC – Sustaining the Strength of the Nation!

OPPOSITE: U.S. Soldiers perform support activities and training exercises alongside the Republic of Korea army. Earlier this year, the unit that served on the Korean Peninsula since 1965 was replaced by the 2nd Brigade Combat Team, 1st Cavalry Division, the first of many future rotations for U.S. forces to South Korea. (U.S. Army photos)

VANTAGE POINT

A LOOK AT AMC SUPPORT TO ROTATIONAL FORCES KOREA

AFTER YEARS OF PLANNING AND PREPARATION, THE ARMY FORMALIZED ITS RESTRUCTURE IN KOREA WITH A SHIFT TO ROTATIONAL FORCES IN JULY 2015.

The initiative that provides an increased level of readiness rotates whole units into the country. These units train together stateside and deploy as one force, replacing the traditional stationing of individual Soldiers.

Using its worldwide team of teams, the U.S. Army Materiel Command (AMC) successfully supported the transition between the historic role of the 2nd Infantry Division's 1st Brigade Combat Team in Korea and Fort Hood's 1st Cavalry Division's 2nd Brigade Combat Team in Texas. AMC elements provided port operations, assembled equipment and painted vehicles. They also established reception, staging, life support activities and transportation, and created the Korean Enduring Equipment Set.

The 403rd, 404th and 407th Army Field Support Brigades (AFSBs), Logistics Readiness Centers, Contracting Support Brigades and Transportation Brigades collaborated to expertly provide predictive readiness.

The 403rd AFSB championed AMC's support to the Korean peninsula by placing logistics power forward. In partnership with 8th Army, the 2nd Infantry Division and the 19th Expeditionary Sustainment Command, the 403rd AFSB led the effort to achieve a successful inactivation of one brigade and transfer of authority to another while preparing for continued rotations. Army Field Support Battalion-Korea, the 403rd AFSB's battalion that provided direct support to the 2nd Infantry Division and now the 1st Cavalry Division, supported the reception, staging and onward movement of rotational unit equipment, providing on-site technical expertise at Korea's Port of Busan, as well as at unit deployment forward locations and railheads.

In support of initial rotations, AMC's 407th AFSB stationed at Fort Hood, painted vehicles, covering the sand color used in Iraq and Afghanistan with a more terrain-appropriate green. The 404th AFSB out of Washington prepped the freshly painted equipment for shipment to Korea, where the 403rd AFSB was positioned to receive it at port.

AMC's Logistics Readiness Centers provided proactive pre-deployment training, certification and validation, including driver training and ammunition handler training. This Korea-specific training process began while rotational units were at home station to facilitate a speedy reception and allow units to reduce distractions as they focused on their combat mission.

For the past two years, AMC sourced and moved equipment forward to build the Korean Enduring Equipment Set, or KEES, that includes ammunition and vehicles. KEES reduces the cost and burden associated with brigade combat team rotations in and out of Korea. Equipment associated with rotational units will continue to decrease dramatically as the KEES fill rates are met.

AMC's Contracting Support Brigades ensured that the appropriate contracts were in place, while the command's Transportation Brigades oversaw the movement of unit equipment.

AMC teams positioned around the globe were key enablers of the Army's successful transition to rotational forces in Korea and will continue to provide for ongoing movements as future brigade combat teams rotate in and out.

AMC SUPPORT TO COMBATANT COMMANDS

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FRONT COVER: A Soldier provides security from a Paladin howitzer while conducting a vehicle recovery mission during exercise Combined Resolve IV in Hohenfels, Germany. (U.S. Army photo by Spc. Brian Chaney)

BACK COVER: A Soldier observes the explosion of a mine clearing line charge during a combined arms live-fire exercise, which concluded exercise Combined Resolve IV. (U.S. Army photo by Markus Rauchenberger)

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AMC TODAY MAGAZINE

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PERSPECTIVES

Featuring this issue's guest columnist

COMMAND SERGEANT MAJOR JAMES K. SIMS

AMC COMMAND SERGEANT MAJOR

SUSTAINMENT

STARTS WITH THE SOLDIER

Maintenance is the cornerstone of readiness, and our Soldier's Creed affirms this, stating, "I always maintain my arms, my equipment and myself." The creed confirms our commitment to reinvest in Soldiers, and by doing so, sustains the readiness of our expeditionary Army.

With the current fiscal realities of the Budget Control Act of 2011, we must seize opportunities to reshape and rebalance for the future – and remain capable of providing readiness for a smaller, expeditionary Army. Our investments in Soldiers will ensure that we have the best trained, best led and best equipped Army in the world. This all starts with ensuring that our Soldiers are capable of operating, maintaining and sustaining the equipment of today, as well as the equipment of 2025 and beyond.

> "AMC DELIVERS READINESS TO OUR FORMATIONS AT THE TACTICAL POINT OF NEED"

The U.S. Army Materiel Command (AMC) plays a critical role in enabling our formations to operate the complex equipment that has been fielded across the Army over the past decade through support from our life cycle management command Logistics Assistance Representatives. We must strike the right balance between contracted logistics support and Soldier sustainment in order to ensure that our Soldiers are capable of preserving operational effectiveness within our warfighting formations.

As we do this, the over-the-shoulder support from AMC's military and Department of the Army Civilians will remain critical and reinvigorate Soldier ownership for operating, maintaining and sustaining their equipment.

Whether deployed in support of contingency operations, deployed to a combat training center, or at home station, AMC's Army Field Support Brigades and Brigade Logistics Support Teams act in direct support to Army Corps, Divisions and Brigade Combat Teams to bring the capabilities of the entire materiel enterprise. AMC delivers readiness to our formations at the tactical point of need. Our organization reinforces our Soldiers' capacity to maintain their equipment at home or deployed around the world.

Units at all levels must plan for, resource and execute "command maintenance, motor stables or assembly area operations" in order to codify this vital practice as part of day-to-day business across our Army. Our AMC professionals stand shoulder-to-shoulder with our Soldiers in providing readiness solutions for our forces around the world.

Army Doctrine Publication 4-0, Sustainment, states that logistics provides the maneuver commander with options, and the linchpin of this starts with our Soldiers' ability to conduct sustainment operations, as well as plan and incorporate sustainment across the tactical, operational and strategic levels of operations.

In order for our readiness to be optimized within affordability, Soldiers must take ownership for their arms and equipment. For me, as a young paratrooper, this began with placing my name on the windshield of my vehicle, participating lockstep in command maintenance with the truck commander and unit maintenance personnel, and ensuring that services appeared on the training schedule. Readiness began with my own stewardship and ownership for the equipment that the Army entrusted to me. In other words, sustainment started with me – the Soldier!

AMC BY THE NUMB3RS

Prepositioned Equipment Speeds Global Response

By Kim Hanson, AMC Public Affairs

The U.S. Army Materiel Command (AMC) is a global organization with a presence in nearly 150 countries. To speed our forces to the fight, AMC manages combat-ready equipment and materiel, strategically prepositioned around the world and ready for issue to Soldiers at a moment's notice.

AMC receives, stores, maintains and issues Army Prepositioned Stocks, or APS, in support of Combatant Commanders. Prepositioned sets of equipment are based in the U.S., Europe, Southwest Asia, Northeast Asia and afloat, with planned expansion to South America and the Pacific Rim over the next several years.

"We live in a complex, dangerous world, and APS allows the Army to be responsive and adaptive," said Gen. Dennis L. Via, AMC commander. "Our APS stocks are strategic enablers for Combatant Commanders, allowing them to train and respond quickly whenever and wherever needed."

APS provides critical assistance equipment strategically positioned to allow the Army to quickly react to contingencies, humanitarian assistance, disaster relief, and stability and support operations.

Along with airlift and sealift, APS constitutes one leg of the Strategic Mobility Triad essential for meeting force projection timelines. The APS program's primary mission is to reduce the initial amount of strategic lift required to support overseas operations and to sustain Soldiers and units until traditional lines of communication are established. APS allows early entry of forces into a geographic theater of operations to provide responsive combat power and support while reducing the demands on initial strategic airlift and sealift.

"APS provides the means to rapidly employ an expeditionary Army by delivering the right equipment and materiel to respond quickly to whatever contingency may occur," said Via.

The Army's APS strategy provides a range of capabilities through five categories that enable Combatant Commanders to shape the environment, provide operational flexibility and implement a Regionally Aligned Forces construct.

- Unit sets include equipment stored in unit configurations, reducing force deployment response time.
- Operational Project Stocks include equipment and supplies required above normal unit authorizations, tailored for key strategic capabilities to support Army operations, plans and contingencies.
- Army War Reserve Sustainment equipment includes major end items to replace battle losses and secondary items to replace supplies used during contingency operations.
- War Reserve Stocks for Allies ensures U.S. preparedness to assist allies in war. Directed by the Office of the Secretary of Defense, AMC transfers stock equipment to support allied forces under the Foreign Assistance Act.
- Activity Sets include unit equipment prepositioned to equip Army forces, primarily in support of training exercises outside the U.S.

AMC and U.S. Army Europe made history in 2014 with the development and activation of the first of these, the European Activity Set (EAS). Built in 18 months to a battalion-sized set of equipment, the EAS was first used in multinational training exercises in France, Lavtia, Poland and Germany in April 2014. The EAS has since grown to a brigade-sized set of equipment that can be issued in 96 hours for rapid deployment capability.

"The EAS provides flexibility and facilitates U.S. Army Europe's rapid, efficient and effective response to requirements and contingencies," said Via.

With the first fully operational Activity Set built in Europe, the Army and AMC are now looking to develop future sets in Central or South America, Africa, the Pacific and Southwest Asia beginning in Fiscal Year 2016.

AH-64 Apache attack helicopters hover above a range while U.S. Soldiers fire the gun of an Abrams Main Battle Tank, part of the European Activity Set, during multinational training exercise Combined Resolve IV in Germany. (U.S. Army photo by Markus Rauchenberger)

"The expansion of Activity Sets supports rotational training and exercises across the globe," Via said. "These sets significantly reduce shipping and transportation costs, increase our Army's combat readiness posture, and provide reassurance to our allies of our commitment and resolve."

Even as new Activity Sets are positioned around the world, AMC is enhancing and modernizing existing APS sets. For example, an AMC project to store equipment in climate-controlled warehouses in Southwest Asia yielded great benefits in extending the equipment's use life. AMC is now expanding the program, called Care of Supplies in Storage, or COSIS, warehouses to other sets, with an estimated cost savings of $100 million annually.

"APS capabilities must be modernized and prepared for operations and contingencies when needed, and COSIS improves readiness and extends the life of our critical equipment, saving a significant amount of money in the process," said Via.

Operational Project Stocks will also be enhanced in the coming years, with modernized humanitarian assistance and disaster relief equipment, route clearance equipment and bridging material.

Army forces have used APS equipment in various theaters for years. Equipment was drawn from Livorno, Italy, in 2014 to respond to Operation United Assistance and the fight against Ebola in Liberia. In 2011 and 2009, medical supplies, generators, shower and latrine kits, personal protective gear and more were sent to Japan and Haiti respectively for earthquake and tsunami relief. APS stocks were also used stateside in 2005 to respond to Hurricane Katrina along the Gulf Coast.

"We are deliberately looking at how we can most effectively and efficiently support the full range of Army and joint missions and contingencies," said Via. "We are geographically positioning equipment sets, and tailoring them to meet the Combatant Commanders' most likely scenarios based on population, politics, and topography."

ABOVE: Vehicles and equipment in the Army Prepositioned Stocks inventory are stored inside humidity-controlled warehouses. Inside storage has increased the equipment's readiness, dependability and accountability, and reduced maintenance costs.

U.S. Army paratroopers from 3-509th Infantry Battalion conduct an airborne operation from a C-17A Globemaster III in support of biennial exercise Operation Talisman Sabre in Queensland, Australia. (U.S. Army photo by Sgt. Anthony Noday)

AMC PROVIDES WORLDWIDE READINESS

Whether it's a well-planned training exercise or a spur of the moment contingency, the U.S. Army Materiel Command (AMC) lives its mission to develop and deliver global readiness solutions every day around the world.

As Operation United Assistance stood up to help combat the spread of the deadly Ebola virus, AMC responded, providing logistics, training and engineering support and setting up life support services in an austere and potentially lethal environment. AMC's Army Field Support Brigades prepared and shipped Force Provider Modules that delivered climate-controlled billeting, shower, latrine, kitchen, power distribution and more. Other AMC elements supplied everything from transitional logistics support to contracting to repair parts for aviation assets.

It was AMC scientists and engineers who fast-tracked the modification of existing technology to neutralize Syria's dangerous chemical weapons. AMC's Research, Development and Engineering Command civilians added the portability factor to existing equipment resulting in the Field Deployable Hydrolysis System that was installed on the U.S. cargo vessel MV Cape Ray. AMC answered the call to develop a system that would work effectively at sea, as no nation was willing to permit the Syrian chemical agents to be destroyed on their soil. The system, which garnered a British innovation award, destroyed more than 600 tons of chemical material.

While contingencies are the true test of the command, the support AMC provides during scheduled military exercises is what challenges its flexibility, capability and proficiency. The command has established, modernized and maintained prepositioned stocks, and built ready-for-action activity sets of combat vehicles and equipment, all located strategically around the world. From bolstering the Army's expeditionary capabilities in the Pacific through the Pacific Pathways initiative, to demonstrating the nation's commitment to NATO allies in Europe through Operation Atlantic Resolve and Combined Resolve, AMC is involved in nearly every joint and multilateral military training exercise.

AMC's continued commitment to sustain unified land operations anytime, anywhere, is constantly displayed as it provides to the nation's warfighter at home and around the world.

RIGHT: Stryker armored vehicles from Iron Troop, 3rd Squadron, 2nd Cavalry Regiment, travel down the E67 highway towards Riga, Latvia, on day two of Operation Dragoon Ride, demonstrating the nation's commitment to NATO allies in Europe. (U.S. Army photos)

AMC NEWS & NOTES

1 AMC welcomes new Executive Deputy

Lisha Adams returned to Army Materiel Command this summer as the new Executive Deputy to the Commanding General. Adams served as the command's assistant deputy chief of staff for logistics integration, G4, before taking a position as the deputy assistant secretary of defense for materiel readiness in 2014. Adams has held various leadership positions during her more than 30 years of government service.

2 JMC recognized as superior unit

The U.S. Army Joint Munitions Command (JMC) was recognized for its exceptional service with the Army's Superior Unit Award during a ceremony July 30. The Army Superior Unit Award is a decoration established by the Secretary of the Army, and is awarded to an Army unit that displays outstanding meritorious performance in a difficult and challenging mission, carried out under extraordinary circumstances. JMC earned this distinction by successfully providing ammunition and logistics support during Operation Enduring Freedom in Afghanistan and Operation New Dawn in Iraq, from Oct. 1, 2011, through Sept. 30, 2012. "The success of the mission was accomplished by the management at Joint Munitions Command Headquarters, Rock Island, Illinois, through the network of ammunition installations accomplishing ammunition production, storage, supply, maintenance, demilitarization and training," stated the citation from the Department of the Army.

3 AMCOM recognized for value engineering

The Aviation and Missile Command (AMCOM) was a big winner this year at the Department of Defense Value Engineering Achievement Awards. AMCOM and its partners were presented with four value engineering awards by Stephen Welby, deputy assistant secretary of defense for systems engineering, during the June 26 ceremony held at the Pentagon. The awards included the organization award for its "extensive and extremely successful" value engineering program, and three individual awards for team members in the Utility Helicopter Project Office – Program Executive Office for Aviation; the Lower Tier Project Office – Program Executive Office for Missiles and Space; and the Maintenance Engineering Division of the Aviation and Missile Research, Development and Engineering Center's Aviation Engineering Division.

4 Mission and Installation Contracting Command recognized

Army officials recognized the Mission and Installation Contracting Command (MICC) in June for its outreach and support efforts with the presentation of the Secretary of the Army Award for Small Business Utilization for 2014. George Cabaniss, deputy to the MICC commanding general, was presented the award during a ceremony at Redstone Arsenal, Alabama. The award recognized the command's efforts in exceeding four of five small business goals for the first time since Fiscal Year 2010, and the MICC outpacing all five categories from the preceding year. The MICC Small Business Program Office consists of personnel around the country who provide advice and counsel to small businesses, as well as conduct outreach events to inform industry representatives of installation acquisition forecasts. In addition to providing advice to individual small businesses, MICC members advocate within the command's 32 contracting offices to ensure small businesses have the maximum opportunity to compete for Army contracts awarded by those activities.

5 Army Contracting Command honored by acquisition leadership

Four acquisition professionals and one team from Army Contracting Command-Rock Island were announced as winners of several 2014 Secretary of the Army Excellence in Contracting Awards in April. Derek Schnorrenberg (pictured), contracting officer, was awarded Outstanding Contracting Officer for Specialized Services and Construction Contracting for support he provided for three large aviation service contracts for Special Forces in Africa and Afghanistan. Shnorrenberg was able to save more than $25 million on three contracts. Joan Wysoske, a former ACC-RI chief who retired in 2014, received the Ability One Award for her efforts in developing employment opportunities for the visually impaired. Stephen Dunbar, contracting officer at McAlester Army Ammunition Plant, McAlester, Oklahoma, was honored for his excellent customer service support and ability to work through unique situations with integrity. Susan McKinnis (pictured) was honored with the 2014 Director Acquisition Career Management Award, which recognized her 37 years of outstanding federal service. Finally, Branch E of the Global Reachback Contracting Division was awarded Outstanding Unit/Team Award for Specialized Services and Construction Contracting. This 24-member team of civilians and military professionals awarded around 640 mission-essential transportation requirement actions, with total obligations exceeding $170 million and contracts valued in excess of $400 million.

6 Army Greatest Innovation Awards program looking for submissions

Nominations are being accepted for the 2015 Army's Greatest Innovation Awards. Military, civilians or teams may now submit their best technology solutions for review. The Army's Greatest Innovation Awards program replaces the Army's Greatest Invention Program. Past winners included programs that enhanced weapons, improved Soldier protection and upgraded field systems. For more information or to submit a nomination, visit the website at www.amc.army.mil/AGIAP.

