

Soldiers with 1st Battalion, 29th Infantry Regiment, based out of Fort Moore, Georgia, take part in a human-machine integration demonstration using the Ghost Robotic Dog and the U.S. Army Small Multipurpose Equipment Transport (SMET) at Project Convergence – Capstone 4 in Fort Irwin, California, March 15, 2024. During Project Convergence, AFC experimented with numerous technologies that significantly enhance U.S. Army and Joint operational capabilities. (U.S. Army photo by Spc. Samarion Hicks)

NCOs Enable Continuous Transformation

By Command Sgt. Maj. Brian A. Hester

Army Futures Command

hrough more than 34 years of leading Soldiers, from squad to Army Command level, I've witnessed firsthand the pivotal role that advanced technology plays across the globe and the demanding pace required to adapt to a modern battlefield. My journey has taught me that the equipment we deploy can be decisive, often in unpredictable ways.

In a rapidly evolving combat environment, technological superiority can mean the difference

between victory and defeat. New or advanced equipment, fielded through Army continuous transformation initiatives or industry efforts, must be leveraged effectively in our formations.

Technology, whether it's drones, loitering munitions, cyber warfare tools, or advanced communication systems, provides us unprecedented opportunities and combat power—and it does the same for our adversaries. However, the true value of these tools lies not just in

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their inherent capability but also in how creatively and unpredictably they are employed on the battlefield.

NCOs must hone basic skills and technological aptitude to maintain our edge in modern warfare. Skilled leaders can enhance our technological advantage, yet the same technology may allow our adversaries to exploit potential weaknesses if ignored.

Advanced Technology at the Tactical Edge

The use of <u>drones in the war in Ukraine</u> revolutionized reconnaissance and strike capabilities. These unmanned systems allow us to gather real-time intelligence and execute precise strikes while minimizing risk. Their unpredictable and creative deployment keeps the opposition off-balance, demonstrating the power of advanced technology when used innovatively.

The term *fieldcraft* summarizes a successful Soldier's survival skills. The emerging future operating environment demands broadening proficiencies that address the growing urgency of technological competency. *Techcraft* widens the scope of fieldcraft to include the skills, techniques, and knowledge required to integrate modern equipment and systems effectively into Army formations.

I remember when unmanned aerial systems (UAS) burst onto the scene. The technology was foreign to most NCOs, and we had to learn to adapt and incorporate it into current operations.

UAS platforms improved our awareness and lethality. We were employing our techcraft without realizing we were part of an evolution, potentially not seen since radios and tanks were introduced into combat during World War II.

The technology's performance and capability, combined with my fellow NCOs' cleverness, allowed for unprecedented results across small teams and even large headquarter units. This experience taught me the power of technology's creative application within our mission set.

The <u>Battle of 73 Easting during the Gulf War</u> serves as another excellent example of advanced technology used decisively. In this engagement, U.S. Army forces were equipped with superior GPS systems and advanced targeting technology. They were able to outmaneuver and outgun the much larger Iraqi force by applying technology to a tactical problem. Precise navigation and targeting capabilities allowed for a swift and overwhelming victory. This battle demonstrated that technological superiority combined with tactical skill can achieve significant results even in a peer-to-peer conflict.

NCOs are the backbone of the Army, responsible for leading Soldiers and ensuring mission success. In modern warfare, this includes a crucial duty: keeping our basic military occupational specialty skills and our techcraft razor sharp.

The rapid pace of technological advancement means that continuous learning and adaptation are essential.



A Soldier demonstrates the Integrated Visual Augmentation System (IVAS) 1.2 and the Next Generation Squad Weapon-Rifle at Fort Belvoir, Virginia, Sept. 27, 2023. NCOs and Soldiers with their muddy boots on the ground are uniquely placed to gather relevant lessons and shape Army transformation. (Photo by Jason Amadi, PEO Soldier)

We must ensure our Soldiers have the fundamental technical knowledge to successfully apply or assimilate new solutions without struggling with basic digital skills or concepts in the future fight.

We must diversify our Soldiers' skill sets through education and radically apply technology in training, exercises, and current operations around the globe.

The Right Equipment at the Right Time

During my time as a squad leader and again as a platoon sergeant, we fielded several improvements in night vision and lasers. Some NCOs remarked, "These things are awful. They fog up. I'm better with my learned skill and senses than with this technology." If it were up to them, this capability would have continued to collect dust in the corner. I believe our Army has learned and adapted. We now embrace modern technology solutions, whereas 20 years ago, we would have offhandedly declared a new piece of kit "absolute junk."

Army Futures Command (AFC) places Soldiers at the forefront of development through Soldier Touchpoints and maximizes NCO and Soldier practical experience throughout the requirements process.

Determined not to field a new capability without Soldier input, AFC places prototypes in Soldiers' hands, in the dirt, and in combat simulations. This approach ensures every new sensor, shooter, communicator, or vehicle has been ruggedly tested in demanding environments against realistic threats. AFC and Army Labs collaborate with the best of industry and academia in designing items such as our <u>Next Generation</u> Squad Rifles, adjusting the equipment based on direct Soldier feedback.

NCOs and Soldiers with their muddy boots on the ground are uniquely situated to observe and gather relevant, battle-tested lessons learned. Their voices are a key source of information shaping Army transformation.

Your observations can significantly impact changes across the entire Army Doctrine, Organization, Training, Materiel, Leadership and education, Personnel, Facilities – Policy (DOTMLPF-P) framework—necessary changes, as technology affects how we fight.

Stay actively involved with the feedback process by submitting your experiences to the *NCO Journal*, Center for Army Lessons Learned, or your NCO support channel.

