



More than 2,500 pieces of equipment within the brigade combat team rely on GPS and satellite communications systems to provide network synchronization timing and positional data. The loss of connectivity can have significant implications for the future force.

Ensuring Freedom of Movement in 2025 and Beyond

The Freedom of Movement Rehearsal of Concept Drill explored the implications of sustaining future operations.

■ By Jim Young and Maj. Joseph C. Zabaldano

The U.S. Army Operating Concept: Win in a Complex World describes the future operational environment as complex, which means that it “is not only unknown, but unknowable, and constantly changing.” The concept states, “The Army cannot predict who it will fight, where it will fight, and with what coalition it will fight.”

The Sustainment Center of Excellence, in its mission to understand the future and develop a sustainment force that can adapt for the future operational environment, recently completed its annual sustainment rehearsal of concept (ROC) drill. This year’s drill was called the Freedom of Movement ROC Drill (FOMRD).

From May 16 to 20, 2016, more

than 125 subject matter experts from across the institutional and operational Army gathered at Fort Lee, Virginia, to explore that future.

The ROC Drill

In 2013 and 2014, during the Global Logistics ROC Drill and the Globally Responsive Sustainment ROC Drill, the efforts were

very much focused on the sustainment warfighting function. In 2015 and 2016, the experiments were focused on understanding the implications of Army Warfighting Challenge (AWFC) 16. AWFC 16 challenges sustainers to set the theater, sustain operations, and enable freedom of movement in an austere environment over extended lines of communication.

In 2015, the Theater Opening ROC Drill focused on understanding the roles, responsibilities, and functions of Army forces opening the joint operational area within the task of setting the theater for the combatant commander.

The 2016 FOMRD explored the other two aspects of AWFC 16: sustaining operations and enabling freedom of movement. Using a fictitious Europe-based scenario set in 2030, participants were led through discussions with four objectives:

- Understanding the implications of conducting simultaneous joint combined arms maneuver and wide-area security.
- Identifying the unique sustainment requirements for Army special operations forces.
- Identifying the unique support requirements for Army aviation.
- Examining the challenges associated with sustaining small, widely dispersed units over extended distances.

These four objectives were broken out into eight themed vignettes that facilitated in-depth discussion over five days:

- Sustaining offensive operations.
- Mission command.
- Special operations forces and conventional forces sustainment interdependencies.
- Support area operations.
- Health readiness and casualty reporting.
- Reconstitution and reorganization.
- Retrograde and transition from operational phase 3 to phase 4.

- Distribution and materiel management.

Using the scenario and a terrain map, facilitators guided the discussions of the participants to answer questions related to the analytical objectives of the experiment.

While the Army Operating Concept describes the future as unknown, unknowable, and constantly changing, one certainty for the future is that all units must be security enablers not security consumers.

While most of the participants were physically at Fort Lee, the experiment was also distributed to the 11 Training and Doctrine Command (TRADOC) battle labs located throughout the continental United States.

The Sustainment Battle Lab and TRADOC Analysis Center–Lee formed the nucleus of the ROC drill's analysis team, which weighed the comments from participants and used analytics software to identify trends in the collected data.

At the conclusion of the event, the analysis team refined the data into key observations and insights for incorporation into a final report. The report had doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) recommendations for follow-on implementation or further exploration.

Unique to this year's experiment was the inclusion of participants from the TRADOC Commanders' Forum as part of a facilitated senior-leader discussion.

Taking advantage of the presence of the TRADOC commanding general, his staff, and the commanding generals of the TRADOC centers of excellence, the Sustainment Battle Lab gained the perspectives of both

action officers and senior leaders on problems that the Army will face in 2030 and beyond related to enabling sustained operations and freedom of movement.

Some of the key insights and takeaways from the ROC drill and senior-leader discussion follow.

Mission Command

The Army must beware of relying on digital systems without having contingency plans. Soldiers must understand manual and analog processes for when digital systems are no longer available.

The Army has made and continues to make significant technology investments in automating basic Soldier skills, mission command systems, and business enterprise systems. Many of these technologies are enabled by GPS or they are on networks that require GPS to communicate.

