

# Rigorous Assessment Model?

The key to evaluating training

by CIV Matthew C. Denney

Commanders develop their training guidance and training plans to ensure their unit can effectively execute their mission essential tasks. The four most valuable services that Training and Education Command (TECOM) could provide for these commanders are trained trainers to support the commander's efforts, trends from evaluation data to focus the commander's efforts, evaluation criteria and tactical standard operating procedures (TACSOPs) for Service-level training events (SLTE) to allow the commander to train to the standard, and trained personnel (formal learning center [FLC] graduates).

Marine Aviation Weapons Tactics Squadron (MAWTS-1) already employs a successful process of providing those four elements for the ACE. Weapons and tactics instructor graduates are taught how to design, control, and evaluate training events and perform those functions in the squadron. MAWTS-1 owns the Training and Readiness (T&R) Manual for aviation. For those events where the standard alone is insufficient for training design and evaluation, they develop a TACSOP that serves as a more detailed and responsive bridge between the T&R standard and a doctrinal publication. The T&R standards and TACSOPs are revised regularly (based on trends, new tactics, techniques, and procedures, etc.) by either MAWTS-1 (for those TACSOPs they own) or in a venue hosted by MAWTS-1 with all the stakeholders. MAWTS-1 also conducts regular fleet support visits to operations and exercises to gather feedback on its graduates and programs.

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MAWTS-1 is staffed to support this process, but Tactical Training Exercise Control Group (TTECG)—as one example—is not. MAGTF Training Command (MAGTFTC) must provide the leadership to ensure that their major subordinate elements (TTECG, Marine Corps Tactics and Operations Training Group [MCTOG], Marine Corps Logistics Operations Group, Expeditionary Warfare Training Groups, and others) are capable, employ this process, and their efforts are integrated. For example, TTECG employs the MAWTS-1 standards and TACSOPs for aviation events during an Integrated Training Exercise (ITX), MAWTS-1 employs TTECG standards and TACSOPs for ground events during a Weapons and Tactics Instructor, Expeditionary Warfare Training Group Atlantic/Pacific teaches from the TTECG standards and TACSOPs, etc. TECOM must provide the leadership to ensure the same for Training Command and Education Command.

The number one trend for GCE and LCE training observed by the Training Support Center Twentynine Palms is units struggle to design effective training and establish a Tactical Exercise Control Group (TECG) to effectively control, evaluate, and debrief

their home station training (HST). It is not their fault; no part of TECOM teaches those skills. TECOM must develop, document, and train personnel on how to design, control, evaluate, and debrief a training event.

TECOM is addressing this shortfall by producing a series of publications on training plan design, training event/exercise design, evaluation, and assessment. There is no current plan to produce a publication on controlling a training event or exercise, but it is an obvious requirement. TECOM should follow the MAGTF Staff Planning Program's paradigm of producing a series of PowerPoint presentations on the Marine Corps Planning Process. Those presentations can be easily modified to fit the level of unit learning about the Marine Corps Planning Process. If TECOM produced similar master lesson files for their publications, these can serve as a baseline for FLCs to modify as desired. TECOM must then enforce that process, as a minimum, throughout TECOM. A Marine's first experience with a TECG at a T&R standards-based evaluated event must not be a Marine Corps Combat Readiness Evaluation (MCCRE).

To address this trend and provide commanders the personnel required to enact the Commander's Training Guidance and Training Plan, all professional military education graduates must be trained to standard in a rank and billet appropriate level of training management. A squad leader at the Infantry Small Unit Leaders Course must graduate as a fire team trainer, an equivalent to a weapons and tactics instructor. This portion of the POI

would prepare the squad leader to design, control, evaluate, and debrief fire team training. The equivalent process, modified for rank and billet, must be included in all the TECOM professional military education programs of instruction (POI). This can be as simple as the instructor staff pulling back the curtain on how their training events were designed and conducted or having the students participate in that process. The Basic School is experimenting with students developing an after-action review (AAR) to good effect. Ideally the students would design and execute the process for evaluation. Other options are to add these tasks to the train-the-trainer formal schools, require attendance and staff them for dramatically increased throughput, or mandate attendance of MCTOG's Prepare for Combat courses.

The number two and three trends observed by Training Support Center 29 is a unit's best efforts at HST (and TECOM's entire training pipeline) failing to effectively prepare them for SLTEs. One reason it is not the unit's fault is because the specifics on how to execute those tasks at an SLTE are not in a doctrinal publication. Doctrinal publications update at a glacial pace and the units conducting an SLTE are not responsible for the publication's currency. Another reason it is not the fault of the unit is because the evaluation criteria (minimal T&R based evaluation occurs during an SLTE) is not the same as the T&R standards employed at FLC or during HST. This explains why units begin an SLTE with a self-assessment displaying a list of mission essential tasks and T&R standards with a red (untrained), yellow (partially trained), or green (trained) assessment of their current status that is mostly green yet struggle during the SLTE.

To address these trends and provide the commanders the information required to focus their training and train to standard, three steps are required. First, TECOM MSEs must adopt the MAWTS-1 model with some minor modifications. Use the T&R standards for evaluation criteria and adjust the standards in the *T&R Manual* if they are ineffective. TECOM has ac-

complished their portion by making the *Infantry T&R Manual* more like *Wikipedia*.

*Untrained, partially trained, and trained* is a basic three-point scale that relies on the evaluator knowing what trained looks like. Scaled Performance Evaluation Measurement System is a five-point scale: novice, advanced beginner, competent, proficient, and mastery. The description of mastery, "flawless execution. Event component completed, no mistakes," still requires the evaluator to know what "flawless execution" looks like and all evaluators to share that view so units are assessed uniformly. The Office of Naval Research and Cognitive Performance Group have developed a Behaviorally Anchored Rating Scale format that describes what the points on the scale mean for *novice, advanced beginner, competent, proficient, and expert* so evaluators have a definition of what must be achieved to earn a rating. General descriptions of each level are used to develop a specific description of each level for each event component or performance step of a T&R standard. This enables more effective instructor, controller, or evaluator preparation and execution. MCTOG has applied this method to develop evaluation tools.

The general description:

Expert: Automatic grasp of situations based on deep tacit understanding, rapid recognition of appropriate decision or action, capitalizes on leverage points and unique uses of ordinary resources, detects problems early based on strong anticipatory ability, and manages uncertainty with ease.

The specific event component description:

Expert: Recognizes and discusses effects of friendly actions for near fight as well as next fights and actively identifying future possible problems across warfighting functions.

Second, for those tasks for which a standard provides insufficient detail, produce a TACSOP that is current and link it to the T&R standard in the *T&R Manual*. Doctrine should host these TACSOPs to both ensure access and information assurance. TECOM must manage this process to reduce duplica-

tive efforts. MCTOG and Command and Control Training and Education Center of Excellence both have TACSOPs with similar flowcharts for combat operation center battle drills but there is no designated lead agency. TECOM must apply leadership to ensure all stakeholders take part in this process.

Third, make the evaluation data accessible for all training planners. Anyone assigned to design a training event, a period of instruction or an entire POI should be able to easily find current evaluation data on a T&R standard to identify which standards, performance step(s), or component event(s) are the most challenging to units and link to a class and a TACSOP for preparation of both the training audience and the TEGC.

The final service that TECOM must provide is trained graduates. The MAGTF Warfighting Exercise is constantly short of evaluators. The Commandant should ensure that any component that provides training or material support to the FMF provides evaluators to MAGTFTC to provide first hand feedback of their products (personnel and material) in an operational environment.

Why are these simple fixes not in place? In December of 2016, Combat Development and Integration and Plans, Policies, and Operations released a joint message requiring that all units attending a SLTE to include the ITX, Mountain Exercise, Talon Exercise, and MEU Certification Exercises be evaluated on their common tactical picture. This effort was a response to trends identified during exercises and deployments. MAGTFTC did no evaluations. When queried, Combat Development and Integration and Plans, Policies, and Operations had no idea how to conduct the evaluations or how to collect the data. Combat Development and Integration and Plans, Policies, and Operations were not clamoring for the data and MAGTFTC did not tell them they were not going to evaluate the common tactical picture. What happens when a lip service force meets a passive aggressive object? Nothing. Why is it so difficult to get evaluations? TECOM does not enforce current orders.

According to the *38th Commandant's Planning Guidance*,

As with our formal schools, we must enforce a more disciplined and rigorous assessment model in which not every unit passes, and for which there are both rewards and punishments for performance. We must be able to say with confidence that the \$5.5 million we expend per ITX rotation is causing greater readiness and, therefore, providing a return to the Service for the investment.

*MCO 1553.3B, Unit Training Management*, excerpts: "A commander's training assessment compares the unit's current level of proficiency with the desired level of proficiency. Leaders determine current proficiency levels by reviewing all available training evaluations and comparing them to the desired level of proficiency or associated performance standard." Also, "Leaders internally evaluate the performance of subordinate elements using training standards defined in T&R manuals, and seek external evaluations by HHQ or TECOM for assessment of capabilities required to perform their METL."

There are four levels of evaluation in the Kirkpatrick Model Kirkpatrick's Four Levels of Training Evaluation:

- "Level 1: Reaction—The degree to which participants find the training favorable, engaging and relevant to their jobs." The instructor rating form is an example of this level of evaluation and Kirkpatrick considers it as valuable as we do.
- "Level 2: Learning—The degree to which participants acquire the intended knowledge, skills, attitude, confidence and commitment based on their participation in the training." The tests, written, and performance, required to graduate a course, be granted a military occupational specialty, etc. are examples of this level of evaluation.
- "Level 3: Behavior—The degree to which participants apply what they learned during training when they are back on the job." A Field Supply and Maintenance Analysis Office inspection and a MCCRE are examples of this level of evaluation. A SLTE is an ideal but ignored venue.

- "Level 4: Results—The degree to which targeted outcomes occur as a result of the training and the support and accountability package." An operational deployment or combat is an example of this level of evaluation.

In addition to a description of the levels, Kirkpatrick offers some trenchant comments on evaluations: A common misapplication (of evaluation) occurs when professionals or functional departments define results in terms of their small, individual area of the organization instead of globally for the entire company. This creates silos and fiefdoms that are counterproductive to organizational effectiveness. The resulting misalignment causes layers upon layers of dysfunction and waste. Evaluations during an SLTE would go far to identify this issue if not remedy this misapplication:

"Level 3 is more than just evaluating; it is a comprehensive, continuous performance monitoring and improvement system. The degree to which required drivers are identified and implemented is one of the most important parts of a successful plan. Level 3 is a challenging level that for decades has appeared to be a no-man's land." Leadership and Development has shied away from taking their share of responsibility for it, and organizations are ultimately focused on Level 4 results. Level 3 truly is the missing link in moving from learning to results.

The TECOM Campaign Plan introduces a 5th level: Return on investment (ROI)/return on expectation (ROE):

Analyzing a training or educational activity's ROI allows decision-makers to compare the ultimate value of the investment with other potential investment opportunities. ROE is often described as the ultimate indicator of value because it ties together the program benefits (defined in qualitative and quantitative terms) with formal training. The foundation of ROE has already been established in our Patchwork Model, wherein we clarify and define the key expectations of our stakeholders and convert their expectations to observable, measurable outcomes.