(U.S. Army photos)

Bringing the Full Might of the Materiel Enterprise to the Front Lines

An MRAP recovery vehicle is secured inside an aircraft at Bagram Airfield in preparation for its shipment to Kuwait under a retrograde mission carried out by the Army Field Support Battalion-Afghanistan. (U.S. Army photo)

By ASC Public Affairs

From the time Army Materiel Command (AMC) was established more than half a century ago, front-line logistical support has been part of its mission. AMC units, under various titles and organizational structures, were present in places like Vietnam, Saudi Arabia and Somalia, linking the factory to the foxhole and providing firepower to units carrying out the difficult and dangerous tasks associated with land warfare.

Today, AMC's mission of front-line support is largely carried out by its subordinate, the U.S. Army Sustainment Command (ASC). Headquartered at Rock Island Arsenal, Illinois, ASC operates a global network of units and sites that function together as AMC's "face to the field," bringing the full might of the materiel enterprise to bear where and when logistical support is needed.

The primary nodes of the ASC network are the command's seven Army Field Support Brigades (AFSBs). Numbered 401st through 407th, these AFSBs are located in Germany, Korea, Kuwait, the Pacific Region and the continental United States. AFSBs are regionally aligned with the U.S. Army's overall global footprint. An eighth command, the Distribution Management Center, provides global materiel management support.

"Integrating and synchronizing all categories of logistical support – maintenance, repair, supply, transition and general services – AFSBs can deliver a complete mix of capabilities directly to the doorsteps of Combatant Commanders," said Carl Cartwright, executive director of Support Operations, U.S. Army Sustainment Command.

The AFSBs evolved a little over a decade ago, out of various AMC Forwards, Logistics Support Elements, and other AMC components that provided direct support to deployed and non-deployed combat units.

"The AFSBs were designed as modular commands to match the needs and structure of a post-Cold War Army that was becoming more mobile, flexible and adaptable in order to meet the security challenges of the 21st Century," said Cartwright.

All AFSBs are commanded by colonels centrally selected at the branch level.

"This provides the brigades with skilled and experienced leaders who are both proficient in their specialties and knowledgeable about how the Army functions as a whole," he said.

AFSBs are now formally designated as modified tables of organization and equipment (MTOE) units, as opposed to their predecessor organizations which were mostly tables of distribution and allowances (TDA) units. TDA units largely perform administrative and support functions, while MTOE units are designed to be fully deployable, ready to go to the front lines when called.

In keeping with a modular Army, the AFSBs are also modular in design. AFSBs have the capabilities and competencies to support any unit, as well as joint and allied forces, regardless of their function.

AFSBs also have access to the wide breadth of knowledge provided by logistical experts at AMC's life cycle management commands and the Assistant Secretary of the Army for Acquisition, Logistics and Technology.

The AFSBs act as a focal point for ASC's primary missions, including Army Prepositioned Stocks, the Logistics Assistance Program and the Logistics Civil Augmentation Program. They also coordinate the activities of Logistics Assistance Representatives, or LARs, from AMC's other commands. AFSBs assure that LARs have the facilities and equipment needed to carry out their vital work of providing hands-on maintenance and repair support to Soldiers in combat units – Soldiers whose lives depend on having reliable, effective weapons and equipment.

"Combatant Commanders have indicated that the AFSBs have been literal lifesavers, and have responded quickly when called," said Cartwright. "AFSBs provide equipment upgrades to assure that units are provided with the latest and greatest technology. For example, vehicles brought to AFSBs have come out in like-new condition, often with supplemental armor providing an additional layer of protection."

To cover their broad geographic areas of responsibilities, the seven AFSBs have subordinate battalions, totaling 18 in all, as well as brigade logistics support teams. In recent years, the brigades have also taken on the responsibility of overseeing operations at ASC's Logistics Readiness Centers (LRCs). LRCs are located at every major Army installation in the U.S. and overseas, providing the supply, maintenance and transportation services required to run an installation, and managing laundry, dining and basic issue facilities.

Although the AFSBs are designed to be deployable and are led by field-grade officers, their personnel rosters reflect AMC as a whole. The AFSB workforce primarily includes Department of the Army civilians and contracted employees. At overseas AFSBs, many of these contractors are foreign nationals from the host nation or other nations.

"Managing such a personnel mix is not without challenges, yet the successes achieved by the AFSBs show that it can be done, and done well," Cartwright said.

Given their modular design, the AFSBs are not anchored to particular locations, and can be moved as needed. A significant move occurred in the summer of 2015, when the 402nd AFSB cased their colors in Kuwait and resumed operations at Fort Shafter, Hawaii.

The 402nd was first established at Camp Arifjan, Kuwait, in support of operations in Iraq, Qatar and Southwest Asia. Meanwhile, the 401st AFSB had set up shop at Bagram Airfield in support of operations in Afghanistan.

The withdrawal of most U.S. combat troops from Afghanistan allowed the 401st AFSB to move to Kuwait, where it essentially took over the mission of the 402nd AFSB while still overseeing elements in Afghanistan. This, in turn, enabled the 402nd to make the move to Hawaii.

The relocation of the 402nd reflects the recent shift in the emphasis of U.S. security strategy toward the Pacific theater of operations. In its new location, the 402nd AFSB will write another chapter in the story of AMC's front-line logistical support mission, a mission that moves as the Army moves and goes where the Soldier goes.

The seven Army Field Support Brigades, their locations, subordinate units and areas of operation are currently as follows:

401ST AFSB:
CAMP ARIFJAN, KUWAIT
Supports the U.S. Central Command area of operations in Southwest Asia and Afghanistan. Subordinate units include the Army Field Support Battalion-Afghanistan; the Army Field Support Battalion-Kuwait; and the Army Field Support Battalion-Qatar.

402ND AFSB:
FORT SHAFTER, HAWAII
Supports the U.S. Pacific Command area of operations. Oversees five Logistics Readiness Centers. Subordinate units include the Army Field Support Battalion-Alaska and the Army Field Support Battalion-Hawaii.

403RD AFSB:
CAMP HENRY, KOREA
Supports units in Korea and Japan, with direct support to the 2nd Infantry Division. Oversees six Logistics Readiness Centers. Subordinate units include the Army Field Support Battalion-Korea and the Army Field Support Battalion-Northeast Asia.

404TH AFSB: JOINT BASE LEWIS-MCCHORD, WASHINGTON
Supports units in the western United States. Oversees 11 Logistics Readiness Centers. Subordinate units include the Army Field Support Battalion-Lewis.

405TH AFSB:
KAISERSLAUTERN, GERMANY
Supports units in the U.S. European Command and U.S. Africa Command areas of operations. Oversees 17 Logistics Readiness Centers. Subordinate units include the Army Field Support Battalion-Germany and the Army Field Support Battalion-Italy.

406TH AFSB:
FORT BRAGG, NORTH CAROLINA
Supports units in the eastern and southern United States. Oversees 27 Logistics Readiness Centers. Subordinate units include Army Field Support Battalion-Bragg; Army Field Support Battalion-Campbell; Army Field Support Battalion-Drum; Army Field Support Battalion-Stewart; and the Army Strategic Logistics Activity-Charleston.

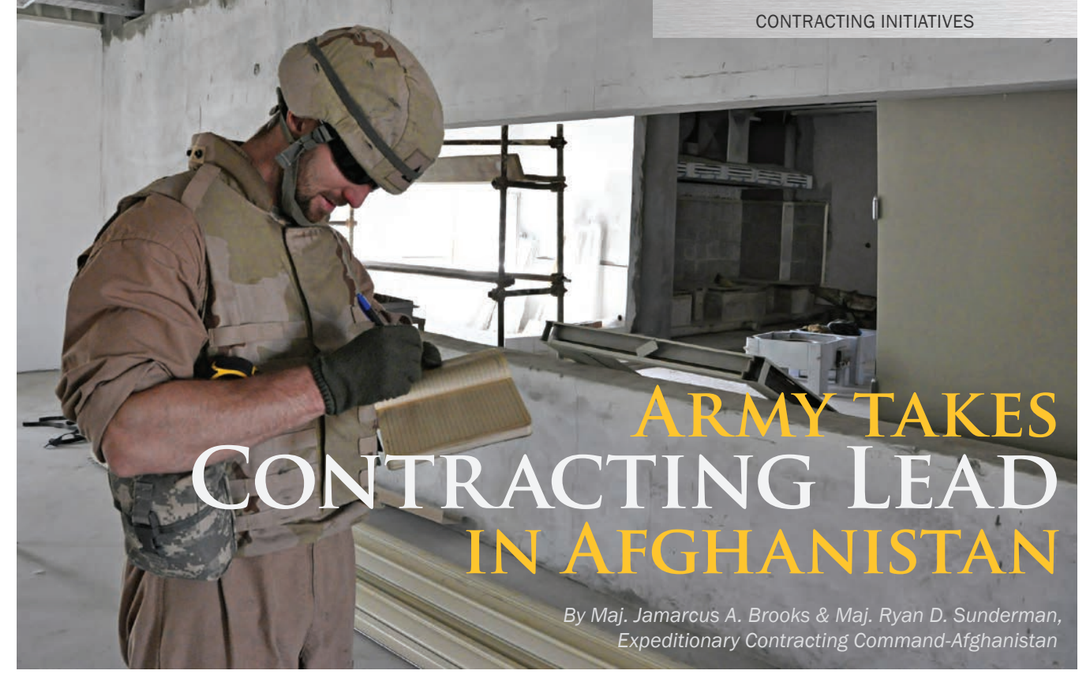
407TH AFSB:
FORT HOOD, TEXAS
Supports units in the central and southwestern United States, as well as Puerto Rico and Honduras. Oversees 14 Logistics Readiness Centers. Subordinate units include Army Field Support Battalion-Bliss; Army Field Support Battalion-Carson; Army Field Support Battalion-Hood; and Army Field Support Battalion-Riley.

FROM TOP: Containers of munitions are off-loaded from a military ship at Military Ocean Terminal-Sunny Point on the coast of North Carolina during Operation Patriot Bandoleer, a massive effort to use Army Reserve and National Guard troops to move the munitions to depots that was coordinated in part by the Army Strategic Logistics Activity-Charleston.

Soldiers from the 1st Cavalry Division inspect equipment issued to them from the European Activity Set by the Army Field Support Battalion-Germany.

Michael Freeman (left) of the 402nd AFSB and Ken Richardson, a Tank-automotive and Armaments Command Logistics Assistance Representative, inspect a tire at the Tire Assembly Repair Program facility at Camp Arifjan, Kuwait. (U.S. Army photos)

Army Sustainment Command, a subordinate organization of the U.S Army Materiel Command, is the command and control hub for global Army logistics, supporting Combatant Commanders and the Logistics Civil Augmentation Program. The command bridges the national sustainment base to the Soldiers in the field, bringing together the capabilities of AMC to provide the right equipment, at the right place and time, and in the right condition.



Army takes Contracting Lead in Afghanistan

By Maj. Jamarcus A. Brooks & Maj. Ryan D. Sunderman, Expeditionary Contracting Command-Afghanistan

Jason Riharb, a civil engineer and contracting officer representative with the U.S. Army Corps of Engineers Afghanistan Engineer District-South, takes notes during his inspection of an Afghan National Civil Order Police Patrol Battalion compound in Kandahar province, Afghanistan. (U.S. Army photo)

Col. Dennis McGowan and Command Sgt. Maj. Marlon Cooper were part of Army history in Afghanistan this summer as they transitioned contracting responsibilities from a joint contracting command to the first Contracting Support Brigade (CSB) to deploy as a unit. The transition also signified the designation of the Army as the lead service for contracting within Afghanistan.

McGowan and Cooper closed a chapter of contingency contracting history June 26 when they cased the colors of the U.S. Central Command Joint Theater Support Contracting Command (C-JTSCC) at Bagram Airfield, Afghanistan. Originally established as the Project and Contracting Office in 2003 to support reconstruction efforts within Iraq, C-JTSCC later expanded to provide operational contract support across the entire U.S. Central Command.

After casing the C-JTSCC colors, they opened the next chapter of history as the colors of the 418th CSB were uncased. In that moment, the 418th CSB became the first CSB to have deployed as a unit, identified as Expeditionary Contracting Command-Afghanistan (ECC-A). This deployment marks a significant achievement in fulfilling the 2007 Gansler Commission Report recommendations for Army expeditionary contracting.

With the transfer of responsibility came the realignment of contracting authority and mission command of ECC-A, placing the 418th CSB under the command and contracting authority of U.S. Army Expeditionary Contracting Command (ECC), a subordinate organization of U.S. Army Materiel Command's Army Contracting Command (ACC).

"Deploying in contingency contracting units will allow our contracting professionals to deploy as more cohesive teams that have trained and prepared together, leading to greater support and accomplishment of mission," said Cooper.

Maj. Gen. John M. Murray, deputy commanding general for support at U.S. Forces-Afghanistan (USFOR-A), officiated the ceremony on behalf of Brig. Gen. Michael D. Hoskin, ECC commanding general. Murray highlighted the behind-the-scenes work of contracting professionals who provide a critical capability and skill set required to support forces in Afghanistan. He highlighted the five fallen C-JTSCC Soldiers and civilians who made the ultimate sacrifice in service to their country over the past 12 years.

McGowan said that having Murray officiate the ceremony speaks to the strength of C-JTSCC's support and the unit's integration into USFOR-A operations.

FROM LEFT: Maj. Jason Kettwig, 196th Maneuver Enhancement Brigade, South Dakota Army National Guard, talks to a local Afghan about ordering more electrical equipment at Camp Phoenix in Kabul, Afghanistan. Kettwig and his team partner with Afghan businesses throughout Kabul to help improve the country's economy and provide necessary commodities such as food, water, wood, repair parts, ammunitions and vehicles to service members throughout the Kabul Base Cluster. (U.S. Army photo by Sgt. Rebecca Linder)

Local workers unload containers from trucks delivering supplies to Afghanistan. (U.S. Army photo by Staff Sgt. Brian Raley)

Local contracted Afghan construction equipment operators use a grader and steam roller to make minor repairs to an aircraft overrun area in the Farah province, Afghanistan. (U.S. Navy photo by Lt. Chad A. Dulac)

"When casing the colors, we could not go without acknowledging the hard work of so many contracting professionals, from all branches of service – military and civilian – who supported the warfighter through the past decade plus of operations in Iraq and Afghanistan," McGowan said. "Those executing the current C-JTSCC mission carry on a long-lasting pursuit of excellence. Those who have served in the command have much to be proud of."

The ceremony also marked the transition from a joint organization manned by a joint manning document to an Army organization staffed by a request for forces.

"The Army contingency contracting officers and noncommissioned officers demonstrated their exceptional skills and excelled at contract execution that carried the organization through transition, while ensuring uninterrupted support to the warfighter," said Lt. Col. Scott McKee, commander of the 904th Contracting Battalion and chief of Regional Contracting Center-East.

The transition was not without challenges, including the loss of experienced civilian personnel who were required to redeploy stateside. The Army contracting officers identified the challenge early and responded in order to provide continuity of operations.

Supported by the ACC Deployed Cadre Program, the Army's contracting workforce demonstrated the capacity to adapt and deploy both military and civilian personnel with critical skill sets to increase operational effectiveness and ensure success, said Lt. Col. Wayne Hiatt, executive officer, 418th CSB.

"ECC-A relies upon a number of selfless ACC civilians who augment the contract operations needed within Afghanistan," he said.

Several other subtle but key changes for the new, Army-led organization also exist. The head of contracting activity authority that once resided with the commanding general of the C-JTSCC now resides with the AMC commanding general. Simply stated, the authority to sign certain policies and procedural items now resides at AMC as opposed to the C-JTSCC. McGowan transitioned from the title of senior contracting official-Afghanistan under the C-JTSCC to the principal assistant responsible for contracting.

Splashes of AMC, ACC and ECC now adorn the walls of the offices of ECC-A, representing the relationship between the organizations. "Engaged, Capable, and Committed," the motto inscribed on the ECC distinctive unit insignia, is prominently displayed alongside emblems identifying previous organizations and symbolizing the change of responsibility.

"Other than the name change, the transition proved transparent to those organizations receiving contracting support from ECC-Afghanistan," said McGowan.

The operational contract support mission in Afghanistan has changed significantly since the majority of U.S. combat forces have left the country. Today, Combined Security and Transition Command-Afghanistan (CSTC-A), with the highest value and most complex contracts, is the largest ECC-A customer. CSTC-A's primary mission is the training and development of the Afghan National Defense and Security Forces. The command's contracts range from simple purchases such as guard towers and basic life support services to multi-million dollar information technology infrastructure projects in support of the Afghan Ministries of Defense and Interior.

While the contracting footprint will decline along with the U.S. presence in Afghanistan based on the strategic and operational environment that develops over time, Army contingency contracting officers will continue to deploy in units such as contracting teams, battalions and support brigades.

The 418th Contracting Support Brigade, from Fort Hood, Texas, is normally assigned to the U.S. Army Mission and Installation Contracting Command headquartered at Joint Base San Antonio-Fort Sam Houston, Texas. The brigade's ranks are augmented with Soldiers from the 901st Contracting Battalion, also based at Fort Hood, and currently deployed to Bagram Airfield, Afghanistan, and Qatar. ECC-A is also supported by the 904th Contracting Battalion deployed from Fort Knox, Kentucky, which is currently supporting Bagram Airfield and Train, Advise, and Assist, Command-East. To provide additional support across Afghanistan, the 605th and 619th Contracting Teams from Fort Drum, New York, are providing contracting support at New Kabul Compound and Kandahar Airfield, Afghanistan. The Fort Riley, Kansas-based 633rd and 634th Contracting Teams provide ECC-A with over-the-horizon support from Qatar.

ARMY CONTRACTING COMMAND SUPPORTS GLOBAL BUYING FOR ARMY OPERATIONS

In addition to the 418th Contracting Support Brigade that has assumed the lead service for contracting in Afghanistan, Army Contracting Command units are supporting the Army and Department of Defense around the world.

Mission and Installation Contracting Command (MICC) and Expeditionary Contracting Command (ECC) specialists operate from more than 100 locations worldwide. These locations provide contracting support to current operations, installations and units in garrison.

