Training and Education

Annual Report

June 2024

INTRODUCTION

Training and Education 2030 (TE 2030) defined our vision and approach for evolving our training and education (T&E) continuum to continue preparing individual Marines and units to fight and win. Over the past year we made significant headway in tackling our key tasks and issues for further analysis, as well as building muscle on the bones of initiatives already in progress and exploring and developing new vectors along the azimuth we shot in the initial report. This annual report captures our progress, identifies further opportunities, and looks forward to actions on the objective.

As expressed in the 2023 annual update to Force Design 2030 (FD 2030), our principal challenge as a Corps is to continue to be effective as the Nation's Expeditionary Force in readiness while we simultaneously modernize the force for the future operating environment with available resources. Correspondingly, the primary challenge for our T&E enterprise is to continue to effectively train today's Marines for today's missions with today's equipment, as we develop and implement advanced T&E concepts and technologies required for success in the future fight. Training and Education Command (TECOM) as the leader of the T&E enterprise is charged to continue to meet this challenge in the coming year by effectively balancing efforts and resources across their five foundational mission areas—making, training, and educating Marines, and supporting unit and service-level training exercises—steadfastly upholding the guiding principles of maintaining rigorous, repeatable standards throughout the T&E continuum and orienting all actions on increasing the lethality of the force. Since TE 2030 was published TECOM instituted projects Triumph and Trident as primary lines of effort to accompany Project Tripoli. These three projects, discussed in this annual update, are intrinsically linked and being employed synergistically to deliver combined arms effects in modernizing the T&E continuum. They are the primary vehicles through which TECOM will deliver key capabilities to modernize our training environments and methodologies and close critical gaps in T&E to develop the force to succeed in the Command, Control, Computing, Communications, Cyber, Intelligence, Surveillance, Reconnaissance, and Targeting (C5ISRT) vs. counter-C5ISRT competition. For these projects to bear fruit, they require wide, collective effort across our Corps and close coordination and integration with the naval and Joint force.

Time is a critical factor. We do not have the luxury to wait for the final answers on warfighting capabilities and concepts to be fully fielded or formally established before we act. Rather, my intent is for T&E to "fast follow" in the wake of Force Design as experimentation continues, understanding fully that corrections in course and speed will be required and not all initiatives and investments will endure. As we think critically, plan rapidly and act decisively, we must maintain a level of risk-tolerance that enables us to adjust fire and re-attack when necessary as we continue to learn. To keep in-stride with Force Design in the coming year, TECOM will continue to increase integration of T&E both horizontally across the breadth of concept and capabilities development, Fleet Marine Force (FMF) and Marine Corps Warfighting Laboratory (MCWL) experimentation and wargaming, and vertically from the Marine Expeditionary Force (MEF) down to the small unit level and individual Marine. Correspondingly, as an institution we will continue to increase the speed and agility of solution development and delivery processes in order to support TECOM in fielding the right T&E capabilities to the FMF at pace with Force Design.

While TECOM has the lead, T&E is a whole-of-Marine Corps effort that requires the continued dedicated efforts, commitment, and innovative thinking of warfighting professionals across our Corps as we continue to design and develop the force to fight and win in the future. We are on-pace, but there is much to be DONE.

STRATEGIC CONTEXT

The TE 2030 core document and this T&E annual report affirm that "a warfighting capability is only as effective as the Marines employing it." The actualization of naval concepts such as Distributed Maritime Operations (DMO), Littoral Operations in a Contested Environment (LOCE), Expeditionary Advanced Base Operations (EABO), Stand-In Forces, Reconnaissance, and Counter-Reconnaissance will require Marines to integrate sensors, fires, and effects as part of a naval, joint, and combined force. Beginning with the 2018 National Defense Strategy, a robust body of knowledge collected through a myriad of service and joint exercises, working groups, studies, wargames, and experimentation efforts have identified gaps in our ability to implement these concepts. To address these gaps, we must develop experienced warfighters who are experts in multi-domain and all-domain combined arms.

To generate greater lethality in our combat formations, we need to mature Marines' technical proficiency and leadership skills faster, and present them with increased opportunities to think, decide, and act earlier in their careers. Our T&E continuum will need to provide Marines and units more opportunities for training sets and repetitions in realistic and challenging environments to gain, maintain, and enhance proficiency and confidence in employing combined arms and new equipment and weapon systems on the current and future battlefields, and in overall decision-making.

OPERATIONAL APPROACH

TECOM will drive change along two primary vectors: Force Design and modernization. Force Design is directing rapid development of transformative warfighting concepts, capabilities and formations that require revolutionary changes within our T&E continuum. Our traditional concepts for conducting unit and service-level training exercises must be reimagined, and the training ranges and tools supporting them must be updated and reconfigured to enable an advanced training ecosystem to support realistic, threat-informed force-on-force training at all echelons and in all domains.

Additionally, the individual and collective skills and standards that our Marines must gain and achieve must be updated through tighter review and decision cycles to provide the FMF the Marines they need to employ new concepts and capabilities resulting from Force Design.

Modernization is continuous and evolutionary; however, we must accelerate it significantly across the T&E continuum to keep closer pace with emerging technologies and methodologies if we are going to continue to maintain our competitive edge relative to our adversaries. TECOM will lead revolutionary change and accelerate modernization through an informed, balanced, and synchronized approach to increase the lethality of the force, while continuing to be the bearer of rigorous, repeatable standards of excellence throughout the T&E enterprise. The three major T&E projects, Triumph, Trident and Tripoli will serve as the primary vehicles through which TECOM will implement and synchronize change across the force.

PROJECT TRIUMPH

Project Triumph focuses on creating an active, student-centered experience for individual Marines throughout the T&E continuum. Our total learning architecture brings learning to the student's point of need, making learning more challenging and accessible, and enabling us to effectively assess the rate of their learning. Our objective is to produce mature, cognitively agile Marines who are problem solvers, decision makers, and maneuverists.