The MCCRE is an example of a current evaluation model. An ad hoc TTECG designs an exercise or uses a template to evaluate a unit on a series of mission essential tasks and their associated T&R standards. The exercise controllers are issued performance evaluation checklists (PECL) or training evaluation rating forms (TERF) for the T&R standards evaluated. The exercise controllers make observations, provide their evaluations to the exercise director, and enter them into the Marine Corps Training Information Management System (MCTIMS). This procedure does have its detractors promoting alternative methods. Instead of waiting for evaluation alternatives to gain widespread acceptance, employ the MCCRE model in all evaluations.

Why evaluate other than the primary determination of readiness? One reason, a precursor to the primary reason, is to validate the T&R standards. Changes are submitted as new tactics, techniques, and procedures are validated, new equipment is fielded, or someone tries to use it to design or evaluate training and recognizes significant shortfalls. The same process must apply to doctrinal publications as well. Of course, this only works if the T&R standards, TACSOPs, and doctrinal publications are employed in evaluations and modifications made and disseminated!

Evaluations must be multi-echelon. TTECG's current method of selecting the *INF-MAN-6001, Conduct an Attack*, as the sole T&R standard for assessing Range 400 Company Attack is an insufficient response to the requirement to conduct standards-based evaluations. That process eliminates valuable feedback on numerous T&R standards, billets, MOSSs, and formal schools. A recommendation using Range 401A Platoon Attack would include medium machinegun standards for the Coyote (TTECG exercise controller) on machinegun hill, mortar standards for the Coyote on the mortar position, and similar ideas to record evaluations post event for the debrief, collection, and dissemination. TTECG staffing does not support that level of evaluations at every event but one-time evaluations of

a large portion of the T&R standards is possible.

To satisfy the emerging Talent Management vision, these multi-echelon evaluations must expand to a combination of individual and collective evaluations. Referencing the Range 410A example above, platoon commanders and sergeants and squad and section leaders must get individual evaluations as well as the platoon, squad, and section collective evaluations.

The primary purpose of evaluations is to evaluate TECOM, not individuals. T&R standards, TACSOPs and doctrinal publications are the basis of POIs at TECOM courses and HST. Negative trends identified during evaluations, updated doctrinal publications and validated T&R standards might help TECOM replicate an efficient observation, orientation, decide, and act loop. POIs are not based on best practices, X-Files, or any of the multitude of possible sources that will turn the average training planner or evaluator into part detective and part historian. The process is undermined by TECOM organizations employing their own PECLs, eschewing the entire process as having a checklist mentality, refusing to evaluate, limiting access to the data, or producing their own publications instead of updating a doctrinal publication, TACSOP, and *T&R Manual*.

This unwillingness to address level 3 evaluations and narrow focus of current evaluations results, not unexpectedly, in a lack of concern on product performance outside a FLC or Marine Corps Operational Test and Evaluation Activity evaluation. FLCs, Marine Corps Systems Command and others should consider their graduates or products to be their responsibility long after graduation and fielding. Tanks had the Unit Conduct of Fire Trainer that included hundreds of training scenarios. This illustrated a schoolhouse's involvement in not only the formal instruction but a complete training package that included all the firing tables for qualification, sustainment training in simulations, and introductory through advanced training at the schoolhouse. It was also a model of simulations fielding, schoolhouses responsible for the

simulations and the training scenarios, that TECOM would do well to adopt.

TECOM's current emphasis on 21st-century learning is eminence-based. Eminent proponents promise sweeping and transformative benefits. In the absence of an evidenced-based rigorous assessment model, TECOM is potentially fielding the intellectual equivalent of the MOLLE pack. Why not first develop a 21st-century evaluation and then conduct a rigorous assessment on 21st-century learning? How the training is presented is important and should certainly be modernized but a feedback loop that validates the effectiveness of the training and education is far more important.

Another reason to evaluate is TECOM's Trends Reversal and Reinforcement Program (TRRP). TRRP would be largely irrelevant if the doctrine and standards that TECOM employs during formal schools were the same doctrine and standards employed for evaluations at a SLTE such as the ITX. There is an unwarranted distinction between trends and evaluation. Trends cannot be identified or valued as either a positive or a negative without a standard for comparison. Absent evaluations, there is no way to determine whether a response to a trend achieved its desired effect. This disconnect between entry-level, home station, and Service-level training is a major reason why negative unit-performance trends persist. Thus, it can be reasonably assumed that Coyote 3 is both correct and partially culpable in saying "there is no direct linkage from the *T&R Manual* to success in combat."

There are still important TRRP decisions that should be based on evaluation data but are not, as is the case with TECOM's ROI. It would be interesting to know if graduates from MCTOG's Advanced Maneuver Warfare Course make a statistically significant difference in the performance of an infantry battalion at ITX. If they do, then eliminate the operations officer classes from the Expeditionary Warfare School and send all operations officer to MCTOG. Do graduates of the School of Infantry squad leaders course make a statistically significant difference in the

performance of an infantry battalion at ITX? If this is the case, then fully staff the instructor cadre and provide reenlistment bonuses for those pursuing this career path. If performance data is more directly tied to geographic areas, it may stem from a lack of viable training areas. Thus, it would be worth investing in better ranges capable of integrating fire (direct and indirect) and maneuver at the locations.

Lastly, consider fielded simulations and simulators contribution to the success of a unit at an SLTE. If there is no data to support their utility, then how to provide the rationale for TECOM's divest-to-invest strategy? Evaluating fielded equipment is an important reason to conduct evaluations. Marine Corps Systems Command fields items such as the Command and Control Personal Computer (C2PC) and the Marine Common Handheld (MCH). Units rarely employ C2PC during an ITX or the MAGTF Warfighting Exercise. Undoubtedly these systems undergo rigorous testing to meet the stated requirements. The problem is, just like the graduates of all the TECOM schools, they are not subjected to a level 3 evaluation to determine whether they contribute to unit effectiveness.

With all the compelling reasons to conduct evaluations, MAGTFTC should be turning away qualified volunteers from Training Command, Education Command, Systems Command, and the like but MAGTFTC is constantly short of exercise controllers. Given the *Commandant's Planning Guidance*, it is uncertain as to why there has not been a bigger push to move toward a cohesive evaluation strategy and criteria. These are just a few counters to evaluation that I have heard in no particular order.

1. Evaluations require expert evaluators. Lack of expertise is an indictment of the current level of training, the promotion process, and the fitness reporting system—not a reason to abandon evaluations. Carefully select and train controllers, employ and refine the T&R PECL, and conduct an effective after-action review. A competent Marine with a PECL refined by the experts will more than suffice. That is why the

fitness reports are designed for average leaders, not experts.

2. Evaluating a unit assumes that they were trained prior to arrival. Training and evaluation occurs at every level, from entry level training to operational deployments. The separation of training and evaluating is impossible. Commonly known phrases such as “train to standard” or “standards-based training” illustrate the linkage as part of shared culture rooted in performance-based training.

3. The evaluations would all be the same because we either reduce or increase the complexity of the training to make it as challenging as possible. Evaluations—honest evaluations—would demonstrate an increase in performance regardless of the initial level and would provide justification for adjusting the difficulty level of each training event.

4. We cannot evaluate because the SLTE constantly changes. The order and combination of T&R events may change but not the component T&R events themselves. The conditions (night, day, urban, rural, etc.) may vary and should be accounted for during evaluations.

5. Someone could get fired over their performance at an SLTE. A former regimental commander and Coyote 6 said, “Performance at an ITX is just a data point, and I wouldn’t fire a battalion commander for that.” Of all the myriad of reasons for a commander to be relieved, I would submit that being in charge of a unit that is grossly unprepared to execute their mission is a valid reason to consider making a change.

6. The relationship between the exercise force and the exercise controllers would suffer if there were an evaluation. These types of interpersonal issues will be negated if there is codified evaluation criteria, especially if the evaluators are using the same standards for entry-level training, home-station training, and SLTE. If you have a growth mindset, failure is a data point and the motivation and information to succeed.

7. You cannot evaluate a commander when he has attachments he has never trained with before.

There are ample examples within the various T&R manuals that address

the conduct of multi-level evaluations. Again, if we codify our evaluation criteria and standards for evaluation, then basic leadership tenants and mission essential task lists should be sufficient for grading both the commander and his attachments separately with equal weight. If the ability to flexibly task organize is to be considered a strength then it must be evaluated.

8. Evaluating a pilot is easy. The aircraft does what it is told. That does not work in the grunts. A commander is responsible for all that his unit does or fails to do is not the same as the commander is the *reason* for failure or success. Again, there is a reason why there are multiple levels in multiple T&R manuals: to conduct multi-level evaluations.

9. PECLs or training evaluation rating forms are a sign of the checklist mentality. An effective PECL/training evaluation rating forms is a valuable technique to train controllers and standardize evaluations. Dr. Atul Gawande’s “Checklist Manifesto” describes the tangible benefits of checklists to pilots, doctors, and numerous other trained professionals. The employment of a checklist by an evaluator does not mean that the exercise force should use a checklist.

10. Coyotes cannot evaluate and control an event simultaneously. True, but not a sufficient reason not to record evaluation data after the event when the information is fresh.

11. MCTIMS is now developing and fielding a capability to monitor training and exercise costs. This is a quote from my first interaction with that project group: “Not sure the previous speaker was not more focused on analysis and evaluation versus ROI?” How would you determine the “return” portion of ROI absent analysis and evaluation? Without evaluation data, we will know the cost of everything and the value of nothing.

12. Evaluating a commander during an SLTE makes them nervous and timid. True, but probably not make them as nervous and timid as the possibility of significant combat losses and mission failure.

There are two requirements for effective evaluations and trend reversal,

method, and motive. The method is simple. If your unit is a TECOM entity, employ the T&R standards for design and assessment/evaluation. If the standard is insufficient, correct the standard. If the standard does not exist and the subject matter is important enough for TECOM to fund instruction, write the standard. If there is no doctrinal basis for the standard, change or draft a doctrinal publication or TAC-SOP. The Infantry *T&R Manual* is full of how to do things but bereft of why to do those things. If decision making is important and it is being evaluated, then it needs a standard. Finally, observe the actual implementation and employment of the graduates, standards, and doctrine during SLTEs and operational employments and adjust accordingly. This is the only way the training and education pipeline will function effectively.

The motive is equally simple. If your unit “takes the king’s shilling, do the king’s bidding,” but if the king is naked, you have a moral obligation to tell him. As a recruit I listened to the Commandant, Gen Wilson, say, “I’m tired of hearing people say ‘They say we have to do this and they say we have to do that.’ Goddammit, I am they and it shall be done!” “They” say we have to develop a rigorous assessment model. “They” say we have to do evaluations. The MCCRE evaluation model is familiar and sufficient.