MICC-contracted services and supplies touch virtually every Soldier in the Army and consist of equipment, supplies and services vital to the U.S. Army mission and the well-being of Soldiers and their families. Support services range from facility support, administrative and general management consulting, wired telecommunication and engineering, and advertising. The MICC ensures America's Soldiers and their families have what they need to be ready and resilient.

In Fiscal Year 2014, ECC supported 181 expeditionary missions in 52 nations around the world. Some of the first personnel to arrive in West Africa for the fight against Ebola were contracting officers. Other ECC contracting personnel have deployed to Nepal, Iraq, Kuwait, Thailand, various African nations and other nations around the world to support Department of Defense exercises, contingency operations and U.S. government relief operations.

ACC also operates six contracting centers at key locations across the continental U.S. that are the Army's "centers of gravity" for weapons systems contracting. The centers support research, development and engineering; program executive offices and program management; the Organic Industrial Base (depots, arsenals and ammunition plants); life cycle management; logistics; and Foreign Military Sales.

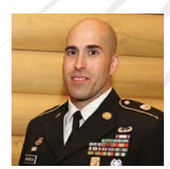
From food and clothing to bullets and bombs, from tanks and trucks to boats and aircraft, from weapons to installations, ACC ensures U.S. Soldiers have what they need where they work and live with their families to be successful. If a Soldier drives it, flies it, wears it, shoots it, communicates with it or eats it, ACC buys it.

ARSENAL OF THE BRAVE:
Committed to Serving our Country with Pride

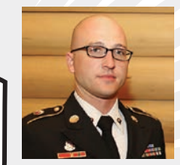
THOUSANDS OF AMC SOLDIERS, CIVILIANS AND CONTRACTORS WORK EVERY DAY PROVIDING OPTIMAL SUPPORT TO THE JOINT WARFIGHTER WITH SKILL, PASSION AND DEDICATION. THEY ARE THE BACKBONE OF THE ORGANIZATION, ENSURING MISSION SUCCESS. ARSENAL OF THE BRAVE PROFILES A FEW OF THE MANY OUTSTANDING INDIVIDUALS FROM ACROSS AMC WHO EXHIBIT THESE VALUES.

ARMY MATERIEL COMMAND (AMC)

In recognition of their exceptional contributions to the Army, three senior-level AMC civilians were honored with Presidential Rank Awards during a ceremony at the Pentagon June 22. **James Dwyer,** AMC deputy chief of staff for logistics, G-4, was presented the Meritorious Senior Executive award. **Joseph Wienand,** former director of Edgewood Chemical Biological Center, was also named a Meritorious Senior Executive. **Joseph Mait,** senior research scientist in electromagnetics for the Research, Development and Engineering Command, was presented a Meritorious Senior Professional award. The Presidential Rank Awards recognize professionals who have demonstrated the highest levels of strength and integrity and provided exceptional service over an extended period of time.



Army musician **Staff Sgt. Jeremy Baharloui** won Army Materiel Command's Best Warrior Competition and was named the command's **Noncommissioned Officer of the Year**. He is a percussionist with the Army Materiel Command Band at Redstone Arsenal, Alabama. Baharloui has been in the Army 17 years and is a native of Melbourne, Florida. He recently organized and led a group of five other band members to attend Air Assault School at Fort Campbell, Kentucky. He participated in the Best Warrior Competition on a two-week notice after a previous competitor was unable to attend. Baharloui said he plans to continue his physical training, brush up on his weapons knowledge and continue studying before he heads to the Department of Army competition at Fort A.P. Hill, Virginia. *"It's going to take even more hard work and commitment," he said.*



Spc. Adam Walton, a percussionist with the Army Materiel Command Band stationed at Redstone Arsenal, Alabama, won the Army Materiel Command's Best Warrior Competition and was named the command's **Soldier of the Year**. Walton is a native of Champaign, Illinois, and has been in the Army two years. He previously served in the 8th Army Band in Korea. Walton is currently working toward a doctorate from the University of Illinois. He recently completed Air Assault School at Fort Campbell with five fellow band members. Before he joined the Army, He said he could never have completed such a grueling competition. *"It's really a testament to the people who trained me," he said. "They provided me with the motivation."* Walton will compete for the title of the Army's Best Warrior in October at Fort A.P. Hill, Virginia.

JOINT MUNITIONS COMMAND (JMC)

Rhonda VanDeCasteele serves as the executive director for ammunition for JMC. Recently promoted to the Senior Executive Service, she has the responsibility of providing joint conventional munitions acquisition and production support to Program Executive Office Ammunition, as well as the readiness and logistics direction for all U.S. military services, allies and friendly nations.

Mike Matzen, a production manager in the Ground and Aircraft Munitions Division, Sustainment Operations Directorate at JMC Headquarters, provides program executive office program managers and customers with JMC's core competencies such as procurement, production and logistics support. He works with a team of inventory and product quality managers, commodity leads and contracting personnel to ensure timely delivery of ammunition.

U.S. ARMY SUSTAINMENT COMMAND (ASC)

Sgt. 1st Class Curtis Benjamin, a maintenance noncommissioned officer (NCO) from Saint Thomas, U.S. Virgin Islands, is U.S. Army Sustainment Command's 2015 NCO of the Year. During his 19 years of military service, Benjamin has served in numerous leadership positions including squad leader, platoon sergeant, motor sergeant and operations NCO in charge. He is currently pursuing a degree in physical education.

Lauren Aggen, an employee assigned to the Equal Employment Opportunity Office, has worked at U.S. Army Sustainment Command since August 2014. She began at ASC as an intern with the Workforce Recruitment Program. *"The best part of my job is knowing that I made a contribution to the success of our troops. I'm truly grateful for all the experiences I've had working at Rock Island Arsenal."*

U.S. ARMY CONTRACTING COMMAND (ACC)

Maj. Thomas Lutz, a division chief for the Facilities Maintenance Division, Theater Contracting Center, 409th Contracting Support Brigade, provides operational contracting support to U.S. Army Europe and Installation Management Command-Europe forces, focusing on installation support and construction for the Rheinland-Pfalz community. *"I've learned a tremendous amount from the synergy involved with the integration of the military, Department of the Army civilians and local national workforce," said Lutz, who has been with the 409th for two years.*

Roland Becker, contracting specialist

with the Regional Contracting Office-Benelux, 409th Contracting Support Brigade, is a Belgian local national who is a vital link to the annual Normandy commemoration events. This year, Becker awarded six Normandy support contracts including food service, tents and electrical, and provided on-site contract coordination while embedded with the 21st Theater Sustainment Command.

U.S. ARMY SECURITY ASSISTANCE COMMAND (USASAC)

Sgt. 1st Class Matthew Alexander

was recently recognized as the Office of the Program Manager for the Saudi Arabian National Guard (OPM-SANG) NCO of the Month. He has been nominated for a Department of the Army award following his support during an inflight medical emergency. While aboard a flight from Frankfurt, Germany, to Riyadh, Saudi Arabia, Alexander provided life-saving assistance to a civilian passenger. He was instrumental in the decision to land the plane. *"It was a pretty simple call for me,"* said Alexander, who urged the captain to land as quickly as possible. *"We were still over two hours from Riyadh. I told [the flight attendant] we need to get on the ground now. [The passenger] was not going to last long enough to reach our destination."* As a medical advisor at OPM-SANG, Alexander is also a diplomat, helping to foster relations between the U.S. and the Saudi Arabian National Guard. *"Even before I landed in Saudi, people were aware of what happened, and the effect had begun. This situation helped improve relations before I set foot in country."*

Sandra Watkins-Peay joined

USASAC in 2008 and currently works as a support contractor for Central Command regional operations. Watkins-Peay was in attendance, along with her father, during USASAC's opening July 19, 1965. She also celebrated USASAC's 50th anniversary in 2015. *"When I started work at USASAC, my dad was still alive and we talked about how ironic it was that I finally was going to participate in what he was doing when he retired," she said. "Today, I can see reasons for what I do every day in the world news. It is a very soul-satisfying situation."*

U.S. ARMY TANK-AUTOMOTIVE AND ARMAMENTS COMMAND (TACOM)

Jennifer West is a general financial

specialist in the TACOM G-8 Resource Integration Office. Shortly after her arrival in G-8, a colleague was diagnosed with stage IV cancer. In addition to assuming significant amounts of workload to ensure coverage, West headed a campaign of moral support for her colleague, including a Facebook page, T-shirts and a support walk at TACOM.

Albert James (AJ) Sparks, an

artillery work leader at the Joint Manufacturing and Technology Center, has served in multiple positions for more than 10 years. Today, he works on the HMMWV ambulance shelter and integration line where he ensures that the line is operational and properly stocked with parts. He coordinates with TACOM and Product Director – Light Tactical Vehicles to travel to units receiving the fielded ambulances, supporting and assembling a wide variety of products such as the M119 howitzer, Forward Repair System and Shop Equipment Contact Maintenance.

U.S. ARMY COMMUNICATIONS-ELECTRONICS COMMAND (CECOM)

Kevin Ivory was selected as the

CECOM 2014 Logistics Assistance Representative of the Year. Ivory works in Logistics Information Technology in the Logistics Assistance Division, Field Support Directorate, Logistics Readiness Center. He earned the recognition for his assistance and training efforts while assigned to the 2nd Cavalry Regiment Logistics Support Team in Vilseck, Germany. Ivory's accomplishments while in Vilseck include completing a six-month deployment to Kandahar, Afghanistan, during which he was able to recover more than $650,000 in misplaced or discarded equipment for reutilization. Ivory also conducted over 200 hours of formal and informal Soldier training.

Steve Waak, an electronics mechanic

and a member of Tobyhanna Army Depot's Communications Security (COMSEC) branch, is a member of a team of technicians who provide life cycle management of COMSEC equipment and Controlled Cryptographic Items. Branch employees receive, store, maintain accountability and issue COMSEC and Information Security equipment and materiel. The COMSEC branch also performs depot maintenance and demilitarization of equipment and sub-assemblies. The branch boasts five sections plus two Forward Repair Activities in Southwest Asia, supporting AMC's worldwide mission.

MILITARY SURFACE DEPLOYMENT AND DISTRIBUTION COMMAND (SDDC)

Salvatore Granese, personal property storage specialist, was recently recognized for his work in transitioning operations from the Central Regional Storage Management Office (RSMO) to Scott Air Force Base, Illinois, with the stand-up of the newly established Command Storage Management Office (SMO). Granese resolved critical database issues, streamlined database operations and provided training to all personnel, allowing the SMO to assume the duties of the Central RSMO by the established deadline.

Kent Beck has served as SDDC's

command historian since 2007. During the commemoration of SDDC's 50th year as an Army command, he was responsible for the organization's year-long celebration. Beck led the planning and coordination efforts for numerous 50th anniversary events and activities, each developed to educate the SDDC workforce about the command's heritage and how SDDC has supported the warfighter for half a century.

U.S. ARMY AVIATION AND MISSILE COMMAND (AMCOM)

Phylip-Michael Agee is a secondary

items manager with the AMCOM Systems Sustainment Management Division, Logistics Service Branch, where he provides support for the Integrated Field of Test Equipment V5. Agee said he is proud to assist service men and women. *"If given the chance, I would tell the Soldiers, if there is anything that you need, please know that I will assist you in every way possible," he said.*

Dana Benson plays a big part at the

AMCOM Logistics Center. Her three-year service to AMCOM has been filled with the full spectrum of duties and responsibilities for her depot-level workload execution of program funding. Proud to be a part of AMCOM, she said, *"AMCOM to me means being able to support the warfighters who put their lives on the line for each and every one of us."*

U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND (RDECOM)

Scott Newman, chief of the

Systems Engineering and Integration Branch within the Space and Terrestrial Communication Directorate at Communications-Electronics Research, Development and Engineering Center (CERDEC), proactively and strategically built new laboratory capabilities, including a fully functioning command post, while also supporting the Network Integration Evaluation (NIE). Newman and his team supported two NIEs providing lab-based risk reduction and field support to the 2/1 Armored Division at White Sands Missile Range, New Mexico. Just this year, Newman and his team integrated 204 products, including program of record systems, industry products and new government technologies.

The CERDEC Army-wide Cryptographic Network Standardization (ACNS) Team was awarded the 2014 Dr. William A. Novick Award for excellence for efforts in upgrading aging cryptographic devices and standardizing the security capabilities for the Army's tactical network. The CERDEC Cryptographic Modernization Branch (CMB) ACNS Team traveled to U.S. military installations worldwide, accounting for each encryptor listed in the Army's inventory, then returning to remove inactive devices and upgrade the outdated ones with modern counterparts. The CMB ACNS Team is on track to streamline the entire Army inventory of encryption devices by 2016, converging 77 different types of outdated devices into 48 modern types.

TRAINING TEAMS BOLSTER U.S. NATIONAL SECURITY, SUPPORT PARTNER NATION NEEDS

By Adriane Foss, USASAC Public Affairs

The last of the two longest serving U.S. Army Security Assistance Training Teams concluded its mission when the team departed from Egypt June 1.

The AH-64D Apache Technical Assistance Field Team (TAFT) was established in February 1993. The nine-man U.S. Army aviation team had the mission to advise and assist the Egyptian Air Force (EAF) 550th Apache Wing in the fielding, training and operational sustainment of three squadrons, consisting of 640 Egyptian airmen and 35 AH-64D attack helicopters.

"For the past 22 years, the TAFT has trained the EAF trainers of pilots and maintenance personnel in order for the wing to achieve the capability to sustain its own operations," said Walton "Buck" Walker, Security Assistance Training Management Organization (SATMO) Security Assistance Training (SAT) manager for Egypt, Jordan and Lebanon. "The TAFT has assisted in developing pilot training procedures, pilot-in-command and instructor pilot training, along with wing-level maintenance to ensure the wing could begin to execute independently."

While the recently redeployed TAFT was historically long, it is far from the only one of its kind.

ABOUT SATMO

SATMO, a subordinate organization of the U.S. Army Materiel Command's U.S. Army Security Assistance Command (USASAC), deploys Army Security Assistance Training Teams to partner nations in support of Security Assistance Organization training objectives.

SATMO training teams are a crucial component of USASAC's "total package approach," which not only provides materiel for partner nations in the form of Foreign Military Sales, but also provides refurbishment, spare parts, maintenance and training teams like TAFTs. All elements of USASAC, including SATMO, combine to help 145 ally countries and multinational organizations strengthen their defensive capabilities and promote democratic values throughout the globe.

"Because of the duration of a TAFT – one or more years – long-term relationships are often established with partner nation personnel," said Mark Moen, SATMO's director of regional operations. "Some of these relationships extend beyond the time a Soldier is in a country."

Moen has worked for SATMO for 15 years, and retired from active duty service after 21 years. As a special forces Soldier, he spent several years training foreign forces and has a unique knowledge of foreign military needs. He said a TAFT is generally designed to meet a specific mission requirement, like helicopter mission training. The team is composed of experts within the particular field.

"In the case of the Apache TAFT, the pilots selected for this mission would be experienced instructor pilots or maintenance test pilots," he said.

MULTI-FACETED MISSIONS

The scope of TAFT missions is broad, as USASAC currently oversees more than 5,000 Foreign Military Sales cases with a combined program value of more than $160 billion.

SATMO's brigade-equivalent command is headquartered at Fort Bragg, North Carolina, where it employs more than 260 Soldiers, Department of Army Civilians and contractors who deploy to more than 20 countries throughout the year to meet training assistance requirements of America's foreign partners.

"SATMO has a long history of providing a wide variety of security assistance teams which can do anything from basic Soldier skills training to highly technical, very advanced military education and senior-level development," said Moen.

SATMO was organized in the early 1970s to manage the deployment of Security Assistance Training Teams. Today, it is known as the Army's one-stop shop for all Army security assistance training overseas. Moen said it earned its status as a customer-oriented unit that gives the security assistance enterprise a wide range of options in achieving each partner nation's training goals and U.S. foreign policy objectives.

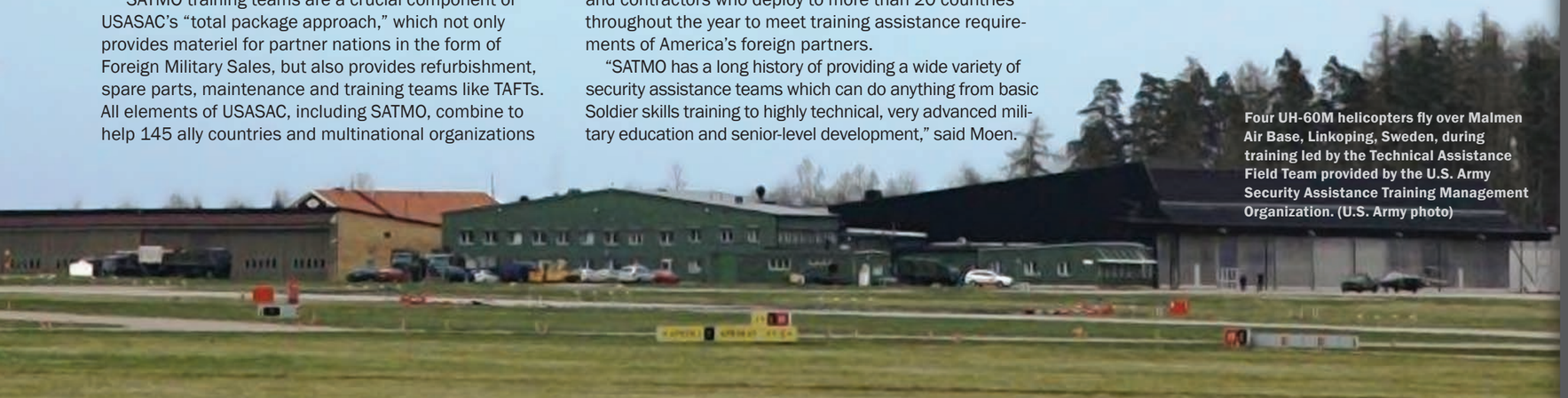
THE BENEFITS

"TAFTs can save time by providing a team over a longer, singular period of time versus episodic, periodic events that only last from a few days to a couple of months," said Moen. "Episodic events don't accomplish everything the partner nation needs."