Codifying Outcomes Based Learning

TECOM took a scientific approach to implementing *Marine Corps Doctrinal Publication 7*, *Learning*, which calls for deliberate, outcomes-based design in our T&E programs. Over the course of a three-year experimentation period involving the Infantry Marine Course (IMC), Basic Combat Engineer, and numerous other formal school programs of instruction (POIs), we have proven the efficacy of outcomes-based learning (OBL) tenets in entry level training (ELT) and other formal school settings. OBL orients learners on "how" to think through and overcome challenges vice merely "what" to think in terms of rote procedures and processes. It requires Marines to be more engaged and adaptive to grow as problem-solvers who can confidently process information, comprehend key variables within specific contexts, and rapidly make informed decisions. To that end, we are making Marines more accountable for their learning by providing asynchronous learning opportunities and expecting them to prepare individually and in teams for training events. At IMC, highly qualified squad leader instructors facilitate competency-based experiential fieldwork with Marines working in teams as

they gain proficiency in core competencies and leadership skills. This instills cohesion within their cohorts that we continue to build upon by shipping them together after graduation to their initial FMF units where they continue to grow together through more advanced individual and collective training. Feedback from FMF commanders and unit leaders attest to the success of these methodologies.

To the maximum extent possible, we are implementing these concepts throughout our formal schools, adopting scenario-based instruction techniques to prompt Marines to solve increasingly difficult problems in context, giving them space to fail, self-assess, remediate, and learn throughout the process. Where subject matter dictates or resources constrain, some instruction must still be provided in a traditional lecture format to larger groups. However, we are working toward inculcating a bias toward OBL tenets across our formal learning centers and continue to monitor progress and results. Leading into this year's legislative cycle, TECOM released an information paper on OBL lessons learned to Communications Directorate and the Office of Legislative Affairs for use in our Service-level communications and messaging.

We are moving rapidly to codify proven OBL tenets through service-level guidance. The recent revision of Formal School Management (Marine Corps Order (MCO) 1553.2D) and the Systems Approach to Training and Education (Navy Marine Corps (NAVMC) 1553.1) policies are guiding curriculum developers, instructors, and faculty to develop POIs that reflect more student-centric approaches to instruction and assessment. TECOM will present a report on the visible effects of these changes across the enterprise and our lessons learned at the next Executive Off-Site (EOS). NLT end of second quarter FY24, TECOM will have updated all formal school policy directives and evaluations based on these new objectives and procedures.

Instructors as Learning Leaders

Recognizing that highly capable instructors are the "center of gravity" for instituting OBL across the T&E enterprise, TECOM is instituting a top-tier instructor development program. Capitalizing on the successes of their Innovative Instructor Workshop, Training Command (TRNGCMD) established the new Center for Learning and Faculty Development (CLFD) to expand the instructional acumen of all instructors and staff. Moving away from our traditional formal school instructor development model that valued "sage on the stage," they are instead developing coaching and mentoring skills for instructors to serve as a "guide on the side." The CLFD replaces Train the Trainer School and offers new courses emphasizing design and facilitation of learning experiences as well as how to command at formal schools in ways that enable these practices.

CLFD will be offering a POI teaching instructors and faculty techniques on how to assess learning and leverage synchronous and asynchronous learning technologies to increase learning opportunities. By teaching instructors and faculty ways to work smarter with online tools, more of their time can be allocated to student contact. CLFD will produce instructors who are adept at employing proven, advanced learning theories through enabling technologies, where appropriate, to enhance Marine development across the learning continuum. Through these initial steps, we are building the momentum we need to make more improvements and realize exponential effects.

Through an eight-month assessment of instructor and staff development programs across our formal learning centers, sister services, relevant professional associations, and academic institutions, we are learning about the special skills and talents embodied by effective instructors and making substantive improvements within our current footprint starting with structure and curriculum. TECOM instituted a new developmental career ladder for civilian CLFD instructors, a pilot to test new command teams at our formal learning centers, and initial course changes that include a Facilitating Learning Experiences Course for instructors and a Designing Learning Experiences Course for curriculum developers. TECOM is also developing a new, progressive roadmap for instructors consisting of Entry, Journey, and Master levels. As this experimentation matures and begins to yield results, TECOM will present the full roadmap with burdened cost estimates to Deputy Commandant, Programming and Resources (DC, P&R). Additionally, Marine Corps University (MCU) will conduct a comprehensive assessment of its faculty and provide recommendations for changes in resourcing, policies, and structure.

Over the past year TECOM made significant progress in establishing an exception military occupational specialty (EMOS) program with associated MOS roadmaps for entry-level instructors. In April, they codified the EMOS

creation and modification process in NAVMC 3500.132, MOS Manual Program Guidance. The MOS Manual is complete, with complementary Training and Readiness (T&R) Manuals pending final approval. TECOM, working with the occupational field sponsors, is in the process of completing the Instructor Roadmaps.

By understanding the characteristics, traits, skills, experiences, and interests that lead to some individuals being predisposed to (and highly effective at) teaching, the Marine Corps can make better choices in selecting talented individuals across the force to serve as instructors. We must work deliberately to retain this talent. TECOM and Manpower and Reserve Affairs (M&RA) are assessing the retention rate of instructors and analyzing incentive options that are and can be offered. These efforts will directly benefit the T&E enterprise and yield returns on the Marine Corps' talent management investments.

NLT the end of FY24, TECOM will provide improved basic instructor courses at CLFD and, NLT FY26, will incorporate intermediate and master courses to support instructor roadmaps in order to accelerate the development of Marine Corps instructors and implementation of OBL.

Technology Framework to Enable On-Demand Learning

We are building a unified, data-driven Information Technology (IT) architecture that will serve as the digital foundation for delivering the right training to each Marine based on their needs. In addition to delivering student-centric learning content, it will increase the speed and automation of instructor and course feedback and protect sensitive data.

By integrating TECOM IT infrastructure into the Marine Corps Enterprise Network (MCEN), we are providing all Marines with continuous access to T&E and collaboration tools whether they are in our schools or out in the FMF. TECOM IT infrastructure must leverage the enterprise to support training at all classifications with appropriate access for Marines, joint, allied, coalition, and interagency partners. We must train how we fight and our IT infrastructure for training must facilitate the same collaboration and interoperability expected when conducting combined joint all-domain command and control.

More students, instructors, and faculty have greater access to curriculum and other learning content due to the expansion of our eLearning Ecosystem (eLE). This online learning environment supports independent study, ancillary training, formal school curriculum, and professional military education (PME) by providing video, audio, and virtual classroom environments. Its many uses include creating and distributing digital content, storing and sharing files, and collaborating in social communities. These advances are helping to mature skills at a faster rate and giving Marines more ownership of their learning and careers.

