



Soldiers from A Company, 296th Brigade Support Battalion, 3-2 Stryker Brigade Combat Team, 7th Infantry Division, prepare to conduct fuel operations for their brigade's six battalions at the Yakima Training Center, Wash. (Photo by Staff Sgt. Chris McCullough)

Sustainment for the Army of 2020

The Combined Arms Support Command proposed a new division-aligned force structure to provide sustainment capabilities from echelons above brigade through combat sustainment support battalions.

■ By Col. Robert Hatcher, Jeffrey A. Martin, and Lt. Col. Karl F. Davie Burgdorf

Modern warfare is three dimensional, and Army forces conduct a fluid mix of simultaneous offensive, defensive, and stability operations and support to civil authorities.

In the past 12 years, the Army evolved while fighting two simultaneous conflicts and transitioning from the Army of Excellence force structure to a modular force.

Lessons learned from the conflicts allowed leaders and Soldiers to better

understand sustainment's role in future Army operations.

Recognizing future challenges, the chief of staff of the Army, Gen. Raymond T. Odierno, tasked senior leaders to identify force management gaps and some mitigating strategies for effectively developing the force within current constraints.

Leaders ultimately identified more than 200 potential force design updates for possible consideration in Total Army Analysis (TAA) 14-18.

The Guidance

The 2012 Army Campaign Plan identified a major objective of creating "an Army 2020 force that is: affordable, agile, capable, networked, responsive and adaptive, able to address the complex future operating environment characterized by complex, hybrid threats and demanding missions." Using that guidance, Army leaders looked at how to create the force of Army 2020.

Leaders developed decision points

to address each area of potential change. Their solutions included multiple efforts, including the following:

- Redesigning the brigade combat teams (BCTs).
- Revising the sustainment concept of support.
- Designing a new Army Force Generation model.
- Maintaining an “operational reserve.”
- Creating regionally aligned forces.
- Integrating special operations and conventional forces.
- Improving echelons-above-brigade (EAB) mission command.
- Aligning brigades to divisions and corps.
- Implementing a tactical wheeled-vehicle strategy to reduce vehicles.
- Ensuring reversibility and expansibility.

In 2011, the Training and Doctrine Command (TRADOC) was tasked with developing solutions for several of the decision points in order to create a capable, agile, adaptive BCT-based force that meets force reduction targets while retaining the ability to prevent, shape, and win in 2020. This task included designing the future BCT and developing criteria and strategies to support the Army 2020 initiative.

In relation to sustainment, TRADOC was assigned Decision Point 15 (DP 15), the “sustainment design and support concept campaign of learning line of effort.” DP 15 specifically addresses the migration of sustainment capabilities out of the BCT to EAB. TRADOC assigned the Combined Arms Support Command (CASCOM) as the lead for DP 15.

CASCOM began extensive gap and seam analysis, course of action (COA) development, and field reviews. The gap analysis focused on the following:

- Emerging sustainment capability and capacity gaps as the Army of 2020 migrates selected BCT logistics capabilities into EAB units.

- Shortfalls created by the elimination of the maneuver enhancement brigade (MEB) brigade support battalion (BSB).
- Stryker brigade combat team (SBCT) mission command and capability gaps related to its lack of forward support companies (FSCs).

CASCOM’s COAs were to develop effective and efficient sustainment organizations to execute wartime missions and security cooperation activities and to develop options to improve command relationships in support of deployment, garrison operations, and training mission command.

Working with the TRADOC Analysis Center at Fort Lee (TRAC Lee), CASCOM analyzed the known and emerging gaps and offsets in tactical-level sustainment from the BCT to EAB. Adhering to the requirement to gain economies of scale—an essential element for force planning to operate effectively in a resource-constrained environment—CASCOM proposed redesigning units, creating a new type of transportation company, and adding sustainment capabilities to the SBCT.

The Background

Proposed changes to future maneuver formations have profound effects on sustainment. Without changing sustainment in response to those maneuver formation changes, gaps created by previous decisions will adversely affect the maneuver force’s ability to fully execute its mission.

For example, armored brigade combat teams (ABCTs), SBCTs, and infantry brigade combat teams (IBCTs) reduced their organic sustainment capability in order to maintain lighter, more agile formations. This reduced fuel distribution and eliminated stationary fuel storage, water production, and troop transport capability in the IBCT. It also reduced distribution and days of supply in all of the BCTs.

Force development decisions made between 2001 and 2012 centered on

meeting a high operating tempo and forced the Army to rebalance itself. Those decisions caused BCT and sustainment designers to focus on modifying units to conduct forward operating base (FOB) operations and wide-area security. The simultaneous implementation of modularity played a large role in reshaping the force. As the warfighting formations are redesigned for Army 2020, sustainment unit design and employment must adapt with them.

