for passenger transportation. The 3d ESC granted this request, maintained the contract, and allowed us to use the buses when we needed them. The 377th Theater Support Command (TSC) attended the after-action review since it subsequently conducted a relief in place/transfer of authority with the 3d ESC.

Organizational Redeployment

Around 11 March, we received an opportunity to redeploy C Company early since its mission was complete. We called C Company "Force Package 0."

Around 20 March, the 407th BSB received redeployment orders and the 2d BCT received an order to reassume the global response force mission on 1 April. Our initial concern was general and redeployment support to the 2d Battalion, 325th AIR (2–325 AIR), which would be the last battalion to redeploy. After some mission analysis and coordination through the JTF and the 377th TSC, we transferred all general support functions to the 530th Combat Sustainment Support Battalion (CSSB).

Simultaneously, we divided our own battalion into three force packages: Force Package 1, largely consisting of A Company; Force Package 2, consisting of equal parts B Company, A Company, and the headquarters and headquarters company; and Force Package 3 (the trail party), consisting of 20 people.

Force Package 1's mission was to transfer stocks and supply point operations to the 530th CSSB, Force Package 2's mission was to restructure and drawdown LSA Gold, and Force Package 3 would continue to coordinate a higher echelon of support for Task Force White Falcon, which included the 2–325 AIR and a small element from the 407th BSB and the brigade headquarters. Force Package 3 would also facilitate White Falcon's redeployment and close down LSA operations. We frontloaded capability in Force Package 1 but preserved some manpower in Force Package 2 in case we had to fully tear down LSA Gold.

Transferring support to the 530th CSSB went very well and was seamless to Task Force White Falcon. Essentially, the White Falcon forward support company changed its pickup location; instead of picking up its supplies from the 407th BSB in LSA Gold, the company picked up supplies from LSA Hope, 2.5 kilometers to the east. To ensure success even further, we emplaced a liaison team in the 530th CSSB headquarters.

After this successful transfer, we isolated Force Package 1 and had it focus solely on redeployment. We manned the RTOC with a unit representative, like any other battalion would, conducted an initial coordination meeting, and got Force Package 1 moving on its redeployment timeline. Force Package 1 quickly shut down its various nodes—the tactical water purification system and bulk water supply point, the bottled water and meals ready-to-eat supply point, the fuel point, the class I (subsistence) point, and the supply support activity. The only part of A Company's footprint that remained was the brigade ammunition holding area, which was ready to clear the final pieces of battalion ammunition and the remainder of White Falcon ammunition.

We finished Force Package 1's equipment preparations early enough to restructure the camp. The most important step was to clean and containerize the general purpose medium tents that had come from Fort Bragg. With rain reducing our teardown time, the Soldiers from Force Packages 1 and 2 tore down 20 tents and constructed 20 tents that would stay behind in Haiti. To assist with the teardown effort, the battalion hired local Haitian workers. This restructuring effort not only successfully reduced LSA Gold and properly returned the tents to their point of origin, it also set conditions for the 65th Military Police Company to move into LSA Gold as permanent party and established an enduring redeployment node for the theater.

A BSB must be ready to execute a redeployment concept of support. But redeployment is rarely trained. Particularly in the case of the 2d BCT, which had to redeploy with precision to reassume the global response force mission (the 1–325 AIR deployed to Operation Enduring Freedom 3 weeks after its return from Operation Unified Response), redeployment is a complex operation. Approaching it in any other manner will inevitably result in failure. Organizations that apply the fundamentals of planning, rehearsals, and execution, identify the limiting factors, and preserve clear mission command will enjoy a smooth return.

To plan for the true complexity of redeploying in an immature theater, the BSB future operations section should begin planning redeployment within the early days of arrival. The BSB in a global response force should retain a concept of operations for redeployment support since it is very likely that the global response force BCT will be the first to redeploy from such a contingency operation. For all support units, redeployment support operations remain a worthwhile topic of study toward building requisite logistics and supply chain competence throughout our profession.