Within the eLE, we have made significant changes to MarineNet to improve the fleet's ease of use in developing and delivering content. This includes video services, a new Virtual Learning Environment, and a Learning Record Store. We've also expanded the system's analytic capability and our instructor-led courses in Moodle. Over the next year, Education Command (EDCOM) will develop additional PME assessment tools, enabling authentication without a Common Access Card, and integrating wargames.

We are modernizing our T&E data management systems enabling improved, inter-organizational processes and data sharing. Near the end of FY23, Commanding General (CG), TECOM approved moving forward with Marine Corps Training Information Management System (MCTIMS) II. By January 2024, we will transition legacy MCTIMS to an approved Hybrid Cloud Services (HCS) cloud environment and by FY28 TECOM will field a fully operational, cloud-based MCTIMS II capability. Both MarineNet and Marine Sierra Hotel Aviation Readiness Program (M-SHARP) are already hosted in approved cloud environments as of June 2023.

NLT June 2024, M-SHARP will release a system-hosted flight schedule that can be tailored to the unit level and a simulator schedule with real-time availability and scheduling capability. Implementing these tools will increase training efficiency within our squadrons, increasing readiness and improving our collective ability to isolate, diagnose and resolve negative trends.

None of this is possible without network connectivity and device support. TECOM will continue to invest in and expand wired and wireless infrastructure and student devices so that Marines can access digital courseware at all our formal learning centers and throughout their careers.

Expansion of Wargaming Across the Learning Continuum

Marines gain a greater appreciation for tactics when they are given the opportunity to employ them and experience the consequences of their decisions in realistic scenarios. TECOM is working to integrate wargaming throughout the T&E continuum to strengthen decision making abilities earlier in a Marine's career and continually reinforce them across T&E settings, formal and informal, in continuing education. TECOM is developing tools and opportunities for Marines across the force to engage in online or in-person wargaming. Marines in FMF units will be able to access these capabilities to support tactical growth, leadership development, experimentation in a controlled environment, and the ability to think critically in complex, chaotic environments.

MCU hosted its first online tournament in the new Wargaming Cloud, attracting students and faculty from across MCU, joint PME schools, and allied PME schools to include Australia, Canada, and the United Kingdom. "Objective One," an MCU-led wargaming mini-conference, was a highlight at the Modern Day Marine Exposition. Building on the foundation of the 2020 plan, the new MCU Wargaming Master Plan published in September will expand access to the new Wargaming Cloud and add to the library of games (digital and table-top formats). This highlights the need for increased wargaming expertise and use of wargaming to explore emerging technology and military education topics from Joint Warfighting to AI. TECOM will expand wargaming across formal schools and PME NLT FY25 and deliver capability to the FMF NLT FY26 for learning and experimentation throughout a Marine's career.

PROJECT TRIDENT

Project Trident focuses on creating combat-ready Marines and formations at all echelons, capable of utilizing assets and capabilities across all domains, to effectively build and close kill webs in a contested maritime environment. This requires the T&E enterprise to develop Marines who are adept at performing the integrated functions of finding, fixing, tracking, targeting, engaging, and assessing (F2T2EA) in various operating scenarios involving a myriad of service, naval and joint sensors and shooters as well as multiple command and control (C2) nodes. Integrated with the Service's Campaign of Learning, Trident is advancing change within the T&E continuum in-stride with Force Design to train individuals, fires and effects coordination teams, and Combat Operations Centers (COCs) on updated kill web enabling processes, systems, and networks.

Individual Training

TECOM is working through its formal learning centers, with Navy commands and across Headquarters, Marine Corps (HQMC) to close gaps in individual training for kill webs. In April, Marine Detachment Fort Sill launched a pilot of the Advanced Fires and Effects Course to train MOS 0802 (Field Artillery Officers), 0803 (Target Acquisition Officers), and 0871 (Field Artillery Scout Observer Chiefs) Marines serving within a Division Fires and Effects Coordination Center (FECC) or Fleet Maritime Operations Center (MOC). TECOM provided a second iteration of this course in first quarter FY24 to refine the proof of concept.

To improve the organic capability of commanders at all levels to exercise C2 in a distributed environment, TECOM's Communication Training Battalion is assessing how to combine critical skillsets from the 062X, 063X, and 067X MOSs to serve as multi-disciplinary, independent communications and information operators. This will expand the versatility of individual operators and increase commanders' agility in executing C2 at the forward edge.

Our exercises, experimentation, and wargaming have revealed substantial capability and capacity gaps in establishing and operating the tactical data link networks that are critical to closing kill webs. To address these gaps, we must increase the number of Marines in the FMF with the requisite expertise in these low-density skill sets. DC, Aviation signed a decision memo in June to create a restricted interface control officer MOS and corresponding training continuum. TECOM is developing the requisite MOS training and experience track in coordination with DC, Aviation and M&RA. Expect implementation in FY25.

TECOM is leveraging the Expeditionary Warfare Training Groups' (EWTGs') unique resources, placement, and command relationships with the Navy to develop and refine curricula that build Marines' skills in naval integration and maritime fires. A recent example is an inaugural Naval Expeditionary Operations Planners Course developed by EWTG Atlantic (EWTGLANT) aimed at increasing proficiency of O5-O9 level staffs by training members to understand, analyze, and plan naval operations with emphasis on emerging operating

concepts including DMO, LOCE and EABO. Additionally, EWTG Pacific (EWTGPAC) provided an academics package to 5th Marines in October to enhance their integration within the Fleet Synthetic Training-Joint (FST-J) exercise employed by Tactical Training Group Pacific as a key component of Strike Group certification. EWTGPAC and TECOM are analyzing the effectiveness of the academic package, informed by the results of the FST-J, to determine its potential as a stand-alone advanced individual training course.

In a concerted and coordinated effort, the EWTGs together with TECOM are reviewing and updating existing fires and effects training courseware to increase their relevancy to current operating environments. Recent efforts include curriculum review of the Fires and Effects Coordination Center (FSCC) Course taught by both EWTGs for update and standardization, and analysis of inactive and legacy courses including EWTGPAC's Marine Air-Ground Task Force (MAGTF) Fires Course and Naval Gunfire Liaison Officer (NGLO) Course to determine if and how they should be modified to align to critical gaps in the training continuum.