Previous TAA decisions eliminated significant portions of the Active component sustainment force structure and shifted others to the Army Reserve and Army National Guard. By 2017, 78 percent of sustainment units will be in the Reserve component; more specifically, 89 percent of truck companies, 95 percent of petroleum, oils, and lubrications companies, and 95 percent of water companies will reside in the Reserve. Anticipated reductions of the Active component by 2020 may further increase the reliance on the Reserve component.

Previous decisions left substantial sustainment gaps. For example, TAA 14–18 eliminated the BSB from the MEB. The change eliminated direct sustainment support for the MEB’s subordinate units and moved that workload to EAB without additional resources or doctrinal guidance to cover the gap. Other gaps were fuel distribution shortfalls within division areas, organic mission command shortfalls in the SBCT, property accountability, and theater petroleum distribution and planning.

Changes to the BCT structure, including the addition of a third maneuver battalion, the transition of the special troops battalion to a brigade engineer battalion, and the addition of an engineer battalion in the SBCT, caused significant growth in the size of the BCTs.

To keep the BCTs deployable and averaging 4,500 Soldiers, and to keep the total Active component force limited to 490,000, the Army identified sustainment capabilities

that could be moved out of the BCT: water purification, bulk fuel distribution, bulk fuel storage, and troop movement capability in the IBC. This decision placed a high demand on EAB sustainment organizations to provide these functions, but Army leaders determined that the shift maintained a prudent level of risk.

The Analysis

CASCOM conducted its analysis with the goal of designing sustainment structure and capabilities to meet the needs of the Army of 2020 in an era of fiscal austerity. Constrained by a smaller Army end strength, force developers were instructed not to increase the size of EAB.

CASCOM first examined tactical-level sustainment gaps associated with supporting BCTs and other functional brigades, including the lack of adequate mission command in the SBCT, lack of a BSB in the MEB, lack of efficient and adequate support for the fires brigade, and lack of required petroleum distribution at the theater level.

Planners also examined the four major offsets created by the BCT redesign: water purification, bulk fuel distribution, bulk fuel storage, and troop movement.

As the analysis progressed, force developers realized the natural tension in achieving economies of scale in sustainment while producing a streamlined, effective concept of support—efficiency versus effectiveness. Organizations are designed to support average demand since the Army cannot afford to build for the extreme.

Several CASCOM-developed concepts were analyzed to ensure they go beyond simply plugging holes to temporarily fill gaps and seams. Instead, CASCOM took a holistic approach to improving sustainment for all units that depend on EAB support.

Planners also remained mindful of the flexibility, capability, and faults of modularity. Sustainment was modular before the Army officially transitioned from the Army of Excellence to modularity in 2007. When modularity

was adopted, in some cases sustainment became “hypermodular.” The added flexibility worked in principle but came at the price of mission command, economy of scale, and synergy.

With new concepts being offered, CASCOM brought in TRAC Lee to provide a balanced analytic assessment of the sustainment concept of support. TRAC Lee ran multiple sustainment concept models for each BCT formation to measure capabilities and identify the associated risks of each. The analysis criteria measured the ability of the sustainment structure to provide operational reach, prolonged endurance, and freedom of action.

Using the TRAC Lee analysis, CASCOM drafted a sustainment concept of support that acknowledges the Army’s migration of capabilities to EAB and creates a new division-aligned structure to provide these capabilities from EAB through combat sustainment support battalions (CSSBs). It proposed new company-level structures for quartermaster, transportation, and ordnance units assigned to the CSSB.

COAs

Three COAs were developed to address the passback of capabilities from the BCT to EAB units while offering varying cost-to-risk options for fixing existing gaps. TRAC Lee submitted its validated COAs at a sustainment operational assessment in June 2012, where current and former brigade, BSB, and CSSB commanders and S-3s and division G-3s and G-4s assessed the COAs.

Leaders were briefed on the capabilities of sustainment units in 2017 (the year of the last Army structure memorandum), BCT changes for Army 2020, sustainment gaps and offsets created by Army 2020, and the three COAs offered as solutions. Then they were allowed to ask questions and vote on the best COA to present to the TRADOC commander for implementation.

Most leaders supported a COA that aligned CSSBs to divisions and corps (Active and Reserve), added

FSCs to SBCTs, and eliminated the fires brigade BSB. Voting members of the sustainment operational assessment also provided comments. Many leaders were concerned about placing so much demand on CSSBs, while others expressed doubts about reducing the organic sustainment capabilities of the fires brigade.