Episodic events are also more expensive, because the teams deploy under temporary duty, instead of permanent change-of-station conditions.

"Every team sent out by SATMO is unique and tailored, both in size and technical expertise, to meet the requested mission," said Moen. "This makes SATMO a cost-effective provider of training to our partner nations. There is no excess on our TAFTs."

Cost savings are crucial for partner nations. Another cost-effective feature of TAFTs hinges on the length of stay. He said team members can impart a significant amount of knowledge to partner nations during long-term TAFTs.



Four UH-60M helicopters fly over Malmen Air Base, Linkoping, Sweden, during training led by the Technical Assistance Field Team provided by the U.S. Army Security Assistance Training Management Organization. (U.S. Army photo)

AMC Global Reach

USASAC: 50 YEARS OF BUILDING RELATIONSHIPS FOR THE ARMY

The U.S. Army Security Assistance Command (USASAC) recently marked a half-century carrying out one of the State Department's most critical missions – building partnerships and cementing strategic alliances around the globe.

USASAC recognized its 50-year anniversary during a July ceremony at its headquarters at Redstone Arsenal, Alabama, and with festivities at its founding location, New Cumberland Army Depot, Pennsylvania.

The command delivers materiel, services and training to allies and international partners through security assistance and Foreign Military Sales (FMS). USASAC's mission has improved allies' and partners' capabilities, their abilities to work and fight independently and also strengthened their partnerships.

"Five decades has seen the USASAC mission evolve, and the same can be said of our headquarters locations," said Maj. Gen. Mark McDonald, USASAC's 27th and current commanding general. "As the importance of our mission has grown, our headquarters has moved with increased visibility throughout the Army."

At its July 19, 1965, inception, USASAC was known as the U.S. Army Supply and Maintenance Command International Logistics Center at New Cumberland. It was a relatively small organization that was part of the three-year-old Army Materiel Command (AMC).

"When you see photos of USASAC's opening day at New Cumberland, you realize how far we've come – from a former warehouse to a state-of-the-art facility at Redstone Arsenal. And we have always managed to meet our nation's, our Army's and our customers' requirements," McDonald said.

Today, USASAC executes more than 5,000 FMS cases with 145 countries that are valued at more than $160 billion. McDonald cites the command's ability to execute urgent requirements – such as in Iraq, where 300 MRAPs, 50 mine rollers and five brigade sets of individual Soldier equipment, weapons, ammunition, communications equipment, counter roadside bomb equipment and bridging equipment have resulted in increased partner capability – as supporting a national security priority.

The command remains a relatively small organization, but as the lead for AMC's security assistance enterprise, it coordinates with more than 40 U.S. government agencies and private industry.

"It's a team effort, because it is a team business with our allies, internally with our security assistance enterprise partners inside the military, and with our defense industries who provide the capability," said McDonald. "It's pretty important that we maintain a good sense of cooperation."

While the day-to-day success of the relationships that develop between the Army and its partners may not be visible to large numbers of people, the partnerships are vital to the nation and used in U.S. Combatant Command strategies, McDonald said.

He attributes much of USASAC's successful partnerships to what is known as the "total package approach," which offers life cycle management for FMS and includes equipment, spare parts, training, publications, technical documents, maintenance support and other services to ensure a long-term capability and relationship.

"Our command provides materiel, while maintaining and cultivating friendships on a daily basis," said McDonald.

FAST FACT:

WHAT IS THE DIFFERENCE BETWEEN A TECHNICAL ASSISTANCE FIELD TEAM (TAFT) AND EXTENDED TRAINING SERVICE SPECIALIST (ETSS)?

Technically, a TAFT is more focused on technical assistance and less on training. An ETSS is more focused on training with limited technical assistance. From the SATMO perspective, the terms are interchangeable; the term TAFT is more universally recognized.

FROM TOP: Master Sgt. Steven Kroll, left, and Sgt. 1st Class Ronald Bootes, members of the U.S. Army Security Assistance Training Management Organization, instruct Armenian students on individual movement techniques during the Warrior Leader Course at the Warrant Officer School in Yerevan, Armenia.

Sgt. 1st Class Marc Baker, a member of the U.S. Army Security Assistance Training Management Organization, observes Armenian students working during Warrior Leader Course classroom instruction at the Warrant Officer School in Yerevan, Armenia. (U.S. Army photos)

"There are many lessons that we as an Army have learned over decades that can be provided to our partner nations," said Moen.

Relationships between members of the TAFTs and partner nations often stretch far beyond the tenure of the team members' time in country. He said long-term teams have the opportunity to instill and solidify cultural change to the way the partner nations do business.

"For example, in Colombia, there has always been a strong tendency for the Colombians to follow the U.S. Army when establishing their aviation training, techniques and procedures. The TAFT that is currently in Columbia has come a long way in solidifying those into the Colombian aviation culture," Moen said.

CHALLENGES

The nature of global politics requires TAFTs to also work under a partner nation's time constraints. A TAFT deployed in 2012 to Linkoping, Sweden, in support of the Swedish Armed Forces' (SwAF) procurement of 15 UH-60M aircraft. The SwAF was scheduled to deploy to the Afghanistan area of responsibility in March 2013 to provide critical medevac support for coalition forces. SATMO selected and deployed three of its most experienced aviation UH-60 crew members to assist. This TAFT was charged with ensuring the SwAF could meet their proficiency requirements in their shortened timeframe. Moen called this par for the course, noting time constraints and world politics are some of many constraints TAFTs work under.

"We sometimes face language and cultural concerns, and varying expectations from partner nations," he said, adding that TAFT members are well-trained and reinforced by Army ethics and excellent support teams. "U.S. Soldiers do not want their mission to fail, so they work hard at providing what their customers need, and it's a full-team effort by the security assistance enterprise, setting the TAFT up for success."

That full-team effort includes the constant oversight and support from USASAC's country program managers, security assistance management directorates, security assistance training managers and security cooperation officers. Moen said constant collaboration is ongoing from the time TAFTs are selected through the end of the mission.

SUCCESSFUL SIDE EFFECTS

TAFTs can also serve as a bridge for diplomacy. Moen said in Sweden, the SwAF team proved to be a stepping stone for the U.S. Army Special Operations Command (USASOC) at Fort Bragg.

The three-person team that went to Sweden focused on a single mission, and ultimately helped the Swedes provide a very successful medevac capability for coalition forces in Afghanistan. The relationship building that took place during the process also laid the foundation for a USASOC team to continue improving their aviation capabilities.

"All-in-all, our TAFTs are providing a crucial service to our nation and our partners around the globe," Moen said. "Effectively training our partners at the end of the day means we are strengthening U.S. global relations, ensuring interoperability between U.S. and friendly foreign forces during combat operations, and supporting Combatant Command engagement strategies. It's a win-win – for our partners and for the United States."

PROVIDING GLOBAL TRANSPORTATION SUPPORT TO THE WARFIGHTER 24|7|365

By SDDC Public Affairs

For more than 50 years, the Military Surface Deployment and Distribution Command (SDDC) has provided global deployment and distribution capabilities to meet the nation's objectives. Although SDDC's mission has adapted, the command has always played a major role in the transportation of Department of Defense cargo in support of the U.S. warfighter.

"Trained and ready warfighters, plus logistics excellence, equals success," said Maj. Gen. Susan A. Davidson, SDDC commanding general. "No other country can do what we do, and SDDC plays a huge role in the logistics part of that equation."

As a major subordinate command of U.S. Army Materiel Command, and the Army Service Component Command to U.S. Transportation Command, SDDC is responsible for planning, booking, shipping and tracking cargo; conducting terminal operations at ports around the globe; and managing personal property moves for America's warfighters, federal employees and their families.

"There are literally tons of equipment and supplies needed to keep our warfighters supplied," said Davidson. "All of that cargo isn't being transported from point to point exclusively by military assets. It would take thousands more troops, trucks, vessels and aircraft, and a lot more of the taxpayers' money, to move everything by military transport."

Sgt. 1st Class Aaron Lawson, port operation supervisor with the Surface Deployment and Distribution Command's 839th Transportation Battalion, directs vehicle drivers as they load equipment onto the ship Cape Race at the Liberian National Port Authority's Port of Buchanan. The ship berthed so Soldiers could load and redeploy military equipment used in support of Operation United Assistance, a Department of Defense operation in Liberia to provide logistics, medical training and engineering support to efforts combating the Ebola virus outbreak in West Africa. (U.S. Army photo by Sgt. 1st Class Mary Rose Mittlesteadt)

Instead, SDDC contracts those transportation requirements to existing commercial companies already moving other cargo around the world.

"It's a far more efficient and cost-effective way to do business," said Davidson.

SDDC'S GLOBAL POSTURE

SDDC, which includes about 2,400 military and civilian transportation experts, accomplishes this global mission by partnering with the best of U.S. commercial shipping, port, trucking, barge and rail services to deliver cargo to every corner of the globe in support of Department of Defense operations.

The command is involved in worldwide port operations around the clock, 365 days-a-year. Nearly all DOD cargo for unit deployments, redeployments, training rotations, exercises, humanitarian assistance missions and other contingencies goes through one or more ports before reaching its destination.

Military port operations, as well as the execution of SDDC's other deployment and distribution functions, are carried out by the command's five brigades and their subordinate battalions, all of which are strategically located throughout the world. Taking advantage of their geographic locations, each of the brigades is regionally aligned to provide deployment and distribution support to DOD's geographic Combatant Commands.

SDDC's 595th Transportation Brigade, located at Camp Arifjan, Kuwait, conducts surface deployment and distribution operations within the U.S. Central Command (CENTCOM) area of responsibility. The brigade has two transportation battalions with locations in Afghanistan, Kuwait, Qatar, Dubai and Oman. Through a cohesive team of experts, the brigade links strategic surface movement requirements with commercial capability by combining organic, commercial and host-nation capabilities.

SDDC's 596th Transportation Brigade conducts operations in support of U.S. Northern Command and U.S. Southern Command. Headquartered at Sunny Point, North Carolina, the 596th's mission includes the operation and management of two ammunition terminals, located on both U.S. coasts. West Coast ammunition operations are conducted at Military Ocean Terminal Concord, California, while the East Coast is serviced by Military Ocean Terminal Sunny Point. The brigade also includes two battalions with detachments in Florida, Puerto Rico and California.

Stevedores at Port of Port Arthur, Texas, secure military equipment to railcars during a multi-port mission conducted by the 842nd Transportation Battalion, 597th Transportation Brigade, Military Surface Deployment and Distribution Command. The battalion facilitated terminal operations simultaneously at two Texas ports for the loading of unit equipment headed overseas and the offloading of retrograde cargo returning from Afghanistan. (U.S. Army photo by Sarah Garner)

The 597th also includes three Rapid Port Opening Elements (RPOE) in Virginia. The RPOEs deploy quickly in a crisis or contingency operation to support air and sea ports of debarkation for follow-on personnel and equipment as part of U.S. Transportation Command's Joint Task Force-Port Opening capability.

SDDC's 598th Transportation Brigade provides support to U.S. European Command, U.S. Africa Command and CENTCOM. The 598th consists of two battalions, one company and numerous detachments located throughout Europe. Their motto, "Warrior Logistics – in Motion," aptly describes their operations as they provide expeditionary and deliberate port and surface distribution operations to support multiple Combatant Commanders.

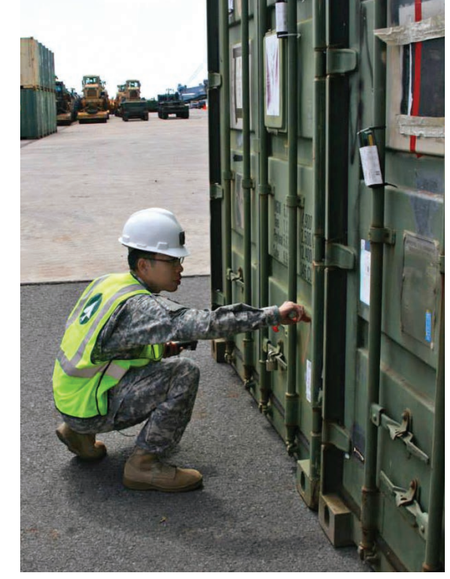
SDDC's 599th Transportation Brigade is headquartered at Wheeler Army Airfield, Hawaii, and supports operations in the U.S. Pacific Command (PACOM) area of responsibility. The brigade is co-located with all PACOM service component commands on the island, making the location ideal for brigade planners to effectively coordinate with the brigade's leading supported units. The brigade's location also provides easy access to Navy and commercial ports at Pearl Harbor, Barbers Point Harbor and Honolulu.

The 599th has the largest geographical area of responsibility in the world, covering 52 percent of the Earth's surface, equal to about 105 million square miles. To enable this reach, the brigade includes three subordinate battalions, with elements located in Japan, Singapore, Guam, Alaska and South Korea.

SDDC also has a valued asset in its reserve component, the Deployment Support Command (DSC). Headquartered in Birmingham, Alabama, and composed of five reserve brigades, DSC's trained and ready surface transportation experts provide the critical support augmentation needed to keep the cargo flowing for the nation's warfighters during wartime operations and other contingencies.

FULL-SPECTRUM SURFACE TRANSPORTATION

The amount of equipment and supplies that SDDC transports is immense. According to SDDC's Command Operations Center, during calendar year 2014 alone, SDDC was responsible for the movement of more than 5.6 million measurement tons – or 3.2 billion pounds – of cargo in support of U.S. forces and their missions worldwide.



Sgt. 1st Class Paulus Hindarto, movement management operator for the 836th Transportation Battalion, 599th Transportation Brigade, checks off cargo to be loaded on the U.S. Naval Ship Mendonca after accounting for it on a handheld device. The 599th Transportation Brigade worked around-the-clock port operations for five straight days to upload more than 1,600 pieces of cargo destined for the Joint Readiness Training Center at Fort Polk, Louisiana. (U.S. Army photo by Donna Klapakis)

Prior to 9/11, SDDC's primary focus was on providing terminal operations at ports around the country and throughout the world. SDDC's role in the management of port operations has since evolved, focusing more heavily on planning and coordinating with its customers, the military services, federal agencies and commercial partners. While SDDC still conducts terminal operations and actively participates in cargo movement operations, much of the physical staging of cargo and loading of vessels, trucks, trains or planes is completed by contracted labor.

When working with customers to get their cargo moved, SDDC uses its logistics expertise and information technology systems in the planning, preparation, execution and follow-up phases.

"There is so much data and such a variety of players involved in the process, that what our surface transportation experts are doing every day takes proficiency and requires an integrated, full-spectrum approach to conducting operations," said Davidson.

The Military Surface Deployment and Distribution Command (SDDC), a subordinate organization of the U.S. Army Materiel Command and Army Service Component Command of the U.S. Transportation Command, delivers world-class, origin-to-destination distribution solutions. Whenever and wherever Soldiers, sailors, airmen, Marines and Coast Guardsmen are deployed, SDDC is involved in planning and executing the surface delivery of their equipment and supplies.

GLOBAL PARTNERSHIPS DELIVER S&T OPPORTUNITIES

By RDECOM Public Affairs

U.S. Army and Japanese Ground Self-Defense Forces conduct bilateral training focusing on the identification and disposal of improvised explosive devices at Camp Chitose-Higashi, Japan. (U.S. Army photo)

U.S. Army Science and Technology (S&T) teams are stationed around the globe to explore international collaboration opportunities and close capability gaps for Soldiers. This cooperation can lead to advancements that can be applied in both conflict and humanitarian missions.

"From basic science to maturing technology, foreign research contributes to the development and improvement of American military products," said Brig. Gen. William Cole, deputy commanding general of the U.S. Army Research, Development and Engineering Command (RDECOM).

Three regional RDECOM Forward Element Commands (RFECs) lead these S&T efforts: RFEC Americas with headquarters in Santiago, Chile; RFEC Atlantic with headquarters in London; and RFEC Pacific, headquartered in Tokyo. They pursue solutions in standardization and interoperability, research and development, academic collaborations and S&T agreements. RFECs also initiate partnerships with industry, foreign military laboratories and academia.

"These RFECs serve as the critical link between our domestic research centers, U.S. commanders overseas and our foreign technology partners," said Cole, who oversees the RFECs.

RFECs coordinate the work of the International Technology Centers (ITCs), which represent RDECOM to international researchers and the foreign military technologists of allies and key partners. Field Assistance in Science and Technology (FAST) teams supporting U.S. commands overseas also fall under the RFECs.

"Our FAST advisors are RDECOM's face to the field," Cole explained. "We rely on them to represent RDECOM to U.S. commanders at select three- and four-star commands."

RFEC AMERICAS

Founded in 2004, RFEC Americas is the newest and smallest of the three organizations with ITCs positioned in Canada and Argentina.

RFEC Americas has access to senior leadership in most of the armies in the Americas, and their science, technology and engineering leaders through the Conference of American Armies. This voluntary organization, which includes 22 member armies and other observers, has a goal of improving interoperability in peacekeeping, disaster relief and humanitarian operations.

"We are part of the U.S. mission and execute our program to meet Army goals in the context of broader U.S. government goals as articulated in the U.S. Embassy strategy," said Lt. Col. Hector Gonzalez, RFEC Americas commander.

Gonzalez said the relationship is strong and makes for better programs.

"We are scientists and engineers working in subject areas of universal importance such as alternative power and energy, disaster relief technologies, water purification, and mitigating environmental impact of operations and manufacturing," he said. "For a Combatant Command or Army component command, we are a smart, soft power tool that can be used to meet their goals."

RFEC ATLANTIC

RFEC Atlantic oversees a diverse cultural and political landscape that spans Europe, Africa and Western Asia (Russia and the former Soviet Union) from ITCs in the United Kingdom, France and Germany, according to Col. Keith Hirschman, RFEC Atlantic commander.

RFEC Atlantic supports two Combatant Commands – U.S. European Command (EUCOM) and U.S. Africa Command (AFRICOM) – maintaining relationships in an S&T community spread across 110 nations.