Collective Training

Recent exercises, including Project Convergence 22, Steel Knight 23, the Marine Littoral Regiment (MLR) Training Exercise, and Northern Edge 23-1 successfully validated our kill chain and kill web enabling concepts and capabilities; however, they also reinforced the need to expand our advanced collective skills training for teams and staffs to build and close naval and joint kill webs. TECOM is driving the EWTGs to update or develop collective skills POIs aimed at O-6 level staffs—Marine Expeditionary Unit (MEU), MLR, and regiment—and explore additional options for closing current gaps at other echelons, potentially including FECC and MOC staffs.

Additionally, during the last several years of service, joint, and naval exercises, TECOM's MAGTF Staff Training Program (MSTP) identified Echelon III (MEF) and Echelon IV (MSC/Task Group) COCs as critical capabilities in conducting all-domain combined arms through C5ISRT. They also identified a lack of standardized training and certification for COCs as a gap in the T&E continuum. By fourth quarter FY25, TECOM will establish a MEF Operations Center Training Team (MOC-TT) within MSTP to train and certify Echelon III and IV COCs in the planning and C2 of MEF-level, multi-domain operations in a complex, joint environment. This will include programming a supporting resourcing strategy within Program Objective Memorandum (POM) 26.

Synchronization – Internally and Externally Across Service, Naval, and Joint Force Organizations

TECOM has intensified its integration across the service, naval, and joint force to ensure T&E continues to be a "fast follow" to ongoing Force Design initiatives related to kill webs and all domain combined arms.

TECOM actively coordinates with the Joint Staff and informs the Naval Board, via the Maritime Working Group (MWG), to close identified T&E gaps. Based on the MWG's recommendation, the Naval Board established the Maritime Fires Executive Agent (EA) for the Navy and Marine Corps and, in June, designated Commander U.S. Pacific Fleet to serve in this capacity. The EA is responsible for synchronizing related staffing, training, and equipping requirements for maritime fires across the naval services.

Project Trident is closely linked to MAGTF C2 experimentation, wargaming and capabilities development described and directed in the 2023 FD 2030 Annual Update. TECOM is collaborating with MCWL on the development of their live, virtual, constructive experimentation environment (LVC-EE) and virtual stand-in force (VSiF). Within the LVC-EE, VSiF virtualizes standard C2 systems and connects constructive simulations and wargame tools to allow commanders and staffs to conduct experimentation and test new tactics, techniques, and procedures (TTPs). It provides the capability to conduct threat informed concept driven battle drills using a growing repository of operational scenarios and vignettes. This results in the ability to perform iterations of kill web actions at a faster rate and without the typical limiting factors experienced during training exercises, to include equipment setup and teardown, establishing the communications networks, ship and aircraft availability, and extensive exercise control requirements.

Within an experimentation environment, LVC-EE and VSiF are informing the advancement of Combat Development and Integration's (CD&I's) singular, all-domain MAGTF C2 capability. Recent Naval Integrated Live Virtual Constructive (LVC) Environment (NILE) exercises have also shown VSiF's potential as an effective training resource to provide Marines with sets and repetitions vital to building and sustaining proficiency in closing kill webs. To provide

this advanced capability to the FMF, MCWL plans to begin fielding VSIF suites and to MEF Battle Simulation Centers during FY24. TECOM will continue its collaboration with MCWL, Naval Information Warfare Center (NIWC)-Atlantic, Marine Corps Tactical Systems Support Activity, and the FMF to exploit the capabilities provided by LVC-EE and VSiF, while ensuring unity of effort with Project Tripoli to rapidly deliver viable and effective LVC training capabilities to the force. To drive integration of these complementary efforts, TECOM will serve as the EA for development of the LVC Training Environment (LVC-TE) for the Marine Corps to maximize effective use of resources and accelerate fielding timelines.

TECOM hosted the second annual Combined Arms Training and Education (CATE) Conference in August. Participants from across the FMF and HQMC collaborated on ways to increase integration and achieve Project Trident's near and long-term objectives. The conference yielded numerous potential initiatives spanning the T&E continuum, to include updated targeting doctrine, MOS and cross-MOS roadmaps for kill webs, and refinements to T&R manuals, as well as improvements to Service Level Training Exercises (SLTEs) that are being assessed for suitability, acceptability, and feasibility. The conference also resulted in the Marine Corps Center for Lessons Learned implementing a Combined Collections Focus Area to their campaign which will help refine Project Trident's approach and inform continued planning.

Professional Military Education

Future actions to inform Project Trident include academic research. TECOM has invited our 2023-24 resident professional military education students to leverage their knowledge, experiences, and perspectives on how Marine Corps T&E can be modernized to better enable kill webs. Future efforts will include leveraging the eLearning Ecosystem and Continuing Education Program to increase exposure to maritime warfighting concepts such as Composite Warfare Commander, maritime battlespace design, and DMO.

PROJECT TRIPOLI

As capabilities and formations exceed the physical limits of our ranges and training areas, we must have a comprehensive training environment for units at every echelon to increase repetitions of Mission Essential Tasks (METs) and conduct operational mission rehearsal.

Project Tripoli is the combined arms training range of the future, providing a scalable, all-domain environment that replicates similar conditions, threats, and capabilities that Marines encounter today and will encounter on future battlefields. The LVC-TE will fully integrate data from ranges, devices, simulators, and constructive forces to enable real-time interaction between geographically dispersed Marine Corps, Joint, and partner nation units. LVC-TE will be a game-changer as it helps us to mitigate safety risks, maximize our training dollars, and minimize exposure of critical warfighting capabilities to our adversaries.

In 2022, TECOM accelerated its LVC-TE development and fielding strategy to match the pace of FD2030 objectives and timelines. We are divesting our legacy training systems and simulations and moving forward to adopt government and commercial off-the-shelf (GOTS/COTS) solutions. The Joint Live Virtual Constructive Environment will now serve as the architecture and the Navy Continuous Training Environment will be the support network that connects geographically dispersed training sites. No later than fourth quarter FY24, we will deploy an initial LVC-TE capability to five sites: 29 Palms, Camp Pendleton, Camp Lejeune, and Marine Corps Bases Hawaii and Okinawa. This capability will be improved and extended to additional sites as the technology and resources become available.

