
ANNEX C: TRAINING AND LEADER DEVELOPMENT

General

Training Transformation across the Department of Defense (DoD) is a primary effort. The 1 March 2002 "Strategic Plan for Transforming DoD Training" identified three specified strategic goals for transforming and modernizing training and training support capability of the U.S. military: 1) making training more joint, 2) maximizing the use of the live-virtual-constructive (L-V-C) training environment, and 3) addressing training requirements in the acquisition process. *Joint Vision 2020*, *Army Vision 2010*, and *The Army Plan (TAP)* make "Readiness" of "Trained and Ready" Army forces for Joint Force Commanders (JFC) the main effort. Training and training support capability are the critical force readiness enablers.

The President issued the National Security Strategy (NSS) in September 2002. Its supporting defense strategy is translated into specified missions and tasks by DoD's Defense Planning Guidance (DPG) and the Army's supporting strategic planning guidance of TAP 2004-2019. TAP 2004-2019 specifies that "Readiness is our Mission," which means readiness of units, readiness of individuals assigned to these units as well as their potential replacements, must be trained and ready to meet the requirements outlined in the NSS and defense strategy. Both the Secretary of the Army and the Chief of Staff, Army (CSA), have stated that individual and unit readiness is a "nonnegotiable" priority.

Training and leader development are inherent in all three strategic Army objectives of

Readiness, Transformation and People. Readiness is dependent upon training and training support capability. Readiness of units is dependent upon high-quality, realistic training. Readiness of Army people to be Soldiers, Department of Army (DA) civilians, and leaders is also dependent upon training. DoD Transformation and Army Transformation have both identified training support capability as a primary enabler to maintain momentum to the Objective Force.

The first DoD Training Transformation objective to be implemented is for the U.S. Joint Forces Command (JFCOM) to establish a Joint National Training Capability (JNTC), which in part would link designated Services' training centers and training support capabilities. The Unified Command Plan (UCP) has been revised to reflect this new role for JFCOM. The Army G-3 issued guidance and taskings to achieve this JNTC and its key enabler of Live-Virtual-Constructive Training Environment (LVCTE).

The Army's Transformation Campaign Plan supports the national and DoD Transformation goals and objectives. The Army recently conducted an extensive assessment of its training and training support capability under the Army Training and Leader Development Panel (ATLDP) process. A common operational picture methodology linking NSS, DPG, TAP and the ATLDP has helped to identify those areas that warrant immediate remedial action planning and execution.

The Army Vision of being more strategically responsive and dominant at every point on the

operational spectrum is about people, readiness and Transformation. People are the centerpiece of our formations, and leadership is our stock in trade. Training Soldiers and growing leaders remain the most essential missions for the Army. Soldiers must be highly trained across the spectrum of military operations. Leaders must be educated for rapid synthesis of information, intuitive assessments of situations, and rapid conceptualization of courses of action. They must be comfortable with giving and executing decisions. They must be able to clearly define their information requirements and, most importantly, develop and effectively communicate their intent. Units and leaders must be highly trained and disciplined in the use of information technologies that can assure timely delivery of critical information. A main effort in Army Transformation is linking training and leader development to prepare Army leaders for full-spectrum operations.

The Army identified seven training and leader development imperatives in the Army Training and Leader Development Officer Panel (ATLDP-O) that are keys to success in achieving the Transformation objective. The seven imperatives serve as the baseline for management of Army training and leader development and are categorized as: Army Culture, Training and Leader Development Model, the Officer and Noncommissioned Leader Education System, Training, Systems Approach to Training, the Training and Leader Development Management Process, and Lifelong Learning.

Army Culture

The Army recognizes the inextricable link between Army Culture, training, and leader development. Our culture is the common thread running throughout all aspects of Army

training and leader development. The Army must operate routinely within an acceptable band of tolerance to effectively train Soldiers and grow leaders; thus, an Army Culture imperative has been initiated. The underlying theme of this imperative is to demonstrate the Army's commitment to Soldiers, civilians, and their families by providing values-based leadership and a focus on well-being.

Army Culture is representative of the goodness in American society as evidenced by the adoption of the seven Army Values: loyalty, duty, respect, selfless service, honor, integrity, and personal courage. These values play a critical role in shaping the beliefs of Soldiers and leaders. Army Culture is internalized over time by its members, as reflected in their practices and beliefs. Influences external to the Army will continue to shape that culture. Leaders must be sensitive to instituting any policy or procedural changes that widen the gap between Army beliefs and practices and make it more difficult to train Soldiers and grow leaders.

The Army has demonstrated a commitment to the well-being of our Soldiers, civilians, and their families. This commitment will be demonstrated through a coordinated effort to monitor and resolve many issues that affect the well-being of Soldiers, civilians, and their families. This commitment includes efforts to address issues in medical care, education, family support, housing and installation support, command programs, pay and compensation, and morale, welfare and recreation (MWR). A Well-Being Division has been established to focus efforts across the Army. The Well-Being Strategic Plan, Campaign Plan, and Action Plan have been published and efforts are ongoing to include Army Well-Being into appropriate Army training, education and doctrine.

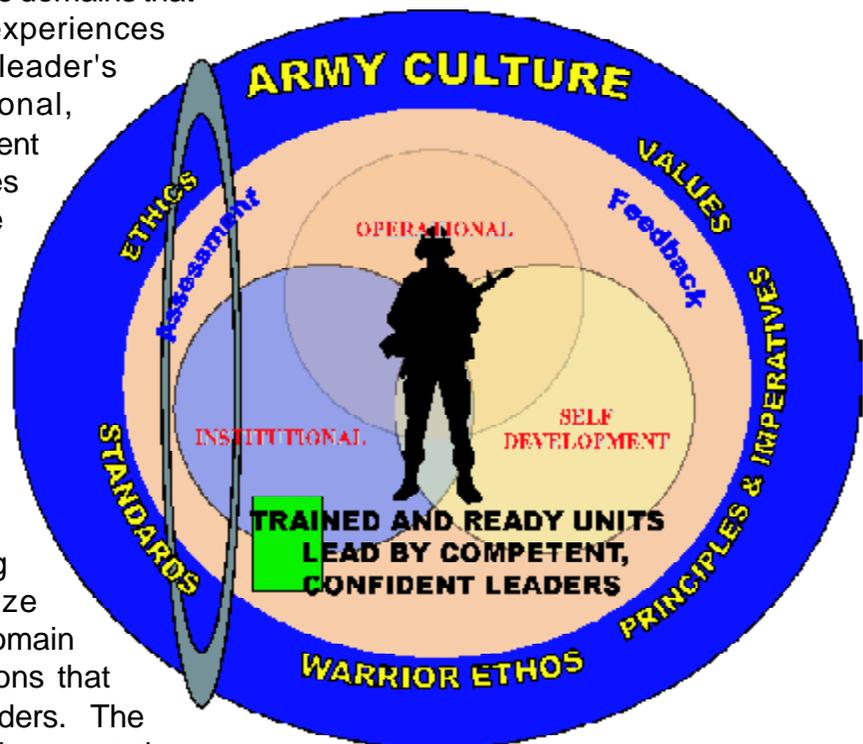
Leader Development

Leader Development is the deliberate, continuous, sequential, and progressive process, based on Army values, which develops Soldiers and civilians into competent and confident leaders capable of decisive action. Closing the gap between training, leader development, and battlefield performance has always been the critical challenge for any army. In an era of complex national security requirements, the Army's strategic responsibilities now embrace a wider range of missions that present even greater challenges to our leaders. These operations will likely include combined arms, joint, multinational, and interagency considerations.

The Army Training and Leader Development Model centers on developing trained and ready units led by competent and confident leaders. The model identifies an important interaction that trains Soldiers now and develops leaders for the future. Leader Development is a lifelong learning process. The three core domains that shape the critical learning experiences throughout a Soldier's and leader's career are the operational, institutional, and self-development domains. All of these activities take place within an Army culture bound by distinct values, standards, ethics, and a warrior ethos.

Focused on the Soldier, these domains interact using feedback and assessment from various sources and methods, to include counseling and mentoring, to maximize warfighting readiness. Each domain has specific, measurable actions that must occur to develop our leaders. The operational domain includes home station

training, combat training center rotations, joint training exercises, and operational deployments that satisfy national objectives. Each of these actions provides foundational experiences for Soldier, leader, and unit development. The institutional domain focuses on educating and training Soldiers and leaders on the key knowledge, skills, and attributes required to operate in any environment. It includes individual, unit and joint schools and advanced education. The self-development domain, both structured and informal, focuses on taking those actions necessary to reduce or eliminate the gap between operational and institutional experiences. Throughout this lifelong learning and experience process, there are formal and informal assessments and feedback of performance to prepare leaders for their next level of responsibility. Assessment is the method used to determine the proficiency and potential of leaders against a known standard. Feedback must be clear, formative guidance directly related to the outcome of training events measured against standards.