The benefits of evaluations are both obvious and numerous. The protestations against evaluations at SLTEs seem shrill and petty in comparison to the benefits. The combination of FLC instructors and MAGTF/TC controllers will dramatically improve the quality of evaluation data used to assess and improve what TECOM, Marine Corps Systems Command, Marine Corps Installations, and commanders have done to prepare that unit for employment in harm’s way.



# Inter-Service Investment in the Future Force

Marine Detachment, U.S. Army Maneuver Center of Excellence

by LtCol William J. Patrick

Nearly four years ago, in initial guidance to the Deputy Commandants, Marines across the FME, and those in the supporting establishment, Gen Berger emphasized, “*Our force must be an integral element of the Joint Force, able to combine people, processes, and programs to execute globally integrated operations.*”<sup>1</sup> The publication of the *38th Commandant’s Planning Guidance (CPG)* in 2019 started an intellectual renaissance not only at the highest levels of our institution but all the way down the rank and file. This near-philosophical movement has reexamined the purpose for our existence, illustrated the stark reality of how our current capabilities match up to potential future operating environments, and set a course to align the Marine Corps’ capabilities to the priorities set in the *National Defense Strategy* while serving as a catalyst for creative thought inside our Service and setting the example for bold change during an interwar period inside the DOD and other Services.<sup>2</sup> Following the *CPG*, the Commandant released *Force Design 2030 (FD2030)*<sup>3</sup> and supporting concepts such as *Talent Management 2030 (TM2030)*,<sup>4</sup> and *Training and Education 2030 (TE2030)*.<sup>5</sup> Although sharing common ground with some national security experts advocating for urgently necessary legislative and defense establishment change to deter or defeat our adversaries,<sup>6</sup> there are elements of these concepts that have come under consistent public criticism by some widely known subject-matter experts and legendary retired Marine general officers.<sup>7</sup>



*McGinnis-Wickam Hall is the headquarters for the Maneuver Center of Excellence. (Photo by John D. Helms.)*



*The historic Infantry School building built in 1935. (Photo by John D. Helms.)*

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One does not need to be a proponent of these concepts to recognize that they contain universal fundamentals that are timeless elements of the very foundation of contemporary principles of war, such as the value of the Joint Force, combined with strong alliances and partnerships: “*Our wargames have shown that in any*

*great power conflict, our alliances are an essential factor to achieving success ... We must work with them in peace to be ready to partner with them in war.*"<sup>8</sup> Whether critical or fanatical about *FD2030*, both detractors and supporters alike can universally recognize the combined scope, scale, complexity, and depth of dynamic change across many important pillars of our institution poses a considerable challenge to the capacity of both our financial and human resources. In our current fiscally constrained environment and with manpower reductions to the supporting establishment where a great deal of change must be codified in areas such as training, education, doctrine, modernizing readiness standards, and learning environments, we must look to adopt existing best practices and models of success from within the Joint Force when beneficial.

### **Investing in the Future Force via the U.S. Army Maneuver Center of Excellence**

As the Marine Corps continues to experiment with, iterate, implement, and institutionalize the *CPG, FD2030*, and their supporting concepts, we do not need to look very far for proven ways to improve our current state as we move

veloping future force capabilities, and enhancing joint interoperability for the FMF through joint, allied, and partner nation integration during the training of advanced warfighting skills aboard the U.S. Army Maneuver Center of Excellence (MCoE).

### **Marine Detachment, Maneuver Center of Excellence**

Located at newly redesignated Fort Moore, GA (formerly Fort Benning),<sup>9</sup> the MARDET, MCoE is a Marine Corps training command that generates warfighting readiness for the FMF and the Joint Force by providing and maintaining a professional instructor cadre that enhances the preparation, throughput, proficiency, and certification of students in advanced warfighting skills. As a matter of historical precedent, the Commander, MARDET, MCoE also serves as the senior Marine representative to the CG of the MCoE, the Commandant of the Infantry School, the Commandant of the Armor School, and further represents all Marine Corps equities and interests aboard the Maneuver Center while serving as a conduit between the Army and the Marine Corps on mutually relevant and beneficial topics.

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## ***Historically, this relationship began about 100 years ago in the 1920s as Marine students attended schools and courses at the Infantry School.***

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toward the desired state. Taking a hard look at what has been successful in our sister-Services can provide effective, economical, and successful examples of best practices that create needed warfighting readiness and lethality in a resource-constrained environment. A demonstrative example of some of the benefits associated with our inter-Service collaboration with the Army is the Marine Corps Detachment, U.S. Army Maneuver Center of Excellence (MARDET, MCoE). The MARDET, MCoE invests in the future force by providing a professional instructor cadre, generating warfighting readiness, de-

veloping future force capabilities, and enhancing joint interoperability for the FMF through joint, allied, and partner nation integration during the training of advanced warfighting skills aboard the U.S. Army Maneuver Center of Excellence (MCoE). Historically, this relationship began about 100 years ago in the 1920s as Marine students attended schools and courses at the Infantry School. Marines started as students, focused on broad resident infantry professional military education, and later began to be assigned as instructors at Army schools. Shortly after World War II, the Commandant of the Marine Corps permanently assigned a lieutenant colonel to the Infantry School at Fort Benning as an amphibious operations instructor and the senior Marine representative of the Commandant of the Marine Corps. During the Korean War period, Ranger

School was created, and for decades the Marine Corps sent Marines to this school. From the 1960s to the 1990s, as a Service, we evaluated and utilized best practices, tactics, techniques, and procedures developed by Ranger School and selectively implemented elements of this program of instruction throughout the entire collection of Marine Corps infantry leadership schools.

As an example of providing quality instructors to the supporting establishment, after completing his battalion command tour with 2/4 Mar in Vietnam, Gen P.X. Kelley, then a lieutenant colonel, served at this command as the senior Marine representative of the Commandant of the Marine Corps. A few years later, as a captain, MajGen James E. Livingston, who earned the Medal of Honor (also with 2/4 Mar) for heroic actions during the Battle of Dai Do, served with the command as an instructor at the Infantry School. In 2011, as a result of congressionally authorized base realignment and closures, the Army's Armor Center of Excellence at Fort Knox was relocated to their Infantry Center of Excellence at Fort Benning. During that process, the Marine Corps' Tank Detachment at Fort Knox joined the Marine Corps Infantry Detachment at Fort Benning, and the Army established both the Infantry School and Armor school under a new common higher headquarters titled the MCoE.

After considering elevating the command, the larger armor-focused Marine Corps Detachment took the reins as the senior Marine representative, ending a 90-year period where the Marine Corps' exclusive focus at the MCoE was infantry. Over the last few decades, during the Global War on Terror, and to the present, it could be estimated that the limited extent of what the Marine Corps obtains from the MCoE is airborne "jump school" quotas. This estimation, however, would be an uninformed and simplistic view that grossly understates the value of inter-Service integration with the MCoE, lacking comprehension of its enormous potential. There are numerous, wide-ranging, and profound areas of overlapping interest that exist in ground combat operations,

basic and advanced infantry skills training, capability development, doctrine, experimentation, testing, evaluation, and acquisitions that have legitimate applicability and should be of genuine interest to the Marine Corps.

Since 2021, the MARDET, MCoE has been focused on what schools provide the Marine Corps the most benefit toward *FD2030*. In 2022, the MARDET, MCoE realigned to become an additional O5-level subordinate command of the School of Infantry-East to functionally align to and complement the 03XX training mission of the Schools of Infantry. Although not well known, the Marine Corps has fostered and benefited from inter-Service interoperability at the MCoE for generations of Marines over nearly a century. With minimal investment in manpower resources, commands like MARDET, MCoE could take inter-Service integration to the next level, aiming to accomplish the spirit and intent of the Commandant's guidance when he prescribed, "we must better integrate ... and work more effectively with other elements of the Joint Force."<sup>10</sup>

### Why Invest in Army Training and Education?

There are numerous examples of how "The Few, The Proud, The Marines" have higher standards in certain areas than a traditional land component soldier. In many cases, our unique functions as an amphibious and naval expeditionary force-in-readiness, combined with our exclusive capability of the MAGTF provide bona fide reasons that Marines should train and educate their own at purpose-built, permanent schoolhouses. However, there are situations where the Army, as the executive agent for doctrine, training, and acquisitions for a particular capability within the DOD such as airborne operations where it would be fiscally unwise and too resource intensive for the Marine Corps to duplicate a purpose-built and permanent school. The primary reason to utilize Army schools is to avoid duplicating the entire program of instruction and all the connected costs associated with developing and maintaining such a redundant capabil-

ity unless it is necessary. The point of the Army owning doctrine in a particular area cannot be underemphasized and is not restricted to airborne operations. Whether it is doctrine for heavy-tracked armor, wheeled light-armor operations and vehicle platforms, mortar and machinegun gunnery, or simply shared publications and manuals, the Marine Corps heavily relies upon and should fully integrate with the Army for all MCoE-produced ground combat operations and range and training area doctrine.

A couple of storied examples of the benefits of the Marine Corps using Army training and education schools, courses, and materials are easily illustrated by our continued use of historical examples provided in *FMFRP 12-2, Infantry in Battle*, first published by the Infantry School in 1934 and updated in 1938, the Marine Corps republished this text to familiarize students with relevant examples of the realities and principles of war during peacetime.<sup>11</sup> Perhaps even more widely recognized are our respected Marine Corps Leadership Traits and Principles taught in leadership classes all across our institution. These traits and principles are immensely powerful at assisting an individual with improving upon their personal value set and subscribing to our professional values. However, these

traits and principles were originally developed and published by the Army and likely made their way into our lexicon after having been embraced by Marine Corps students and staff at the Infantry School.<sup>12</sup> Aside from other historical examples, there are two significant reasons we should invest heavily in Army schools at the MCoE.

First, it is an extraordinarily sensible financial investment. In a fiscally uncertain environment—especially as our future force design requires significant investments to be made in testing, evaluating, and fielding new systems, platforms, technologies, as well as all the installations and logistics costs that are tied to these investments—it is wise to find economical ways to achieve all our warfighting readiness requirements.<sup>13</sup> One of the most illustrative examples of being economical is the Marine Corps' process for obtaining airborne quotas. The Marine Corps would have to spend an exorbitant amount of time analyzing the doctrine, organization, training/education, materiel, leadership/communication synchronization, personnel, facilities, and cost requirements to establish a sufficient training organization that could be trained, staffed, equipped, certified, organized, and fully resourced to replicate the Army's Airborne School.<sup>14</sup> The flight hours alone would be an astounding cost, not to



**An instructor inspects and tests parachute functionality from the 250-foot tower at Airborne School. (Photo by Patrick A. Albright.)**



mention no unit in the DOD submits more OPREP-3 SIRs than Airborne School.

Conveniently, by providing four experienced reconnaissance staff non-commissioned officers to serve on the airborne and jumpmaster instructor cadre, the Marine Corps receives hundreds of quotas to these schools that serve the needs of the Reconnaissance and MARSOC communities of interest via an effective inter-Service agreement. This inter-Service agreement requires utilizing a complex input and adjudication process between the Marine Corps and the Army, yet sufficient numbers of quotas can be allocated to the Marine Corps as long as they are efficiently utilized and the instructor requirement is fully sourced. Recently, the Commandant emphasized that the Marine Corps will seek additional airborne quotas to serve as talent management incentives.<sup>15</sup> The MARDET, MCoE is currently working closely with Training Command (TRNGCMD), Training and Education Command (TECOM), Plans, Policies, and Operations (PP&O), and Marine Manpower Division to meet the Commandant's intent by permanently maintaining the necessary subject-matter expert structure to enable a corresponding increase in airborne quotas that will directly support *TM2030* retention efforts.