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Redefining the Future of Tactical Equipment Maintenance Facilities

by Nadia Abou-El-Seoud
and Lieutenant Colonel Ravin Howell, USA (Ret.)

The Army is developing new multifunctional maintenance complexes to meet the demands of the 21st century.

Exterior view of a medium tactical equipment maintenance facility at Fort Richardson, Alaska.

A pressing and rigorous task has been given to Army logisticians: Reengineer Army maintenance and repair structures to support 21st century missions. In the past, Army policies focused on facilities that supported specific functions. To avoid future logistics gaps, the Army has fundamentally redesigned and amplified the most modern and flexible facility design used today, the Tactical Equipment Maintenance Facility (TEMF). This redesign uses functional applications adopted from civilian environments.

Maximizing the features and capabilities of future facility designs to accommodate fundamental changes in equipment maintenance and repair relies heavily on tapping the imaginations of facility operators. Logisticians and engineers throughout the Army have expanded the horizon of possibilities and adopted concepts and innovations that better support the fundamental purpose of the TEMF: maintenance and repair throughput. The resulting design has exceeded the expectations of the Army Staff functional proponent, the Office of the Deputy Chief of Staff, G–4, and the designer for achieving increased throughput capacity.

While it is only one of many of the TEMF features that incorporate current innovations and can be adapted

Interior view of a large tactical equipment maintenance facility at Fort Eustis, Virginia.

to meet future requirements, the increased throughput capacity by itself mitigates the effects of budget cuts on efforts to modernize aging TEMF legacy facilities. As a result, even in times of enormous pressure to find ways to reduce expenses, both the immediate past and the current Deputy Chief of Staff, G–4, are committed to continuing to provide new TEMFs that comply with the new TEMF Army Standard to meet the 21st century needs of units worldwide.

Supporting Army Maintenance Transformation

The transition from 20th century methodologies to evolving 21st century practices relies on completing the Army's transformation to a two-level maintenance system comprising successful field- and sustainment-level operations.

The fusion of facility design and field maintenance focuses on providing preventive maintenance services and performing timely repairs, resulting in the rapid servicing of equipment and weapon systems and the quick return of items to Soldiers in an operational status. The Army has modified its logistics resources and maintenance policies to conform to the futuristic objectives for field maintenance and repairs.

Based on improvements in maintenance operations, development of the TEMF is progressing toward two goals: to support Army transformation and to provide flexibility to incorporate new policies and advanced technology to assist the warfighter. TEMFs accommodate a variety of facility missions. Since maintenance Soldiers spend most of their duty day in the motor pool, the TEMF complex is no longer a single facility focused on performing a specific function but a multifunctional complex.

In addition to performing the primary functions of inspecting, maintaining, servicing, or repairing equipment, the TEMF also supports secondary functions of preparing and staging equipment for deployment, conducting mission planning and rehearsals, and enabling embedded and distributed training. The TEMF design supports a brigade-centric readiness posture while maintaining and sustaining the equipment assigned to various units. It is therefore essential that maintenance organizations supporting units build on the modernization of equipment, advances in reliability, maintainability, and technology, and the design and redesign of equipment to reduce the logistics footprint. From these factors, the new TEMF standard design has emerged.

The Combat Readiness Support Team, Headquarters, Army Corps of Engineers, in partnership with the Office of the Deputy Chief of Staff, G–4, continues to serve as a key participant in validating Army missions, tasks, and functions leading to the review and development of current and future standards for TEMF complexes worldwide. The new TEMF design has proven to be the Army's most innovative to date and provides the physical conditions to perform the most complex set of missions in a single facility type in the Army.

The process used to derive the new TEMF Army Standard and its companion Army Standard Design is used by the Army Staff as the template for all mission-based facility standardization. A composition of functional, operational, and spatial relationships, the new TEMF's significance to the Army continues to grow as a crucial focal point for mission success. Therefore, new developments and reviews continue as TEMFs remain responsible for returning serviceable equipment back to the warfighter.