Planners used the information and comments to develop an alternative COA to address the most significant concerns. The derivative COA became the CASCOM recommended COA and was approved by the TRADOC commander, Gen. Robert Cone, on Aug. 24, 2012.

The Concept of Support

When Gen. Cone approved the CASCOM-recommended COA, he agreed to significant changes in Army sustainment. Although significant, the changes are not wholesale changes to the way sustainment does business on the battlefield, especially from a sustainment customer perspective. The concept of support addresses how to most effectively and efficiently support the warfighter and increase agility while operating in a fiscally constrained environment.

The concept centers on habitually aligning selected logistics capabilities into three corps-aligned CSSBs and 10 division-aligned CSSBs. An additional eight division-aligned CSSBs are expected in the Army National Guard. In turn, these division and corps CSSBs have the added responsibility of providing general support to units within corps or division areas of responsibility.

Gaining synergy through area support is essential to balance the Army and maintain an effective force. Consolidating capabilities and being able to distribute them back to the force on a geographic basis leverages economy of force and flexibility and saves time, materiel, and resources.

For example, area support reduces security risks by consolidating movement; there are fewer vehicles and drivers providing sustainment, resulting in lower fuel and manpower

requirements, a smaller sustainment footprint, and an increased capacity in a theater-level supply pipeline. By making these organizational and support relationship changes, sustainment forces provide the same, and in some cases better, support to the maneuver force.

In addition to changes to the CSSB, the concept proposes a significant change to SBCT sustainment. Unlike other BCTs, SBCTs currently do not have FSCs. Without these critical units, the SBCT's BSB has been facing a mission command challenge. The 2020 concept of support adds FSCs to the SBCT, giving the maneuver battalions better support. It also gives the SBCT, IBCT, and ABCT the same sustainment structure, allowing for easier cross organization of a task force.

The CSSB in 2020

CSSBs currently play a significant role in providing mission command for sustainment units that provide area support to units in an assigned area that is not contiguous with the division area. The key difference between the current CSSB and a CSSB in 2020 is that the newly designed CSSB comes fielded with a standard base capability of transportation, supply, and maintenance and provides the BCT with water purification, bulk fuel storage and distribution, and troop transport.

Each corps- and division-aligned CSSB is designed with the same capabilities to organically and simultaneously support EAB units. In the new design, both division- and corps-aligned CSSBs are modular and consist of a headquarters company, composite truck company (CTC), composite supply company (CSC), and support maintenance company (SMC) capable of providing flexible and responsive sustainment throughout the corps and division operating environments.

The CSSB gains its flexibility through sustainment mission command as a subordinate of the sustainment brigade. Sustainment units

assigned a mission in general support can weight the division or corps commander's main effort by shifting resources.

A CSSB can have mission command of up to seven companies, so it can be tailored with integrated capabilities to provide additional supply, ammunition, fuel, water, transportation, mortuary affairs, field services, aerial delivery, financial management, and human resources management. Without being reconfigured, it can support more units on an area support basis through supply point and unit distribution operations.

In keeping with TRADOC's decision to move some sustainment capabilities out of the BCTs, the sustainment concept moves capabilities to the CTCs and CSCs. The most direct change is moving water purification and stationary fuel storage capability to the division-aligned CSCs.

In addition, the concept moves personnel transport with integrated convoy protection platforms for dismounted infantry in the IBCT into the division CSSB CTC to better pool resources and offer more flexibility and agility. By centralizing capability to distribute these commodities and offering corps and division commanders more agility in directing the priority of supply, CSSBs maintain integrated, responsive, survivable, and less complicated support to maneuver forces.

By design, CSSBs provide general support capabilities, typically on an area basis. The new CSSB is doctrinally responsible for the capabilities passed back from the BCTs, but it also provides support to every unit within or passing through the assigned sustainment footprint.

The responsibilities within the CSSB and sustainment brigade include supply, maintenance, transportation, field services, health services, personnel services, and finance. Using general support, CSSBs simultaneously support BCTs and division or corps EAB units.

This provides agility and economy of force to meet sustainment re-

quirements of the battlefield without compromising the responsiveness or effectiveness of support. Capabilities now embedded into the CSSB make it a powerful combat multiplier for the supported BCTs. Even with this added capability, flexibility and modularity are still crucial to success.

Composite Truck Company

Of all the changes within the CSSB, one of the most substantial is the creation of a CTC. During the past 12 years of conflict, one of the chief complaints from tactical-level commanders was the makeup of transportation units. Commanders said they needed "some of this and a little bit of that" when it came to truck companies, but they rarely needed the full capabilities of a specific type of truck unit.