"From the leading edge of international research, collaborative projects not only build lasting relationships, they allow the ITCs to leverage a small amount of research money to gain a huge return against the cost of the research effort," Hirschman said.

FAST members at EUCOM have a strategic focus and represent the command in Joint Concept Technology Demonstration and Coalition Warfare Program initiatives.

The Joint Multinational Readiness Command FAST advisor and Joint Multinational Readiness Center noncommissioned officer provide S&T support to U.S. and multinational training and exercises at Grafenwoehr and Hohenfels, Germany, working directly with Soldiers to improve training, interoperability and equipment.

FAST members assigned to AFRICOM have helped solve capability gaps ranging from man-portable water solutions to providing solar power for remote outposts. Their efforts aim to solve long-range, long-endurance intelligence, surveillance and reconnaissance challenges inherent in a vast area of operation.

RFEC PACIFIC

RFEC Pacific facilitates S&T collaboration throughout a region spanning 36 countries.

"RFEC Pacific has established an exceptional working relationship with Japan, Korea, Australia and Singapore," said RFEC Pacific Commander Col. Ernest "Lee" Dunlap. "We seek opportunities to expand engagements in India as well as countries in the Association of Southeast Asian Nations, such as Vietnam, Thailand and the Philippines."

Capt. Kantima Niweswan with the Royal Thai Army Chemical Department demonstrates the Smart-DART Platform during Operation Crimson Viper 2014 to test for water purity at Chao Samran, Thailand. (U.S. Army photo)

Maj. Brent Odom (top), RDECOM Field Assistance in Science and Technology advisor to U.S. Army Africa, observes Cameroon soldiers developing combat life-saving skills in Koutaba, Cameroon, during Central Accord 2014. (U.S. Army photo)

RFEC Pacific works with the broader Department of Defense S&T community, including the Office of Naval Research Global, the Asian Office of Aerospace Research and Development, the Defense Advanced Research Projects Agency, and the Defense Threat Reduction Agency.

FAST advisors participate in about 10 coalition exercises each year to identify and address critical capability gaps and help build partner capacity with allies. Their contributions in the Pacific support a wide range of technology needs, including Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance, counter-improvised explosive devices, counter-weapons of mass destruction, dynamic precision fires, operational power and energy, language translation and humanitarian assistance/disaster relief.

"Exercises such as Ulchi Freedom Guardian (in Korea) provide ideal opportunities for us to operationalize our S&T support to the warfighter and build strong relationships with other AMC equities, as well as allied countries," Dunlap said.

The U.S. Army Research, Development and Engineering Command (RDECOM) is the Army's technology leader and largest technology developer. A subordinate of the U.S. Army Materiel Command, RDECOM creates, integrates and delivers technology-enabled solutions to Soldiers.

Logistics Assistance Representatives take COMMAND SUPPORT to soldiers worldwide

By Kari Hawkins, AMCOM Public Affairs

Two Soldiers in Korea work to repair electrical wires affecting cockpit flight instrumentation on a UH-60L helicopter under the guidance of an Aviation and Missile Command Logistics Assistance Representative. (U.S. Army photo)

The Aviation and Missile Command's (AMCOM) presence is known wherever Soldiers are charged with around-the-clock maintenance of aviation and missile systems, at stateside Army installations and around the world.

That AMCOM presence comes in the form of civilian employees who have a vast amount of both on-the-job and formal training. They have the ability to provide the guidance, advice and resources needed to keep helicopters and unmanned aircraft flying and missile systems ready to fire.

They are Logistics Assistance Representatives – better known as LARs – and about 250 of them are stationed around the world. They are critical, mobile, technical experts who fulfill their mission working side-by-side with maintenance Soldiers.

"The intent of a LAR is to aid in early detection and resolution of logistics issues that might affect unit readiness," said Christopher Oleyte, director of the AMCOM LARs program. "They are experts in their field. They are AMCOM to aviation and missile Soldiers, and we have them all over the world from Korea to Turkey to Grenada to South America."

LARs have the capability to mobilize total AMCOM support, including engineers, logistics personnel and program managers, to address issues in the field. LARs ensure unit readiness and implement AMCOM's overall mission.

"LARs are in an incredible position to identify and act on readiness problems. They are a link with AMCOM to provide feedback," said Jose Escolero, a LAR stationed in Afghanistan. "We conduct studies and provide data requested for internal elements and advise AMCOM of weapon system issues that cannot be resolved in the field."

Often, AMCOM recruits its LARs from those leaving the military who have been trained in a maintenance military occupational specialty.

"They have 10 years or more of aviation and missile experience," Oleyte said. "And mobility is a condition of their employment."

It could be said that LARs are the human manifestation of cutting-edge technology. They know how to take the knowledge gained from years of working in Army maintenance and sustainment, and apply it in any situation. Often, those situations come fast and furious, with only minutes to spare in making adjustments or correcting a maintenance issue.

"We hire subject matter experts in their fields, particularly in weapon systems," said Curt Gross, Logistics Assistance division chief. "Then, we teach them about the resources available to LARs. They need to understand logistics, the different databases we use for locating equipment

and spare parts, how to contact the right manager to assist them and how to do business with AMCOM. We have standardized expectations where our LARs know how to expedite parts, how to search in various databases, who to call, how to track progress and what needs to be reported to a commander. We hire a technician and teach them the logistics side of the business."

Ask any LAR and they'll tell you there is another condition of employment – a deep-rooted commitment to the nation and a dedication to ensuring Soldiers have the best technological support to complete their missions.

"I spent 26 years as a Soldier, associated with the CH-47 helicopter as a private to first sergeant," said Clarence Reynolds, who is an AMCOM LAR for cargo/utility helicopters in Iraq. "I felt being a LAR is the best way that I can show my respect to our aviation Soldiers and give back to our CH-47 Soldiers by offering them the training and guidance that I received from a group of special individuals who trained me over the years. I am proud to be a LAR, to share my knowledge."

> **"YOU'VE GOT TO BE ABLE TO ADAPT TO DIFFERENT ENVIRONMENTS. YOU HAVE TO HAVE THE ABILITY TO COMMUNICATE, WORK UNDER PRESSURE AND MULTI-TASK. YOU HAVE TO BE ABLE TO LISTEN TO THE CUSTOMER'S ISSUE AND ASSIST IN RESOLVING THE PROBLEM."**
>
> **CRAIG SPECK, AMCOM LAR IN IRAQ**

While LARs are often assigned to six-month deployments, they are not necessarily deployed to a war zone. They are also located with units serving in peacetime missions around the world. They serve wherever AMCOM's aviation and missile systems are maintained.

"LARs assist Soldiers in motor pools, maintenance shops, aviation hangars, supply activities and electronic maintenance facilities," said Frank Dudas, AMCOM senior command representative at Fort Shafter, Hawaii. "They serve as the subject matter experts for a particular commodity, whether it's in peace time or conflict, including natural disasters. LARs provide assistance to commanders with logistics issues beyond their resources or capabilities to resolve."

Each deployment for a LAR is unique in the unit they are assigned to support and where their deployment will take them.

"You've got to be able to adapt to different environments," said Craig Speck, an AMCOM LAR in Iraq. "You have to have the ability to communicate, work under pressure and multi-task. You have to be able to listen to the customer's issue and assist in resolving the problem."

John Hinchman, who supports the 407th Army Field Support Brigade in the Midwest region of the U.S. and who has deployed as a LAR three times to Iraq, and once each to Afghanistan and Kuwait, said there are two things that make a good LAR: technical knowledge of supported systems and the ability to work with and train Soldiers. Proficiency in all aspects of logistics assistance mission activities make LARs invaluable to brigade units in the field.

"Experience, commitment, patience, tolerance, obedience, flexibility, ability to work with people and ignore discomforts of different environments, stable marriage and family life, economic stability, health, willingness to travel, willingness to move frequently," John Salazar, a LAR in Kuwait who has deployed seven times in support of aviation brigades, added to the list of qualifications of a good LAR.

Below, Shawn Spoon, an Aviation and Missile Command Logistics Assistance Representative, develops an airframe repair for a cracked longeron on an OH-58D Kiowa Warrior during a recent Periodic Phase Maintenance Inspection. Spoon's technical expertise resulted in direct savings of more than $12,000 and countless man-hours in repairing the cracked longeron, seen here, rather than replacing it. (U.S. Army photos)

Although the job is a challenge, being a LAR is rewarding for those who take on the responsibility.

"The things I really like about the job include the daily contact with Soldiers and the contractor workforce, and seeing the expression on a Soldier's face – either young or old – as you help them understand or repair something on the helicopter," said Reynolds, who has been on six deployments. "The teamwork is great, too. But the best result is always watching and seeing your aircraft and its crew return home safely after the mission is completed."

The U.S. Army Aviation and Missile Command (AMCOM), a subordinate of the U.S. Army Materiel Command, develops, acquires, fields and sustains aviation, missile and unmanned vehicle systems. As a life cycle management command, AMCOM assures aviation and missile readiness with seamless transition to combat operations.

ACROSS THE YEARS

THE BIG 5

THREE DECADES OF TECHNOLOGICAL SUPERIORITY

During the 1970s, the U.S. Army Materiel Command (AMC) devoted much of its energy and expertise to the development of the Big Five – major projects that would provide technological superiority on the battlefields of the 1980s, 1990s and beyond. The intent was to develop an Advanced Attack Helicopter, a Utility Tactical Transport Aircraft System, the Main Battle Tank, a Mechanized Infantry Combat Vehicle, and a Surface-to-Air Missile.

The Big Five systems eventually transformed into the AH-64 Apache Helicopter, the UH-60 Black Hawk Helicopter, the M1 Abrams Main Battle Tank, the M2/3 Bradley Fighting Vehicle, and the Patriot Air Defense System. All five systems underwent rigorous, and often challenging, development processes before being fielded. These systems have been linchpins in the U.S. Army's fighting force over the past three decades.

Apache

1 APACHE HELICOPTER

The Advanced Attack Helicopter program, which began in 1972, eventually led to the development of the Apache Helicopter. A four-blade, twin-engine attack helicopter, the Apache was conceived as a replacement for the AH-1 Cobra.

The AH-64 Apache, which has seen a variety of upgrades over the past three decades, was initially designed and developed by Hughes Helicopters. It became the product of McDonnell Douglas from 1984 to 1997, and later transitioned to Boeing Defense.

The system took part in its first major operation in 1989 when units were deployed to Operation Just Cause, the invasion of Panama. With its world-class target acquisition and night vision systems, the helicopter was highly praised for its precision by Army senior leaders. Apaches fired the first shots in Operation Desert Storm, destroying Iraqi radar positions. It has since served in a variety of conflicts including those in Kosovo, Afghanistan and Iraq.

AMC and its partners in industry continue to devote resources to upgrading and improving the Apache Helicopter so it can remain vital to missions across the globe.

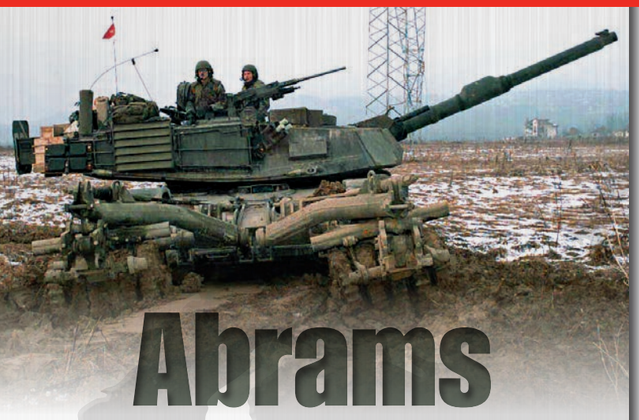
Black Hawk

2 BLACK HAWK HELICOPTER

In 1952, the U.S. Army identified a requirement for a medical evacuation and utility helicopter that led to the development of the UH-1 Huey. While used in Vietnam as part of medical evacuation units, the Huey faced serious operational shortcomings, and beginning in 1965, the Army worked to address those issues.

The program, known as the Utility Tactical Transport Aircraft System, was redesignated the UH-60A Black Hawk in 1977, with the helicopter finally entering service in 1979. The U.S. first used the Black Hawk in 1983 during the invasion of Grenada and again in 1989 during the invasion of Panama.

The Black Hawk continues to support the U.S. Army's missions across the globe in a number of variants with special modifications, including improved target acquisition, medical evacuation and electronic warfare.



Abrams

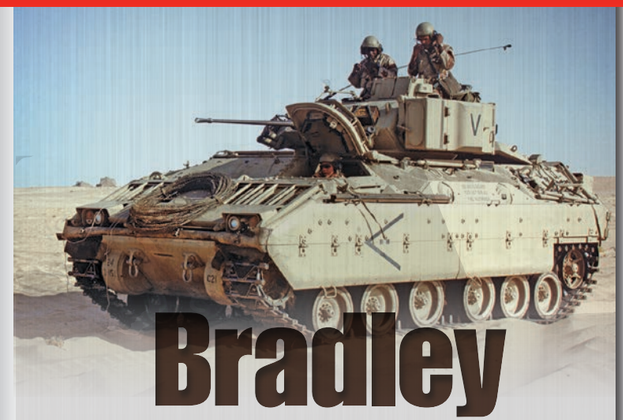
3 ABRAMS MAIN BATTLE TANK

The XM1 Main Battle Tank entered U.S. service in 1980, replacing the M60 tank. That year it was announced that XM1 would be called the M1 Abrams in honor of the late Gen. Creighton Abrams Jr. While technically only in development for seven years, the success of the M1 is directly related to two failed programs – the MBT-70 and the XM-803 – which served as building blocks for the third-generation Main Battle Tank.

The Abrams saw its first combat during Operation Desert Storm in 1991.

More than 3,000 M1 Abrams were produced between 1979 and 1985, and an additional 6,000 M1A1 Abrams were produced between 1986 and 1992. Each successive variant of the Abrams has incorporated changes or improvements to lethality, survivability and maneuverability.

The U.S. Army is still working with its industry partners to upgrade the Abrams with improved mileage, sights and sensors.



Bradley

4 BRADLEY FIGHTING VEHICLE

Entering Army service in 1981, development began on the Bradley as the Mechanized Infantry Combat Vehicle during the mid-1960s. The original requirements called for a vehicle with armor protection that could transport infantry while providing cover fire to suppress enemy troops and armored vehicles. One specific design requirement was for the vehicle to be as fast the M1 Abrams to more easily maintain formation while moving.

About a dozen variants of the Bradley have been produced over the past 30 years, and more than 6,000 individual Bradleys have been built.

The Bradley, named after Gen. Omar Bradley, first saw combat in 1991 during Operation Desert Storm and has since been active in conflicts in the Middle East. The U.S. Army is currently working to develop a replacement for the Bradley through the Future Fighting Vehicle program.

Patriot

5 PATRIOT AIR DEFENSE SYSTEM

In 1964, the Secretary of Defense initiated the Surface-to-Air Missile Development (SAM-D) program to replace Hawk and Nike Hercules systems. The requirements for the SAM-D would create a system that had extensive computer control, could engage multiple targets and could operate in an electronic counter-measure environment.

In 1976, the SAM-D program was formally named the Patriot, with emphasis on the air defense system's role as a strong defender of American freedom and national beliefs. It also reflected the nation's celebration of the American Bicentennial.

Entering service in 1981, the Patriot became the Army's primary surface-to-air missile system. During the 1980s, the Patriot was upgraded to handle the threat of missiles and rockets, and to engage and destroy aircraft at standoff range. The upgraded system reached Army units in 1990, just in time for deployment during Operations Desert Shield and Desert Storm.

More than 1,000 launchers are currently in U.S. service with more than 10,000 missiles manufactured over the past three decades.

HIGHLIGHTING THE CONTRIBUTIONS OF PAST PROFESSIONALS

The late Col. Alexander Davis Jr., known as "Big Al" for his giant stature and gregarious personality, helped shape a generation of Army leaders during his time in the Quartermaster Corps.

Davis, who passed away in 2013, served in a variety of logistical assignments around the globe, including a deployment to Iraq in 2005. He retired from active duty service in 2010 and transitioned to civilian life as director of Operations and Training Management Directorate at the U.S. Army Quartermaster School at Fort Lee, Virginia.

"He was an awesome American," said Keith Orage, currently the director of training at the U.S. Army Quartermaster School, who served as Davis' executive officer during his time as the battalion commander for the 262nd Quartermaster Battalion. "He was very charismatic, a leader that had this presence about him. He was upbeat, positive, the kind of person that made you want to work for him and be around him."

Throughout his career Davis helped to lay the foundation for the future of the Quartermaster Corps, and in many ways, the Army as a whole, Orage said.

"He would go out of his way to help his fellow man – Soldier, civilian, whomever – doing whatever he could," Orage said. "He used to tell me that he never met a stranger, and it showed.

"Having a leader like that here as part of the institutional Army for a significant portion of his career provided the opportunity for him to impact so many young Americans," Orage continued. "We train hundreds of Soldiers annually, so think about having someone like him here as a leader and mentor. You can see his impact across the globe."

As a way to honor the lasting impression "Big Al" left on the Quartermaster Corps, the 262nd Quartermaster Battalion Headquarters was named Davis Hall in June.

"I watched his example of leadership, service and commitment on full display," said Gen. Dennis L. Via, U.S. Army Materiel Command commanding general, during the building dedication ceremony.

Via, who met Davis while he was in the ROTC program at Virginia State University, said that Davis' motto for the battalion – "Lifeline for Life" – could easily have applied to his lifetime of service to his fellow Soldier.

"As we remember him today and every day, I know the 262nd headquarters building will stand for many years as a tribute to his great legacy."

Davis is survived by his wife, Karen, and two daughters, Alexis and Aaren.

Mike Walsh, Joint Munitions Command Quality Assurance Ammunition Surveillance expert, inspects 120 mm tank ammunition in storage during a deployment to Iraq. (U.S. Army photo)

AMMO EXPERTS PROVIDE FAITHFUL FIREPOWER TO WARFIGHTERS IN THE FIELD

By Tony Lopez, JMC Public Affairs

When bullets respond to a trigger pull and mortars explode as they should, Quality Assurance Ammunition Surveillance (QASAS) experts can rest assured they have successfully performed their mission.