Designing for TOE and TDA Units

The Combat Readiness Support Team and the Army Corps of Engineers TEMF Center of Standardization determined the key functions and relationships between the table of organization and equipment (TOE) and table of distribution and allowances (TDA) units using TEMFs and the relationship between maintenance operations and TEMF design and construction. This resulted in enhanced use of manpower and space and reduced costs.

For the first time in known Army history, the doctrinally-based, requirements-oriented futuristic design of a facility has outpaced the understanding of the practitioners who use it. Fundamental change brought about by Army transformation has created a new gap that is now being identified in several 21st century facility standards and designs. Transformation has created a new challenge: how to use the advanced concepts embedded in 21st century facility designs.

The Army Facility Design Team, cochaired by the Office of the Deputy Chief of Staff, G–4, Field Maintenance Division and the Office of the Assistant Chief of Staff for Installation Management, acts as the facilitator and adjudicator of TEMF redesign. Its assessments and conclusions are projected to affect Department of the Army Pamphlet 750–1, Commanders' Maintenance Handbook, by adding information on how to use TEMFs and on the intended purpose of vital adjustments to TEMF standards and designs of the past.

On and Off the Battlefield

TOEs depict the Army's wartime mission, organizational capabilities, essential equipment, and personnel for deployment readiness. In order for a unit to maintain wartime capabilities, maintenance and repair functions are required for TEMF facilities. The designs of TEMF facilities highlight the importance of operational readiness, achieved by the redesign and rethinking of the TEMF standard design to promote functionality.

New TEMF facilities are larger and include additional resources for units and increased space for secure and nonsensitive secure storage areas for the vehicles, mounted weapons, radios, and navigation equipment used in convoy protection. The alteration of TEMF designs generates functional spaces for maintenance, repair, service, and inspection of equipment.

While TOE units have provided the requirements for deployable units, TDA organizations provide authorizations for nondeployable units. TDAs stipulate the requirements and authorizations for personnel, equipment, and organizational structures when an appropriate TOE is not available or applicable. TDA facilities are generally not grouped into TEMF standard sizes. However, they share common standardized criteria (standard design building blocks), attributes, and general layouts with TOE facilities and continue to form the infrastructure of the Army.

TDA units are adding roles and responsibilities and facility features to support activities like "maintenance supply expeditors" and reset that are embedded within the brigade support battalion's TEMF. TOE and TDA units are serving as the fundamental building blocks for TEMF facilities. Advances in repair work areas, maintenance shops, inspection areas, administrative core areas, and site functional areas are supporting the development of TEMF criteria and standard designs to serve the warfighter faster and more efficiently.

Specialized capacities and capabilities are provided in the brigade support battalion to support both return to service and return to supply in a single set of standardized design features while still optimizing throughput. Simultaneously, life-cycle sustainment costs are reduced as the Army modernizes and replaces legacy facilities. For example, the overhead lift in all aviation and ground maintenance facilities has been standardized, which reduces the annual cost of certifying overhead-lift capacity by reducing the number of lift variations on an installation.

Soldiers at work in a medium brigade support battalion TEMF at Fort Bliss, Texas.

The obligation to uphold the TEMF Army Standard requires the TEMF Facility Design Team and the center of standardization to continually advance and refine the TEMF complex over time so it remains predictive and responsive to future demands. As such, features and adaptability to enable the Department of Defense condition-based maintenance (CBM) initiative are already embedded in the new TEMF facility design. For example, CBM prognostic and diagnostic enablers will employ both passive and active sensors on vehicle dynamic components. The TEMF has already been designed to enable the capture and transmission of sensor data, either remotely or hard-wired to computers, for both analyses and redistribution to Army maintenance and repair centers of excellence.

To uphold the TEMF Army standards and press forward with the task placed on the Army to reform 20th century practices requires a more efficient and rapid return of equipment. TEMFs remain the Army's most innovative design to be implemented worldwide. Efforts to support 21st century mission execution are underway within the Army. With great emphasis placed on field and sustainment maintenance operations, the Army is upholding its promise to remain the strongest force on land.

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