

**Questions submitted by Participants at the end of the Industry Forum (5 Feb 15)**

The following questions were asked by participants at the Industry Forum via question cards.

**1. In Feb Army Magazine, and in his Force 2025 & Beyond article, BG Brito stated the new “BIG 5” are: 1) Optimized Soldier and team performance 2) Adaptive professionals and Institutions 3) Capabilities overmatch 4) Scalable & tailorable Joint/Combined Armed Forces 5) Joint & Organization Interoperability. In your briefing today (BG Martin) you stated the new “Big 6” are: STE, AI, One-World Terrain, IT, BD and Point of Need. Please clarify. Which of these two lists are Army priority – “Big 5” or “Big 6?”** Submitted by: COL(R) Ernie Forest.

**ANS:** In the Feb issue of Army Magazine, BG Brito was describing the priorities for Force 2025B. The “Big 6” BG Martin was referring in his briefing are CAC-T’s Science & Technology research priorities. The purpose of the “Big Six” are to inform the Synthetic Training Environment capability development and reduce risk. CAC will be seeking help from industry on ideas about how these gaps can be closed in the near future. We will seek assistance through a message on Federal Business Opportunities o/a 5 March 15. We will send a reminder to Industry Forum participants once this message is released.

**2. What does the operating force need to know about social media? Is social media just OSINT or is it a communications, civil affairs, recon, JIIM/UAP, human digital dimension aspect of the OE? How do we train this?** Submitted by Nick Dowling. **ANS:**

**ANS:** Social media plays an important role in understanding and shaping the operational environment. In recent years, units have integrated fictitious social media sites and venues into training environments. These fictitious sites that are updated in accordance with a master events list as part of the exercise facilitated the integration of social media for intelligence purposes as well as improving the understanding of unit actions and activities as perceived by populations within the area of operation. Integrating social media into exercises and training provides more realistic training for commanders and supporting staff elements (intelligence, Public Affairs, PSYOPS, Civil Affairs, etc.) and can be used as a tool to ensure broader social and information integration into a training exercise. Social media can also provide additional information to inform operational assessments.

**3. Who is the proponent in the Army for Joint Interagency Intergovernmental Multi-national /Unified Action Partner integration? Who is looking at doctrine, lessons learned, standards, and programs to ensure we do this right? Is industry input welcome to this question?** Submitted by Nick Dowling.

**ANS:** First, industry input is absolutely welcome on this challenge. Clearly, an Army solution won’t cut it in the future. Joint and UAP interoperability becomes paramount for meeting JTF requirements in support of 2025 and beyond. Within the Combined Arms Center (CAC), the Mission Command Training Program (MCTP) delivers complex training environments within a JIIM framework in support of our operating forces. Their feedback is critical to CAC-Training’s capability development efforts to improve integration of UAP in support of our doctrine and lessons learned. These enhancements currently fall into constructive training environments in support of Division and higher command post exercises (i.e. Warfighter Exercises, Army Service Component Command exercises, etc.) MCTP provides feedback to the TCM-Constructive, who

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is the Army's lead for improvements of our simulations to meet JIIM requirements. There is a established process for improving our current training capabilities. The TCM-Constructive routinely exchanges information with the Joint Staff J7 on the development of future simulation capabilities. The JSJ7 is currently moving towards a JLVC 2020 along similar paths as the Army's Synthetic Training Environment (STE). Improving this cross-talk and synchronization is an area we seek to improve as we move forward. For information on Army constructive capabilities: <http://usacac.army.mil/organizations/cact/nsc/tcm-constructive>

For information on Joint Simulation capabilities:  
<http://www.jcs.mil/Directorates/J7%7CJointForceDevelopment.aspx>

**4. In the Force 2025 plan, the operational and institutional components are addressed, but what is the strategic planning behind the contractual and funding components that drive the simulations to a common platform and delivery mechanism to provide the training at the point of need, when it's needed?** Submitted by John Givens.

**ANS:** The strategic planning process that will govern the Army's Training Support Strategy (TSS), specifically its acquisition of Training Aids, Devices, Simulations and Simulators (TADSS), is the Long range Investment Requirements Analysis (LIRA) process. LIRA is often referred to as the "30 Year Investment Strategy". The TRIAD, which is composed of the senior leadership of DAMO-TR, CAC-T and PEO STRI, will use LIRA as an instrument to provide a mid and long-term strategy in guiding a TADSS/training support solution for Force 2025 and Beyond. The first Non-System Training Devices (NSTD) LIRA was briefed to senior Army leadership in November 2014, and is referred to as LIRA 17. The NSTD LIRA will be an annual event, with LIRA 18 preliminary planning already underway. As part of the LIRA process, CAC-T, through its TRADOC Capability Managers (TCM), is developing the requirements and capability needs to execute TADSS/training support for Force 2025 and Beyond. In conjunction with the other two members of the TRIAD, an analysis of existing Programs of Record (POR) is underway to adjust current requirements and acquisition strategies given projected Total Obligation Authority (TOA) funding constraints. The intent is to identify trade space for realizing the Army's mid-term strategy, the Synthetic Training Environment (STE), as well as our far term objective, the Future Holistic Training Environment – Live/Synthetic (FHTE-L/S), thus providing training at "point of need."