We are divesting our legacy Instrumented-Tactical Engagement Simulation System (ITESS). The Marine Corps Tactical Instrumentation System (MCTIS) will constitute the "Live" aspect of LVC training, and its fielding will be a determining factor in LVC-TE's continuing success. This next generation instrumentation system transforms a benign training area into a representative force-on-force combat zone. MCTIS has three components: Personnel (MCTIS-P), Vehicle (MCTIS-V), and Weapon Surrogates (MCTIS-WS). It provides the ideal environment for challenging leaders' cognitive skills, enhancing our combat decision-making, reinforcing the consequences of those decisions, and generally accelerating learning. By third quarter FY24, each MEF and MAGTF Training Command (MAGTF-TC) will receive one LVC-TE integrated battalion MCTIS-P. Additional battalion sets will follow, achieving full operational capability by the end of FY26. TECOM has already begun prototyping MCTIS-V in March and will prototype MCTIS-WS in FY24.

As TECOM analyzes the range, training area, and airspace requirements for performing distributed operations, they are identifying other Department of Defense (DoD) and non-DOD ranges and training areas for possible use. In early 2023, TECOM conducted site visits to I, II, and III Marine Expeditionary Force (MEF) to collect requirements and identify impediments and deficiencies. While we typically compose Range Complex Management Plans (RCMPs) at the regional level, TECOM will publish their findings and recommendations in an inaugural Service-level RCMP which will be finalized no later than March 2024.

TECOM is on track to field modular and scalable electromagnetic spectrum operation (EMSO) systems that simulate war-like conditions. We are already employing joint and contracted solutions at the Marine Corps Air Ground Combat Center (MCAGCC) for SLTE, including SPACE JAM, Mouse Pants, EC-130 Compass Call, and Joint Threat Emitter. These capabilities replicate adversary electronic warfare capabilities such as global positioning satellite spoofing, jamming tactical radios, and direction finding. By simulating these types of degraded, disrupted, and denied conditions we will encounter in current and future operating environments, we can place Marines and units in dilemmas where they must think, decide, and act under realistic conditions. Also, by providing training units with a real-time, visual depiction of their electromagnetic spectrum footprint, they can repeat the TTPs necessary to build proficiency in emissions monitoring and counter current pacing threat capabilities.

Simulation provides a repeatable, relatively low-cost, risk-reduced option for units to build proficiency in warfighting skills. In some cases, simulation provides training that cannot be safely replicated in a live environment, such as water egress from aircraft. In other cases, simulation saves highly limited resources, such as Close Air Support (CAS) sorties to train Joint Terminal Attack Controllers (JTACs). TECOM has identified need for simulators covering newly fielded systems such as Navy/Marine Corps Expeditionary Ship Interdiction System (NMESIS), Long-Range Missile (LMSL) firing capability, and the Organic Precision Fires-Mounted (OPF-M) munition system as well as an Amphibious Combat Vehicle driver simulator. By FY25 TECOM will assess legacy and new platform programs of record to identify those that have inadequate or ineffective simulators and provide recommendations to the EOS.

While simulation is an integral part of the aviation training continuum, we are not integrating simulation into our training on ground combat systems to the extent that we should. But we cannot fully leverage simulation as a supplement, or in cases of particularly high-risk training an alternative, to live training until it is codified as a requirement or acceptable option in our T&R Manuals. While we may never be as prescriptive with ground systems as we are for aviation, we will direct certain training events to be performed in simulation before attempting them in a live environment. Beginning in FY24, TECOM will identify ground T&R events that have a high rate of injury, mishap, or casualty and direct simulation pre-requisites before conducting live training on these tasks or in particular cases simulation in lieu of live training. TECOM will continue to expand inclusion of simulation beginning with the Motor Transport T&R Manual which will be completed by end of FY24.

Beginning in FY24, TECOM will conduct functional level Independent Verification and Validation (IV&V) testing of all new simulators to determine which T&R events can be conducted with a simulator and the degree to which a Marine can fulfill those T&R events to standard. Program Manager Training Systems (PM TRASYS) under Marine Corps Systems Command will continue to conduct IV&V testing on new simulators at the technical level. Both IV&V tests will be conducted before the warfighting capability under development (or simulator) will be procured by the Marine Corps.

UNIT AND SERVICE-LEVEL TRAINING

We continue to integrate our all-domain capabilities and expand the scope and training audience of our SLTEs across multiple echelons. Beginning with SLTE 2-24 and 5-24, we will increase information operations by offering a credible training venue for the MEF Information Group and subordinate elements. TECOM is collaborating with all stakeholders to develop options for enhancing training opportunities for all MAGTF elements (particularly logistics) and increasing the scale of our SLTEs to incorporate naval and joint integration and higher echelons of command. Our primary challenge is stabilizing an exercise force slate for a composite task force built around a Regimental Combat Team (reinforced). Although the Force Synchronization Conference is effective at slating units to participate in SLTE, units continue to cancel later in the exercise life cycle due to competing FMF events and interests. To

achieve common goals, TECOM is collaborating with I MEF and 1st Marine Division (MARDIV) to combine exercises STEEL KNIGHT, DAWN BLITZ, and SLTE 2-25 into a single event that will potentially train a Naval Task Force/Task Group and incorporate Projects Tripoli and Trident goals in this first of its kind exercise.

MAGTF-TC is formalizing its Fleet Support Program (FSP) in coordination with fleet support teams across Marine Corps Logistics Operations Group (MCLOG) and Marine Corps Tactics and Operations Group (MCTOG). This program supports the unit's work-up training in advance of their participation in SLTEs by deploying mobile training teams (MTTs) directly to MEF locations. MAGTF-TC will continue to expand its capabilities to deploy MTTs to push more SLTE-like training forward to the FMF. By end of FY24, MAGTF-TC will present a scalable concept for FSP (supported by lessons learned) with fully burdened cost estimates to the EOS.

In addition to maturing its FSP, MAGTF-TC is ensuring the advanced individual training provided across our centers of excellence—MCTOG, MCLOG, Marine Aviation Weapons and Tactics Squadron (MAWTS-1), Mountain Warfare Training Center (MWTC), and the EWTGs—fully align with FD 2030 and the TE core document and annual updates and are employing MTTs to export it to FMF locations around the globe. The intent is not only to provide expanded support to FMF training and experimentation, but to draw lessons learned that will feed continuous improvement and evolution of our SLTEs.