The second reason we ought to invest heavily in the advanced warfighting course portfolio of schools and courses at the MCoE is because the Army is truly a world-class learning organization. The MCoE and its Infantry School have excellent ground-combat-element schools, courses, leadership, staff officers, training areas, and their ground doctrine, weapons system acquisition, soldier lethality, close combat lethality task force, holistic health and fitness, capability development and integration, and experimentation efforts are all collocated and integrated aboard the MCoE by design. To further illustrate the quality and value of this type of inter-Service integration, the MARDET, MCoE currently provides one infantry Marine officer in the rank of major to serve as an instructor at Maneuver Captains Career Course (MCCC), which is



**A Marine jumpmaster instructor conducting a UH60 spot jump while participating in the Army's Jumpmaster of the Year competition. (Photo by Markeith Horace.)**

the Army career-level school equivalent of Expeditionary Warfare School. In exchange for that one officer, the Marine Corps receives thirty quotas for resident career-level schools each year. Not only does this equal the number of infantry officers sent to resident Expeditionary Warfare School in a typical academic year, but it is the equivalent of six infantry battalions' worth of company commanders receiving topnotch resident

PME prior to assuming command of a warfighting formation. MCCC lacks a concentrated focus on amphibious and expeditionary operations, but what it lacks in intensive MAGTF operations, it makes up for with six months of first-rate instruction in planning infantry company and battalion-level operations and arguably produces a more technically and tactically proficient company commander.



**A Marine serving as an instructor at the Army's Maneuver Captains Career Course. (Photo by CPT Tacori Barnett.)**

### Inter-Service Quotas through TIP and Service Manning Decision Review

As part of the aforementioned inter-Service agreement, each fiscal year the Marine Corps receives hundreds of advanced warfighting course quotas for the infantry, reconnaissance, MARSOC, and assault amphibian communities. Although numbering in the hundreds, these are high-demand, low-supply quotas that scarcely meet current FMF demand. In exchange for these quotas, the Marine Corps provides a specified number of Marines who are MOS-qualified and later certified as professional instructor cadre at select Army schools in a manner that is similar to that of a combat instructor at our Schools of Infantry. MCoE quotas are sought out by members of the Army, Navy, Air Force, Space Force, Special Operations Command, other elements of the Joint Force, and the Marine Corps. All requesting agencies go through a rigid and structured future-oriented process to obtain allocations. For the Marine Corps, TECOM manages the Service's Training Input Plan (TIP) for internal Marine Corps schools and courses, as well as for sister-Service schools. For MCoE schools, TECOM tasks PP&O (assisted by MARDET, MCoE) to utilize their expertise and role as occupational field sponsors to seek and obtain FMF input on what sister-Service schools the Marine Corps should invest in and provide a precise estimate on the number of quotas required by the FMF. For the Army, this process is managed at the Service-level via their annual Service Manning Decision Review process. When considering inter-Service allocations, the Service Manning Decision Review and its adjudication panel look at the Marine Corps' TIP inputs, compare it to the total number of requests, and the corresponding utilization rate of the previous three fiscal years. Failing to keep high utilization rates is the main reason the Marine Corps loses quotas to important inter-Service schools. From 2018–2020, the Marine Corps had airborne utilization rates fall as low as 56 percent, and consequently, the past trend of poor utilization decreased Service allocations

by one-third (down from 627 to 411 quotas) over a three-year span. These utilization trends have been radically reversed by analyzing no-shows, failures, and unused quotas and implementing new business rules. For the last two fiscal years, utilization has remained at 97 percent and has already resulted in a correspondingly significant increase in allocated airborne quotas (up from 411 to 512 quotas) by Fiscal Year 2025. By reversing negative utilization trends and maintaining sufficient quality and quantity of airborne instructor cadre, the Marine Corps can increase utilization, optimize production, and increase airborne quota allocations in support of *TM2030* retention incentives.

### MARDET, MCoE Warfighting Course Portfolio

In 2021, after nearly a century of inter-Service integration with the Army's Infantry School, the *CPG* and *FD2030* changed the leadership structure of MARDET, MCoE from armor back to an infantry-focused training command. This Service-directed change in mission and focus provided the purpose and motivation to redefine the command mission, develop a framework to increase utilization, optimize production, generate FMF warfighting readi-

ness, and analyze the entire portfolio of advanced warfighting courses offered at the MCoE. The simple criteria for analysis were which courses provided the best return on investment, and produced skills that would be valuable to the future force 03XX community. From 2011 to 2021, the primary focus of MARDET, MCoE was the production of officers and enlisted tank crew and leaders, as well as the development of enlisted tank maintenance capability. From late 2021 to early 2022, working with TRNGCMD, TECOM, and PP&O the MARDET, MCoE presented recommendations and options that led to CG, TRNGCMD, PP&O, and TECOM's endorsement to reduce some legacy school requirements and redirect those fiscal and human resources to courses that had strong potential to benefit the 03XX communities with respect to future force design. Essentially, significant observation and analysis of multiple programs of instruction revealed that Ranger School was no longer valid or needed Marine Corps training requirement. Simultaneously, this study indicated that previously unutilized or underutilized schools such as Reconnaissance and Surveillance Leader, Scout Leader, and Cavalry Leader provided needed capabilities in support of



**Medium Caliber Weapons System demonstration by the Army Armament Research, Development and Engineering Center aboard the MCoE. Nearly identical to the 30mm cannon on the future amphibious combat vehicle, the Medium Caliber Weapons System is designed to enhance the accuracy and lethality of the M1126 Stryker Combat Vehicle. (Photo by Patrick A. Albright.)**

*FD2030* and should receive additional emphasis and investment.

As an example of the total cost of ownership doctrine, organization, training/education, materiel, leadership/communication synchronization, personnel, facilities, and cost analysis, as well as decisions made to not duplicate effective Army schools, a few years ago the Assault Amphibian (AA) community invested in providing an instructor to the Master Gunner Common Core course. This investment was made by the AA occupational field to develop an internal Marine Corps school program of instruction and instructor cadre. Quickly, the AA community recognized that with current fiscal realities, the best solution was to provide one instructor in exchange for the needed subject-matter expert certification, and perhaps never fully realize the standalone Marine Corps school capability. Master Gunner Common Core is a tough gunnery planning and sustainment training prerequisite for the Army's platform-specific Master Gunner Courses. The course develops master gunners that can plan and execute battalion-level live fires and develop long-term sustainment training. Essentially a "gunner-light" capability. As the Marine Corps began testing and fielding the Amphibious Combat Vehicle, the MARDET, MCoE worked with PP&O, CD&I, and the Advanced Amphibious Assault program manager to study the Stryker Master Gunner course as a pathway to developing an instructor cadre for the eventual fielding of and training with the 30mm cannon variant of the Amphibious Combat Vehicle. Our first instructor has graduated Stryker Master Gunner, and the Marine Corps will begin receiving quotas a couple of years in advance of the fielding. Since the MCoE is the doctrinal hub for these weapons systems and platforms, it provides the senior Marine instructor at Stryker Master Gunner an immediate doctrinal connection to the source and provides the FMF with a useful point of contact. A similar concept can be employed within the Light Armored Reconnaissance community, especially if *FD2030* were to eventually arrive at a common platform for the Amphibious

Combat Vehicle and future amphibious reconnaissance vehicle where the occupational fields could essentially be combined and both mission sets merged.

Upon the conclusion of *FD2030* focused analysis, the MARDET, MCoE's Warfighting Course Portfolio expanded its focus across a broad range of schools and courses that includes Airborne, Airborne and Air Delivery, Jumpmaster, Reconnaissance and Surveillance Leader, Infantry Mortar Leader, Scout Leader, Cavalry Leader, Master Gunner, Stryker Master Gunner, Ranger, Pathfinder, Maneuver Captains Career Course, and the Western Hemisphere Institute for Security Cooperation. To assist commanders in making informed choices on their warfighting course investments, a detailed Warfighting Course Portfolio that advertises all advanced warfighting courses at the MCoE has been distributed to MEF, division, and regimental operations sections.<sup>16</sup>

### **Instructor Certification and Incentivization**

Serving as an instructor at Army schools is professionally rewarding and provides a significant return on investment upon return to the FMF. Reconnaissance Marines typically leave with additional career and occupational field-enhancing schools and qualifications. The Marine instructor at the Army's Infantry Mortar Leader Course was selected as the Army's Master Trainer. After significant recognition within the Infantry School, MCoE, and TRADOC, this Marine was selected as the Marine Corps' instructor of the year for Fiscal Year 2021. Instructor certification is time intensive, demanding, and requires commitment, but the Army recognizes and rewards talent regardless of Service affiliation. Instructors serve OPCON to their Army schools during all academic hours, and when the appropriate conditions are met in SECNAV and Marine Corps policy, instructors are eligible for and receive Department of the Army personal decorations. At MCCC the Marine instructor is surrounded by the Army's top talent, as they see the importance of

identifying high-performing, key, and developmental billet complete officers for assignment to the Army's Project Warrior program. This program selects high-quality, company-grade officers to serve as company commanders, with a follow-on utilization tour as an observer, coach/trainer at their combat training centers. Upon successful completion of an assignment as an observer, coach/trainer (similar to TTECG at the MCAGCC), Project Warrior officers return to Captain's Career Course resident schools to serve as faculty advisors and share lessons learned from leading and training the Army's operating forces. This program is nested with the Army's Talent Based Career Alignment (TBCA) program.<sup>17</sup> These soldiers are highly competitive for promotion and are typically selected to attend intermediate-level school after their tours as faculty advisors. Similarly, the Army has a formal and credentialed instructor certification process that focuses on adult learning and the experiential learning model. This is paired with a badge program where an instructor can achieve basic, senior, and master instructor certifications. Programs such as this, as well as Project Warrior and the Army's TBCA program, offer points of reference for ongoing *TE2030* efforts.

### **Joint, Inter-Service, Allied, and Partner Nation Integration and MCoE Conferences**

Each year, the MCoE holds a Maneuver Warfighter Conference focused on the future operating environment, current operating concepts, peer and near-peer adversary challenges, and features world-class guest speakers. This forum is attended by a wide range of general officers including multiple Army 4-stars. The past two years have been exceptionally relevant and focused on China and Russia while also serving as an industry conference. Marine senior-leader participation has been sought, and if not due to emerging priorities, the CG, Marine Corps Warfighting Lab (MCWL) would have been a panelist and speaker in early 2022. On a similar note, after senior Marine representative engagements with the CG, and Chief of Staff of the MCoE on *FD2030*, the

future infantry battalion, and the development of the Infantry Marine Course, Senior Leaders at the MCoE proposed an annual Infantry Summit. This summit was executed in May 2022 and was designed to allow key leaders from the Army and Marine Corps, as well as allied and partner nations, to share infantry training processes, best practices, and challenges. The two-day summit consisted of presentations and discussions with representatives from MARDET, MCoE; SOI-E/SOI-W, Infantry Training Battalions; U.S. Army Infantry School; the Republic of Korea Army; German Army; Royal Australian Infantry; Royal Netherlands Army; British Army; French Army; Brazilian Army; and Chilean Army. Each presenter described their Service's infantry training progression, best practices, and challenges. The discussion topics covered training for large-scale combat operations, the future operating environment, optimizing human performance, 21st-century learning, and efforts to reduce attrition. The MCoE is currently planning to conduct both its annual Maneuver Warfighter Conference and Infantry Summit later this year.

