

Soldier Lethality CFT Bringing Next Generation Technologies to Soldiers

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In October 2017, the Soldier Lethality Cross-Functional Team (CFT) began work to narrow the capability gaps that affect Soldiers — particularly the 100,000 close-combat Soldiers who close with, engage, and destroy the enemy.

The team has had some early success with the implementation of the Infantry One Station Unit Training (OSUT) transformation and the requirement approval for the Enhanced Night Vision Goggle-Binocular (ENVG-B) device. In particular, the ENVG-B requirement was written and approved in 30 days. The average time it takes the Army to approve requirements is two to three years.

The Soldier Lethality CFT is doing exactly what was intended at the outset: to have warfighters and developers work together to prepare capability documents that enable the rapid delivery of capabilities to the warfighter and to inform a potential program of record.

“The Army’s fundamental responsibility is to equip, train, and field Soldiers with the tools and resources to engage and destroy the enemy,” said BG David Hodne, Soldier Lethality CFT director. “Soldiers must have capabilities that increase lethality, mobility, situational awareness, and protection while countering threats. New systems will be designed to employ emerging technologies to ensure our Soldiers have a decisive advantage over potential adversaries.

“Our CFT has been given the task to develop requirements informed by experimentation and technical demonstrations — through teaming, agility, and rapid Soldier feedback,” Hodne explained. “This enables informed decision making by Army leadership for potential programs of record in order to regain our overmatch over near-



Soldiers with the 173rd Airborne Brigade hold their position during a live-fire portion of the Saber Junction 18 exercise in Germany’s Grafenwoehr Training Area on 12 September 2018.

(Photo by PFC Matthew J. Marcellus)

peer competitors. We have all the right people in the organization: from warfighters, program management, finance, testing, science and technology, and others. That was the original intent for the creation of the CFTs.”

Currently, the lethality team is working on three lines of effort: the **ENVG-B**, the **Next Generation Squad Weapons (NGSW)**, and the **Adaptive Soldier Architecture (ASA)**. Of the three, the ENVG-B program is closest to fielding, with devices expected to be in the hands of Soldiers in 2019.

“The ENVG-B was developed based on an urgent operational requirement from U.S. Army Forces Command,” said COL Chris Schneider, project manager for Soldiers Sensors and Lasers. “They were seeking a capability that provided both night vision and thermal-sensing capability with stereoscopic binocular depth perception to increase mobility and improve visual confidence in varying lighting present on the modern battlefield during day and night operations. It also had to give Soldiers increased mobility and situational awareness through a heads-up display of friendly and enemy locations.”

The ENVG-B is a digital system that allows for significant capability growth and the ability to network sensors and other situational awareness systems such as NETT Warrior, Small Arms Fire Control, range finding systems, and any information transmitted across the tactical network.

“The ENVG-B utilizes the same wireless technology to communicate with the Nett Warrior system and is designed for full compatibility with future synthetic training systems to facilitate Soldiers training and fighting with the same equipment,” said COL Travis Thompson, Soldier Lethality CFT chief of staff.

To meet future warfighter needs, the CFT has made significant progress in the development of the NGSW. The first of these weapons will be the Next Generation Squad Weapon-Automatic Rifle (NGSW-AR), which will be followed by the Next Generation Squad Weapon-Rifle (NGSW-R). The NGSW-AR will replace the M-249 Squad Automatic Weapon (SAW) in the automatic rifleman role, and the NGSW-R will replace the M4/M41 Carbine in brigade combat teams.

“The NGSW-AR is the first in a series of capabilities to modernize the weapons of the dismounted maneuver force,” explained COL Elliott Caggins, project manager, Soldier Weapons. “NGSW capitalizes on advancing technologies to provide increased performance at range, integrated squad fire control systems, improved ergonomics of the weapon, lightweight case technologies, signature suppression capabilities, and intelligent and powered rail designs through systems integration.”

The goal of NGSW is to improve lethality, mobility, and situational awareness of the dismounted Infantryman, scout, and engineer to overcome our nation’s adversaries and win on the battlefield.

“By incorporating frequent Soldier touchpoints in the development and acquisition strategy of the system, the Army is ensuring the Soldier, weapon, ammunition, and fire control combined-system function as needed and are optimized,” Caggins finished.

The most complex effort ongoing for the CFT is the work being done with the ASA. The architecture is a concept of treating the Soldier as a system much like a tank or an aircraft. It ensures that systems are integrated with the Soldier rather than added to the Soldier.

“With this new architecture, we want to provide adaptive and responsive leap-ahead capability to our Soldiers that results in an innovative, collaborative, and cross-functional culture to drive advanced capabilities into the squad to support current and future priorities,” explained Thompson.

The ASA establishes power, data, connection, and transfer standards to Soldiers and their equipment, treating Soldiers the same as an integrated combat platform.

“What’s vitally important about the architecture is that it facilitates technology insertion and Soldier integration through enhanced communication with industry that will enable the advanced capability that our Soldiers require to defeat our current and future threats, and facilitate future technology growth and capability integration across the Soldier and squad,” Thompson added.