QASAS personnel are assigned as ammunition advisors to Combatant Commanders across the globe. Wherever Soldiers go, QASAS experts are there to provide ammunition surveillance and explosives safety support.

The QASAS Career Program was established in 1920, making it the oldest federal civilian Career Program. QASAS professionals have deployed during World War II, Korea, Vietnam, various wars in the Middle East and conflicts in Grenada and Panama.

QASAS professionals bring many areas of expertise to the field when deployed, such as explosive safety, ammo packaging and safe handling procedures.

"QASAS experts have a different set of skills that require a broad spectrum of ammunition knowledge," said Tom Moore, Joint Munitions Command (JMC) QASAS team leader, who has served as a QASAS expert for 18 of his 32 years of government service. "We are often tapped as subject matter experts, particularly for things that happen in the field."

Their core duty is inspecting ammunition returned by units. QASAS personnel have the skills to oversee or perform ammo inspections that effectively separate and segregate good ammo from bad.

This "recycling" effort allows good ammo to be repackaged and retained in storage or reissued to Soldiers when needed, said Moore. This effort alone reduces the logistical pressures of moving ammo forward across the battlefield. Any reduction in commodity movement saves not only money, but exposes fewer haulers to the dangers and hazards of operating in a combat zone.

Moore said he enjoys his role as an ammo expert because every day is different. He recalls performing a malfunction investigation on a conventional missile that normally would take two to three days, but required two weeks to complete because of the hazardous travel involved. Moore flew by helicopter, or in one case traveled in a military convoy for 16 hours in the middle of the night, to six different combat zone locations, to complete the investigation. That is typical of what QASAS personnel do to support the warfighters in the field.

QASAS professional Mike Walsh has been deployed four times, including stints in Iraq, Haiti and Afghanistan.

"I enjoy my job because of the impact that it has on supporting the Soldiers," Walsh said. "I do my best each day to continue the QASAS legacy for the Army. Soldiers should not have to wonder if their ammunition will function when they need it."

Irene Young has been a QASAS expert for the last 10 years of her government service, deploying as the JMC Senior Theater QASAS to Kuwait in 2013.

"It's one thing to have hands on the ammo and assure that it is serviceable and ready for the Soldier, but to have that one-on-one with the Soldier makes it more valuable," Young said. "You see the work that you've done in the rear by inspecting the ammo that they are using. It gives you a feeling of pride, and you feel your job is significant because this Soldier is depending on you to give him quality ammunition."

QASAS experts are a part of the broader mission of JMC, which serves as the logistics integrator for life cycle management of ammunition and provides a global presence of technical support to U.S. combat units wherever they are stationed or deployed.

The QASAS mission includes establishing a surveillance program to determine the condition of the ammunition stockpile; developing procedures that assure ammunition is safe for storage, handling and use; executing inspections on all Class V materials; performing explosives safety surveys, mishap and malfunction investigations and inspections on explosives operations and facilities; and maintaining a database on the serviceability/readiness and suspension/restriction status of the ammunition stockpile.

Joint Munitions Command operates a nationwide network of conventional ammunition manufacturing plants and storage depots, and provides on-site ammunition experts to U.S. combat units wherever they are stationed or deployed. A subordinate command of U.S. Army Materiel Command, JMC provides for customers from U.S. forces of all military services, other U.S. government agencies and allied nations.

Tom Moore, Joint Munitions Command Quality Assurance Ammunition Surveillance Team lead, inspects 105 mm Stryker main gun ammo during a deployment to Iraq.

Eric Suarez, Tooele Army Depot Quality Assurance Ammunition Surveillance expert, completes the inspection of 40 mm linked grenades from unit turn-in during a deployment to Afghanistan. (U.S. Army photos)

Providing Support to Global Exercises

By Travis Spurrier, TACOM Logistics Assistance Directorate

Soldiers support the Combined Joint Logistics Over-the-Shore exercise in Korea. (U.S. Army photo by Chief Warrant Officer 4 Rick Deans)

The U.S. Army Tank-automotive and Armaments Command (TACOM), a global organization that focuses on Soldier and ground systems, plays a key role in theater exercises and operations around the world, providing technical assistance and support.

Two of those theaters – Korea and Europe – saw extensive TACOM participation during exercises in Fiscal Year 2015.

TACOM SUPPORT TO EUROPE EXERCISES

In October 2014, TACOM Logistics Assistance Representatives (LARs) provided technical assistance and support to various units deploying to the European theater to conduct training exercises as part of Combined Resolve III. Prior to each unit's arrival, the LAR Team assisted European Activity Set (EAS) maintenance personnel to ensure the readiness of equipment that Soldiers would soon draw. The newly established EAS included a battalion-sized set of equipment that Soldiers would fall-in on and use for training exercises throughout the region. TACOM's subject matter experts assisted EAS mechanics with troubleshooting, diagnosing and repairing equipment, as well as verifying that data cards for the combat vehicles were up-to-date.

Once the units arrived in Europe, TACOM LARs worked closely with maintenance personnel from the unit and EAS to assist with and resolve maintenance-related issues. They provided continued on-site support during the EAS equipment draw, which included more than 413 vehicles and pieces of equipment.

Once the equipment draw was complete, the units moved to the Hohenfels and Grafenwoehr Training Areas in Germany to begin operations. In coordination with the units' Brigade Logistics Support Team chiefs, LARs conducted site visits to the live-fire ranges, assisting units with performing immediate-action inspections and repair on carbines, machine guns and grenade machine guns. LARs also visited maneuver ranges during mounted gunnery exercises to assist maintenance personnel with troubleshooting, diagnosing and repairing wheeled and tactical vehicles, and heavy expanded mobility tactical truck fleets. Finally, TACOM's experts assisted with fire control issues on the big guns in the Abrams Tanks and Bradley Fighting Vehicles.

TACOM's ability to train and advise unit maintenance personnel on how to troubleshoot, diagnose, repair and maintain their equipment, returning non-mission capable equipment to fully-mission capable status in the most expeditious manner, ensured the success of training missions in Germany.

Logistics Assistance Representative Robert Martinez instructs a Soldier on proper repair procedures. (U.S. Army photo by David Jeffries)

TACOM SUPPORT TO KOREAN EXERCISES

In July, TACOM supported Combined Joint Logistics Over-the-Shore (CJLOTS) 15, a large-scale exercise involving the U.S. Army, Navy, Coast Guard and Marines, along with soldiers and sailors from the Republic of Korea. Logistics over-the-shore operations are military activities that include offshore loading and unloading of ships when fixed port facilities are unavailable. They are conducted over unimproved shorelines and through fixed ports not accessible to deep draft shipping. The mission is to be able to discharge cargo from vessels anchored off-shore, transport cargo to various shore-based off-load sites, and marshal cargo for movement inland.

During CJLOTS 15, TACOM managed Rough Terrain Container Handlers (RTCH) that were essential to operations. One of the involved units needed to move the RTCHs from Camp Carroll, Waegwan, South Korea, to Anmyeon Beach, South Korea – a distance of about 140 miles. The unit requested assistance in removing the top handlers from the RTCHs to prepare them for movement. TACOM LARs provided the expertise, training and assistance to the unit maintenance personnel.

At Anmyeon Beach, the TACOM experts provided support and assistance by ensuring the equipment remained operational throughout the exercise. The TACOM-managed equipment used in support of CJLOTS included tactical wheeled vehicles, construction equipment, recovery vehicles and numerous port operations items including the Trident Pier and port tugs.

During the exercise, Soldiers experienced unique challenges when operating vehicles in rising and receding water with the tides. TACOM professionals assisted unit personnel with operating equipment and troubleshooting equipment failures due to salt water operation. Their expertise allowed them to verify the effects caused by salt water to vehicle systems.

At the conclusion of CJLOTS, the TACOM LARs provided guidance to unit maintenance personnel to ensure that the equipment used during the exercise was properly restored and maintained. They worked with the units to inspect and clean vehicles to prevent excessive corrosion and other adverse effects from salt water.

The U.S. Army Tank-automotive and Armaments Command (TACOM), a subordinate organization of the U.S. Army Materiel Command, integrates Army acquisition, logistics and technology responsibilities, authorities and processes to enable a closer relationship among all its partner organizations that develop, acquire and sustain the capabilities provided by ground and Soldier systems around the world. TACOM's mission is to provide and sustain mobility, lethality and survivability for Soldiers, other services and allies through ground combat, automotive, marine and armaments technologies. Headquartered in Warren, Michigan, with a workforce of around 19,000 worldwide, TACOM supports more than 2,000 fielded systems and more than 34,000 components that make those systems work.

CONNECTIONS ON THE BATTLEFIELD

KEEP CAPABILITIES CONSISTENT AROUND THE WORLD

By CECOM Public Affairs

The U.S. Army Communications-Electronics Command (CECOM) ensures the global readiness of the complex, networked Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) systems and capabilities that provide joint forces with the advanced information and technology they need to communicate on today's battlefield. The command adapts, strengthens and sustains the critical systems that joint warfighters rely on, allowing them to operate, fight and win anywhere, against any enemy, at any moment. CECOM provides global support such as training, reset, sustainment, maintenance, field support, logistical expertise, information and software assurance, and interoperability and certification activities around the globe.

As a worldwide command, CECOM's workforce is comprised of more than 13,000 military, civilian and contract employees located in 23 states and seven countries. Team members are integrated into Army Sustainment Command's Army Field Support Brigade structure, ensuring regional alignment with Combatant Commands (COCOMs).

"This alignment ensures responsive support to COCOMs with units located in the Pacific, Americas, Europe and forward deployed in the Middle East," said Maj. Gen. Bruce T. Crawford, CECOM commanding general. "Regional CECOM offices and field support representatives provide well-positioned capabilities for responsive, agile support to deployed COCOMs and Army units."

CECOM's Software Engineering Center (SEC) is one of the most experienced and comprehensive software support systems within DOD. To ensure Soldiers are fed, housed, moved and supplied, the SEC provides life cycle software solutions for C4ISR software and hardware systems on the battlefield, and develops and maintains software business applications. The organization successfully supports more than 400 systems and programs for a wide variety of government customers with core capabilities that include Army business and logistics solutions and worldwide software field support. The SEC offers 24/7 worldwide field software support working to ensure the Army's advanced computer systems are battle-ready.

SEC, headquartered at Aberdeen Proving Ground (APG), Maryland, also manages the Global Support Center, a secure, web-based portal for warfighters that streamlines the field support process through the use of the Field Support Management Tools suite of applications. These applications assist in balancing requirements and sustainment support of software-intensive systems. Electronic access to this service provides higher readiness and shorter response times to the field support process.

Soldiers assigned to 4th Battalion, 319th Airborne Field Artillery Regiment, communicate on the radio while conducting training during exercise Allied Spirit II at the U.S. Army's Joint Multinational Readiness Center in Hohenfels, Germany. Allied Spirit II is a multinational decisive action training environment exercise that involves over 3,500 Soldiers from the U.S., allied and partner nations. (U.S. Army photo by Spc. Brian Chaney)

LOGISTICS READINESS AROUND THE WORLD

CECOM's Logistics and Readiness Center (LRC) provides global C4ISR logistics support, preparing, sustaining and resetting the warfighter and coalition forces. This is accomplished through rapid acquisition, maintenance, production, fielding, new equipment training and operation and sustainment of CECOM equipment. The LRC provides the Army with communications and electronic systems that enable tanks, planes, helicopters, ships, satellites and missiles to talk to each other and dominate the battlefield. Headquartered at APG, the LRC has activities at three other U.S. military bases with Logistics Assistance Representatives (LARs) stationed in eight countries.

LARs are the key to global support for C4ISR systems, located at each post, camp and installation throughout the world. Their mission is to develop, provide, train, integrate and sustain the logistical readiness for the systems and mission command capabilities for joint, interagency and multinational forces worldwide.

LARs provide commanders and Soldiers with the technical guidance and training – both classroom and hands-on – necessary to resolve weapon systems, equipment and systemic logistics problems. In Fiscal Year 2014, CECOM LARs provided sustainment training to nearly 37,000 Soldiers. LARs also coordinate national-level sustainment support for non-standard equipment and contractor support when necessary. They identify and report all logistics matters that have, or may create, an adverse impact on logistics readiness, including supply, maintenance, transportation, personnel, training, organization, systems and doctrinal issues.

CECOM LARs are multifunctional. They support more than 380 Line Item Number products and more than 600 National Stock Number items among seven different specialty skills: Avionics, Information Technology-Radio, Information Technology-Switch, Logistics Information-Logistics, Long Haul Transmission, Power and Environmental, and SENSOR.

The C4ISR community is committed to a seamless global Soldier support system that accompanies units from home station, through Combat Training Center rotations, and onward to missions around the world, said Crawford. CECOM's global network supports both Army contingency forces and Regionally Aligned Forces, integrating technical assistance personnel into the unit's deployment support package.

The U.S. Army Communications-Electronics Command, a subordinate of U.S. Army Materiel Command, develops, provides, integrates and sustains the logistics and readiness of C4ISR systems and mission command capabilities for forces worldwide.

RIGHT: U.S. Army Spcs. Luke Perkinson and Peter Meppen, both air traffic control specialists with 3rd Battalion, 82nd Combat Aviation Brigade, Task Force Corsair, check out the sensor pallet for the Forward Operating Base Shank airfield in Afghanistan as a UH-60 Black Hawk executes a low approach. (U.S. Army photo by Spc. Ken Scar)

BATTLE TECH

MATERIEL READINESS FOR TOMORROW'S WARFIGHTER

AMC experts have developed game-changing technology to provide the decisive edge to today's forces and ensure the Army's advantage well into the future. BattleTech provides a look at some of the amazing technology being used in the command today.

RAPID EQUIPPING FORCE

The U.S. Army engineering community continues to provide rapid technological solutions for a variety of challenges in Afghanistan. U.S. Army Research, Development and Engineering Command's Rapid Equipping Force (REF) has partnered to maintain support at Bagram Airfield. The REF's Expeditionary Lab, also known as the Ex Lab, can provide engineering, prototyping and manufacturing support to meet urgent Soldier needs. "With the Ex Lab tool, we are collaborating as far forward as possible, resulting in more innovative solutions," said Col. Steven Sliwa, REF director. Sgt. 1st Class Justin Fulk, the Ex Lab noncommissioned officer in charge, said bringing the experts directly to units is vital. "The ability to bring the engineer to the units on the ground is what sets the REF apart. We are able to witness capability gaps first-hand, solve problems where they exist, and put the Solider back in the fight quickly by providing simple solutions on-site." To learn more about the REF and its commitment to meeting urgent Soldier needs, visit www.ref.army.mil.

Cpl. Andrew Strickland, 1st Squadron, Combined Task Force Dragoon, operates a Rapid Equipping Force Minotaur at Forward Operating Base Zangabad, Afghanistan. Strickland used the Minotaur for counter IED operations during a foot patrol. The Rapid Equipping Force provides technological solutions to Soldiers throughout Afghanistan. (U.S. Army photo by Spc. Joshua Edwards)

GAMING INNOVATION LAB

The Armament Research, Development and Engineering Center's (ARDEC) Innovation Group at Picatinny Arsenal, New Jersey, aims to help the ARDEC workforce find innovative ways to use and apply gaming technology to support the warfighter. Its Gaming Innovation Lab, one of the group's five parts, is a virtual "sandbox" where employees are encouraged to be creative while also learning what it takes to develop serious training games. The lab focuses on three categories: video game programming, 3-D art development and new gaming technology research, and provides all the space, equipment, software and reference materials to work with new ideas. The Gaming Innovation Lab offers a variety of equipment, including motion capture, 3-D scanners, cameras, virtual reality headsets and commercial game systems, such as Xbox One and PlayStation 4. It also works with different gaming engines, such as Unreal Engine 4 and Unity 5, as well as art software, such as Adobe Production and Autodesk Entertainment Creation Suite. Learn more about ARDEC and their Gaming Innovation Lab at www.ardec.army.mil.

Anthony Ur, an animation technology lead, demonstrates capabilities at the Gaming Innovation Lab, which aims to help the workforce find innovative ways to use and apply gaming technology to support the warfighter. (U.S. Army photo)

RECOVERY OF AIRBASE DENIED BY ORDNANCE

A Recovery of Airbase Denied by Ordnance (RADBO) prototype is shown during a testing phase in February 2015. The U.S. Army and Air Force are working together to integrate RADBO's laser technology onto Army vehicles, providing the capability to negate the threat of improvised explosive devices from a safe distance. (U.S. Army photo)

The U.S. Army and Air Force have joined forces to develop Mine Resistant Ambush Protected (MRAP) vehicles that use laser technology to help with the negation of improvised explosive devices, makeshift bombs, mines and other unexploded ordnance from a safe distance. The U.S. Army Aviation and Missile Research, Development and Engineering Center (AMRDEC), U.S. Air Force Air Combat Command and the Redstone Test Center are working together to develop and integrate the Recovery of Airbase Denied by Ordnance (RADBO) capability. The AMRDEC Prototype Integration Facility is working to integrate the RADBO laser, Interrogator Arm, console and other features onto the Category I Cougar MRAP. "We may see hundreds to thousands of small unexploded ordnance items on a runway or airfield, but the RADBO will allow us to reduce the time it takes to get an airfield operational," said Marshall "Doc" Dutton, Air Force explosive ordnance disposal modernization program manager of the Air Force Civil Engineer Center at Tyndall Air Force Base, Florida. To learn more about RADBO and other Army aviation and missile research projects and programs, visit www.amrdec.army.mil.

LONG-RANGE ADVANCED SCOUT SURVEILLANCE SYSTEM TEST TOWER

The Long-Range Advanced Scout Surveillance System (LRAS3) Test Tower, high above Tobyhanna Army Depot's Powder Smoke Ridge in Pennsylvania, provides testing capabilities to support a wide range of laser-based surveillance systems. The tower, which stands at 70 feet, makes it possible for operators to precisely survey targets at distances up to 11.5 miles away. The primary workload intended for the tower is the AN/TAS-8 LRAS3 overhaul program, a system that is expected to be fielded in 2025 or later. Although the LRAS3 is a standalone program, Tobyhanna supports other systems in the ground sensors family, including Driver's Vision Enhancer, Boomerang and the Vehicle Optics Sensor System. For more information on the LRAS3 Test Tower, or other projects and programs at Tobyhanna Army Depot, visit www.tobyhanna.army.mil.