**Areas MCoE Integration Could Assist with CPG, FD2030, TM2030, and TE2030**

The MCoE offers many ideas that merit further exploration and consideration that could benefit the implementation and institutionalization of the CPG, FD2030, TM2030, and TE2030. One future focus area could be working with the Army on infantry and tank integration during training aboard the MCoE, an idea generated by Advanced Infantry Training Battalion-East. It has been stated in FD2030 that armor capability will continue to be provided by the Army, and Marines typically affirm that Marine infantry integrates with tanks in a manner that is different from the Army.<sup>18</sup> Another potential area to evaluate is MCoE annual competitions. In 2001, a Marine instructor with the MARDET, MCoE became the only Marine to ever place first in the Army's Best Ranger competition.<sup>19</sup> In the last couple of fiscal years, the Marine

Corps has fielded sniper teams for the MCoE's Best Sniper competition, and this year the MARDET, MCoE has worked with PP&O and the FMF to field teams for the Best Mortar Competition. The MCoE also has a Best Squad Competition, and in the same spirit, the potential for including the winner of the Marine Corps' Super Squad competition in this inter-Service challenge is under evaluation. Doctrine is a topic that surfaces frequently, and there are likely existing formal and informal established relationships for doctrine between the Marine Corps and MCoE,

in this article to be adequately covered by field-grade officers and senior staff NCOs. The purpose was that this new combined infantry and armor detachment would go from being a representative to a 1-star to a 2-star, adding more equities and larger staffs, thus requiring more effective coordination. Equally important in the previous planning to elevate this command to an O6 headquarters was the idea that the MCoE was the doctrinal hub for all ground combat operations and systems as the Army is the DOD'S executive agency, and the Army's Futures Command has

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**The scope, scale, and cost of FD2030 and all supporting concepts require a gargantuan effort by Training and Education Command ...**

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but evaluating the ability to integrate with and collocate a Marine with the MCoE's Directorate of Training and Doctrine may be of benefit to TE2030 efforts.

**Important Relationships**

It was previously noted that the Commander, MARDET, MCoE serves as the senior Marine Corps representative to multiple Army general officers, and in 2021, CG, TRNGCMD added strengthening the relationship with the 75th Ranger Regiment to that list of esteemed organizations. Likewise, there are significant relationships with three training brigade commanders, the Commandant of the Western Hemisphere Institute for Security Cooperation where the Marine Corps owes a joint instructor billet, and the director of MCCC. From 2005–2011, prior to the Marine Corps combining its infantry and armor detachments in 2011, there was significant consideration given to elevating the MARDET, MCoE to an O6-level command with a significant number of action officers assigned as enablers from MCWL, TECOM doctrine, and SYSCOM. Correspondingly, the headquarters structure was postured to grow to allow all of the focus areas

its Maneuver Capabilities Development and Integration Directorate (think GCE portion of CD&I) located at the MCoE with responsibilities that mirror many HQMC CD&I, PP&O, and MCWL functions.

The scope, scale, and cost of FD2030 and all supporting concepts require a gargantuan effort by Training and Education Command as evidenced by the directed actions in TE2030.<sup>20</sup> A way of reducing this cost is as the Commandant said, "We will leverage the investments other Services have made as a fast follower."<sup>21</sup> Similarly, the supporting establishment has long felt the lack of fiscal and human resource prioritization that is encompassed by the Commandant's recognition of the same when he said, "TECOM leads doctrinal development for our Corps, but we have not adequately resourced it to accomplish this critical task—that must change."<sup>22</sup> A textbook starting point is the MCoE. Significant joint, allied, and partner nation force integration occurs in training at the MCoE. Marines train with Army, Navy, Air Force, and special operations forces, as well as over 100 different allied and partner nations while attending advanced warfighting courses at the MCoE. Through joint integration in training, education,

course attendance, mastery, and certification in warfighting skills, the FMF increases its warfighting readiness and enhances its joint interoperability. With a nominal current investment of only 23 assigned personnel, the MARDET MCoE directly contributes to the training of more than 14,000 soldiers, sailors, airmen, Marines, and allied and partner nation leaders from over 100 countries each year. In the highlighted cases of airborne, where a single reconnaissance staff sergeant assigned as an instructor currently equates to the Service receiving more than 100 jump school quotas, and at MCCC where a modest investment of a single major's salary and entitlements produces outsized returns by providing world-class resident PME to five infantry battalion's worth of company commanders each year, it is important to compare and contrast the total cost of ownership if we conducted these schools and courses internal to the Marine Corps. Not only are these small investments delivering disproportionately positive results, but they deliver a huge value in cost savings to the Service. A comprehensive analysis of the total cost of ownership airborne alone would cost the Marine Corps millions of dollars each year. Army schools benefit the FMF, and moderate investments in additional resources could further expand the value to the FMF, the supporting establishment, and support *TM2030* and *TE2030*. Just as the Commandant provided guidance that adding Marine structure to Maritime Operations Centers at numbered fleets would benefit Naval integration,<sup>23</sup> the benefits of adding structure to select inter-Service billets in areas such as the MCoE's Maneuver Capabilities Development and Integration Directorate, Maneuver Battle Lab (GCE portion of MCWL), and Directorate of Training and Doctrine (GCE doctrine, T&R, and formal instructor certification) could greatly benefit our *FD2030* and *TE2030* implementation efforts.<sup>24</sup>

#### Notes

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17. Army's Talent Based Career Alignment (TBCA) program link: <https://talent.army.mil/tbca>.

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# Changing the Narrative

The value of high-performing instructor pilots

by Col Aaron J. Brunk & LtCol Daniel E. Bowring

Instructor pilots (IPs) assigned to Marine Aviation Training Support Groups (MATSG) establish the foundational skills from which all future Marine aviators are created. IPs develop competent aviators ready to train in a fleet aircraft and prepare Marine officers for future leadership positions in the FMF. Like an assignment to The Basic School or Infantry Officer Course, Marines selected to be MATSG IPs should be selected in the right quantity and quality based on a proven record of superior leadership, proficiency, and competency as a fleet aviator.

In January of this year, Training and Education Command published *Training and Education 2030 (T&E 2030)*, which lays the groundwork for how the Marine Corps will train and educate the future force. Instructor talent management is central to those efforts as the Marine Corps selects, develops, invests, and retains our highest qualified instructors.

As stated in *T&E 2030*, “making and developing high-caliber Marines requires selecting superior Marines from within our ranks to serve as instructors.”<sup>1</sup> However, in the past twenty years, assignments to MATSGs as an instructor pilot have evolved into a perceived detrimental career move. This created an institutional culture within Marine aviation where we seldom send our highest qualified fleet aviators, specifically night system instructors and weapons and tactics instructors, to serve as MATSG IPs for fear that they will no longer be competitive in the Board Room.

Per MMOA-2 data from 2020, the average relative value for captains assigned to MATSG-21 was an 88.17 in comparison to a 92.61 average relative value for captains assigned to The Basic

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**>>LtCol Bowring is the Executive Officer for MATSG-21. He is a UH-1Y Pilot with three deployments with the 24th MEU from 2010–2015, a tour as a MAWTS-1 Instructor Pilot, and is slated for command of HT-18.**

School. Current selection rates to major follow the same trend, 53 percent of captains currently assigned to MATSG-21 have been passed for promotion in comparison to only 1 percent of captains assigned to The Basic School. This is incongruent with current training and education initiatives which champion talent developing talent and recognize MOS attainment as a “critical moment in a Marine’s career, with a significant influence on future success and retention.”<sup>2</sup>

This reinforces the current narrative that an assignment to MATSG is detrimental to a Marine’s career. However, assigned IPs who are average to slightly above average fleet performers and PME complete will generally get selected for major while assigned to MATSG. Failure to promote is not the result of an assignment to MATSG even though that is largely the perception from the outside looking in. Though, on closer inspection, failure to complete PME for grade is the root cause for most of the passed-over MATSG captains. These same captains who did not complete PME for grade would be passed over regardless of the command, duty assigned, or qualifications. Additionally, this does not mean these officers are poor instructors, leaders, mentors, coaches, etc. On the contrary, many of them are exceptional instructors and

find the mission highly rewarding on a personal level. It simply means they are making a cost-based decision on their future goals which does not include a field-grade officer in active service and the Marine Corps is incentivizing them to do just that—exit. When they exit, the civilian sector reaps the harvest of these talented aviators, coaches, mentors, and instructors.

Institutionally, we must reevaluate our methodology toward the selection of MATSG IPs and thus change the narrative with regard to promotability after assignment as a MATSG IP. Not every MATSG IP should be nor needs to be a night systems instructor or weapons and tactics instructor with an hourglass fitness report profile. In fact, there are many current IPs who were average performers as fleet aviators and are exceptional instructors and mentors at MATSG. On the other hand, would a Weapons and Tactics Instructor not benefit from 1500 extra hours teaching, mentoring, leading, and instructing? Aviators selected to be MATSG IPs should be PME complete, meet the requisite level of fleet aviator credibility and proficiency, and represent an even distribution of talent and potential across the relative value scale.

Simply selecting promotable captains to be MATSG IPs will increase the promotion rates, incentivize young

captains to complete PME, and increase the quality of instruction and leadership provided in flight school. Recent engagements with MMOA-2 over the last two years have resulted in a gradual shift to a more balanced approach to assignments; however, we must continue to champion this effort and codify verbal agreements into written policy if we want to truly change the culture associated with MATSG IP assignments.

*T&E 2030* states it is our responsibility as leaders to “continue to challenge and develop them [instructors] throughout their careers, making master instructors from journeymen.”<sup>3</sup> MATSG IP captains will fly between 1,000 to 1,500 hours as an instructor during their three-year tour. This will in most cases double an aviator’s total flight time. Aside from the obvious benefit of experience and exceeding the historical average for when a pilot is most likely to have a mishap related to pilot error, MATSG IPs develop into excellent instructors because that is the focus of their effort for three years. Unfortunately, the benefits of this additional flight time and instructor experience have yet to be tested or demonstrated in fleet aviation, because so few MATSG IPs ever return to fleet aircraft. This means that the Marine Corps receives almost zero return on investment from these talented instructors and the civilian sector reaps the benefits of the additional flight time and instructor experience.