**5. How do you collapse virtual, constructive, and gaming when so many stakeholders have so many different and sometimes conflicting requirements?** Submitted by Jeff Lyons.

**ANS:** This question highlights one of the major challenges with transitioning from our legacy to future capabilities. We have two challenges: 1) Establishing consensus on the future of training and 2) How to fund the required changes. Changing the paradigm of how we train is difficult, but has gained momentum with the publishing of the Army's Operating Concept. CAC intends to retain the momentum of ARCIC's work as we work to improve training and education in the Army. In terms of funding, a program like the STE, which touches every major training system in the Army, won't be a simple task to pull off. But, we have very talented groups of researchers, capability developers, material developers, academia and industry partners that can help us make it a reality.

**Is the entire Army on board/accepted the STE and FHTE concepts?** TRADOC is, and we are going through the Training System Support Enterprise process to ensure the entire Army Training Community understands and accepts them. Like many ideas, and with all change,

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some organizations may not accept this transition. That said, both the CSA and VCSA have been briefed on these initiatives and understand the importance of the concept and its support to Force 2025.

We are also reviewing and reducing the number of capability requirement documents within our TSS portfolio over the coming 2-3 years. We assess that going from 17 documents to 3-4 documents will help us shape the divesting of Army legacy capabilities in the future. We are also reorganizing our TCMs within the National Simulation Center to move to a support the development of “live - synthetic” solution vice having multiple TCMs and TPOs. PEO-STRI is also assessing organization and composition of programs and entry points with capability developers to ensure unity of effort and the routine Triad meetings between Capability Developers, Material Developers, and resource managers (CAC-T, PEO-STRI, and DAMO-TR) will help synchronize our efforts.

**6. MCCoE designated TCM-MC as TCM MC/CP, but at the same time closed the only CP POR – Product Manager Command Post Systems and Integration without a TOR. How does ASA (ACI), TRADOC, CERDEC, etc. synchronize the CP 2025 effort in this fiscally constrained environment? Will this plan consider BN TAC’s? Corps and Division EECF’s and TAC’s? More agile – scalable BCT Main CP’s?** Submitted by James Hall.

**ANS:** This is an interesting question, but beyond the scope of the realistic training industry forum. We encourage you to contact TCM-Mission Command. Points of contact can be found at: <http://usacac.army.mil/organizations/mccoe/contact-us>.

**7. How do Unified Action Partners, Allied/Coalition players/services, integrate into a “holistic training environment?” Are their strengths and limitations factored into our requirements? This would be a risk in some outpacing the others. DOD and the Army are the only real organizations with adequate resources.**

Submitted by: Anonymous.

**ANS:** A key distinction needs to be made here between integration of mission command capabilities and integration of simulation capabilities in support of realistic training with UAP. We have found it necessary in the past to use US technologies to provide the training environment and then integrate UAP into our Mission Command information systems to support training. Trying to integrate disparate simulations across UAP and Allies is an extremely expensive venture given the number of disparate capabilities, organizations, and partners. For the purposes of training, we see the Army having a singular synthetic training environment (STE) that supports Army training requirements and we integrate Allies and UAP into this environment through our tactical and operational tools, such as Mission Command Information Systems. Arguably, this is also the most realistic way to train, since integrating UAP is an operational requirement not a simulation training environment integration task. That said, if there becomes a need to integrate a specific UAP or Allied capability within the STE, we can work the integration during routine updates to the capabilities based on commander training requirements and available funding.

**8. With budget drop funding to 19 CTC rotations, including 2 ARNG, sequestration means less money. It appears that the Army will protect CTC/bill payer for home station**

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**training? How do we balance these fiscal realities with initiatives to improve Home Station Training?** Submitted by: Anonymous.

**ANS:** This is a challenge that we will have to overcome. As you probably know, there is a correlation between Home station training and performance at a Combat Training Centers. We need to get past programmatic differences and begin to see the problem holistically. There are two considerations as we move forward that are worth highlighting: First, we need to recognize that reductions in HS training capabilities reduce the effectiveness of HS training and may reduce the level of task proficiency of our formations preparing for a CTC rotation. This means that units arriving at a CTC may arrive less prepared for the rotation. Units may require training on routine HS tasks at our CTC, thus reducing the overall effectiveness and quality of the learning experience. Second, enhancement to the Synthetic Training Environment (STE) is not only designed to improve the quality of HS training, but to also improve the realism, quality and value of the CTC experience. If leveraged correctly, the Army could vastly expand the complexity of our CTC rotations and integrate additional assets in support of a rotational unit at a CTC. For example, a more expanded area of operation could be developed that includes participation of a HS division or JTF HQ integrated into a CTC rotation or improved integration of Joint and sister service platforms through simulation integration of virtual and gaming capabilities.

**9. What is the best path or process for a small business to protect its patents and trade secrets as it moves through the “open” requirements phase to support the 2025 initiative?** Submitted by Brian Stanley.