To assist in achieving success in the self-development domain, we will leverage technology through the Warrior Knowledge Network (WKN). Using WKN, leaders will collaborate on solving common organizational problems, share branch-specific lessons learned, and form virtual teams to effect changes in doctrine.

During FY00, the first ATLDP convened to identify skill sets required of Objective Force leaders and to assess the ability of current training and leader development systems and policies to develop these skills. By the end of FY03, we will have completed comprehensive officer, noncommissioned officer (NCO), warrant officer, and civilian studies. Each study results in an action plan designed to deliver specific results integrated with ongoing Legacy Force activities and the budget planning process.

One mandate of Army Transformation is to ensure the link between training and leader development is well understood in order to prepare Army leaders for full-spectrum operations. Linking these two fundamental obligations commits the Army to training Soldiers and civilians while growing them into leaders. Training and leader development is a team effort and the Army has a role that contributes to force readiness. The DA and Major Commands (MACOMs) are responsible for resourcing the Army to train. For example, the institutional Army, which includes schools, training centers, and NCO academies, train Soldiers and leaders to take their place in Army units by teaching doctrine and tactics, techniques, and procedures (TTP). Units, leaders, and individuals train to standard on their assigned missions, first as an organic unit, then as an integrated component of a team. Operational deployments and major training opportunities such as major training exercises, Combat Training Centers (CTCs), CTC-like

training, and external evaluations (EXEVAL) provide rigorous, realistic, and stressful training and operational experience under actual or simulated combat and operational conditions to enhance unit readiness and produce bold, innovative leaders. Simultaneously, individual Soldiers, NCOs, warrant officers, officers, and the civilian work force are responsible for training themselves through personal self-development.

Commanders have the ultimate responsibility to train Soldiers and develop leaders who can adjust to change with confidence and exploit new situations, technology, and developments to their advantage. The result of this Army-wide team effort is a training and leader development system that is unrivaled in the world. Effective training and leader development produces trained and ready units, led by competent, confident leaders that can win across the full spectrum of operations.

Leader Education System

Officer Education System (OES)

The Officer Education System (OES) is being adapted to meet the needs of the transforming Army and the realities of the contemporary operating environment. We have begun to adapt instructions to include the new operational environment and will gradually expand this to incorporate all programs of instruction (POI) and training scenarios.

Basic Officer Leader Course

The Basic Officer Leader Course (BOLC) incorporates recommendations from the ATLDP-O and the OES Needs Analysis Study. It transforms pre-commissioning and officer basic courses to better prepare second lieutenants to achieve success in the

contemporary operating environment immediately upon arrival in their first unit. The objective is to develop technically competent and confident platoon leaders grounded in leadership and field craft, regardless of branch, who embody the Army values and warrior ethos and who are physically and mentally strong. To achieve this objective, BOLC capitalizes on experience-based training, logically structured to build upon and reemphasize previous lessons learned.

Phase I (Pre-commissioning): The traditional commissioning sources are revising their curricula to train and educate the majority of performance tasks (basic Soldier and leader skills) commonly performed by all Lieutenants. Each officer candidate or cadet, regardless of commissioning source, will be trained using the same standards and programs of instruction. They will be steeped in the values and traditions of the Army, and will possess a clearer knowledge of what it means to be an officer.

Phase II (Experiential Leader Training): Upon graduation/commissioning, lieutenants attend the second, branch-immaterial phase of BOLC. This course is physically and mentally challenging, with 84 percent of the training conducted hands-on in a tactical or field environment. The platoon is the focal point for all activities, as each student is evaluated in a series of leadership positions under varying conditions/situations. A highly trained cadre of officers and NCOs continuously assess and counsel the performance of each student. Officer students also participate in several peer reviews and self-assessments. The curriculum includes advanced land navigation training, rifle marksmanship, weapons familiarization, practical exercises in leadership, Nuclear, Biological and Chemical (NBC) operations, and use of night vision equipment, and culminates in squad and

platoon situational-training exercises using contemporary operating environment scenarios (including urban terrain). Students also complete several confidence courses containing obstacles that challenge students to overcome personal fears. Lieutenants depart BOLC II with greater confidence, an increased appreciation for the branches of the combined arms, and a clearer picture of their personal strengths and weakness. To date, four highly successful pilot courses have been conducted.

Phase III (Branch Specific Training): After gaining confidence in their ability to lead small units, these officers are prepared to learn the specialized skills, doctrine, tactics, and techniques associated with their specific branch. Upon graduation, officers will proceed to their first unit or attend additional assignment-specific (Airborne, Ranger, Language School, etc.) training.

The BOLC pilot program will continue in FY03. Curriculum refinement will continue, reflecting the needs of the Army and recommendations from graduates, as collected over time and analyzed by the Army Research Institute. When implemented, BOLC will provide the institutional training and education required to develop the high-quality officers needed to lead the Objective Force.

Captains' Professional Military Education (PME) is being redesigned based on the feedback from numerous survey results. Currently, Captains' career development is not meeting the needs of the professional company grade officer. Analysis of the data indicates that emphasis is needed on assignment-tailored training focusing on specific primary staff positions, realistic scenario-driven command training, minimal time away from the family, and cost efficiencies for the Army. Captains' PME end state is to develop adaptive thinkers and leaders able to

sense changes in the environment, adjust their plan, make innovative decisions and execute.

The Captains' OES structure has evolved into two primary modules. The Combined Arms Staff Course (CASC) emphasizes primary staff positions found at battalion level. Along with this is training for specific technical staff positions such as an Artillery Branch, "Fire Support Officer" or a Transportation Corps, "Movement Control Officer." CASC also trains specific technical staff positions such as an artillery branch Fire Support Officer (FSO) or a transportation corps' Movement Control Officer. The second module, the Combined Arms Battle Command Course (CABCC), will educate those officers selected to lead companies and batteries prior to their taking command of Soldiers.

CASC will train a Captain for the specific job he or she will be assigned. For example, a Captain going to his or her future battalion to become the S1 will go through the CASC module for S1s. More specifically, the CASC concept is to divide it into two phases. Phase I is a two-week block of Distributive Learning (DL) consisting of non-branch-specific common core CASC instruction focusing on staff core competencies. This is completed by the officer at his or her home station either at the work place, education center or home through either a CD ROM or Internet delivery of instruction. Once the training on the common core competencies is complete, there is not a need to retrain. A separate week of DL is given for those officers assigned to staff functional areas with a focus on coordinating special staff officer skills. As officers are reassigned from one staff position to another, they will take the staff module applicable to the new assignment. Again, it is not necessary to retake the staff common core competencies as they have already been completed. The intent is to have completely separate modules for every staff

position an officer could be assigned to and get that training prior to his or her assignment. Phase II is a two-week resident course focusing on technical staff duties and responsibilities as determined by the individual branch proponent.

CABCC is a three-phase program that includes four weeks of DL, four weeks of branch-specific resident training and two weeks of CTC resident experience. The four-week DL module has two weeks designated for TRADOC company commanders' common core tasks, which focuses on leader development and non-branch-specific company commander tasks. The last two weeks of DL is pre-resident instruction focusing on the branch-specific commander tasks as determined by the Captain's branch of service. This work can be completed by the individual officer prior to resident training, thereby making the program more cost effective and allowing more time during the resident phase for those tasks determined greater priorities to learning. After successful completion of Phase I, each Captain selected for command proceeds to Phase II and the branch-specific, four-week resident course, temporary duty (TDY) and return. The intent of this experience is to have mostly hands-on, realistic training based on the 21st century classroom concepts. Future company commanders will concentrate on those tasks that give opportunity for practical experience and hands-on methods of instruction. After successful completion, they will proceed to Phase III, a two-week TDY experience to one of the three CTC locations. There, they will engage in a right-seat ride with a CTC Observer Controller (OC) focusing on the ability to plan, execute, assess and provide feedback on battle-focused training based on FM 7-0 and FM 7-10 (25-101). Future commanders will have the opportunity to hone their skills as master trainers.

At a minimum, the reevaluation of the Captains' OES is requiring branches to update task analysis of all company commander and staff officer positions. This is leading to the validation and quality assurance of all present officer advance courses and the updating of their Terminal Learning Objectives (TLOs). The end state is a Captains' OES that prepares Captains for their next job, making them more productive and adding to a positive working environment. The method of instruction is being redesigned to give a realistic, hands-on experience to stimulate better recall during all situations, most importantly in a combat environment.