The pathway to promotion and back to the fleet is clear so long as the individual aviator was successful in the fleet during their first fleet tour and completes PME. A newly promoted major during a MATSG tour should serve as a squadron senior Marine, squadron department head, or MATSG headquarters department head during their third year at a MATSG. The Marine would then have the option to go to resident command and staff or return to the fleet to meet their next major milestone toward promotion to lieutenant colonel.

A slightly more challenging narrative to fix is that of the promotability and retention model for Marine IPs who are assigned to MATSGs as majors and who will not have the opportunity to return

to the fleet to complete a department head tour before the lieutenant colonel board. For an aviator to get promoted to lieutenant colonel, it is currently considered a must to successfully complete an assignment as a fleet operations officer (OpsO), aviation maintenance officer, or executive officer. There are exceptions to this rule, but they certainly represent a very small number of aviators who got promoted to lieutenant colonel without serving in one of these key billets.

Majors assigned to MATSGs are direct representatives of the MATSG CO in primary and advanced training squadrons and/or hold key department head billets (namely OpsO) both at the training squadrons and MATSG headquarters. However, these assignments are not considered comparable to a similar assignment as a fleet squadron OpsO by our culture and the boards. We argue this should change.

There are differences between a training squadron and an operational squadron, a training squadron OpsO is managing 60 to 120 sorties and 200 pilots every day on the flight schedule to accomplish annual production numbers for the Navy, Marine Corps, and Coast Guard. In comparison, a fleet OpsO is managing around 12 to 40 sorties and 40 to 60 pilots every day depending on the platform. Additionally, a training squadron will fly upwards of 23,000 hours in a year, whereas most fleet squadrons will execute around 5,000 to 8,000 flight hours per year. Fleet OpsOs have the additional task of managing a complicated training exercise and employment plan but that is balanced with a significantly smaller number of flight hours, pilots, and complexity on a day-to-day basis. The two OpsO billets, fleet and training squadron, should be recognized as different but comparable and equal in terms of value and weight on a promotion board. This would create the opportunity for selection to lieutenant colonel after completing a department head tour as a training squadron OpsO.

*T&E 2030* prescribes “[we must] explore ways throughout the T&E continuum to increase the professionalization of our instructor cadre by arming Marines with training and education

aimed at developing their skills and ensuring continuous growth of their abilities as teachers, coaches, mentors, trainers, exercise designers, and curriculum developers.”<sup>4</sup> The Marine Corps will not realize the full value of three years’ experience instructing and mentoring the most junior aviators under the current construct, nor will we be able to continue to develop these skill sets if most MATSG IPs get out of the Marine Corps and/or never return to fleet aviation after their tour as an IP.

Culturally, the Marine Corps is a long way away from achieving parity between operational assignments and supporting establishment instructor duties; however, over time and with the initiatives outlined in *T&E 2030*, we are confident perceptions can change. This article, continued engagement with senior leadership, and the solidification of current verbal initiatives into written policy are the first steps toward shifting our culture toward valuing our MATSG IPs vice assuming they will all be passed for promotion, exit the Marine Corps, and become civilian airline pilots. The Marine Corps is missing a huge return on investment opportunity due to cultural perceptions of aviation that are simply invalid. Recruitment, selection, development, and retention of the highest quality IPs can be achieved if the narrative and our culture are changed.

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#### Notes

1. Headquarters Marine Corps, *Training and Education 2030* (Washington, DC: January 2023).
2. Ibid.
3. Ibid.
4. Ibid.



# Revolutionizing Marine Corps Maintenance

Harnessing data as a strategic asset

by Mr. Christopher Hegland & Mr. Cliff Hanchett

**D**ata is a strategic asset the Marine Corps must leverage to realize an immediate and lasting military advantage. The Marine Corps must maintain information superiority by providing the right information to the right hands at the speed of relevance. Dependence on multiple compartmentalized data sources subject to independent data manipulation and filtration can jeopardize information integrity and effective command and control. Proper data governance is essential for the Marine Corps' data-driven systems to ensure reliability, traceability, and modernized security standards for any data used by the Marine Corps' customer base in data-driven decision-making processes. The Marine Corps maintains a decisive advantage in the information domain by developing capabilities allowing Marines to focus on warfighting tasks rather than data entry and redundant administrative procedures.

## Developing a Solution

The 38th Commandant's Planning Guidance emphasized the need to close the gap in the Marine Corps' ability to collect, process, analyze, and leverage data to comprehensively man, train, and equip the force. To address these concerns, the Program Manager, Logistics Integrated Information Solutions Marine Corps (PM LIS2-MC) is delivering the logistics data services (LDS) capability to serve as the single source of truth to harness Marine Corps data and enhance decision making and accountability for the warfighter. The LDS platform is a centralized, non-transactional data repository to enable

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**Effective maintenance management requires complete information based on reliable data.**  
(Photo by Cpl Nathaniel Cray.)

enterprise-wide data-driven decisions for Marines and Marine Corps customers, facilitating more timely and actionable logistical predictions, increased intelligence, and effective decision making based upon and informed by accurate data.

LDS is aligned with the DOD's Software Modernization Strategy to enable resilient software capabilities rapidly and securely. PM LIS2-MC leverages the Scaled Agile Framework methodology for planning and delivery, allowing customer-focused



solution development, collaboration, and iterative development. The LDS capability provides transparency and data standardization to improve the workforce and warfighter's ability to address technical data needs through more efficient information flows to the tactical edge.

### **The LDS Capability**

The LDS team is at the forefront of organizational change management by breaking down legacy cultural barriers and data-sharing norms to maximize informed decision-making potential at all operational levels. LDS will provide the data hub that will facilitate Marine Corps logistics data governance to support data quality, exploratory data analysis, and visualization. LDS is a web-accessible application hosted in Marine Corps Business Optimization Support Services, a Federal Risk and Authorization Management Program Accredited Level 4, Amazon Web Services DOD GovCloud environment. LDS enables tools to allow users to exploit their data for informed decision making, creating an operational advantage for the warfighter. These tools include the implementation of Amazon QuickSight, an easy-to-use, cloud-scale business intelligence service that allows users to combine data from different sources into a single data dashboard. It also enables decision makers to explore and interpret information in an interactive visual environment. The LDS effort includes the delivery of a family of services created using Scaled Agile Framework-based processes, industry-standard data management practices, and controlled using data governance.

### **Data Governance**

Data governance is a principled approach to managing data during its life cycle, from acquisition to disposal, and ensuring data is secure, private, accurate, available, and usable. It includes the actions people must take, the processes they must follow, and the required supporting technology throughout the data life cycle. Data governance aims to ensure that data is accurate, consistent, secure, and man-

aged consistently with the organization's strategic objectives. LDS enables Data Governance through the following:

1. Defining data management standards and policies includes setting standards for data quality, security, and privacy and defining data management and use procedures.
2. Establishing data ownership: It governs data access permissions and what data is subject to governance. Data governance also involves complying with external standards set by industry associations, government agencies, and other stakeholders.

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## ***The LDS team is ... breaking down legacy cultural barriers and data-sharing norms to maximize informed decision-making ...***

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3. Creating a data catalog: A data catalog is a central repository that documents the organization's data assets, including data definitions, data lineage, and data relationships. Procurement and supply-chain-management personnel need accurate data to keep inventories stocked and to minimize costs.

4. Enforcing data policies: This includes monitoring data usage and ensuring that data is used following established policies and procedures. Compliance personnel must prove that data is handled according to internal and external mandates.

5. Managing data quality involves implementing processes to ensure that data is accurate, complete, and consistent. Knowing that data has quickly become one of our most valuable assets. Senior managers need accurate and timely data to make strategic business decisions.

6. Ensuring data security: This includes implementing measures to protect data from unauthorized access, loss, or theft.

### **Operational Dashboards**

The LDS team is operationalizing Marine Corps user data into a custom-

er-centric dashboard to showcase information in a consumable format that will support actionable decision making across the Marine Corps Enterprise. These dashboards provide realtime insights into key metrics and trends, including advanced machine learning algorithms that automatically analyze data. These tools will improve controls, optimize resource management, give the Marine Corps a tactical advantage, and provide predictive insights to guide actionable decision making at all levels.

The initial LDS dashboards will support enterprise configuration management reporting and visibility

of top-end items and sub-components, leveraging data from Total Force Structure Management System, Technical Data Management CATALYST, and Global Combat Support System-Marine Corps. This dashboard will allow users at all levels of command to see near realtime data from an organizational view to an equipment view, down to the serial number level, to identify configuration compatibility, readiness stats, service request order history, maintenance actions, and parts fulfillment lead-time from the source. LDS provides users with a robust dashboard and reporting capability to view and resolve identified gaps and shortcomings. The solution will support data governance as data owners can take action to resolve identified discrepancies to ensure information accuracy while enabling the total transparency of data across the Marine Corps Enterprise. These tools will empower our existing analytical community to leverage the advanced education investments of the Marine Corps. Additional reports in the pipeline are:

1. Marine Corps key suppliers: Leveraging sources from both internal and external to the Marine Corps to provide parts listings where the Marine Corps is a registered user within

the DOD catalog and their associated weapon systems to identify the location and onhand quantities.

2. Marine Corps key suppliers with service request order history: The report will be coupled with the Marine Corps key suppliers listing to identify Marine Corps high-use items with order fulfillment timelines with drill down to the ordering unit and weapon system association for trend analysis and forecasting.

3. Readiness reportable item comparison to Defense Logistics Agency (DLA) Weapons System Support Program: Provides a comparison between weapons systems identified within Total Force Structure Management System as readiness reportable with their identification in the DLA Weapons System Support Program and all individual National Stock Number parts, including criticality. The additional capacity will be analyzed for percent compatibility between weapon systems for proper placement and utilization of the Weapons System Support Program Group Designations.

4. Item Unique Identification: Leveraging Data from Global Combat Support System-Marine Corps, Technical Data Management-CATALYST, and Unique Item Identification System to provide a comprehensive evaluation by National Stock Number to onhand inventory locations of items that require Item Unique Identification registration within the Office of Secretary of Defense registry.

These reports are a snapshot of the initial dashboards planned as incremental releases. As additional interfaces are established with other internal and external data sources, LDS will inherit increasingly robust data sets to generate more comprehensive dashboards. Additionally, users across the enterprise are encouraged to propose the creation of additional dashboard views for review and approval by Marine Corps governance boards for potential inclusion into the LDS development backlog. Dashboard requests can be submitted within Technical Data Management Support at <https://app.mcboss.usmc.mil/suite/sites/support/page/support-cases>.



**The future LDS platform will deliver enhanced analytical capabilities including AI and machine learning.** (Photo by Cpl Anthony VanFredenberg.)

### Analytics

The LDS platform will enable the future delivery of enhanced analytical modeling capabilities, such as artificial intelligence, machine learning, and deep-learning algorithms that will allow warfighters to forecast and generate insights that can be used to inform and, in relevant cases, automate decisions

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### ... LDS will inherit increasingly robust data set ...