At the same time, the United States faces both state and nonstate actors that have increased their ability to interfere with GPS and are conducting persistent cyberattacks against U.S. forces and joint inter-organizational and multinational (JIM) organizations.

To mitigate the threat to the Army's ability to conduct mission command and sustain forces, sustainers must be prepared to operate in a degraded cyber environment by understanding, planning, and training to execute manual processes.

The Army must also understand command and support relationships. In general terms, command and support relationships among Army units

have been misunderstood for a long time. Although they have been clearly documented in multiple doctrine publications, they are not understood. Soldiers use colloquial terms such as “hand-shake con” or “ride-along con” to describe doctrinal terms, such as general support, direct support, operational control, assigned, and attached, without fully understanding the implications.

The differences between Army and joint doctrine regarding command and support relationships compound the lack of understanding for sustainers. When nondoctrinal terms are used to describe support relationships, supported unit commanders lose confidence in their abilities to influence supporting organizations and direct command relationships.

In order to correct this learning and experiential deficit, the Army must ensure that leaders understand command and support relationships at all levels. It must also establish command and support relationships as part of the planning process and ensure that they are well understood by affected units.

The Army must also address the lack of interoperability among mission command systems and sustainment information systems. Sustainment information systems, such as the Global Combat Support System—Army, the General Fund Enterprise Business System, and the Integrated Personnel and Pay System—Army, must be interoperable in order to be integrated as part of a sustainment common operational picture.

Once a sustainment common operational picture is achieved, it must be synchronized and integrated into the Command Post Computing Environment to provide a commander with the true status of a unit on one system.

Security

The Army should increase organic convoy protection capabilities. While the Army Operating Concept describes the future as unknown, un-

knowable, and constantly changing, one certainty for the future is that all units must be security enablers not security consumers.

According to Lt. Gen. H.R. McMaster, the director of the Army Capabilities Integration Center, “Units must be capable of self-protection and be able to defeat anticipated threats. The future calls for a smaller, more agile force, and the Army may not be able to dedicate maneuver and maneuver support assets to protect convoys.”

To mitigate level II and III threats and to make every unit a security enabler, sustainers must be proficient in convoy protection tasks and every sustainment vehicle must be a combat platform capable of engaging the enemy with direct fire. The FOMRD resulted in these recommendations:

- Identify sustainment requirements for weapon systems to increase lethality, generate security, and provide overmatch.
- Equip support units with combat platforms with enhanced armor and hostile fire detection with multispectral sensor suites, such as hard-kill and soft-kill active protection systems.

Regarding the first recommendation, the Joint Light Tactical Vehicle Capability Production Document, version 3.5, (which has been approved by the Joint Requirements Oversight Council) identified the requirement to be able to reach out to a stationary target at 2,200 meters with current, approved weapon systems. Armor improvements have been made against small-arms, roadside, and underbelly threats and include the ability to add additional armor as required.

Regarding the second recommendation, the Sustainment Center of Excellence proposed a force design update that provided sustainment units with organic convoy protection platforms; unfortunately, the force design update was returned

for future consideration.

When the protection of enabling forces cannot be ensured through organic capabilities or through the maneuver force, future Army formations must be able to meet sustainment needs through demand-reduction technologies such as water from air, sustainable power, and other technologies that make the force more self-sustaining.

By reducing the demand for sustainment, it will be possible to amass the effects of sustainment without amassing sustainment personnel, thereby improving our security posture.

The Army also needs to consider the security of support area operations. The future requires sustainers to keep forces dispersed to avoid creating a high-payoff target for the enemy. This is a risk consideration for refuel on the move, maintenance collection points, flat rack exchanges, logistics release points, ambulance exchanges, and base cluster formations.

Dispersed units create a more robust intelligence-gathering network for mission command; effectively reporting data from a wide area has an intelligence crowd-sourcing effect that can improve situational understanding. However, widely dispersed units present challenges in preparing systems, forecasting supply chain requirements, and distributing supplies on the battlefield.

Another issue is medical evacuation through contested airspace. The future operational environment will not provide the military with assured, constant access to airspace. This may affect the Army’s ability to perform aeromedical evacuation without exposing additional aircraft and crews to risk.