Taking this into account, the CTC gives commanders what they asked for—some of this and some of that. The CTC comes in two types: light and heavy. Light CTCs consist of a company headquarters, a maintenance section, two palletized load system platoons, and two medium tactical vehicle platoons.

Heavy CTCs consist of a company headquarters, a maintenance section, two palletized load system platoons, one medium tactical vehicle platoon, and one heavy equipment transporter platoon. The CTC also has organic convoy protection platforms and maintenance.

Composite Supply Company

In 2020, the CSC will have several major changes, including the addition of a petroleum and water platoon and the possible addition of ammunition transfer and holding point assets. These additions offer three major capabilities to the CSSB that give EAB units and BCTs higher levels of support while meeting the economies of scale required by BCT passbacks.

Having an ammunition transfer and holding point would help fill gaps in class V (ammunition) distribution to the MEB and provide versatility to EAB support. This could eliminate

the CSSB's often double-handling of class V—a redundancy recognized during gap analysis.

Additionally, the petroleum and water platoon specifically addresses the passbacks from the BCTs under Army 2020. This section's bulk fuel and water capabilities can be used by

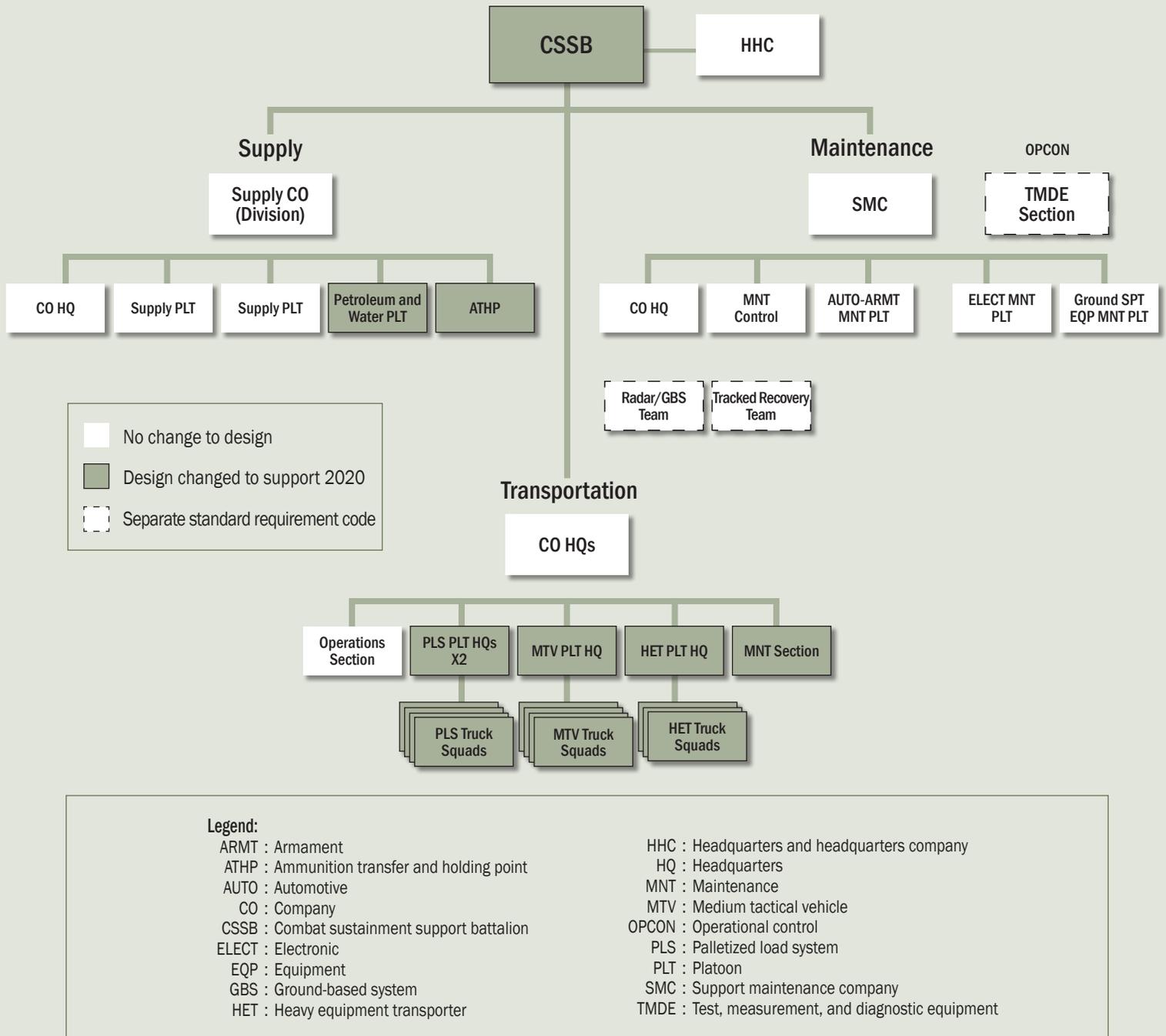
the CSSB for EAB or BCT support or can be pushed directly into a BCT, if required.