Intermediate Level Education (ILE) consists of two phases: the core curriculum course and the qualification course. The core course is a 13-week military education level MEL4 awarding course (similar to term I of Command and General Staff College (CGSC)) taught by the CGSC to officers in the four career fields. A 28-week qualification course (similar to terms II and III of CGSC) is being developed by CGSC for officers in the operations career field. Each Functional Area (FA) in the other three career fields will conduct individual qualification courses ranging from two to 178 weeks in length. The core course provides Army officers a common MEL 4 education and Joint Professional Military Education (JPME) I credit; qualification courses prepare officers for duties in their respective career field or FA. International Military Students (IMS) will continue to join their U.S. counterparts in most OES phases. In the near term, IMS will complete DL phases at branch schools.

Warrant Officer. The ATLDP, Phase III (Warrant Officers) resulted in 63 recommendations, extending across four crucial imperatives that the Executive Panel felt the Army must address. They are:

- **Army Culture.** Fully integrate Warrant Officers into the officer corps. Clarify and publish the role of the warrant officers in the total Army.
- **Training and Education.** Revise the current Warrant Officer Education System (WOES). Ensure the revised WOES provides the right training at the right time for all warrant officers.
- **Manning.** Develop and implement warrant officer recruiting, accession and retention plans and programs to meet total Army requirements.
- **Professional Development.** Link warrant officer training and skills to grade and position rather than to promotion. Develop and put into practice performance-based counseling tools to support effective development counseling.

The Army has relied upon warrant officers as its technically expert officer cohort for many years. The implementation of these recommendations will ensure the Army makes the fundamental changes in the warrant officer cohort necessary to support full-spectrum operations.

DA Civilians. The ATLDP, Phase IV (Civilians) is reviewing its conclusions and recommendations and expects to publish its final report in FY03.

NCO Education System (NCOES)

Soldier and leader competency is the center of gravity for our Army. A critical near-term task is to transform our NCOES to insure it develops the competent and adaptive leaders required in a more complex and uncertain environment. While the current NCOES is not broken, the world and the Army are changing. Therefore,

NCOES will also change. NCOs will continue to be the masters of leader tasks for their respective levels of responsibility and of individual and small unit training; they will continue to be the recognized experts in field craft, basic marksmanship, Soldier care, and technical skills. In addition to these traditional skills, the Army will develop NCOs who can master new information quickly, adapt to rapid mission changes, and take advantage of opportunities on the battlefield. Our educational system will train the right tasks at the right levels and will prepare the NCOs to operate in both the analog and digital environments. In developing a future NCOES, we will look at three critical areas:

Infrastructure. Future strategies for infrastructure will address the combining of both Active Component (AC) and Reserve Component (RC) training and officer/NCO training events. Our capabilities will also fully leverage L–V–C learning environments to provide the right training, at the right place and right time in a Soldier’s learning path. Our infrastructure will move us from place- and time-based learning strategies to a strategy that pushes training to the Soldier anyplace and anytime it is needed.

Faculty. Changes in learning strategies and the incorporation of new technologies require our NCOES faculties learn new skills. Each member of an NCO academy and proponent school cadre will master the use of technology and understand how to develop both live and virtual collaboration skills in their students.

Curriculum. The Objective Force Soldier will operate in an intent and network-centric environment requiring enhanced thinking, learning, and decision-making skills that allow them to act decisively based on the commander's intent and good situational awareness. The instructional design of NCOES

will become more experiential and problem solving-oriented. Our overall design for professional development will include the integration of shared training opportunities between officer and NCO development systems. As the Army evolves to meet full spectrum operational requirements, expectations of the NCO corps will increase and the tasks normally associated with more senior NCOs will migrate downward. We will also begin to develop NCOs who are competent battle staff NCOs at the SSG level and continue to grow and refine those skills at the SFC and MSG level.

Primary Leader Development Course (PLDC)—Educating the Sergeant. The

Sergeant is the primary first line leader for our Soldiers. PLDC is the developmental experience that transitions the Soldier to becoming an NCO. Feedback from the Army indicates the current PLDC is not sufficiently performance-oriented. A new PLDC POI addresses that concern. As we evolve the PLDC, we will field a course of instruction that:

- Is more experiential-/performance-oriented.
- Has a clearer focus on the NCO’s responsibility to lead and train.
- Emphasizes the "Be and Do" aspects of NCO leadership.
- Emphasizes troop-leading procedures and field craft.
- Provides the NCO with the capability to actively participate in the after action review (AAR) process.
- Is more challenging with numerous problem-solving situations.

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- Teaches self-development and stresses developmental counseling, goal setting, and linkage to training in course POIs.

Basic NCO Course (BNCOC)—Educating the Staff Sergeant. At the SSG level, we will continue to develop leaders who are masters of their Military Occupational Specialty (MOS) as well as expert trainers and training managers. At this level, we will continue to focus on leading and training inside the platoon formation and on providing the initial exposure to core staff skills needed inside the battalion formation. We will provide SSGs training on:

- Common and MOS-specific skills.
- How to lead and train the squad and section.
- Performance-based learning using the concept of leader labs.
- A clearer focus on leading and training within platoons and squads.
- Enhanced MOS technical and tactical skills.
- Multi-echelon, shared training events with other ranks.
- Exposure to staff skills needed in the battalion and brigade tactical operations centers (TOC).

Advanced NCO Course (ANCOC)—Educating the Sergeant First Class. At the SFC level, the focus needs to expand from MOS-specific training to the battlefield operating system. The focus becomes leading and training inside the company formation and expanding the NCO's staff skills to those needed inside the brigade formation. The officer-NCO relationship receives more

attention at this level. At this level we will train the SFC on:

- Common and MOS-specific skills.
- How to lead and train the platoon.
- Expanded battle staff skills at the battalion and brigade level.
- Leading and training inside the company and platoon formation and the relationship to the company team and battalion task force.
- A broader understanding and capability beyond the specific MOS.
- More multi-echelon, common/shared training events with other ranks.
- Skills, knowledge, and attributes (SKA) that foster conceptual thinking and reasoning.
- Focus on officer-NCO relationship inside the company/battery/troop.

Educating the Master Sergeant and First Sergeant. Today, the NCO does not receive any formal training between the ranks of SFC and MSG. In the past, two functional courses, First Sergeant Course and Battle Staff NCO Course, have attempted to fill this void. Since neither is tied to promotion and not all NCOs attend, many newly promoted MSGs must learn to succeed at their new rank the hard way. The Army is currently analyzing the potential need to develop and implement a new standard Skill Level 5 course for SFC(P). This potential course would provide all newly promoted MSGs and 1SGs a core education consisting of leading, training, and some tactical skills. Based on their MOS or assignment, these NCOs would also take one or more of three

additional tracks of Technical, First Sergeant, or Staff Skills.

Sergeant Major Course (SMC)—Educating the SGM/CSM. The capstone of NCOES continues to be the Sergeant Major Course. However, some of the same deficiencies mentioned about PLDC are also true of the current SMC. Teaching by VGT will be replaced by problem solving activities, where students learn by doing. Training for the SGM/CSM will include:

- Battle staffs inside the Brigade Combat Team.
- How the Army runs.
- Sister Services' roles and missions.
- Operations within a joint context.
- How to lead and train at the battalion level and above.
- Team building/building high-performance teams.
- Command team relationships.
- Training and education on both analog and digital operations.
- Leading complex organizations/group dynamics.
- More performance-based simulation, simulation-driven exercises to explore full-spectrum operations.

Self-Development

The Army must have Soldiers and leaders who continually seek to improve their fundamental knowledge base. Self-development initiatives

contribute to a leader's development by focusing on maximizing strengths, minimizing weaknesses, and ensuring that professional and personal goals, needs, and objectives are realized. Self-development is a continuous, career-long process. It takes place during institutional training and development and during operational assignments and should stretch and broaden the leader beyond the job or training requirements. Self-study, professional reading programs, and civilian education courses support the individual's developmental goals. Self-development supports the requirement for all leaders to be self-aware—to know their strengths and weaknesses in order to take the necessary steps to improve their skills, leadership, and attributes. Army Culture and Lifelong Learning management actions will support Soldier self-development through distributed learning, force structure, and policy adaptations.

The focus of self-development is twofold: to fill individual Soldier or leader training, experience, and education voids; and to ensure the Soldier meets personal and professional goals. The individual self-development portion of the leader development program is a joint venture between the individual and his or her chain of command.