As we field new warfighting and training systems and adopt modernized training concepts, we must ensure Marines understand how to incorporate these into their training. MARADMIN 144/23 announced the new 7-20A series of publications that provides leaders at all ranks and echelons easy-to-use guidance on designing, planning, executing, and documenting unit training. This series replaces two Marine Corps Training Publications (MCTPs): 8-10A (UTM Guide) and 8-10B (How to Conduct Training). It is incumbent on receiving units to provide feedback to formal schools so that our schools can continually evolve and keep pace with the FMF. MCO 1553.3C UTM Program will direct units to use MCTIMS for recording all individual and collective training and require units to respond to formal school post-course surveys.

TRAINING AREAS AND INFRASTRUCTURE

We are reviewing the airspace at all our installations in support of expanded training requirements driven by FD 2030. In coordination with Marine Corps Installations East, West, and Pacific, TECOM documented our current Marine Corps special use airspace initiatives, which the Airspace Operational Review Board (ORB) reviewed in May. TECOM, with support from DC, Aviation and DC, Installations and Logistics (I&L), will update the Airspace ORB Memorandum of Understanding and provide a report of the airspace initiatives supporting FD 2030.

TECOM revised Marine Corps Bulletin 1501, Underwater Egress Training, in FY22 and will release the newly revised Marine Corps Water Survival Training policy (MCO 1500.52E) no later than March 2024 aimed at improving Marines' survivability in aquatic environments. A MARADMIN with coordinating actions will follow publication of the MCO. In support of these policies, TECOM partnered with I&L to develop a list of water training facilities requiring construction or modification to meet the new requirements. In June, the Military Construction Capital Investments Working Group prioritized 134 total Service projects, ranking the Camp Lejeune SOI pool at #6, followed by the Marine Corps Base Quantico pool at #67 (pre-decisional). We must continue to assess and prioritize the maintenance of Marine Corps training tanks, to provide the capacity necessary to execute these policies.

TECOM PROCESS ADVANCEMENT

T&E must be fully integrated with capabilities development, manpower management, and resourcing decisions across the Doctrine, Organization, Training, Materiel, Leadership, Policy, Facilities – Cost (DOTMLPF-C) spectrum. Since its elevation to a three-star command, TECOM has re-assessed its involvement in T&E development across the naval and joint force and significantly improved internal processes to increase integration throughout the Marine Corps enterprise. After being elevated to a three-star command, CG, TECOM took on the responsibilities of functioning as a DC within HQMC in addition to his role as a CG with five subordinate general-officer led commands. This DC role must be codified to enable future leaders of the T&E enterprise to continue to expand integration of T&E "up-and-out" across the service and the naval and joint

enterprises. At the same time, TECOM looks "down-and-in" by analyzing data and stakeholder input to rigorously evaluate their programs and ensure timely delivery of relevant, standards-based T&E. Given the scope of TECOM's "up-and-out" role and the span of control required for the "down-and-in" responsibilities, TECOM requires a Deputy CG to most effectively balance efforts and drive action to fulfill the vision of T&E. As TECOM continues to evolve, it will likewise continue to gauge the effects of modernization investments to ensure T&E capabilities are more accessible, repeatable, and challenging to all Marines and units.

Capability Development, Delivery, and Maintenance

We revised MCO 1553.1, The Marine Corps Training and Education System, to codify TECOM's expanded role and responsibilities as well as implement processes to better integrate T&E with the Corps' other Title 10 "organize" and "equip" functions. This change complements the Training and Education Resource Management System (TERMS) addressing requirements management within existing enterprise capabilities-based, human capital, and resourcing processes.

Representing the Doctrinal and T&E pillars in DOTMLPF-C Working Group, TECOM analyzes and vets initiatives across the enterprise, identifies actions and resources to implement them, and helps organizations petition for and position resources accordingly. In this capacity, TECOM instituted the TERMS process to serve as a single point of entry for analyzing and prioritizing specific T&E requirements that require resources. Formal schools are now required to submit estimates of supportability through the TERMS process to communicate resource shortfalls or capability limitations. With input from the Universal Needs Program, TERMS channels and tracks requests through TECOM's internal processes to ensure deliberate, holistic, and sustainable resolution to T&E gaps. It also facilitates resolution for needs requiring broader, institutional resources or containing structural implications by ensuring CG, TECOM's endorsement of requests before transitioning, if necessary, to force structure or capabilities development processes.

TECOM is a signatory stakeholder in the Requirements Transition process within the Marine Corps Force Development System and a standing member of the Manpower, Personnel, Training Integrated Product Team that monitors and supports initiatives as they mature and become fielded. TECOM also serves as the requirement and resource sponsor for range and non-standard training systems. This past year, we codified TECOM's Capabilities Development roles and responsibilities in a new training annex to MCO 5000.27, Marine Corps Roles and Responsibilities for the Acquisition and Sustainment Processes.

As leader of the T&E enterprise, TECOM is responsible for developing the requirements for stand-alone T&E solutions and is the driver of requirements for training systems and enablers within CD&I's warfighting systems requirements process. TECOM will use TERMS as the requirements validation process to optimize the rapid development of stand-alone T&E solutions for the force. TECOM and DC, CD&I will codify the TERMS process and TECOM's role in T&E requirements development into Marine Corps force development and integration policy. To determine how to further streamline the process for delivering these T&E solutions to the force in a timely and sustainable manner, we will commission a third-party audit yielding recommendations to improve integration among TECOM, Marine Corps Systems Command, and PM TRASYS. Finally, we will use Project Trident as a model to inform and formalize TECOM's integration with the service's Campaign of Learning, ensuring TECOM's other initiatives gain similar alignment and traction. These actions will be complete NLT FY25.

Program Evaluation

MCU incorporates fleet input into program evaluations via the Fleet Feedback Program (FFP). The objective is to ensure MCU graduates meet the current and emerging attributes needed in the FMF, by focusing on the quality, value, and relevance of the educational curricula. FFP draws from multiple perspectives including graduates, supervisors, and senior leaders. MCU completed two operational pilots with I and II MEF with a third (III MEF) scheduled for completion in FY24.

TECOM is also collecting feedback directly from the fleet on home station training support to inform decisions on LVC-TE investments, as well as modifications to ELT, Formal Learning Center POIs, and home station training enablers. In addition to identifying negative performance trends at SLTEs, this input will reveal emergent trends from exercise force efforts to counter the simulated pacing threat in their MAGTF Warfighting Exercises.