Support Maintenance Company

Although a few minor adjustments were made to the SMC for Army 2020, the most significant change was

a reduction in the number of standard requirements codes (SRCs) from 22 to one. Previously, planners had difficulty determining which SMC assets (SRCs) to bring to battle.

For example, during the conflicts in Iraq and Afghanistan, planners “ordered” an incomplete SMC because



This organization chart represents the new division- and corps-aligned combat sustainment support battalion that is being implemented across the Army.

they did not realize that the SMC had multiple SRCs. By making the SMC a single SRC, planners can ensure the full capabilities of the SMC will be brought to the battlefield.

FSCs in the SBCT

In several specific areas, the concept of support involves filling gaps and gaining efficiencies. One of the largest gaps was in the SBCT, where the subordinate battalions lacked FSCs and, thus, sufficient mission command and sustainment structure. This gap made sustainment more challenging and made it difficult to task organize BCTs.

Without the changes approved in DP 15, the SBCT's maintenance company was on the path to becoming the largest tactical company in the Army because of the elimination of contracted maintenance. Between 2001 and 2012, the company grew twofold. But during that time, mission command was never adjusted based on resourcing constraints. This left a captain to command almost 400 Soldiers operating throughout the SBCT area of operations—well more than the standard 200 for an Army tactical unit.

Without FSCs, the SBCT BSB was forced to create ad hoc, non-standard forward logistics elements (FLEs) constructed from pieces of the BSB without adequate mission command or equipment. Lieutenants or noncommissioned officers—often cooks or mechanics with little multifunctional sustainment experience—were expected to conduct FSC-like operations.

The result was a degraded capacity to provide support for freedom of action and operational reach without adjustments to mission command, maintenance control, and distribution.

Task organizing SBCTs was also a challenge. Without FSCs in the subordinate battalions, SBCTs had no sustainment mission command at the battalion level unless leaders created an ad hoc team to fill the role. This was challenging for task force planners and commanders who were

operating with an SBCT.

Adding FSCs into the SBCT formation fills the mission command gap and provides the personnel and equipment necessary to fill the maintenance roles that are currently provided by contracted mechanics and maintenance managers. It also gives the SBCT the same sustainment structure as the other BCTs, allowing for easier task organization.

The Future

In September 2013, Army leaders made many decisions regarding Army 2020 through the Army analysis and decision-making process and published them in an Army structure memorandum. CASCOM's redesigns for the sustainment forces of Army 2020 use fiscal year 2017 as a baseline.

As a result, many of the changes made to unit tables of organization and equipment for 2020 will take two to four years to be implemented for the current forces. Consequently, changes from some previous unpublished decisions and the acceleration of new decisions appear uncoordinated or sporadic as they are implemented.

Sustainment must make adjustments at the same pace as BCTs to ensure that there are no gaps at home station or on the battlefield. TRADOC is making changes to doctrine to describe how the newly designed CSSB and other operational- and tactical-level sustainment units will complete their missions in Army 2020. Planners, force designers, and doctrine writers are working together to create updated doctrinal guidance that will allow for changes in training.

While the Army resizes, forces are likely to be restationed, creating challenges to sustain those organizations at home station. As stationing decisions are made, sustainment structure must be moved or built to meet garrison sustainment and training requirements. The Department of the Army will coordinate decisions for stationing with Forces Command and TRADOC to reduce friction and enable home station sustainment.

Although the 2020 concept of sup-

port is conducive to all components, Reserve forces have additional challenges, especially the Army National Guard. Since the Guard stretches across state lines with both Title 32 and Title 10 responsibilities, it must determine how to design its forces to meet its missions. Both the Reserve and Guard will convert to the new design.

Planning and designing formations and how they fight or support the fight are evolutionary processes. Since it is an evolutionary process, making changes to formations and doctrine must be methodical, comprehensive, and holistic.

Army processes, including the force design updates and total Army analyses, will continue to shape the force and require updates in relation to both strategy and doctrine. CASCOM integrates feedback from commanders in the field, operational deployments, training center rotations, modeling, and simulations to help determine the path forward as we now look to the Army of 2025.

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