Lifelong Learning is a coherent learning approach and requires all members of the force to be engaged in Lifelong Learning wherever they are located. First and foremost, Soldiers and leaders must accept and commit to Lifelong Learning as a key leader development strategy. This strategy must integrate training and education content and materials with operational experiences, assessments, and feedback to ensure effective learning of required skills, knowledge, and attributes. The single most critical element of Lifelong Learning is feedback. Feedback sets the basis for increasing self-awareness and identifying

individual Soldier and leader developmental needs. Lifelong Learning is necessary to fill knowledge gaps and provide greater depth and breadth of knowledge that educational and operational experiences do not provide. Lifelong Learning includes a mixture of traditional schoolhouse instruction as well as instruction presented at other locations, delivered synchronously and asynchronously on demand.

Army Distributed Learning

Distributed Learning (DL) is the delivery of training to Soldiers and units through multiple means and technology. DL allows students, leaders, and units centralized access to essential information and training. It represents a powerful capability in which the proper balance of course content and delivery technologies are provided when and where they will have the greatest impact on force readiness.

The Army Distributed Learning Program (TADLP) is a DA program that was approved for implementation in 1996. TADLP is funded in FY98-10 to field DL classrooms and convert selected Army courses to DL delivery media. The mission of TADLP is to improve training, enhance force readiness and support Army Transformation by exploiting current and emerging technologies to facilitate the development of self-aware and adaptive leaders through Lifelong Learning and the delivery of the right training and education to the right Soldier and leader at the right time and place. The TADLP Campaign Plan contains the requirements, policies, and management tasks to ensure the program's support of Army readiness.

In May 2001, the Army senior leadership established a General Officer Steering

Committee (GOSC) to provide guidance and oversight of all Army DL programs and initiatives to assure the Army's investment in DL provides the intended impact on force readiness. In the near term, the GOSC focuses on developing strategies that support Army Transformation, identifies intermediate and objective states for TADLP, and identifies and leverages complementary linkages among existing programs.

Infrastructure

TADLP is an approved Army acquisition program that is integrated with the Army National Guard (ARNG) Distributed Training Technology Project (DTTP). The DTTP is a congressionally directed assistance program with an acquisition component. TADLP and DTTP complement each other but have different missions and objectives. TADLP focuses on military readiness training for AC and RC forces. The DTTP supports and extends TADLP's military readiness training goal while also supporting multiple ARNG missions to include command and control of state Guard units, and providing shared community access to electronic technology.

Courseware

Selected courses are being redesigned to provide DL training phases/modules. These courses will allow students to participate in both synchronous and asynchronous multimedia training. Selection of courses for DL redesign is based on Army readiness requirements and high-level interest of the senior Army leadership. Under the current plan, over 525 courses will be redesigned for DL delivery by FY10.

The Classroom XXI Program (CRXXI)

Although separate from TADLP, CRXXI provides training modernization that enhances the TADLP DTF at Army resident schools. This program improves training provided through the schools and allows the broadcast of training to remote TADLP/DTTP DTFs. In addition, CRXXI establishes Army standards for courseware development and playback, instructional technology capabilities that are Soldier-centered, and design and architectural standards for classrooms. CRXXI is scheduled for completion by the end of FY09 with a total of 270 classrooms fielded.

Deployed Training

The Army has developed prototype deployable classrooms to provide mission readiness, professional development, sustainment, and lessons learned training to deployed units. There are eight deployable training facilities in Germany, Bosnia, Kosovo, Hungary, and the Sinai. Several courses such as Hazardous Material (HAZMAT), BNCOC, and Battle Staff NCO Course (BSNCO), have been presented using these deployable facilities.

Training

The fundamentals of Army training doctrine are sound but must be adapted to the changed strategic environment. The Army training system is being revitalized by updating training doctrine, improving home station training, and modernizing the CTCs. Training doctrine (*FM 7-0, Training the Force*, and *FM 7-10, Battle Focused Training*) is being adapted to account for the Contemporary Operational Environment (COE) and link to joint operational (*FM 3-0, Operations*) and leadership (*FM 6-22, Army Leadership*) doctrine.

The Army requires Soldiers and leaders who are steeped in the warfighting capabilities and doctrine required to execute combined arms operations in a full-spectrum environment. They must be knowledgeable and experienced in how to analyze the ability of their units to operate and sustain themselves on the battlefield. Warfighting modules will teach leaders standard U.S. Army techniques and procedures for tactical decision making and the tactical employment of companies, battalions and brigades in combined arms full-spectrum operations. Warfighting training will be tactically focused, hands-on, in execution-oriented and will culminate with an exercise that tests the leaders' ability to rapidly make decisions and to apply the elements of combat power within the operational framework of full-spectrum operations. The intent of the warfighting curriculum is to produce an officer, warrant officer, or senior NCO who is highly skilled in combined arms maneuver, support, and sustainment of companies, battalions and brigades.

Joint Training

Leaders are increasingly required to lead joint, multinational, and interagency operations. Our leader development and training programs are incorporating broader Army, joint, multinational, and interagency knowledge and perspectives. The end state will be Army leaders who demonstrate the values, character, competency and confidence to lead Soldiers, sailors, marines, and airmen—in any mission. In addition, Army leaders will be able to successfully participate in coalition operations throughout the world.

Four Training Domains

Institutional Training

Transformation of PME will utilize key findings from the applicable ATLDP and link to anticipated requirements in developing full-spectrum leaders. Focusing on crucial development periods in a leader's career, the new PME will build leaders through progressive and sequential education experiences. The end result will be full-spectrum Soldiers and leaders at every level who think and adapt earlier in their careers, possess technical competence, are committed to continuous learning, and are grounded in doctrine.

Home Station Training

The home station training environment will use live, virtual, and constructive simulations within the domains (institution, home station and deployed, and CTCs) to approximate the operational environment. Simulations will be required to support individual and unit training depending on the robustness and capabilities of the Objective Force operational systems. Unit commanders will be given mission TTP, TSPs, and training scenarios based on emerging real world events, coupled with real intelligence on which to train. These scenarios will provide the basis for rapidly transitioning from home station training to deployed mission. Unlike today's units, Objective Force units will use a robust training management and performance support system made available through interoperable Army Training Information Architectures (ATIA) to access assessment information to maximize training opportunities, and tailor training to meet needs.

Home station training requirements will not be totally met by embedded training means. Many

of the maneuver support systems that will probably continue to support the Objective Force are commercial off-the-shelf (COTS) in nature, and it will be costly to try to integrate them with computer-based systems to support embedded training (ET), therefore requiring appended simulation capability.

The nature of the sustainment mission suggests a uniqueness in training and leader development requirements that sets it apart from the other functional areas. In carrying out maneuver sustainment, a critical area of responsibility rests in training for focused, anticipatory logistics. In the areas of leader development and education, unit and collective training, and individual Soldier self-development, increased emphasis will be placed on preparing TSPs and simulation scenarios for distribution through embedded battle command training systems at home station and actively employed while deployed. This will ensure logistical requirements on the battlespace for the maneuver forces are correctly anticipated and positioned.

Units will be trained to execute dominant maneuver. Unit standard operating procedures (SOP) that traditionally contribute to customization must give way to TTP, standards, and processes that will apply across the force. This concept will better contribute to force tailoring and enable commanders to be more effective at campaign planning. Objective Force units must be prepared to deploy with units stationed anywhere in the world. Units will focus on a train–alert–deploy–execute model while building distributed but cohesive teams. While home station training is itself a training domain, it clearly must be linked to the institution and CTC to enhance battle command doctrine, and SKA. Home station battle command training gives battle staffs the opportunity to practice and gain competency and proficiency while reinforcing knowledge

learned in the institutional training base. Enhancing battle staff SKA is achieved through training in an environment that uses assigned C4I systems and approximates the intensity and decision making of the operational environment. The strategic training environment (STE) will bring the constructive and virtual capability needed to augment the live training environment improving the realism of home station training. Simulation systems like One Semi-Automated Forces (OneSAF) and Warfighters Simulation (WARSIM)/WARSIM Intel Model(WIM) will provide the stimulation needed to fully stress battle staff proficiency.

Using rapidly configured TTPs and TSPs, units will be able to adapt to an operational environment that includes government, nongovernmental organizations (NGO), private volunteer organizations (PVO), and Special Operations Forces (SOF). When required by assigned missions, the training of Soldiers, leaders, and battle staff will incorporate consideration of joint, interagency and multinational (JIM) and SOF planning, command and control and execution. Home station and deployed training capabilities will provide Soldiers, leaders, and battle staffs with the means to conduct JIM and SOF operations.

Training When Deployed

The Objective Force systems will allow the Soldier and unit to train before, during, and after deployment into the operational area. For the Soldier and unit, training in the deployed domain will be just like training at home station or a CTC. The deployed training environment will be seamless, training products will be readily available, and simulation will provide for robust training for each Objective Force Soldier and unit. This will allow them to both enhance their theater specific skills and sustain

operation readiness while responding to mission requirements. The New Generation Army Targetry System (NGATS) will provide a deployable live fire range capability to support the Legacy, Interim, and Objective Force worldwide.