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and actions. By understanding data and analytics as strategic assets supporting the Department of the Navy's Information Superiority Vision, LI2S-MC will provide a single interface for logistics data visibility and analytics through the LDS program. Additionally, LDS is aligned with the Department of the Navy's Jupiter and Advana, DOD's big data platform for advanced analytics, to collect and display critical insights from disparate data sources. Jupiter and Advana provide *analytics as a service*, presenting users with a simple, seamless experience from data discovery to insightful data visualizations.

### Conclusion

By the conclusion of 2023, the Marine Corps will have created a cloud-based data hub of logistical data managed by a data governance board overseeing the defined business transformation and rules encompassing the data warehouse. PM LI2S-MC is meeting the mission to invest strategically in data science, machine learning, and artificial intelligence and leveraging existing data to collect, process, analyze, and disseminate information promptly and effectively. In concert with Marine Corps Systems Command, Program Executive Office for Manpower, Logistics and Business Solutions, Deputy Commandant, Combat Development and Integration, Deputy Commandant, Installation and Logistics, Deputy Commander for Information, and the operating forces, PM LI2S-MC remains integral to the plan to create and sustain a flexible, scalable, and portable IT environment that can provision and leverage data to make confident decisions for equipping the force to train for battle and win.



# Transforming Marine Corps Systems Command through Digital Engineering

A paradigm shift

by Mr. James Howell III & Mr. Kevin Brett

**M**arine Corps Systems Command (MCSC) has begun a paradigm shift from traditional document-based systems engineering to digital engineering including model-based systems engineering.

## The Challenge

In the DOD *National Defense Strategy of 2022*, Secretary of Defense Lloyd Austin encouraged all of us to act with urgency to build enduring advantages for the future Joint Force, undertaking reforms to accelerate force development, getting the technology needed more quickly, and making investments in extraordinary people. Current traditional engineering practices make data sharing, versioning, collaboration, and design decisions using the latest versions of models and documents a challenge. Information about a program's engineering thread is disparate and often inconsistent because information and models are siloed within different

organizations and are not synchronized and not integrated. Currently, performing multiple iterations of a design and rapid evolution of requirements, performance specifications, and other engineering artifacts is slow. Consistency and continuity are a problem.

## The Change

To meet the *National Defense Strategy's* lines of effort, our defense systems must be modernized, and speed of delivery must be prioritized to be able to fight and win the wars of the future. Digital engineering (DE) is a DOD initiative that combines model-based techniques, digital practices, and computing infrastructure to enable the delivery of high-pay-off solutions to the warfighter at the speed of relevance. DE modernizes how the DOD conceives, designs, operates, and sustains capabilities to outpace its adversaries. By shaping the culture and workforce to collaborate and work more efficiently with an authoritative source of truth,

DE incorporates technological innovation into an integrated digital model-based approach to transform the state of engineering practice in support of lifecycle activities. This digital transformation incorporates the use of digital computing, analytical capabilities, and new technologies to conduct engineering in more integrated virtual environments to increase customer and vendor engagement, improve threat response timelines, foster infusion of technology, reduce the cost of documentation, and impact sustainment affordability. These comprehensive engineering environments will allow government and its industry partners to evolve designs at the conceptual phase, reducing the need for expensive mock-ups, premature design locks, and physical testing. Figure 1. (on the following page) shows the expected benefits of DE. In June 2018, the Under Secretary of Defense for Research and Engineering released the DOD Digital Engineering Strategy (DES) to promote engineering transformation. According to the DOD Digital Engineering Strategy, "The practice of digital engineering promotes the use of digital representations of systems and components and the use of digital artifacts to design and sustain national defense systems." Figure 2. (on the following page) provides a view of the goals of DE. The depth and breadth of digi-

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tal engineering are enterprise-wide and are being incorporated into programs and systems, including the system-of-systems and all components. There is continuous improvement across the DOD and the defense industrial base in communications, risk assessment and reduction, design optimization, and shortened acquisition timelines. The stakeholders are evolving collaborative, integrated digital environments guiding, orchestrating, and delivering access to data, functions, and elements and executing in a purely digital environment. DE practices provide the opportunity for all stakeholders and participants to operate from a federated, yet integrated, authoritative source of truth (ASoT). Figure 3 provides an illustration of ASoT relative to data and specialty engineering models. Model-based systems engineering (MBSE), as part of DE practices, offers the DOD transparency, flexibility, rigor in communication, analysis, quality control, and an increase in efficiency in engineering and acquisition practices.

The Department of the Navy (DON) embraces DE to maximize agility, interoperability, reusability, and scalability across the Navy. As a result, the Navy and Marine Corps Digital Systems Engineering Transformation (D/SET) Strategy was signed by the Deputy Assistant Secretary of the Navy for Research Development Test and Evaluation in June 2020 to align with the DOD DES. The DON D/SET Strategy has five objectives:

1. Formalize the development, integration, and use of models.
2. Provide an enduring authoritative knowledge source.
3. Incorporate technological innovation to improve engineering practice.
4. Establish the supporting infrastructure and environments for the DE practice.
5. Transform the culture and workforce to adopt and support DE across the lifecycle.

To further encourage this digital transformation, the Office of Under Secretary of Defense for Research and Engineering created and maintains the DOD Digital Engineering Body of Knowledge, and the Office of Deputy

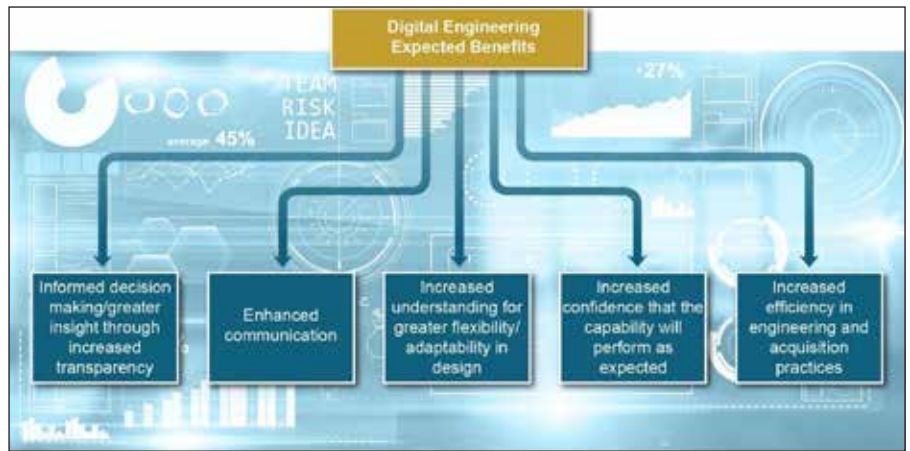


Figure 1. Digital engineering expected benefits. (Figure provided by author.)

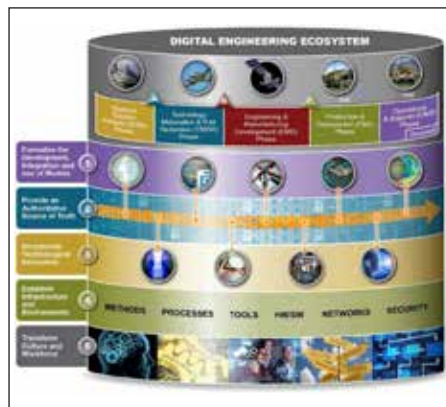


Figure 2. Goals of digital engineering. (Figure provided by author.)



Figure 3. Illustration of ASoT relative to data and specialty engineering models. (Figure provided by author.)

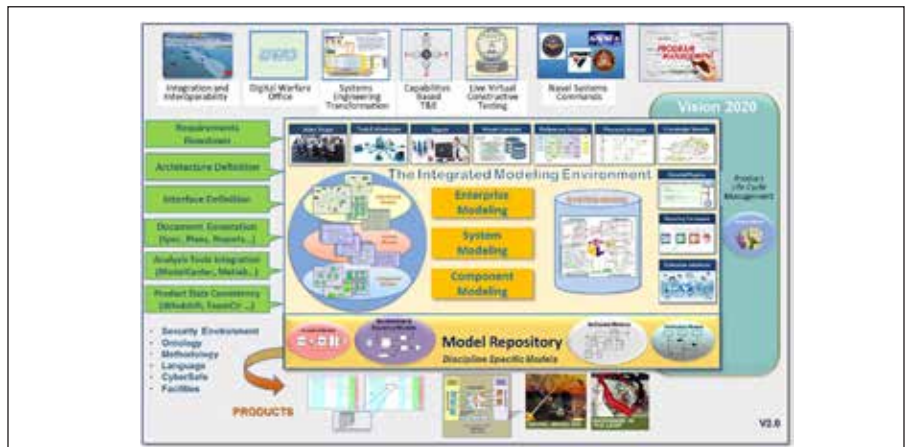
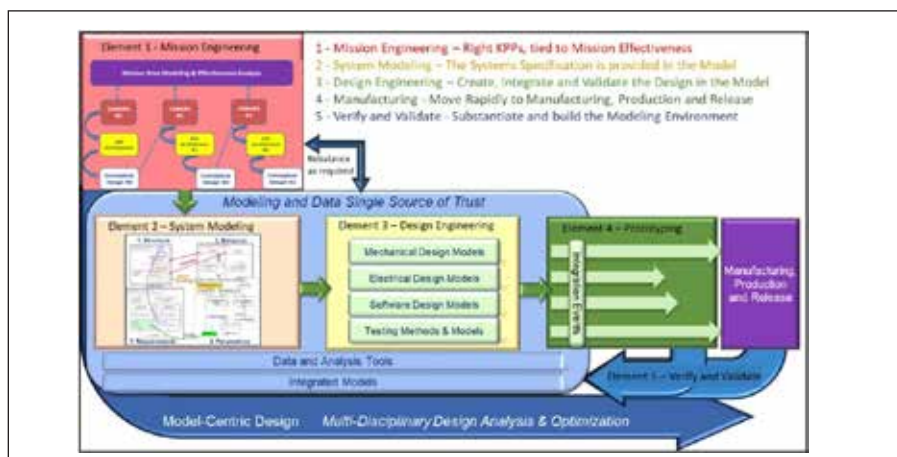


Figure 4. Vision of the Naval Enterprise Integrated Modeling Environment (IME) planned for the DON. (Figure provided by author.)

Assistant Secretary of the Navy for Research Development Test and Evaluation created and maintains the DON Digital Engineering Body of Knowledge. Both Digital Engineering Bodies of Knowledge focus on the underlying

fundamentals, enablers, guidance, and examples of DE implementation.

To expedite the implementation of DE, MCSC has been working closely with the Deputy Assistant Secretary of the Navy for Research Development



**Figure 5. Illustration showing how a model-based approach integrates to SE accomplishments. (Figure provided by author.)**

Test and Evaluation and its Navy SYS-COMs as core members of the Naval D/SET Working Group. The goal of this body is to create an environment that enables sharing of digital data and leveraging D/SET initiatives throughout the DON. Figure 4 provides a vision of the Naval enterprise integrated modeling environment planned for the DON, and Figure 5 provides an illustration showing how a model-based approach integrates into SE accomplishments. This D/SET Working Group serves as the single integrator of digital requirements, implementation, and products.