Assessment

Resilience directly contributes to our readiness. A recent study, conducted by the University of Pittsburgh, found that recruits who scored higher on a standardized resiliency scale experienced less attrition than those who scored lower. This was confirmed in a follow-on study at Officer Candidate School. TECOM and Marine Corps Recruiting Command will determine if this scale can be used to screen out those who may be more susceptible to stress or adverse behaviors, which could help lower our attrition rates and get a better return on our investment.

The Marine Corps has commissioned research in the past to assess whether various factors influence performance at The Basic School and to identify possible associations between TBS outcomes and performance in the fleet. TRNGCMD is sponsoring a new two-phased study with CD&I to examine the quality spread policy used to assign military occupational specialties at TBS. The first phase will evaluate whether quantitative evidence supports continuation of the policy. If the existing model is found to be deficient, the second phase will result in an alternate assignment model. The findings from first phase will be presented to TECOM and M&RA NLT third quarter of FY24 with second phase scheduled to end by fourth quarter FY24. As a Corps, we will continue to innovate from a position of research, study, and experimentation.

While TECOM is the standard bearer, T&E developed within the FMF is an integral part of the T&E continuum. TECOM is fully committed to ensuring integration and expansion of FMF-led training within the T&E enterprise. The Division Leader Assessment Program (DLAP), which currently addresses only infantry company commanders, is a target of opportunity for enhancement. TECOM will coordinate with 2nd MARDIV, I MEF, Plans, Policies, and Operations (PP&O), and the DLAP officer-in-charge to standardize and expand this program to all MARDIVs, major subordinate commands, and MOSs. They will provide an update in the next annual report.

Due to the ever-increasing demands placed on commanders in our current operating environment and our need to maintain rigorous, repeatable standards, establishing accountability for commanders and units for their performance at SLTEs is vitally important in ensuring that we continue to produce combat-ready units. Given the competing demands of Global Force Management (GFM), we have historically not been able to consistently slate units for SLTE at the same point in their unit lifecycle, which places some units at an immediate disadvantage. Units participating in SLTE as the final major event prior to deploying will be at a high level of readiness and will perform well, while those returning from deployment are in the early stages of their unit lifecycle and will likely be less successful as an organic formation and in supporting larger MAGTF operations. In addition to GFM requirements, multiple exercises, operations, and MEF/major subordinate command exercises conflict with SLTE, making it difficult for units to prepare for training objectives that, at times, diverge from the MAGTF operations stressed at SLTE. These inconsistencies create wide-ranging variables impacting the probability of success and therefore accountability.

MAGTF-TC, in coordination with the FMF, is exploring options to increase units' likelihood for success. These include establishing collective minimum standards and an Active-Duty Mentor Program during SLTE that provides knee-cap-to-knee-cap mentorship tailored to each unit's unique needs. Another option is to work with FMF commands to assess their unit's readiness for SLTE prior to slating them. Expansion of the FSP will be a key enabler to assisting units prepare for SLTE, and Project Tripoli's advancing LVC capabilities will enhance SLTE workups as well as provide state of the art training and assessment tools for SLTEs to tailor training to where units are in their life cycle and aid them in progressing their skills faster. Tripoli's advanced after-action capabilities will provide immediate feedback to commanders and help inform more specific training plans that pinpoint performance gaps and allow for more sets and repetitions in those areas.

TECOM has made significant investments in the assessment methods and data management systems at PME and formal learning centers to inform decisions that improve the programs. M&RA, together with EDCOM, drafted a position paper based on their assessment of whether observed academic fitness reports is contributing to increased focus and rigor in PME. M&RA will present this paper at the next EOS.

We use many information sources to inform our T&R standards. These include TECOM's trend reinforcement and reversal process, the Marine Corps Lessons Learned Program, after action reports from our SLTEs, and input from MAGTF-TC. The inaugural CATE Conference in 2022 identified this as an area for improvement. Members of the CATE Conference recommended addressing similar

POIs across ELT, Advanced Infantry Training, PME, and SLTE during T&R working groups (TRWGs) and Course Content Review Boards to ensure unity of action and consistent injects of lessons learned. Another recommendation was to develop and apply one assessment tool across exercise and experiments to ensure consistent, effective, and efficient identification of T&E shortfalls, gaps, and requirements. TECOM will review the feasibility of those recommendations this next year.

TECOM is working with PP&O to increase the rigor and fidelity of our assessments which will ultimately improve readiness reporting and enable us to better predict a unit's performance at a training exercise based on trends analysis. In turn, this will inform decisions on the timing and resources for those events, mitigating or even avoiding gaps in readiness. TECOM will leverage the lessons learned from its predictive analysis work and IMC Limited Quantitative Assessment methodology to help make sense of the past decade of entry-level attrition data and effectively mitigate risk.

Reducing Marines Awaiting Training Backlog

Training Command is collaborating with relevant stakeholders to institute several methods for reducing the Marines Awaiting Training (MAT) backlog. These include voluntary reclassification, alternate training, and Permissive Recruiter Assistance Support Program (PRASP).

For individuals waiting for lengthy periods, we are offering voluntary reclassification to occupational specialties that are experiencing production shortfalls and then shipping them immediately to their new schoolhouse. Other Marines are attending training, such as officers attending Expeditionary Warfare School seminars while they await flight training, or augmenting FMF and supporting establishment units using non-funded temporary additional duty.

Prior to Recruit Training graduation, Training Command is identifying individuals whose wait time between Marine Combat Training and follow-on school is greater than 10 days and assigning them to the PRASP. This temporary assignment provides Marines with productive learning experiences while reducing resource demands on our schoolhouses.

We recognize that high attrition and recycle rates contribute to higher MAT backlogs. As we learn to leverage our data better, it will inform better policies that address the origins of the issue, not the symptoms. Through Project Triumph, TECOM and M&RA continue to collaborate on potential efficiencies to improve throughput.