Training at the Combat Training Centers

The CTCs remain the Army's capstone training events for battalions, brigades, divisions, and corps. Their focus remains leader development and readiness. Their cornerstone of excellence is the professional Observer/Controller (O/C). CTCs must be modernized to keep pace with Army Transformation to remain relevant to the training audience—Legacy, Interim, and Objective Forces. Training scenarios will offer full-spectrum operations in a contemporary operational environment (COE), fighting against a freethinking and adaptive opposing force (OPFOR). Training will be fully instrumented to provide accurate feedback. Instrumentation will ride on a common architecture at each CTC to facilitate sharing of lessons learned to home station, institutions, and deployed units. Target engagement systems will replicate future weapons effects to enhance realism. Each CTC will be fully digitized to allow units to train as they will fight. Increasingly, CTCs will be required to integrate JIM and SOF to train Army leaders for the complexity of today's battlefields.

Objective Force

The Objective Force will be highly trained to be strategically responsive, deployable, agile, versatile, lethal, survivable, and sustainable across the entire spectrum of military operations. Soldiers and leaders will be confident and competent, capable of rapid synthesis and assessment of information and

immediate situational understanding. Commanders will be able to clearly define their information requirements, shape the situation, effectively communicate their intent and mission-based orders, and execute with precision. Objective Force Soldiers and leaders will form the core of lethal and effective units capable of exploiting information dominance and employing warfighting systems of systems to meet the Objective Force operational requirements. They will be adaptive and self-aware—able to master transitions in the diversity of 21st century military operations.

The Objective Force requires units trained to rapidly transition from one mission to the next and conduct mission planning en route while assembling a task organization tailored into force packages for mission execution. Commanders and battle staffs must be trained to see and understand the battlespace. Organizations need to be skilled at the rapid collection and fusion of information from manned and unmanned systems that enable situational understanding and decisive operations. Commanders and battle staffs must synchronize and integrate joint fires to allow Objective Force units to mass effects at the critical space and time. Training must enhance air and ground maneuver in complex terrain, enable sustained combat operations without a loss of momentum, and permit continuous learning and assessment that is focused on performance.

Our training environment must be developed to approximate our operational environment. Our modernization effort must allow for the implementation of the Objective Force soldier model and transform initial military training. It must also implement the Objective Force leader development framework and transform professional military education. We will embed training in our operational platforms and

resource the institution to meet “reach” requirements mandated by the force. Our training environments (live–virtual–constructive) must be integrated and linked to joint training capabilities. Training at institution, home station, combat training centers, and when deployed must be interlinked to make training available on demand. At end state, our Army will link the training environments between institutions, home station, combat training centers, and when deployed. By achieving these capabilities, the Army will be able to train, alert, deploy, and employ to meet our Nation's complex national security requirements.

While there will be changes in the framework of the strategic environment, the contemporary and future operational environment, doctrine, and force structure, the most significant difference will be how we apply advanced and dynamic technology to create a full-spectrum Army and a fully integrated, relevant training environment that seamlessly merges training across the institution, unit, home station, CTCs, and deployed theaters. This use of technology will help streamline the operational planning and training management process and enhance training capabilities, ultimately ensuring competent, trained, and ready Soldiers and units for more rapid deployments across a full spectrum of operations. The difference between operations today and Objective Force operations is a requirement for greatly enhanced Doctrine, Training, and Leader Development (DTLD) capabilities, enabled by improved processes and an integrated training support system (TSS) that supports Soldiers and leaders whenever and wherever required.

Objective Force Concepts and Capabilities

Training and developing the Objective Force Soldier and leader require available doctrine

and a fully linked and integrated training and leader development capability. This capability is derived from an assessment of Objective Force warfighting concepts and capabilities. The strategic concepts derived from this analysis are:

- Sustain a doctrine and standards-based Army.
- Conduct full-spectrum training.
- Develop Objective Force Soldiers.
- Develop Objective Force leaders.

From these concepts follow seven strategic capabilities, which include:

- Develop technologically enabled, highly responsive, flexible, tailored, dynamic doctrine, TTP, and training development systems.
- Embed training tools in operational and institutional systems of systems.
- Integrate the training environments (live–virtual–constructive) and link to joint training capabilities.
- Link the training domains of institution, home station, deployed, and CTCs to make training available on demand.
- Link training environments and domains through the infosphere and the Global Information Grid.
- Implement the Objective Force Soldier model and transform initial military training.
- Implement the Objective Force leader development model and transform PME.

Army Training and Leader Development—through its centers and schools—will continue to be the foundation of Army doctrine, training, and PME. During initial military training, centers and schools will continue to train new recruits and officers, instilling the Army values and warrior ethos, and preparing them for their operational assignments. During PME, centers and schools will continue to develop leaders through NCO, warrant officer, and officer education programs. Additionally, in times of crisis and need for Army expansion, centers and schools will remain vital to the mobilization requirements of the Army. The difference will be the force's increased access and opportunity to Army centers and schools using technology and modern learning models to grow Soldiers and leaders with the requisite SKA.

The goal of Objective Force unit training is combat readiness—the development of lethal Units of Action (UA) and versatile, agile, and knowledgeable battle staffs. Field commanders will continue to employ the principles of Army training to train Unit of Employment (UE) and UA mission essential tasks. Unit training will be experiential and standards-based. The intent will be to provide leaders and Soldiers with a realistic, operationally relevant training environment that replicates the full spectrum of operations. Meeting these requirements will require an integrated enhanced Training and Leader Development Model, enabled by an integrated training support system (TSS) that will link the Soldier and leader to the centers and schools and the CTCs through a global information infostructure (GII).

Training Modernization

The Training Support System (TSS)

TSS is the full range of integrated training support products and training development and management tools enabled by architectures and infrastructures to facilitate training anywhere at any time. TSS will:

- Enable self-development, individual and collective training at the institution, home station, deployed operational theater, and CTCs.
- Enhance training by providing standards and technologies that increase effectiveness, accessibility, and interoperability.
- Support the development of training and doctrine products while minimizing duplication by horizontally and vertically integrating the course content and delivery methods.
- Provide the means for training as we fight, injecting battlefield realism through exercise control, training and scenario management; automated data collection and reduction; and application strategies and remediation tools—automated training instrumentation systems, models and simulations, and tactical engagements systems.

Live–Virtual–Constructive (L-V-C) Training

Effective **live training** carried out to a high doctrinal standard, is the cornerstone of operational success. It is essential to maximize the capability, availability, and accessibility of ranges and land to support

doctrinal training and testing requirements, mobilization, and deployments. The critical task training that individuals, crews, platoons, and companies have to accomplish to be combat ready is directly related to the availability and capability of live-fire ranges and maneuver areas. The continued improvement of live-fire ranges is critical as we move to the Interim and Objective Forces. The mission requirement of these units to be on the ground and operational in 96 hours is directly related to the live-fire training these units receive at their home station gunnery ranges; these units will go as-is when called. The Digital Multi-Purpose Range Complex (DMPRC), Battle Area Complex (BAX), and NGATS are the first tie into training the Future Combat Systems (FCS) weapon systems and maintaining the edge for legacy weapon systems such as the M1A1AD. The instrumentation of the ranges such as the DMPRC and BAX is the critical step of testing the networked systems of the FCS Unit of Action. The successful implementation of the business end of FCS is when the sharing of information in the FCS sensor array allows for the precision targeting and grouping of precision fires for target kills.

Virtual simulations are essential to the L-V-C architecture to train Legacy, Interim and Objective Forces. Virtual simulation training provides crews, leaders and units with realistic, immersive training experiences using man-in-the-loop simulators that approximate the physical layout of tactical weapon systems and platforms and is executed on computer-generated battlefields. In the virtual environment, simulators operating on virtual terrain take the place of weapon systems and can be linked to expand the scope of the training event. Virtual training systems provide commanders with "walk-level" and sustainment training, leader development, and mission-rehearsal capabilities. Through frequent and repetitive use and an immediate and total

replay AAR capability, virtual training systems assist commanders with the building and sustaining of training readiness. Virtual training also has the advantage of allowing Soldiers to perform tasks too dangerous for the live environment (such as calling for artillery fires on or near an occupied friendly position), provides the capability for rapid changes to scenarios, and facilitates retraining specific tasks until training objectives are met. Virtual simulations allow repetitive training under varying conditions to enable the individual or team to conduct live training at a higher state of readiness, potentially reducing OPTEMPO requirements. Many virtual simulations also provide a link to the Army Battle Command System (ABCS), thereby providing a realistic training environment for the digitized units and battle staffs.