FAR RIGHT: The 70-foot Long-Range Advanced Scout Surveillance System (LRAS3) Test Tower at Tobyhanna Army Depot is used to test laser-based surveillance systems such as the LRAS3. Testing from the platform allows the operator to see targets up to 11.5 miles away when using laser-based surveillance systems.
RIGHT: Scott Marzec, an electronics mechanic at Tobyhanna Army Depot, inspects an integrated optical bench component of the LRAS3. (U.S. Army photos)

EAGLE:

PROVIDING ARMY LOGISTICS SUPPORT AND COST SAVINGS AROUND THE GLOBE

By Matt December, AMC Today contributor

The Enhanced Army Global Logistics Enterprise (EAGLE) program provides logistics support to a wide range of U.S. Army missions, with flexibility and a response time that keeps pace with evolving requirements – all while decreasing costs. Created in 2012, the program saves the government money through a unique contracting tool that allows private companies to support the Army with supply, maintenance and transportation functions.

EAGLE, operated under the leadership of U.S. Army Sustainment Command (ASC) and the U.S. Army Contracting Command-Rock Island (ACC-RI), uses a Basic Ordering Agreement (BOA) process to generate increased task order competition by providing more opportunities for contractors of all sizes. This mechanism leads to efficiencies in contracting and business processes while at the same time expanding roles for small business within the U.S. military.

"EAGLE was established three years ago when Army Materiel Command (AMC) and ASC took over the Logistics Readiness Centers, formerly known as Directorates of Logistics, from the Installation Management Command," said Maj. Gen. Kevin O'Connell, ASC commanding general. "As we analyzed how those supply, maintenance and transportation services were being provided, it was immediately evident we had significant duplication of effort, and 73 different sets of standards and business processes."

To address those issues, the ASC and ACC-RI EAGLE team developed an acquisition strategy that eliminated redundancy and inefficiency across the global enterprise. Those efforts have paid significant dividends, achieving more than 20 percent cost avoidance and more than 50 percent reduction in the number of logistics contracts within the scope of EAGLE over the past three years.

EAGLE's impact to the Army has become global by directly, or indirectly, contributing to the mission success of AMC's materiel enterprise programs, U.S. Army Forces Command operations, U.S. Army Training and Doctrine Command institutional training and combat training centers, and U.S. Central Command operations and joint programs.

"EAGLE is either present or in transition at every major Army installation, and at many joint bases, both stateside and overseas," said Melanie Johnson, executive director of ACC-RI. "At each location, the EAGLE task order provides a contractor workforce that has consistently contributed to mission success by ensuring reliable equipment and supplies are available when needed – for both forecasted and unforecasted requirements."

EAGLE has played an integral role in supporting Army Force Generation, providing a flexible response to requirements that arise to support deployment and redeployment operations. This includes the maintenance and accounting of pre-deployment training equipment made possible by performance-based task orders. The flexibility to surge and ebb with operational requirements means EAGLE is able to support real-world operations that come and go.

EAGLE has been vital to a variety of missions, providing equipment maintenance and supplies such as shuttle bus support for daily institutional training at bases like Fort Benning, Georgia. EAGLE also provides material maintenance, multi-class supply support and warehouse, and transition support to Army Prepositioned Stocks program sites around the world.

Despite continued success, program leaders recognize that continued dialogue with industry and regular stakeholder meetings are vital to providing avenues for program improvement.

"(Contractor) feedback is very important as we continue to modify and try to find ways to improve," said O'Connell.

Johnson said that ACC-RI is working on a communications plan that aims to enhance response time to industry by laying out points of contact for specific contracts.

"It might alleviate instances in which industry members go straight from the Procuring Contracting Officers to me as the Principal Assistant Responsible for Contracting," she explained. "There are several people in between the PCO and myself who are a lot closer to the action than I am, and can probably answer questions more quickly."

The EAGLE approach to services contracting is projected to avoid $190 million in costs over the next five years. ASC leadership predicts that EAGLE's recent success can be translated to the Army's acquisition of all service contracts. This eliminates the need for multiple organizations to oversee multiple acquisition disciplines by implementing the best practices from EAGLE.

The U.S. Government Accountability Office Report to Congressional Committees, titled "Strategic Source: Improved and Expanded Use Could Save Billions in Annual Procurement Costs," suggests the Army could save 10 percent annually – around $50 billion – by adopting a cross-discipline program similar to EAGLE for all service contracts.

ABOVE: Sgt. Alex Krist, infantryman for Headquarters Service Company, U.S. Army South, instructs Soldiers on proper use and handling of the M2 .50-caliber machine gun. The Enhanced Army Global Logistics Enterprise program helps to ensure Soldiers have access to the proper training equipment prior to deployment. (U.S. Army photo)

LEFT: The U.S. Army Sustainment Command and U.S. Army Contracting Command-Rock Island hosted representatives from more than 50 companies for the Enhanced Global Logistics Enterprise (EAGLE) Basic Ordering Agreement (BOA) holder meeting. The biannual meeting is an opportunity for EAGLE staff to meet with BOA holder companies and discuss ways to use and expand the unique contracting tool the program provides. (U.S. Army photo by Liz Adrian)

Soldiers assigned to the Michigan National Guard secure a landing zone during an infiltration/exfiltration mission, part of Exercise Northern Strike at the Joint Maneuver Training Center, Camp Grayling, Michigan. (U.S. Air Force photo by Staff Sgt. Matthew B. Fredericks)

"From aviation to ground combat vehicles, from communications to contracting, from munitions to research and development, and installation logistics support to the destruction of chemical weapons, AMC develops and delivers global readiness solutions every day and in every theater."

– Gen. Dennis L. Via, AMC Commanding General

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Delivering and Sustaining Army Readiness

By Gen. Dennis L. Via
Commanding General,
U.S. Army Materiel Command

Complex—no other word better describes the world we live in today. From the rise of the Islamic State group to the delicate nuclear negotiations with Iran, from humanitarian assistance in West Africa to earthquake relief efforts in Nepal and the fragile cease-fire in Ukraine, the global security environment remains unstable, unpredictable and exceedingly complex.

The Army is engaged across the globe in simultaneous missions on multiple continents to prevent and deter aggression, shape the operational environment, and win when necessary to preserve freedom. U.S. Army Materiel Command (AMC) is there as well, enabling, delivering and sustaining our soldiers. Globally responsive, regionally aligned and engaged, AMC provides strategic agility and operational flexibility to the six geographic

Soldiers from the 10th Transportation Battalion load vehicles aboard a logistic support vessel during field training in Virginia.

Electronics mechanic Joseph Betz uses a computer and hand-held controller to manipulate a counter-IED robot.

combatant commands as part of the Army's foundational enabling capabilities to the joint force.

With remarkable teaming and collaboration with U.S. Army Training and Doctrine Command and U.S. Army Forces Command, AMC is committed to ensuring our Army remains the best-led, best-trained and best-equipped fighting force in the world.

Globally Positioned

As the Army remains forward-engaged and deployed around the world, so does AMC. Within each combatant command, AMC is appropriately postured to provide and sustain the capabilities our warfighters need. Among the many ways AMC enables Army readiness is through the modernization and optimization of prepositioned stocks and activity sets. These strategically positioned sets allow units to quickly deploy and fall in on equipment that is maintained in the highest state of readiness.

In Europe, through support of Department of the Army headquarters, AMC has built the European Activity Set. Working closely with U.S. Army Europe and the 21st Theater Sustainment Command, AMC is transitioning the battalion-sized set of equipment, first drawn by the 1st Cavalry Division in April 2014, to a brigade-sized set including tanks; towed artillery; weapon systems; and communications, intelligence and reconnaissance assets. This enables U.S. regionally aligned forces and partner nations in Europe to participate in multinational training exercises and contingency operations while increasing responsiveness and decreasing deployment timelines.

In the U.S. Central Command area of operations, AMC is working in close concert with U.S. Forces-Afghanistan, U.S. Transportation Command and the Defense Logistics Agency to close out the complex mission of retrograding thousands of pieces of equipment and materiel from land-locked Afghanistan. Simultaneously, we're ensuring deployed units in theater are equipped to successfully complete their Operation Freedom's Sentinel mission.

AMC re-established logistics capabilities in Iraq in support of Operation Inherent Resolve. Through contracting support, foreign military sales, and brigade logistics support teams deployed with units in support of the advise-and-assist mission, AMC's involvement is essential to mission success.

Pumping Up Pacific Presence

As the Army continues its rebalance toward the Pacific, AMC is ramping up its presence. This year, the command supported the Pacific Pathways training deployments to Thailand, South Korea, the Philippines, Australia and Indonesia, providing logistics and sustainment base support. In

Gen. Dennis L. Via *became the 18th commanding general of U.S. Army Materiel Command (AMC) in August 2012. Before that, he served as the AMC deputy commanding general, and he deployed to Kuwait to oversee the retrograde of equipment and materiel out of Iraq at the conclusion of Operation New Dawn. He has served in numerous command positions, including commanding general, Communications-Electronics Command and Fort Monmouth, N.J.; 5th Signal Command, Mannheim, Germany; Third Signal Brigade, III Armored Corps, Fort Hood, Texas; and 82nd Signal Battalion, 82nd Airborne Division, Fort Bragg, N.C. Via was commissioned in 1980 after graduating from Virginia State University and later earned a master's degree from Boston University. He is a graduate of U.S. Army Command and General Staff College and U.S. Army War College.*

U.S. and Malaysian soldiers conduct a dismounted patrol during the Pacific Pathways bilateral exercise Keris Strike 14.

July, AMC uncased the colors of the 402nd Army Field Support Brigade in Hawaii to expand the command's direct reach in support of U.S. Army Pacific and the U.S. Pacific Command theater.

Through U.S. Army Security Assistance Command, AMC reaches more than 150 nations across the globe, supporting every combatant command theater security cooperation effort. Foreign military sales continue to reach record numbers, yielding billions of dollars in new business and increasing the capacity and capabilities of our allies.

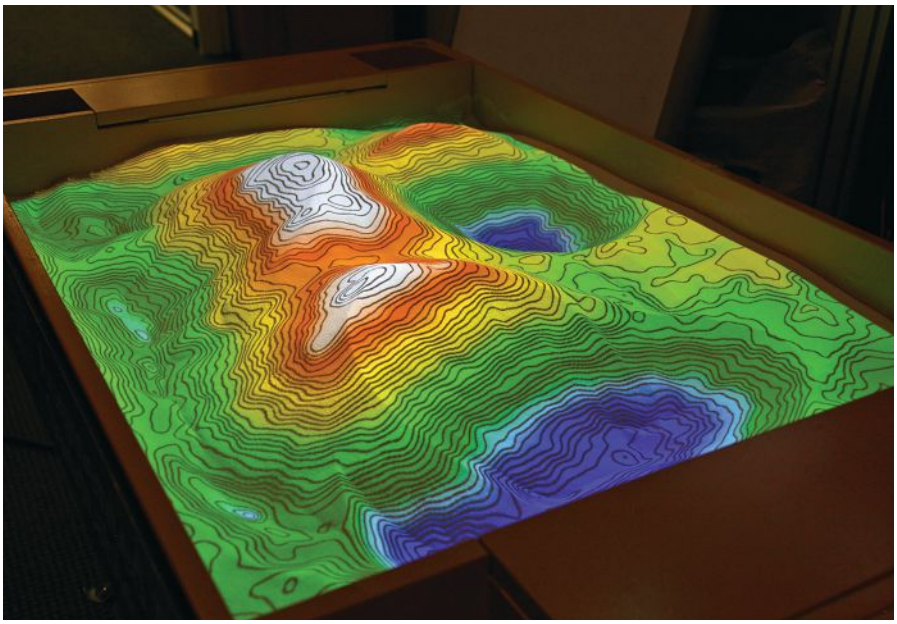
The *Army Operating Concept* envisions a future Army that has adapted to be expeditionary, tailorable and scalable, serving as the enabling foundation for the joint force. AMC provides the foundational logistical capabilities with primary responsibility for setting the theater, sustaining operations, maintaining freedom of movement and extending operational reach. From aviation to ground combat vehicles, from communications to contracting, from munitions to research and development, and installation logistics support to the destruction of chemical weapons, AMC is developing and delivering global readiness solutions every day and in every theater.

Advancing Efficiencies, Driving Innovation

Not only is the Army operating in an exceedingly complex world, but it's also operating during a period of downsizing and budget uncertainty. To lessen the impact, AMC continues to find ways to operate more efficiently across all core competencies and enduring operations. We are working with U.S. Army Forces Command and U.S. Army Training and Doctrine Command to return many maintenance and sustainment tasks to our soldiers, ensuring they remain proficient in their skills, increasing unit deployability and sustainment, and preserving valuable resources.

We continue to drive for efficiencies in the Army's organic industrial base (OIB), consisting of 23 depots, arsenals and ammunition plants. The OIB serves as a national security insurance policy for the nation, essential to our ability to maintain fleet readiness and meet surge requirements for future contingencies.

As we draw down from the peak of combat operations, we have a tremendous opportunity to incentivize positive change across the OIB. In pursuit of this objective, the Army has invested more than $1.5 billion in capital improvements, and we are optimizing the OIB to lower costs, meet schedules and increase quality, ultimately providing high-quality equipment and products on time at best value. We are establishing materiel enterprise structures and protocols for leveraging the innovation and production capabilities of the private sector to support rapid equipping and fielding initiatives. Public-private partnerships allow us to exploit the power of the best of what



A prototype of the Augmented Reality Sandtable, a high-tech sandbox designed to improve battlespace visualization

Gen. Dennis L. Via, commanding general of U.S. Army Materiel Command, greets Sgt. 1st Class Marsie Franco and other troops in Afghanistan.

industry and the OIB have to offer. Our end state is an efficiently operating OIB that is shaped for success in support of the future force.

As the Army's lead materiel integrator, AMC is also placing continued emphasis on providing responsive global logistics, acquisition and technology support. The Logistics Modernization Program is a true business transformation for the Army—a $1.1 billion investment that replaced 35-year-old legacy systems and now provides greater accuracy, reliability and speed. The program allows us to better deliver readiness in support of global operations, and AMC is advancing efforts to better manage one of the nation's largest, fully integrated global supply chains—the U.S. Army's.

Ensure Technological Advantage

Declining resources also require intense focus and a determined resolve to ensure our military's technological advantage on the battlefield. We must drive innovation and align potential future capabilities with validated requirements.

Managing approximately 75 percent of the Army's annual investment in science and technology, and research and development, AMC is increasing operational effectiveness and better enabling the warfighter. More than 12,000 Army scientists and engineers are working in labs and research centers across the nation to develop solutions that will make the Army's equipment more efficient, lethal, reliable and safe, and less expensive to operate and maintain while increasing mobility. We are leveraging technology breakthroughs to reduce the logistics burden for the individual soldier and unit while increasing effectiveness on the battlefield.

From owning the skies with aviation dominance where future vertical lift capabilities will allow soldiers to fly faster and farther with more payload and less fuel, to owning the ground where an Augmented Reality Sandtable will essentially put the battlefield in the hands of the soldier, AMC is delivering progressive technologies to warfighters. AMC continues to play a critical role in the research, design and development for every item a soldier wears, drives, flies, communicates with or operates on the battlefield.

Meanwhile, we are looking ahead and engaging in cutting-edge research to develop follow-on technologies for the Army of 2030 and 2040. AMC is conducting basic research that will yield the yet unforeseen innovations of the future, exploring the art of the possible in fields from quantum science to polymer chemistry.

As we continue to look for efficiencies in this austere environment, we can be successful only through close collaboration and effective partnerships. We are working closely with government, industry and academia—in the U.S. and internationally—to capitalize on opportunities for increased public-private partnerships, research agreements and initiatives, and collaborative alliances.

Adaptive Leadership

More than 60,000 strong, our dedicated workforce remains the cornerstone of everything we do; our people truly are our most valued resource. Our Army professionals—officers, soldiers and department civilians—have faced tremendous adversity through 14 years of conflict. At AMC, we are absolutely committed to enhancing performance and resiliency by promoting policy, programs and training aligned with the five dimensions of strength: physical, emotional, social, spiritual and family. We will champion the Ready and Resilient Campaign and provide professional development opportunities to ensure our workforce remains Army Strong.

AMC is also committed to recruiting and shaping the next generation of Army professionals. AMC's 1,000 Intern Initiative will provide 1,000 college and high school internship opportunities annually for the next five years to expose new talent to careers in federal service, while our Always a Soldier program helps veterans with incomparable skills and values find positions across the command.

AMC is building a multiskilled workforce guided by capable, proficient leaders with knowledge, capabilities and skills in support of a rapidly deployable, regionally aligned and expeditionary force.

We are at an unprecedented point in our Army's history, having supported more than a decade of sustained combat operations while remaining engaged in multifaceted, complicated contingencies around the world. As we navigate this challenging and complex global environment during this time of sequestration and budgetary uncertainty, we must maintain focus on the Army's overarching mission of prevent, shape and win.

AMC will continue to do its part to develop, deliver and sustain materiel solutions in support of unified land operations, anytime and anywhere, to ensure our Army's ability to ultimately win in this complex world. ★

THE 58 BILLION DOLLAR MAN

Dennis Via (far right), commanding general of Army Materiel Command (AMC), briefs a November gathering of foreign military attachés—US allies and potential customers for military hardware—at AMC headquarters.

IF A SOLDIER IN ANY BRANCH OF THE MILITARY SHOOTS IT, DRIVES IT, FLIES IT, WEARS IT, EATS IT, OR COMMUNICATES WITH IT, ARMY MATERIEL COMMAND PROVIDES IT

BY SUSAN SELIGSON / PHOTOGRAPHS BY CHRISTOPHER T. MARTIN

IT'S A GREAT American story. Born in 1958, the son of a housepainter and a homemaker in Martinsville, Va., in the foothills of the Blue Ridge Mountains, Dennis Via never missed a day of school in 12 years, played high school football, and worked at a local textile mill to help with family expenses. He was learning brick masonry in

Via greets wounded veterans arriving at Huntsville International Airport last November during Heroes Week, an annual event sponsored by the local task force Semper Fi.

preparation for what he believed would be a satisfying, dependable career. But Edward Fontaine, his high school shop instructor, saw in his student a broader potential and encouraged him to enroll at Virginia State University. Once there, Via, on little more than a whim, joined Army ROTC.