**ANS:** This is definitely outside the scope of Army training expertise. We are looking for market information to support the development of training capabilities. The Army recognizes that contractors are competitors and that we need to maintain a level playing field and avoid the unauthorized disclosure of proprietary data. We also recognize and acknowledge that companies may be reluctant to share certain aspects of their solutions. For acquisitions within DOD, please review DFARS Part 227, for the policies and procedures relating to Data Rights in Acquisitions.

**10. Is the LIRA process working? Does it provide all stakeholders common information toward addressing this evolution in training?**

Submitted by Andrew Hartigan

**ANS:** Yes. Early indications are that the Long range Investment Requirements Analysis (LIRA) process is providing the necessary focus on both the mid and long-term training strategy the Army needs to modernize its approach to Training Aids, Devices, Simulations and Simulators (TADSS) in support of Force 2025 and Beyond. For the first time, the Army Training Support System (TSS) Enterprise has a definitive, 30 year investment plan to guide critical TADSS decisions. The three key stakeholders in executing the TSS Enterprise mission, CAC-T, PEO STR, and DAMO-TR, commonly referred to as the TRIAD, are using the Non-System Training Devices (NSTD) LIRA as the forcing function to address difficult questions as they relate to both current Programs of Record (POR) and future PORs given a projected, constrained fiscal environment. LIRA is assisting the TRIAD in the formulation of a more coherent, synchronized TSS approach to address capability and technology gaps and develop affordable acquisition strategies.

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**11. We completed phase III for an Artificial Tutor with DARPA and RDECOM. I see there is a need now. Who should we contact to complete the final phase? No need to recreate the wheel.** Submitted by Alison B. Rubin.

**ANS:** Thank you for the question and we appreciate your work on this. ARL at the STTC has an existing Broad Area Announcement on this requirement. You can reach the ARL BAA by searching for W911NF-12-R-0011-02 or by going to <http://www.arl.army.mil/www/default.cfm?page=8> and selecting W911NF-12-R-0011-02. Excerpt from the BAA is below.

### **4.2 Simulation and Training**

**4.2.1. Adaptive and Intelligent Training Technologies:** Proposals are requested to design, develop, apply, and evaluate artificially-intelligent agent technologies (e.g., computer-based tutors, virtual humans, process agents and authoring tools/methods) to enhance training effectiveness and reduce associated training support costs. The goal of this research is to enhance the realism, adaptability and decision-making skills of artificially-intelligent computer-based tutors and virtual humans to support one-to-one and one-to-many training experiences where human support is limited, impractical, or completely unavailable. Technical challenges include the development/application of intelligent agents that can adapt in complex, ill-defined domains; understanding natural language in multi-sided conversations with trainees; rapid authoring of effective computer-based tutors for individuals and teams, and realistic virtual humans. Anticipated capabilities include computer-based tutors on par or better than expert human tutors and realistic virtual humans that are so visually and cognitively realistic that they are indistinguishable from humans. These capabilities will serve to provide enhanced “self-directed” learning while at the same time reducing associated training support costs.

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**Observations from the Industry Forum:** Submitted by BG (R) Pete Palmer:

Trainability (comment more than question). I fully agree with your argument. However, there are several challenges: First, except for a boiler plate there is no KSA or KPP for human system integration efforts; additionally if it happens to be in the document it isn't evaluated for program selection. Industry knows you don't count it in your evaluation so they don't have a business case to do it. Actually it will work against them because it could raise the cost of their bid - You don't ask for it so they are not going to increase their costs. So you can either integrate these requirements into KPP or KSA or you can pay for at 4x the rate or an ECP to fix it?? It is cheaper to do it up front. If you do it after you have the program you will have very high reengineering costs to do so.

Second, (except for what BG Charlton proposed) Industry does not get access to the Soldier who is going to use it until the program has been won, built, and sent to LUT (Limited User Test) or some other evaluation. This is too late! Need to let industry get access to the soldiers early on in the process so they build right to start. Otherwise they are just working off an engineering spec sheet.

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Third - from the Cognitive Domain we don't have the base line range of the Soldiers who are going to use it. They all don't think the same. Base line should feed the KSA/KPP. Therefore - Industry builds what you put into the requirements document they can't do otherwise or they don't "win" the program?? Same point as above, industry needs to have a business case to do this. Key is they build what you tell them to build. If you don't tell them the soldier is part of the system and make it a priority then they build what you told them to build

**Observation from Industry Forum:** Submitted by BG (R) Pete Palmer:

Subject is on S&T Investment. I brought up the need to baseline the Soldier (cognitive domain) so we can develop better criteria for KSA/KPP's. The morning panel said information/studies are all over the place and are not clear how to do this. I would argue that it is good enough now but we are going with the position we don't know why you have an S&T requirement to develop cognitive baseline capability and tools so we can develop better training and material solutions tailored to how the individual Soldier learns. We say we have a gap but our S&T efforts aren't addressing which I would argue is required before you do any of the other efforts (Big data, augmented reality, etc.).