Constructive simulations are essential to the L-V-C architecture to train Legacy, Interim and Objective Forces. Constructive simulation training is the use of computer models and simulations to exercise the command and staff functions of units from platoon through Joint Task Force. Constructive simulations permit multiple echelons of command and staff to execute their normal warfighting tasks in an extensive exercise without the resource constraints of large bodies of troops. Constructive simulations provide a versatile, cost-effective, low-overhead training environment that trains leaders how to visualize the battlespace and to make tactical decisions in a time-constrained, digitized environment. Through the repetitive execution of tactical scenarios followed by AARs, commanders and staff officers gain a realistic understanding of how to take advantage of the enhanced situational awareness afforded by the ABCS.

The L-V-C environments must be fully integrated and networked to support full-spectrum training. A deliberate linkage of the

three environments with the C4ISR system-of-systems architecture must be developed to support training of the Soldier on demand, anywhere or anytime. The goal is a near-seamless integration of the training environments to more realistically replicate the operational environment.

Embedded Training

The embedded training vision will give units an expanded range of training options that will enhance readiness by building constructive and virtual training capabilities into manned FCS. Unit commanders will be able to conduct mission planning and rehearsal, gunnery practice, and force-on-force maneuver exercises with live and virtual players at home station or deployed. While embedded training will not replace the need for live training, it will significantly expand the opportunities for realistic practice on limited terrain and with limited availability of the full component of Army and JIM participants.

Embedded training at the platform level will provide a full task training capability for operators/crews to include an embedded high-fidelity tactical engagement simulation capability for force-on-force and simulated gunnery training. It will have simulation/stimulation drivers and a software capability to create computer generated forces providing units the ability to conduct collective training of tactical formations and battle staffs from organic platforms. A "reach" capability to support mission planning, current operations, and training will be embedded and linked to the institution through the Army Knowledge Enterprise. The embedded system will also include a standard AAR capability and a training management system for individual, crew, and unit.

Training Aids, Devices, Simulations, and Simulators (TADSS)

System and nonsystem TADSS support the major objective of an overarching Army training strategy, that being the establishment of policy supported by adequate resources to accomplish defined training and mission rehearsal capabilities for the Legacy, Interim, and Objective Forces. Training transforms people, equipment, and doctrine into capabilities. From a modernization viewpoint, this objective is supported by the effective and efficient integration of systems and non-systems training technologies and development within the live, virtual, and constructive simulation environments across the home station, deployed, CTC, and institution domains. While today's TADSS supplement live training, tomorrow's TADSS will provide the commander with deployable and portable combined-arms collective training and mission rehearsal capabilities, to include joint operations, and enable units to train and rehearse missions in a resource-constrained environment at home station and deployed locations. The vision is to build a synthetic training environment that links L-V-C simulation environments with "fair fight" capability. "Digitizing the battlefield" to provide seamless, digital command and control (C2) capabilities for the entire fighting force is one of the Army's top priorities. To meet this requirement, multiple initiatives are underway to harness the power of the microprocessor and information technology for warfighters. The goal is to use digital technology to maintain a continuous edge in projecting and employing combat power on future battlefields. Mirroring this effort are initiatives to embed the complex, combined arms structured training of the future into the systems of the digitized force.

Nonsystem TADSS that Support the Home Station and Deployed Domains

Multiple Integrated Laser Engagement Systems (MILES) XXI provides tactical engagement simulation for direct-fire, force-on-force training using eye-safe laser "bullets." MILES training has been proven to dramatically increase the combat readiness and fighting effectiveness of military forces. Enhancements include discrete player identification for all participants, enhanced audio-visual cueing effects, event recording and display, increased programmability of weapon characteristics, and increased ability to account for side, flank, corner, and rear shots.

Corps Battle Simulation (CBS) provides a discrete event simulation that is designed specifically to train Army corps and division commanders and staffs. This simulation serves as the ground model when linked in the Joint Training Confederation with models from other Services. CBS models ground movement, ground combat, artillery, air defense, engineering, NBC, supply, medical support, maintenance, transportation, radar and electronic counter measures, electronic warfare, fixed and rotary-wing air operations, special operating forces, and airlift/airdrop. CBS is used during Battle Command Training Program (BCTP) warfighter exercisers and allows the commander to fight his organization and assess its training proficiency. CBS is considered a legacy simulation with recent development efforts focused on contemporary operational environment (COE) enhancements such as improved terrain, multi-sided combat, universal systems, civilians on the battlefield, enhanced Army Tactical C² Systems (ATCCS) linkage, small unit operations, and improved aviation and Air Defense Artillery (ADA). The simulation can be linked to ATCCS using Run Time Manager (RTM) simulation-to-ATCCS

interface boxes. Until WARSIM is fielded, the Army must sustain and enhance Corps Battle Simulation (CBS).

Combat Service Support Training Simulation System (CSSTSS) is an exercise driver used to stimulate exercise play for the collective training of AC and RC commanders and their staff in command, control and coordination of combat service support (CSS). The training audience includes the CSS commanders and staffs in echelons above corps, corps support commands, and division support commands, as well as their subordinate headquarters down to battalion level. The simulation is both stochastic and deterministic and will accommodate any theater, depending on the database. CSSTSS is the only existing Army-approved training simulation capable of providing the detailed logistics information needed to train CSS staffs. Information is provided at the NSN, DODIC, LIN, grade, MOS and SSN level of detail in Standard Army Management Information System (STAMIS) report format where appropriate. It is also able to provide emulated STAMIS data feeds to the Combat Service Support Control System (CSSCS). CSSTSS can run in a stand-alone mode, driving just logistics staffs, or can be linked to the CBS to drive combat commanders and their logistics staffs. This allows the combined arms team to cope with realistic logistics constraints. CSSTSS can be linked to CSSCS using the RTM interface when linked to CBS to provide stimulation of the logistics C4I system. In March 2001, the Chief of Staff, Army, approved CSSTSS for use in all BCTP corps warfighter exercises.

Tactical Simulation (TACSIM) is a military intelligence training simulation used worldwide to provide training in the intelligence analysis, collection management, and intelligence portion of battle command. TACSIM

accomplishes this mission by simulating and/or stimulating a wide spectrum of intelligence operations to include communications intelligence (COMINT), electronic intelligence (ELINT), imagery intelligence (IMINT), and human intelligence (HUMINT). While TACSIM can operate in a stand-alone mode, it typically works in conjunction with other simulation models, such as CBS, to support multi-echelon collective training. In addition, TACSIM fully interfaces with ancillary systems like META-VR (UAV), and the Synthetic Imagery Generation System (SIGS) to garner greater fidelity of intelligence systems. TACSIM stimulates most active Army, multiservice, and national intelligence sensors and stimulates training audience organizational equipment such as the All Source Analysis System (ASAS). TACSIM must be sustained and enhanced until WARSIM (and the WARSIM intelligence model) is fielded.

Engagement Skills Trainer (EST) 2000 provides instructors a resource to support virtual marksmanship training at all skill levels for individuals, fire teams, and squads. It offers an opportunity to conduct and evaluate tactical training in a virtual simulated environment. EST 2000 replicates both small arms and crew-served weapons, as well as multiple shooting courses, can support training of up to 15 Soldiers at the same time, and provides an immediate AAR capability. EST 2000 also provides a judgmental use of force training capability through instructor manipulated shoot-don't shoot scenarios.

Close Combat Tactical Trainer (CCTT) uses various simulators, emulators, and semi-automated forces replicating combat vehicles, weapon systems, dismounted forces, combat support (CS), CSS, C2, and opposing forces. It is networked to provide fully interactive unit task training (collective training) on computer-generated terrain. It is being fielded in mobile

configurations (platoon level) for the Army National Guard and at fixed sites (company/team level) to support armor and mechanized infantry training for the AC. CCTT supports the collective and combined arms training of armor, mechanized infantry, and cavalry units from platoon through battalion/squadron level.