Doctrine and Standards

The 2020 modernization of doctrinal processes is enabling TECOM to surge capacity to keep pace with the new doctrine and significant changes driven by FD 2030. TECOM published a Marine Forces-prioritized list of 27 publications to be revised within 24 months to include the resources necessary to accomplish this. Many of these are currently in revision. Marine Corps Warfighting Publication (MCWP) 8-10, Information in Marine Corps Operations, will be published in October by DC, Information replacing Operations in the Information Environment. New doctrinal publications are under development. One of these is MCRP 3-10.3, Small Unmanned Aircraft System Operations, which also necessitates revisions to its critical enablers. As experts in amphibious operations, the Marine Corps will provide Marines a practical baseline in the principles of amphibious defense and counter landing operations consistent with current and future operating environment realities and will inform the development of Naval, Joint, Allied, and Partner doctrine. Our recently updated doctrine and concepts will provide a common and updated lexicon for how military professionals should execute critical tasks and guide their actions in training, education, and operations. We project these actions to be completed by FY25. MCWP 3-10, MAGTF Ground Combat Operations (formerly Fleet Marine Force Manual 6) was last revised in 2017 and is currently due for revision; however, this will be extended two years given it was not among the FMF's 27 priorities. We will continue to update Marine Corps doctrine to remain in-stride with Force Design.

TE 2030 core documents and annual reports direct the Marine Corps Ground T&R Program to implement rapid change, including the elimination of requirements that no longer contribute to readiness. Codified in NAVMC 3500.106A, TECOM transitioned this program from a tri-annual to an on-demand schedule for updates, which aligns with the MET/METL review process to increase consistency and generate synergy. Early in 2023, TECOM coordinated with CD&I, and 3rd MLR to publish an experimental manual for Marine Littoral Regiment (MLR) comprised of 87 evaluation-coded (E-coded) T&R events

for 3rd MLR Headquarters, Littoral Combat Team, Combat Logistics Battalion, and Littoral Anti-Air Battalion. This manual was later refined with 96 events (86 of which were E-coded) and uploaded to MCTIMS. It will serve as the baseline for 3rd and 12th MLR reviews during second quarter FY24.

TECOM introduced ground T&R precepts to guide TRWGs during the initial analysis phase. These precepts include analysis of individual training events and proposed modifications; validation of core and core plus skills; alignment to doctrine as a result of new equipment, platforms, and concepts; identification of dependencies with FD 2030 implementation; linkage of events to information catalogued in the Marine Corps Mishap Library; and supportability through simulation. Additionally, a new T&R Dashboard provides a visual representation of the work being done by task analysts and TRWGs and informs resource decisions by linking units' METLs and learning resources, including doctrine, references, simulation devices, on-the-job training, and distance learning, to individual training events.

Incorporating lessons learned and experimentation results, the TRWGs address collective training events from the perspective of actions against the pacing threat in a disrupted, disconnected, intermittent and low-bandwidth environment. The Infantry TRWG for individual training events convened in July and is being informed by the last 24 months of MAGTF Warfighting Exercise (MWX) lessons learned and will further incorporate FD 2030 requirements.

Fitness

TECOM supported M&RA in developing an overall Marine Corps Total Fitness strategy which includes the physical, mental, social, and spiritual domains of fitness. This strategy, which includes requirements that will be codified within an MCO, provides the framework for creating an interdependent system of human performance capabilities that optimize warfighting readiness, lethality, and resilience of the individual and organization, while supporting family and community well-being.

Following the largest study of our body composition standards since the 1980's, the Commandant authorized the incorporation of advanced human performance technology into the program. Bio-electrical Impedance Analysis devices have now been fielded throughout the Marine Corps to provide a more accurate assessment of individual body composition and give Marines additional information to help inform their choices in enhancing their health and fitness based on their unique data. These changes are being incorporated into the Marine Corps Body Composition and Military Appearance Program order. Marine Corps human performance policies, standards, and requirements are in a constant state of analysis, assessment, and modification if warranted. This will continue to apply to general and occupational fitness testing, body composition assessment, martial arts, water survival, and the force fitness instructor program.

Synchronization with Talent Management

TE 2030 and Talent Management 2030 (TM 2030) efforts share a common thread of putting Marines at the center, demonstrating our commitment to make process serve people. TECOM and M&RA are developing methods for screening, training, and transitioning individuals with specialized skills into the Marine Corps at competitive ranks. DC, M&RA will publish the Marine Corps Talent Acquisition Program (MCTAP) which provides a roadmap for civilian lateral entry into the Marine Corps and Reserve Marines to change components.

Both Officer and Enlisted Marines may apply for lateral moves. Considerations for approving these transitions include the health of their current MOS, allowance within their desired MOS's structure space, grade, and their overall individual performance record. For individuals desiring to change their primary MOS, TECOM is prepared to facilitate this transition within current policy and formal learning centers' capacity. MARADMINs, roadshows, key leader engagements, and townhalls advertise these opportunities as they become available. Lateral movers help to improve the quality of our learning environments by bringing new perspective and experiences, seasoned leadership, and peer mentorship.

TECOM, in coordination with the Sergeant Major of the Marine Corps, is evaluating the current Enlisted professional military education (EPME) roadmap and considering ways to increase efficiencies and bridge gaps between PME and MOS skills progression as complementary components of professional development. Under consideration is streamlining the roadmap by consolidating PME events, thereby eliminating the need to attend a different PME course at each rank. Reducing the number of "touch points" within the PME continuum reduces the challenges commanders

experience in balancing operational and training requirements with taking care of their Marines. It also provides a more robust learning experience given the diversity of ranks and heightened focus on instructional excellence across fewer courses. Additionally, in support of M&RA, TECOM is identifying options to incentivize MOS skills progression and expand MOS improvement opportunities across all communities. Over a decade ago, our logistics community implemented industry certification for mechanics, vehicle operators, and supply chain managers. This initiative extends the same opportunity to more communities. TECOM and M&RA are meeting with EDCOM, U.S. Naval Community College, and other subject matter experts to discuss micro-credentialing and industry certifications. NLT end of FY24, M&RA will provide an implementation strategy with fully burdened cost estimates to DC, P&R. These are tremendous opportunities to develop and retain our exceptional talent and keep Marines motivated.

CONCLUSION

We have worked, learned and accomplished much this past year, but we must do more to deliver critical T&E capabilities to the force faster. The scope of this effort is broad and largely dependent upon the continued monumental efforts of Marines from throughout our Corps—for the efforts to date, I thank you. It took a significant push to begin, but I am confident that the actions we have taken this past year are building momentum and giving way to more fluid progress and acceleration this next year. As the standard bearer for the Marine Corps, TECOM will continue to lead the T&E transformation that is both anchored in our indelible heritage and ethos that define what it means to be a Marine, and responsive to FD 2030 requirements. I look forward to continuing our coordinated attack that will ensure we develop the force to compete, fight and win.

Eric M. Smith
Commandant of the Marine Corps

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