Four decades later the men remain close, and on August 7, 2012, Via (MET'88) flew the elderly Fontaine and his wife to Huntsville, Ala., to look on as Linda Via, Via's wife of 31 years, pinned a fourth star on his shoulder strap. He is now one of just 14 active-duty four-star generals in the US Army and the first Signal Corps officer in history to earn the four-star rank, the military's highest. (The last of the five-star generals, who include Douglas MacArthur, Dwight D. Eisenhower, and Omar Bradley, was pinned in 1950.)

Via (rhymes with "why") is the 18th person to head the global Army Materiel Command (AMC). Promoted two years ago from deputy commanding general, he oversees a $58 billion budget and activity in 144 nations. AMC, a massive and indispensable, if the least sexy, command ("They don't make war movies about us," says an AMC colonel), has a stated mission: "to develop and deliver global readiness solutions to sustain unified land operations, anytime, anywhere." Or, as anyone in AMC is fond of putting it for the rest of us: if a soldier in any branch of the military shoots it, drives it, flies it, wears it, eats it, or communicates with it, AMC provides it. When a photo on the front page of the *New York Times* depicts US infantry—what AMC people call "the killing army"—decamping to some far-flung locale, it is AMC that puts in place the infrastructure that awaits them, from kitchens to laundries to latrines to security fencing to laptops.

ARMY MATERIEL COMMAND ALSO CHOREOGRAPHS SWIFT RESPONSES TO HUMANITARIAN CRISES, SUCH AS HELPING TO COMBAT THE SPREAD OF EBOLA AND KEEPING NEW YORK CITY'S TUNNELS DRY IN THE WAKE OF HURRICANE SANDY.

"If it involves soldiers, it's going to involve AMC," says Via, one of just four African Americans with a four-star rank. "I think sometimes our work can be taken for granted, but without logistics, without communications, the military can't accomplish its missions," he says. "We don't know where we'll go tomorrow morning, but we do know there will always be another contingency."

"If you pay attention to what senior generals throughout every military campaign in history say, it's 'We won because of logistics,'" says John B. Nerger, Via's executive deputy.

Presiding over a combined military and civilian staff of more than 65,000 professionals and legions of subcontractors, Via is the logistics czar of the world's biggest road show, and he is forever refining the script, casting, props, and budget so things will run as smoothly as possible in less benign theaters, from the most rugged high desert to the densest equatorial jungle.

Once a mission is over, Via is also the guy in charge of getting the Humvees and helicopters—all of it—back to American soil or established military bases overseas. In fact, materiel command's largest, most complex logistical operation since World War II has been the ongoing, $23 billion retrograde operation to significantly reduce US military presence in landlocked Afghanistan, where the United States spent 13 years, and fly out millions of pieces of equipment from harsh, dangerous terrain.

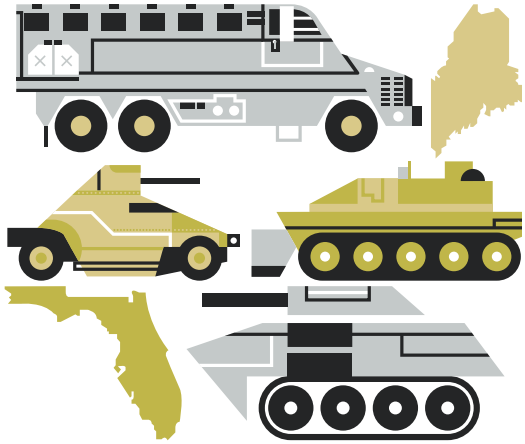
AMC does the intellectual heavy lifting, too: Army research and development, with 11,000 scientists and engineers, fall under Via's command. And AMC also choreographs America's swift responses to humanitarian crises, such as Operation United Assistance to help combat the spread of the Ebola virus in West Africa. Closer to home, it was AMC that provided pumping equipment to keep New York City's Lincoln and Brooklyn-Battery Tunnels from flooding in the wake of Hurricane Sandy in 2012.

It's enough to turn anyone into a compulsive workaholic at best, a gnarly, unforgiving taskmaster at worst. But by all accounts, Via—known on his home turf as the CG—is neither. The adjectives his subordinates (and when you're a four-star that's pretty much everyone) use most often to describe the man are selfless, caring, and upstanding. He never raises his voice. Via is a nice guy.

An hour after addressing a middle school Veterans Day assembly, the seemingly guileless general concludes an AMC bimonthly real-time global briefing—giant screens crackling with satellite images, sober updates from US Central and Africa Commands—with, word for word, the same entreaty he'd given the children, to "please, when you see a veteran, thank him or her for their service." On the first day of the 2013 federal government shutdown, it was Via himself who stood at the door of headquarters to shake employees' hands and tell them, "I'll see you back here soon." Via's predecessor, Ret. General Ann E. Dunwoody, describes his leadership style as one that "brings out the best in everyone."

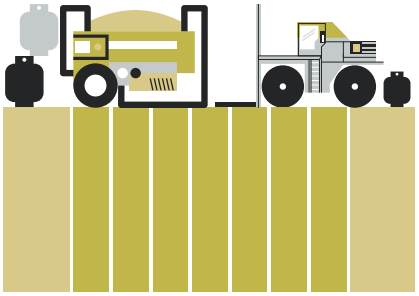
THE MATERIEL WORLD

The United States has spent in excess of $600 billion on Operation Enduring Freedom in Afghanistan, launched 13 years ago in response to the September 11 terrorist attacks. A significant amount of that money paid for materiel and its transportation to the mountainous landlocked war zone. Now, as US troops withdraw from Afghanistan, Army Materiel Command (AMC) is charged with removing, at an estimated cost of $6 billion, all of that equipment. To get stuff out—to other US bases, to be decommissioned, or to be repaired for reuse or sale—the options are few: brave the perilous 10-day, 1,100-mile-long journey overland from the Pakistani port of Karachi or through Turkey, or conduct a succession of airlifts. Concerned over potential losses on the ground, AMC Commanding General Dennis Via (MET'88) has opted for airlifts wherever possible. Many of the actual numbers are classified—the United States still has personnel at risk there—but AMC offered a sense of what it has moved out as of December 2014.



24,023 ARMORED AND WHEELED VEHICLES
Lined up in a convoy, these would stretch 1,365 miles—the distance from Portland, Maine, to Miami, Fla.

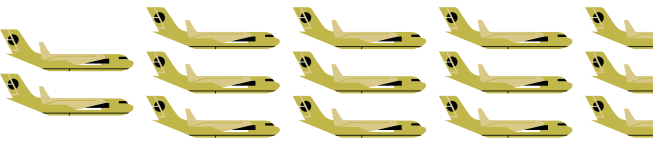
849 HELICOPTERS AND OTHER AIRCRAFT
By comparison, to conduct its worldwide shipping business, FedEx employs 656 aircraft. UPS possesses just 237.



MORE THAN 2 MILLION PIECES OF EQUIPMENT, INCLUDING GENERATORS, FORKLIFTS, AND FUEL TANKS
These would blanket the equivalent of 183 football fields.

7,340 MINE-RESISTANT AMBUSH-PROTECTED (MRAP) VEHICLES
Altogether, these armored anti-IED behemoths would weigh about 132,000 tons and cost nearly $9.5 billion.

LUMBER, CONCRETE, SHINGLES, WIRE, SANDBAGS, FIXTURES, ETC.
AMC estimates that these materials could build a city of single-story structures covering 732 times the area of Boston University's Charles River Campus.



14 DAILY AIRCRAFT SORTIES
Each C-17 sortie moves 250,600 pounds of freight daily from Afghanistan alone.

ILLUSTRATIONS BY MATTHEW HOLLISTER

As unflappable as he appears, Via is clear about what he will and will not abide. "You run into people who are toxic, and that's one thing I don't tolerate," he says. "I don't tolerate toxic leaders. I don't tolerate micromanagement. I don't tolerate those who do not create a healthy command climate. And I don't tolerate people who don't treat folks with dignity and respect. And I hold people accountable for that." Via wants his subordinates to feel comfortable admitting their mistakes and sharing their difficulties. He says he learned long ago from his first sergeant that if soldiers stop coming to you with their problems—"and soldiers have all types of problems"—it's because "they don't think you'll be able to do anything about it, or they think you don't care."

"He likes people," says Nerger. "In his case, he's what you see. But no one wants to disappoint him."

Via's base is Huntsville's Redstone Arsenal, a gated eight-square-mile sprawl of Department of Defense and Central Intelligence Agency office blocks, research labs, and testing grounds that drive the local economy to the tune of nearly $11.5 billion, according to a report released in 2012 by the Huntsville-Madison County Chamber of Commerce. Though civilians far outnumber soldiers among its nearly 33,500 personnel, Redstone, originally a chemical weapons manufacturing facility for World War II, is synonymous with the military-industrial complex.

"WE NEVER WANT TO DEPLOY OUR SOLDIERS TO AN UNEVEN FIGHT," SAYS VIA. "WE ALWAYS WANT THEM TO HAVE THE TECHNOLOGICAL ADVANTAGE. I'M VERY FOCUSED ON THE MEN AND WOMEN WE HAVE IN HARM'S WAY."

The highly decorated Via (his honors include the Defense Distinguished Service Medal and Legion of Merit) is not just a logistician. He is also a pitchman. As the specter of sequestration looms, AMC is still reeling from a major financial overhaul, and Via devotes a considerable amount of his time to drumming up partnerships with private industry and academia (AMC has more than 1,000 academic research partnerships, from research consortia to internships) or networking with military attachés from the scores of nations in the market for US-manufactured nonlethal equipment, as well as weapons. Via is a familiar face at R&D centers like the Natick Labs in Massachusetts or the Langley Research Center in Hampton, Va., his attention equally riveted by the latest in IED-proof Humvees and MRE (Meals, Ready-to-Eat), which, for the first time, include actual sandwiches that can withstand brutal extremes of heat, cold, and moisture. In a briefing of the CEOs gathered at Redstone, Via outlined a program called EAGLE (Enhanced Army Global Logistics Enterprise). It's an opportunity to streamline military contracts with industries offering maintenance and supply operations as well as transportation services, which can range from railhead operations to hazmat shipping.

Via "is particularly good at sustaining relationships with industry," says Nerger. "He recognizes that even in light of this command, with its vast resources stretching around the globe, we can't do anything solely by ourselves. He knows that the time to work on a relationship isn't when there's a problem. You work on the relationship first, and when there's an issue you have a framework in which to deal with it. And he is masterful at it. Relationships have always mattered, and we just happen to have a commander who is finely attuned to their significance."

"I've learned over time what I need to focus on," says Via. "I try to stay steps ahead because in the business of logistics and sustainment we can never afford to fall behind. And I'm clearly very focused on the men and women we have in harm's way. We never want to deploy our soldiers to an uneven fight. We always want them to have the technological advantage. But what truly makes this command such a phenomenal organization is that our mission is so diverse, we can't fall into complacency. In Afghanistan, for example, we're still losing soldiers and marines. We're still having improvised explosive devices. And then there's the mission in West Africa, where we're supporting our soldiers, airmen, sailors, and marines. And we have the business side, which is every day because we have a global supply chain."

It's the start of Alabama's Veterans' Week, culminating in Veterans Day, and American flags have sprouted all over Huntsville like the poppies of Flanders Field. Via is just back from an inspection visit to Afghanistan, and he is nursing a cold. Dressed in civilian clothes with an AMC logo pin on the lapel of his sports jacket, he and Linda welcome a parade of visiting defense contractor CEOs to their "quarters" deep inside the arsenal's guarded perimeter, a well-appointed tudor-style home peppered with keepsakes from the couple's world travels. Wine and conversation flow, business cards are exchanged, and Via, cold and all, is outwardly pleased to witness the seeds of new AMC–corporate collaborations.

In the next two days, his voice increasingly ground to a hoarse whisper, he will keep on the move, brief the CEOs, draw a standing ovation at a middle school, preside over a formal reception for a contingent of foreign military attachés, greet wounded veterans arriving at Huntsville airport from around the United States for "Heroes Week," and host a formal dinner for the attachés, who represent allies such as Brazil, Canada, Israel, Kuwait, the Netherlands, the Philippines, and Uganda.

Via, a Distinguished Military Graduate, was commissioned in the Signal Corps in May 1980. From there, his assignments included commands with the 82nd Airborne Division in Fort Bragg, N.C., the III Armored Corps in Fort Hood, Tex., as well as signal and communications commands in Manheim, Germany, Fort Monmouth, N.J., and various posts in Washington, D.C. In the 1980s and 1990s, Metropolitan College offered a series of programs to soldiers stationed in Europe, and Via did his graduate work there—"one of the best professional investments I

On a mid-November day, just back from a sweep through Afghanistan, Via went from addressing a middle school to briefing defense contractors to greeting wounded veterans at the airport.

ever made," he says—earning a master's degree in human resource management.

It was an assignment as aide-de-camp to Chief of Staff Earl Davis of the Allied Joint Forces Command Naples, in Italy, that changed his life, says Via, who confesses being so awed by his boss that there were times, while attending to Davis' uniform, Via would run his fingers over those three hallowed stars. Within a month of being promoted to lieutenant general, Davis was diagnosed with a brain tumor. "He was medically retired and eight months later he passed away," says Via. "I recall that soon after his departure, they were discussing who would take his place. And that's when I learned that no one is irreplaceable." It's also when Via learned to balance service and his private life, "a defining moment when I knew I would never be infatuated with ranking again," he says. "I made sure I cared for the people who worked with me or for me, and I realized that it can all be taken away from you very quickly."

Linda Via, a civilian who met her husband the first week she arrived at Virginia State, had a high-level government career in human services before giving herself over full time to the demands—from entertainment to military family support—of being the CG's wife. Linda is the only one who can get her husband to stop working and come home. "She just has to call me and say, 'It's time,'" says Via. The couple has two grown sons.

Via, who his wife says signed up for ROTC after Virginia State campus recruiters impressed him as being "pretty spiffy," is one of only 206 four-star generals in US history. If it weren't for an alert teacher, he would likely be among the estimated 306,000 stone and brick masons in America. But sometimes Via will drive past a mason at work and he and Linda will stop to have a look. It occurs to Via that one of the most important lessons of his life, even after his long climb to commanding general, was one he learned in that brick masonry class in high school.

"The most important part of any building or organization is the foundation," says Via. "The business we're in is inherently dangerous, but when adversity comes—and it will come—with a strong foundation, you can withstand it. And a foundation has to be built on trust and integrity. Those organizations that work as a team, that don't worry about who gets the credit, it's phenomenal what they can accomplish." ■

CBS NEWS / *November 14, 2015, 1:20 PM*

The making of the military's highest award, the Medal of Honor

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PHILADELPHIA -- The Medal of Honor -- the military's highest decoration -- traveled thousands of miles to be properly prepared for the ceremony at the White House this past Wednesday, where President Obama awarded it to retired Army Captain Florent Groberg.

Play VIDEO

Army captain awarded Medal of Honor

There are only two companies that mold the five-pointed, 2.25 ounces star, which has been presented to only 13 people who served in the Afghanistan war, including Groberg, CBS News' Mark Albert reports.

One company is in Rhode Island, and another is in Texas. From there they are shipped to the Veteran Medals Unit at a Navy base in Philadelphia, where the medals are kept in a safe to which only two people know the combination.

One of the people who knows the security combination is the supervisor of the eight-person Veteran Medals Unit, Rob Henry Jr.

The supervisor of the Veteran Medals Unit, Rob Henry Jr., prepares to send veterans medals they earned for valor. / **CBSNEWS.COM**

Henry said the medals are everlasting and that, long after the service members who earned them pass away, "They'll still have those medals."

When the Medal of Honor is going to be awarded, one of the unit's two engravers, such as Chris McDaniels, uses diamond-tipped precision to chisel the name synonymous with honor, grit and daring onto the symbol of sacrifice.

Play VIDEO

Marine awarded Medal of Honor after absorbing grenade blast

The Veteran Medals Unit consists of eight people and assembles and ships 130 medals for the Army, 20 of which they engrave. McDaniels says that each medal he works on provides "a glimpse into the life of a soldier."

A medal McDaniels regularly etches with the names of soldiers is the Purple Heart, an award created by George Washington that now bears the first president's likeness and honors those wounded in battle.

"Unfortunately, there's never been a shortage of names," McDaniels said about the Purple Heart which has been awarded to America's service members for more than two centuries.

Play VIDEO

Sgt. Ryan Pitts describes "intense" battle that earned him Medal of Honor

McDaniels has been engraving medals for 28 years, and among those he recalls are, "medals of Jeffrey Zaun when he was shot down. President Clinton presented medals to soldiers that were entitled in World War II and not presented, and I did all of those medals and he presented them on TV."

Earlier this month, Fulton County, Ohio, presented 152 engraved Bronze Stars to World War II veterans and their families. Only seven of the veterans who were presented with the Bronze Stars were still alive.

They won the war -- but vets who were never told they earned the medals, or who later lost them, are still in a battle with time and a backlog.

Veterans are now waiting more than four months for their medals. Delays are up sharply from last year after two assemblers left the team. They have not yet been replaced.

At the same time, the number of medals processed has fallen steadily, corresponding with the staffing shortage and the drawdown of U.S. forces in Iraq and Afghanistan.

Four-Star General Dennis Via who is in charge of the veteran medals program, as well as all Army logistics worldwide, said every medal is a priority. "I've had the privileged of attending a Medal of Honor ceremony at the White House and being able to see the descendants and their family members, the expression and the care that they hold that medal," he said. "And so we want to make sure that we are doing everything we can to get it to them as quickly as we can."

The medals are not just pieces of metal, Via said. "They represent people's lives, they represent individuals, and they represent families."

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