Aviation Reconfigurable Manned Simulator (AVCATT-A) is a mobile, transportable, trailerized virtual simulation training system with the capability to conduct realistic, high-intensity, task-loaded, collective (walk-level) and combined-arms training exercises and mission rehearsals in a simulated battlefield environment. AVCATT-A system capabilities directly support the "train as you fight" concept and allow commanders to focus on and tailor training to specific battle-focused training requirements, the unit's mission essential task list, and combined arms wartime mission requirements. Units will train as units, not as individuals or aircrews. Commanders and staff personnel will plan and command and control, and aircrews will plan and execute. Training will be observed, recorded, evaluated, and repeated as necessary to train collective tasks to standard and to reach the desired level of proficiency at the desired level of complexity. The AVCATT-A system is a critical element of the Aviation Combined Arms Training Strategy. It supports institutional, home station, deployed and CTC training domains for AC and RC aviation units worldwide. The AVCATT-A system will interoperate with other virtual and constructive simulation systems through local area networks and wide area networks utilizing broadcast and multicast modes. It will be Distributed Interactive Simulation/High Level Architecture (HLA), Joint Technical Architecture—Army, and Synthetic Environment Core compliant, and achieve air-ground, combined arms interoperability with the CCTT. The AVCATT-A system provides six

reconfigurable manned modules, semi-automated forces, after action review, battlemaster controller, and role player capabilities for fire support, ground maneuver, battle command, close air support, engineer, and logistics functional areas. Each manned module is reconfigurable to current Army attack, reconnaissance, utility and cargo aircraft.

Close Combat Tactical Trainer (CCTT) XXI integrates Force XXI digitized command, control, communications, computers, and intelligence (C4I) systems into CCTT. Systems included are Force XXI Battle Command Brigade and Below (FBCB2) and the Army Tactical Command and Control System (ATCCS). FBCB2 is integrated into appropriate vehicles and command posts to provide situational awareness and command and control to the lowest tactical echelons. CCTT XXI facilitates a seamless flow of battle command information across the battlespace, and interoperates with external command and control and sensor systems, such as ATCCS. The end result is a vertical and horizontal integration of the digital battlespace at the brigade and below tactical unit levels. CCTT XXI integrates FBCB2/ATCCS digital capability into CCTT and provides the digitized force with both a robust virtual combined arms environment for collective training and an experimentation environment for training development. CCTT XXI provides the most robust, technically and fiscally feasible environment for training complex multiple step digitization tasks prior to execution in the live environment.

Digital Battle Staff Sustainment Trainer (DBST) allows Army Battle Command System (ABCS) to interface with training simulations in major brigade Command Post Exercises (CPX) in a staff exercise environment. DBST uses Joint Combat and Tactical Simulation (JCATS) as the maneuver driver and is

currently being used as a rehearsal tool by units preparing for National Training Center (NTC) and Joint Readiness Training Center (JRTC) rotations. DBST realistically portrays the Joint Surveillance Targeting Acquisition Radar System (JSTARS) and unmanned aerial vehicles (UAV) in the simulation. DBST provides a "wraparound" capability to allow a commander to fight his live unit at the same time he is fighting a simulated deep enemy or operating with simulated friendly units on his flanks. DBST also allows FBCB2 to be simulated by computer simulation.

Warfighters Simulation (WARSIM) is the next generation simulation for use in providing U.S. Army command and staff training. It is being developed to replace the current legacy simulation systems, CBS and TACSIM. It will use advanced modeling and simulation techniques to train Army divisions through echelons above corps commanders and battle staffs. WARSIM is a key enabling simulation for the training of the Army's commanders and staffs. This program will provide the Land Warfare functionality for the Joint Simulation System (JSIMS), a joint initiative intended to create a common, seamless training environment for the Services and joint community. As such, there is a high degree of interdependence among JSIMS, WARSIM, and the simulation programs of the other Services. As TACSIM provides an intelligence simulation for CBS, WARSIM Intel Model (WIM) is the tactical intelligence driver for WARSIM. It can replicate division and higher tactical intelligence collection sources; modeling of strategic/national intelligence collection sources will be provided by other JSIMS development activities. WIM, with augmentation from the other JSIMS developers, supports training of corps and division command posts and their associated military intelligence (MI) staffs.

One Semi-Automated Forces (OneSAF) is a composable, next generation Computer Generated Force (CGF) that will represent a full range of operations, systems, and control process (TTP) from entity to battalion level, with variable level of fidelity and support for all models and simulations domain (ACR, RDA, TEMO) applications with an emphasis on human-in-the loop and no-human-in-the-loop. It also will represent the physical environment and its effect on simulated activities and behaviors. OneSAF will be the future entity level battalion and below constructive simulation that, when linked with WARSIM and the CATT family of virtual simulators, will seamlessly integrate L-V-C simulations into realistic synthetic battlespaces. OneSAF will represent C4I, combat, CS, and CSS. Its fielding will significantly reduce exercise overhead.

Synthetic Environment Core (SE Core). The development and integration of SE Core technology support the development and fielding of the Army's virtual simulation program required by Army Transformation for the Legacy, Interim, and Objective Forces. SE Core extends and expands the capability of the common virtual environment created by the interoperability of current simulations and embedded virtual simulators developed for Interim and Objective Forces (e.g., Synthetic Training Environment/Objective Force Training Environment solution). SE Core supports Army Transformation by providing commanders the ability to simultaneously train and execute rehearsals for all battlefield operating systems, in real time, on the virtual terrain of choice, and under all operating conditions demanded of a force projection Army conducting military operations in a JIM environment.

Fixed Tactical Internet (FTI) allows digital units to conduct live training without having support from signal units every time a unit with digital equipment conducts field training.

Lower FTI provides capabilities for FBCB2 equipped units to conduct training (battalion and lower). Upper FTI will allow battalion and higher units to conduct digital training in a live environment without having to deploy dedicated signal units.

Army Targetry Systems (ATS)/New Generation Army Targetry Systems (NGATS). ATS provides non-digital, live-fire ranges that incorporate infantry and armor targets, both stationary and moving, that portray realistic opposing target threat scenarios to the Soldier under simulated battlefield conditions. NGATS is the future Army ground targetry system that will provide high-fidelity target signatures, evasive targets, shoot-back capability, and remote scoring. Using COTS technology, NGATS will provide a more reliable system at lower cost. The NGATS will be mobile, transportable, deployable, and capable of continuous support during designated training periods.

Air Defense Targets (ADA Targets) provide targets and ancillary devices for gun live-fire crew weapon qualification and training events currently resourced under STRAC. They provide required training and opportunity training to the Air Defense Soldiers for gun and STINGER missile live fire.

Instrumented Digital Multi-Purpose Range Complex provides new and modern ranges capable of training, testing and stressing today's Soldiers and their modern equipment with a realistic train-as-you-fight environment, using all available combat systems capabilities, and digitally integrating those systems to manage all forces undergoing individual and collective live fire training and qualification.

Battle Area Complex (BAX) is a training range designed to support the newly

established Stryker Brigade Combat Teams (SBCT). The BAX will provide the SBCT commander a venue to train the majority of his force in one or a combination of linked training facilities. While the layout is typically to support combined arms training scenarios, the individual and crew requirements were incorporated to allow specific weapons platform qualification.

Integrated Military Operations on Urbanized Terrain Training System (IMTS) provides a melding of three separate but similar thrust efforts into a combined umbrella program. These programs are the transition Military Operations in Urban Terrain (MOUT) sites, the Combined Arms MOUT Task Force training sites, and other MOUT facilities programs. The program will reduce acquisition and sustainment costs, leverage technologies and acquisitions, solve complex and common problems, foster Horizontal Technology Integration (HTI) through commonalities and standards, synchronize and integrate the collective efforts of the Common Training Instrumentation Architecture (CTIA) by leveraging near-term requirements, and support the objectives of the Urban Operations Training Strategy.

Common Training Instrumentation Architecture (CTIA) provides the underlying system architecture that promotes interoperability, standardization, and reuse across the three maneuver combat training centers, home stations, digital multipurpose range complexes, and military operations in urbanized terrain facilities.

One Tactical Engagement Simulation System (One TESS) will develop an advanced TES architecture consisting of standards, protocols, and embedded training capabilities that will eventually be used and fielded training

sites Army-wide. One TESS will be HLA- and CTIA-compliant.

Home Station and Instrumentation Training System (HITS) Phase II is being reevaluated for an accelerated fielding. HITS provides the capability to simultaneously support multiple training exercises for home station and deployed forces. It provides objective data collection of unit performance in force-on-force (FOF), force-on-target (FOT), live fire, and associated command post exercises. HITS supports CATS training and exercise events. HITS integrates live training with other simulation environments to provide representative training across battlefield functions and collate AAR materials from varied training support/simulation systems to provide a cohesive AAR package for associated training elements.

Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT) provides realistic battle command training through an intelligence information environment. IEWTPT will be embedded in or strapped on individual Military Intelligence (MI) tactical collection systems. It will provide training from the operator/crew level through the corps MI battle staff.

Forward Observer Exercise Trainer (FOX) provides quality training for MOS 13F skill levels 1-4, as well as a common task trainer for all Soldiers. The system will be HLA-interoperable and will operate in a stand-alone mode to train from one to thirty students in an institutional training environment. FOX will operate at the unit level to train forward observers without the use of live ammunition. It will be interoperable with other CATTs locally and via long-haul networks. It will monitor performance and provide feedback in accordance with the Army AAR process.