Consider when <u>mechanized infantry was introduced</u> in the early 20th century. This upgrade required a complete overhaul of traditional cavalry tactics, emphasizing the speed, mobility, and firepower granted by the new technology. Armored vehicles and tanks became central to the modern battlefield, leading to the development of combined arms tactics that integrated infantry, armor, and artillery in a cohesive operational framework.

We are on the precipice of similar sweeping change

with Human Machine Integrated formations. I ask all NCOs to consider the implications of unmanned ground and aerial machines on and in the makeup of your squad, platoon, or company.

What tactics and improvements in survivability and lethality emerge while leveraging this technology? Pose critical thinking questions to yourself and your Soldiers on how these devices might evolve operations and address the new realities of warfare, including maintenance protocols, fuel or power supply chains, and new concealment strategies.

Your next step to significantly contribute to Army transformation is to write down these thoughts as well as your local experiments and submit developed Tactics, Techniques, and Procedures (TTPs) as articles to the *NCO Journal* or your <u>branch journal</u>.

The Foundation of Innovation

While advanced technology offers significant advantages to skilled warfighters, it is imperative to remember that innovation is built on a foundation of Soldier core competencies.

Being "brilliant at the basics" is essential. Mastery of fundamental skills such as marksmanship, fieldcraft, and tactical movement provides the baseline from which we



3d Infantry Regiment Soldiers (The Old Guard) and the Army Research Laboratory (ARL) participate in a Joint Tactical Aerial Resupply Vehicle (JTARV) exercise on Fort Walker, Virginia, Sept. 22, 2017. JTARV demonstrated the potential for Soldiers on the battlefield to resupply through an autonomous Unmanned Aircraft System. (U.S. Army photos by Pfc. Gabriel Silva)

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M1A1 Abrams main battle tanks of the 3rd Armored Division move out on a mission during Operation Desert Storm, with an M2/M3 Bradley visible in the background. (Photo by Phc. D. W. Holmes II, U.S. Navy)

can adapt technology to accomplish our tactical missions.

For instance, reading maps and navigating terrain using traditional methods is just as important when considering how your electronic signature and signal systems might operate in the current and future environment.

Basic skills and technology can be woven into even the most routine duties. Be creative; introduce complexity to tasks that empower your Soldiers to employ their techcraft and challenge them to be more thoughtful. Think about your electronic signatures on "motor-pool Monday."

Feed those skills necessary for the Army to dominate tonight and in 2040. We must adapt just as quickly as the operational environment will change on the future battlefield. We will rely on our fieldcraft and techcraft to achieve overall mission success. Our baseline Soldier skills have formed the bedrock upon which technological progress will thrive.

In my current role, I am deeply involved in our Army's continuous transformation. This mission is about more than just acquiring new equipment; it fosters a culture of innovation, agility, and adaptability.

During Project Convergence, one of AFC's largest annual events aimed at aggressively integrating the Army's weapons and command and control systems with the rest of the Joint Force, AFC experimented with numerous technologies that significantly enhanced our Army and Joint operational capabilities.

We learned important lessons, allowing us to be more dominant in the future fight. We are making considerable headway in creating a command-and-control network that enables the Joint Force to make conflict precise. This strategy increases our opportunities to win the first fight, thus encouraging negotiations with our adversaries rather than persistent and costly long conflicts.

The implementation process was not without challenges; however, the results were undeniable during our last execution of <u>Project Convergence Capstone 4</u>. Applying the basics, best practices, and new technology made our Army and Joint Force safer and more lethal.

This blending of the basics with new technology is enhanced by our warfighting experiences in the war on terrorism and observations from Ukraine and Israel. New systems and technologies coupled with U.S. Soldier and NCO skill and will have resulted in a more capable Army and Joint Force.

Conclusion

Our adversaries possess near-comparable technological capabilities to the U.S. It is our responsibility to ensure our Soldiers can execute their core skills while leveraging technological tools effectively and adapting to new solutions swiftly. Doing so requires a commitment to continuous transformation from all NCOs.

Accomplish this through training and education, fostering an environment where innovation is encouraged, and by contributing to enduring repositories of knowledge such as the *NCO Journal*, branch journals, and the <u>Center for Army Lessons Learned</u>.

NCOs must ensure Soldiers have a comprehensive understanding of fieldcraft so they may operate effectively in any environment, regardless of the technology at their disposal.

You instill discipline, confidence, and critical thinking skills to grow your Soldiers' ability to operate under pressure. These qualities are crucial when integrating new technologies into our formations.

Continue to expose your Soldiers to new challenges,

even in daily tasks. To keep their minds sharp, encourage and praise their novel solutions to grow a culture motivated to innovate.

Continuous transformation involves staying ahead of emerging threats and ensuring our forces are equipped with the latest advancements in a world where new technology arrives daily. This proactive approach is critical to maintaining readiness and ensuring that we can outmaneuver and outthink our adversaries.

The lessons learned from both historical and personal experiences highlight a clear message: advanced technology can be a decisive factor in combat when employed creatively and unpredictably.

As NCOs, we must ensure our Soldiers are equipped with the best tools and trained to use them to effect. This approach is not just a strategy for success; it is our obligation to the Soldiers we lead and the nation we serve.

Command Sgt. Maj. Brian A. Hester enlisted as an infantryman and has served in every infantry leadership position during his 34 years of service. He served three tours in Iraq, two tours in Afghanistan, and deployed with Kosovo Force 17. He is now the senior enlisted advisor for U.S. Army Futures Command and is forging the path forward for Army Transformation.





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