The inability to completely control airspace will result in significantly more ground evacuations and will require additional planning considerations. Although they are not supported by current policy, autonomous air and ground transportation capabilities may provide evacuation op-

tions with minimal risk to additional personnel.

Integration with JIM Partners

JIM partners are those military forces, government and nongovernmental organizations, and elements of the private sector with which the Army must plan, coordinate, synchronize, and integrate during operations. Potential roadblocks to integration and interoperability include a lack of common terms, the classification of information, the equipment fielded, and the capabilities of communication networks.

Although some JIM partners have independent supply networks, improved interoperability can lead to enhanced distribution, better use of resources, and synchronized effects. Interoperability continues to be a concept that requires more effort and resourcing. Developing common sustainment estimators and interoperable mission command systems is necessary to fully leverage partner capabilities.

Dependency and Readiness

As the Army's end-strength has declined, an increasing amount of the Army's enduring sustainment capacity has been met with operational contract support (OCS). The demand for contracted support on the battlefield has resulted in "contractor fratricide," or increased competition among JIM partners for contracted support; this has driven up contracting costs.

Another problem with OCS is the inability to clearly articulate requirements and a lack of coordinated planning. Planners must carefully balance the mix of military and contracted support to avoid mission failure. This is especially important when planning the transitions between operational phases 0 and 1 and between phases 3 and 4.

To improve a commander's ability to develop and integrate contract support requirements, the Combined Arms Support Command requested that TRADOC establish a capability manager for OCS.

The capability manager will be responsible for non-acquisition OCS capabilities development across the DOTMLPF-P spectrum. The capability manager will also integrate support from the Office of the Assistant Secretary of the Army for Acquisition, Logistics, and Technology regarding acquisition-related OCS issues and provide a single point of contact to coordinate DOTMLPF-P initiatives.

Over the past 15 years of operations in Southwest Asia, the Army has had to rely on contracted maintenance support in garrison for ground vehicles and aircraft. This reliance has resulted in Army ground and aviation mechanics not being fully trained or able to perform routine maintenance tasks. As the Army transitions to a peacetime or garrison Army, leaders will have to balance the use of contracted maintenance support with providing maintenance Soldiers with the opportunity to maintain their proficiency.

Reserve component dependency also has some implications. During the 2015 Theater Opening ROC Drill, one insight was the Army's dependence on Army Reserve and National Guard forces for the capabilities required to support expeditionary theater opening and early-entry operations.

It was noted that reserve component forces may lack training opportunities and resources, which can cause increased mobilization time lines. As a result of last year's efforts, 20 reserve component sustainment units were identified for increased resourcing, which will lead to improved early mobilization.

This year's exploration of sustaining operations and ensuring freedom of movement produced similar recommendations for maneuver support formations. The maneuver enhancement brigade (MEB), which is the Army's only functional and multifunctional brigade designed to own and manage terrain within the corps and division support areas, is found only in the Army Reserve and

National Guard.

The MEB is responsible for providing mission command to synchronize maneuver support and protection for the supported command throughout the theater, corps, and division by conducting joint security area or support area operations. However, a lack of integration with the active component has resulted in the MEB's capabilities and missions being misunderstood by the active component force.

The insights and recommendation that resulted from the FOMRD will inform ongoing capability development activities, including the sustainment enterprise Force 2025 operational and organizational design concept and the AWFC 16 running estimate.

Additionally, as part of the Army's overall Force 2025 Maneuvers campaign of learning, the FOMRD will help to shape next year's sustainment ROC drill, which is tentatively planned for April 2017. The drill will explore contested distribution operations (seaports and aerial ports of debarkation through the theater, corps, and division support areas).

Jim Young is a retired lieutenant colonel and the division chief of the Experimentation, Analysis, Science, and Technology Division, Sustainment Battle Lab, Combined Arms Support Command, at Fort Lee, Virginia. He holds a bachelor's degree from Trinity University and master's degree from Webster University. He is a graduate of the Command and General Staff College.

Maj. Joseph C. Zabaldano is the 59th Ordnance Brigade S-3. He previously served as a capability developer in the Combined Arms Support Command's Sustainment Battle Lab. He holds a bachelor's degree in industrial technology from Mississippi State University and a master's degree in managerial logistics from North Dakota State University. He is graduate of the Command and General Staff College.