Nonsystem TADSS that Support the Combat Training Center (CTC) Domain

Army Battle Command System (ABCS)-Integration enables the CTC instrumentation system to collect digital data to prepare the AAR for digital units. This program is critical in providing a bridge between the Legacy and Objective instrumentation systems. It enables the CTC Legacy instrumentation systems to collect digital data for the preparation of AARs for ABCS-equipped units.

National Training Center Objective Instrumentation System (NTC-OIS) replaces aging components and provides a fully instrumented battlefield with feedback on position location and weapons engagements. It is CTIA-based and One TESS-compliant and provides digital functionality. It serves as a basis for JRTC and Combat Maneuver Training Center systems. Fielding is in FY06.

Combat Maneuver Training Center-Objective Instrumentation System (CMTC-OIS) replaces aging components. It is CTIA-based and One TESS-compliant, and provides digital functionality. Failure to fund will result in lack of a replacement system for CMTC instrumentation system, which reaches wear-out in FY08.

Joint Readiness Training Center Objective Instrumentation System (JRTC-OIS) replaces aging components. It is CTIA-based and One TESS-compliant, and provides digital functionality. This is the replacement system for JRTC instrumentation system, which reaches wear-out in FY10.

OPFOR Surrogate Tank Vehicle (OSTV)/OPFOR Surrogate Vehicle (OSV). Both are based on the M113A3 chassis with visual modifications to include an OSV turret that is driven by Bradley Fighting Vehicle

components. Excess M60 thermal sights are utilized. The OSTV replaces M551 Sheridan and M60 tanks used as surrogate tanks and the OSV replaces M551s and M113s used as surrogate BMPs. These systems will be fielded to NTC, JRTC, and CMTC.

OPFOR Combat Wheeled Vehicle. A change in the operational environment reduces the number of combat tracked vehicles but increases wheeled systems. These systems reflect changing real-world conditions and provide full-spectrum capability to the maneuver CTC OPFORs.

OPFOR Aviation provides OPFOR rotary wing aviation and Unmanned Aerial Vehicles (UAV) that replicate emerging threats. UH-1s are aging, near wear out, and scheduled to leave the inventory in FY04. There is no UAV program for OPFOR. These systems will replicate real world conditions and provide full-spectrum capability to the maneuver CTC OPFORs.

Nonsystem TADSS that Support the Institution Domain

Satellite Communication (SATCOM) Principals Transformation Trainer (SPTT) provides a Defense SATCOM training device to meet or exceed U.S. Army Signal School as well as the Objective Force Communication Training requirement. It provides training to operators and maintainers in MOS 31S on principles of satellite communications and equipment.

Integrated Training System (ITS) (CSS TADSS) is an integrated, comprehensive maintenance training system that contains specific subsystems of part-task trainers, simulation devices, physical mock-ups, static displays, curriculum, and electronic classrooms with Interactive Multimedia

Instruction (IMI) products that collectively will meet all current training requirements. ITS is also expandable/adaptable to meet future requirements. ITS provides seamless integrated maintenance training system to train MOS 63B, 63S, and 63W in the maintenance of both current and future wheeled vehicle systems. It has been designed for simplicity and reliability to provide organizational and direct support level maintenance.

Basic Electronics Maintenance Trainer (BEMT) provides basic electronics training of missile electronics repair and test, measurement and diagnostic equipment repair at Ordnance Missile and Munitions Center and School, Redstone Arsenal, and electronics maintenance repairer training at the Ordnance Electronic Maintenance Training Department at Fort Gordon.

Advanced Morse Mission Trainer (AMMT) provides training for MOS 98H, Air Force, Navy and Marine Corps Morse intercept operators. AMMT will emulate the common remote system to support multi-mode collection training.

Basic Morse Mission Trainer (BMMT) provides training for MOS 98H, Air Force, Navy and Marine Corps Morse intercept operators.

Family of Model Bridges and Terrain Boards (FMBTB) provides complete scale models with removable bridge components that will provide a visual aid to students prior to actually erecting a full size bridge at a training site. Terrain boards will replicate, to scale, Major Training Areas (MTA), such as NTC and CMTC.

Institutional Digital Education Plan (IDEP) integrates ABCS training throughout TRADOC centers and schools to support and sustain the U.S. Army's digitization strategy with appropriately trained Soldiers and leaders. The

IDEP describes the intent for transition from the current interim New Equipment Training Team/ Central Technical Support Facility-based training system into the long-term solution—the TRADOC institutional training system. It identifies a digital training model and defines the categories of ABCS training appropriate for integration into TRADOC institutions through resident and distance learning applications, and defines the anticipated end state for the training system and a transition plan to reach the objective system.

CTC MCA Projects

National Training Center (NTC) MOUT Combined Arms Collective Training Facility.

To support the contemporary operational environment, NTC requires a MOUT site of sufficient size to support combined arms brigade-level operations.

NTC "Star Wars" Building. NTC will require a new Training Analysis Facility to house their new objective instrumentation system.

Battle Command Training Program (BCTP) Seminar Facility. With the demolition of Bell Hall in FY05, BCTP loses their seminar facility located in that facility. A seminar facility is required to adequately train division and corps staffs prior to their BCTP warfighter exercise.

CMTC "Star Wars" Building. CMTC will require a new training analysis facility to house their new objective instrumentation system.

NTC Railspur. NTC requires a railspur to facilitate deploying and redeploying units to more efficiently use the NTC. Additional railhead space is required for larger numbers of deploying and redeploying vehicles necessitated by the downsizing of the PREPO fleet. Additionally, it supports NTC mobilization missions.

National Training Center Expansion. In the 20 years that NTC has been in operation, the speed and power of weaponry have increased significantly, requiring larger training areas. The House Armed Services Committee expanded the NTC by adding over 110,000 acres of open maneuver space in a manner that recognizes the Army's critical training needs as well as the needs of the environment. The Departments of Defense and Interior will look at a variety of conservation measures—such as acquisition of private and state lands; construction of barriers, fences, and other structures; and funding of research studies—to ensure compliance with the Endangered Species Act. The NTC Instrumentation System, to include Observer/Controller Communications, will require expansion to include Military Construction Army (MCA) projects.

JRTC Administrative/Operations Facilities. Based upon OPS GRP expansion to support third rotational TF, JRTC will need additional administrative and TAF facilities.

JRTC Vehicle Maintenance Facility/ Hardstand. This facility will be used to support O/Cs during rotations in the southern portion of the training area. This training area includes the intensive use area (IUA) and limited use areas (LUA). Facilities will reduce O/C travel time for maintenance of their vehicles.

JRTC AAR TRIPLEX. This facility (located on South Fort) is able to conduct three AARs simultaneously. This facility is used to support AARs for rotational units, thus cutting down on travel time to more distant main post facilities.

JRTC Forward Operating Base (FOB). Current FOB is housed in WWII billets that are scheduled for demolition. A new FOB is needed in a secure location (away from

BLUFOR). FOB is needed to provide required SOF play during rotations.

Critical OMA Project

JRTC Land Use Area. This additional area is critical to the continued success of the JRTC to accomplish its mission to train the Army's light fighting forces, including three battalion Brigade Combat Team conventional rotations and SBCT rotations, which require a 50kmX50km battlespace. Annual recurring requirements are needed to sustain use of LUA training lands and land use agreements with the U.S. Forest Service.

Conclusion

As the operational environment, character of military actions, and unit capabilities change, Army training must change to remain relevant. The Army must train Soldiers and units for situations and missions they will face tomorrow. The Army must provide leaders, Soldiers, and units tough, realistic, multi-echeloned, and fully integrated training that will produce bold, innovative leaders to deal with complex situations, flexible Soldiers with the warrior

ethos, and well-trained units. Soldiers of the 21st century will be expected to achieve these results across the full spectrum of operations. The nature of future threats demands that the Army place its highest priority on training the nation's Soldiers.

People are central to the Army—they are the keys to achieving ready forces today and a transformed Army tomorrow. Effective Soldiers and leaders—those who are self-aware, adaptive, and innovative—will solve unforeseen operational problems. Developing and maintaining this edge in the human dimension is critical to the success of Army Transformation and sustaining day-to-day operational readiness. The Army is committed to the development of its leaders at all levels. This commitment extends equally to all officers, warrant officers, NCOs, and Department of the Army Civilians of the Active Army, Army National Guard, and U.S. Army Reserves. Leaders must be appropriately developed before assuming and while occupying leadership positions to ensure they are competent in and confident of their ability to lead at the level assigned. In short, the goal is to develop competent, confident leaders who can exploit the full potential of present and future doctrine.