Within the DON, MCSC continues to work closely with its Navy partners to formalize the development, integration, and use of models; scale results from pilot projects across mission areas; collaborate with industry and other Services to capture best practices, provide an enduring authoritative knowledge source, and establish and share best practices for the development and assessment of data architectures, data standards, and data strategies. In addition, MCSC continues to work closely with its Navy partners to implement continuous improvement through the transformation of the culture and workforce to adopt and support DE across the lifecycle, fostering the development of the MBSE and DE workforce, and participating in community forums outside the naval and DOD enterprise to capture best practices, drive standards development, and support com-

mon government-industry engineering approaches and best practices.

MCSC continues to leverage DE capabilities and resources to support and integrate engineering and acquisition activities. The MCSC DE began in May 2018 with the establishment of the MCSC MBSE Integrated Product Team. Since then, MCSC has initiated DE and MBSE training across the command that is now a combination of ten courses—some completed virtually, others in-person—covering topics such as artificial intelligence, MBSE, agile software development, and DE foundations.

MCSC is in the process of developing a model-based enterprise. The model-based enterprise efforts aim to create an IME to support the utilization of model-based definition with a product lifecycle management tool to control product baselines. The end state will be a digitally connected organization that can leverage modern advances in digital data flow and control. Models will serve as the single point of truth for an item for all aspects of program development, manufacturing, and support, and changes distributed in realtime. Overall, the transformation journey has included the DE/MBSE training, the development of an MBE, and two MBSE pilot projects (Ground-Based Anti-Ship Missile, and Advanced Reconnaissance Vehicle). A model repository is being designed to host and aid in the conversion from traditional paper-based two-dimensional drawings and models to live, interactive three-dimensional

models. Other development efforts and achievements include an MCSC DC SEAL Vision for Digital Transformation comprised of the adoption of Agile methods, support for decision making, modeling and simulation, mission engineering, DE, and workforce transformation into a digital ready workforce.

The efforts are driven by a detailed set of objectives and key results and are tracked continuously. The DE tools and data will ultimately need to support all phases and activities across the traditional engineering life cycle “V” construct. The intent is not to change the engineering life cycle itself but to streamline and digitally integrate how it is executed. Integrated digital models, twins, simulations, standards, and specifications, combined within an ASoT provide engineers, designers, and other stakeholders with the full suite of tools to enable faster engineering cycle times as well as fewer inconsistencies and disconnects as programs pass through the various systems engineering technical review gates.

### The Impact

DE practices will be realized by a convergence of requirements development, architecture, MBSE, modeling and simulation, test and evaluation, and acquisition logistics activities and may eventually extend into the Naval IME as it evolves. The establishment of DE practices will create the foundation to transform current engineering practices at MCSC. The expected benefits and impact include improved processes, data sharing, model reuse, reduced cycle times, and the opportunity for numerous rapid iterations on designs, performance, mission engineering, and collaboration—all enabled through an integrated federated ASoT. This interconnected digital platform can enable ease of collaboration, speed of development, and iterations on model designs, data, and simulations to support more informed decision making and capability development. Continuous collaboration and design thinking approaches have enabled the team to envision, architect, and build the initial elements of DE within the command.

# Rethinking Marine Corps Non-Kinetic Deterrence

How can the Marine Corps better support the Joint Force's deterrence mission?

by LtCol Charles E. Anklam III & Maj Eric S. Hovey

Five years ago, the *2018 National Defense Strategy* shifted the U.S. military's focus from counter-insurgency to building its conventional capabilities to deter strategic adversaries, namely the People's Republic of China (PRC). This humble logic of safeguarding peace through a strong military is as ancient as warfare itself; *si vis pacem, para bellum*—if you want peace, prepare for war. The *2022 National Defense Strategy* continued this theme, highlighting the DOD's need to collaborate with allies and partners to strengthen U.S. deterrence against the PRC.<sup>1</sup> The Secretary of the Navy identified deterrence priorities for the U.S. Naval Services, advocating “the top priority for the Department of the Navy will be to develop concepts of operations and capabilities that bolster deterrence and expand our warfighting advantages vis-a-vis the People's Republic of China.”<sup>2</sup> The *what* of the U.S. military's role (deter) is abundantly clear; however, the *how* is left to the Services themselves to decide. The purpose of this article is to refine the Marine Corps' role in supporting deterrence, predominantly through actions below the threshold of armed conflict, within the U.S. Indo-Pacific Command (USINDOPACOM) theater of operation.<sup>3</sup>

Though much of the Navy and Marine Corps' publicized efforts to improve their deterrence capabilities have focused on retooling conventional forces (such as the Marine Corps' *Force Design 2030*) and modernizing and increasing the size of the Navy's fleet, the specific means of contributing to deterrence remains vague. Given this

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**>>Maj Hovey is a Marine Corps Officer with deployment experience with both the Ground and Air Combat Elements. He is a Foreign Area Officer, a member of the acquisitions workforce, and is currently serving as the Marine Attaché to Liberia.**

ambiguity and the broad umbrella of military activities that contribute to deterrence, this article focuses on the role that non-kinetic actions can play in this domain and seeks to clarify how the Marine Corps can support the Joint Force's deterrence mission.<sup>4</sup> The insights and recommendations presented in this article are thus not a critique of *Force Design 2030* but a complementary accompaniment meant to refine aspects of Marine Corps modernization that are underdeveloped.

To present this argument, deterrence is first defined, as currently codified in both joint and Navy/Marine Corps doctrine. Next, the Marine Corps' envisaged role as a deterrent force is examined, as seen through current guidance documents meant to restructure the force by 2030, and its anticipated employment as described in *A Concept for Stand-In Forces*. Analysis of these documents reveals shortfalls concerning the Marine Corps' role in supporting non-kinetic deterrence operations. Therefore, the case is made that the Marine Corps' role as a credible deterrent force against the PRC requires more detail concerning the MEF Information Group's (MIG) role in competing

against adversaries in the informational, diplomatic, and economic domains. Additionally, recommendations are presented on how the Marine Corps' ongoing talent management efforts can be leveraged to maximize engagement between interagency and partner nations within USINDOPACOM and more effectively execute non-kinetic influence operations to support deterrence.<sup>5</sup> The informational domain aspects of this article are particularly relevant to the larger joint force because, with the relatively recent designation of “information” as the seventh joint function, there is still considerable work to be done across all Services to establish common frameworks and best practices for information operations and information warfare.<sup>6</sup>

## Defining Deterrence and Influence Operations

To understand the Marine Corps' role as a deterrent force, it is necessary to understand the doctrinal underpinnings of deterrence. The Joint Force's role in deterrence is examined at length in two joint publications: *JP 3-0, Joint Operations*, and *JP 5, Joint Planning*. The first defines deterrence as “the pre-

vention of action by the existence of a credible threat of unacceptable counteraction and/or belief that the cost of action outweighs the perceived benefits.<sup>7</sup> Therefore, effective deterrence requires that a combatant command campaign plan implement a holistic communication effort that emphasizes a broad spectrum of U.S. military activities, including security cooperation with partner nations and force posture planning that demonstrates the willingness of the United States to employ forces in defense of its interests. This effort should include the use of Public Affairs that can quickly disseminate truthful and accurate information across multiple media venues to counter and expose potential adversaries messaging, as we have witnessed with clarity to counter Russian influence in the current war in Ukraine. This effort must also include a sustained presence by U.S. forces in a given theater, which may include forward basing, forward deployment of military forces, or pre-position assets. Thus, even if these deterrence actions fail, they will enable U.S. forces to quickly transition to combat operations in the event of an outbreak of hostilities.

*JP 5, Joint Planning*, builds on this definition of deterrence by providing more detail on the *means* that the U.S. government can take to achieve deterrence. Broadly, these are understood as flexible deterrent options (FDOs).<sup>8</sup> FDOs reflect actions across the entire diplomatic, informational, military, and economic (DIME) range of national power but are considered most effective when combined. Implicit in the use of FDOs is the idea that senior U.S. decision-makers will have a wide range of options during an emerging crisis to gradually apply pressure against an adversary, short of provoking full-scale combat. Examples of FDOs include initiating noncombatant evacuation procedures and withdrawing U.S. embassy personnel, as well as any actions (i.e. troop deployments) to gain the support of allies and friends. FDOs are inherently perception-based, meaning that the intended adversary is aware of these actions. FDOs serve two main purposes: first, they provide a visible and credible means to influence adver-

sary cost/benefit perceptions regarding an undesired activity; and second, they position U.S. military forces in an advantageous position to execute follow on operational plans or contingency plans in the event of hostilities.

Influence operations are another example of deterrence. While influence operations can be defined in different ways, for the purposes of this discussion, RAND's definition, which is mindful of the full scope of DIME activities, is particularly useful:

Influence operations are the coordinated, integrated, and synchronized application of national diplomatic, informational, military, economic, and other capabilities in peacetime, crisis, conflict, and post-conflict to foster attitudes, behaviors, or decisions by foreign target audiences that further U.S. interests and objectives.<sup>9</sup>

Influence operations are thus part of the "how" U.S. military forces can support deterrence within USINDOPACOM. Ensuring these operations are deconflicted and integrated across all

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### **Influence operations are thus part of the "how" U.S. military forces can support deterrence ...**

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the instruments of national power necessitates an integrated campaign plan, aligning military actions with other U.S. departments and agencies, and other inter-organizational partners.<sup>10</sup> It is here that the authors seek to clarify the Marine Corps' role in supporting and executing influence operations below the threshold of armed conflict to deter the PRC (or specifically the Chinese Communist Party) within USINDOPACOM.

Current DOD discussions of deterrence reinforce the understanding that military actions alone are insufficient to influence foreign adversaries. Secretary of Defense Lloyd J. Austin believes that the increasingly interconnected and in-

terdependent 21st-century landscape demands that governments not consider deterrence in a vacuum. This expanded view of deterrence, and the one to which this article ascribes, is defined as "integrated deterrence."<sup>11</sup> Integrated deterrence requires each military Service to contribute to the overall deterrence effort by working across boundaries not just with its fellow Services but other governmental agencies, partner nations, and allies as well. It encompasses the full DIME spectrum and extends to all domains—air, land, sea, as well as space and cyberspace. This expanded vision of integrated deterrence begs the question: are the Marine Corps' current modernization efforts and deterrence strategies fully aligned with this view of integrated deterrence?

### **What is the Marine Corps' Envisioned Role as a Deterrent Force?**

The Marine Corps, while taking bold and necessary changes to adapt itself to the challenge of fighting a pacing threat in a conventional conflict, does not have a detailed plan for integrated deterrence. This is best illustrated by two official documents which provide updates and guidance to the force, the *2021 Marine Corps Force Design Annual Update* and the *Tentative Manual for Expeditionary Advanced Base Operations (TMEABO)*. The former provides updates on the Marine Corps' efforts to modernize itself but frames its future role as a "stand-in force that can provide conventional deterrence against a pacing threat."<sup>12</sup> This is a narrow framing of the Marine Corps' deterrence role that emphasizes kinetic military actions, including long-range, precision expeditionary anti-ship missile fires and tactical mobility afforded by naval maneuver in the littorals. On the surface, *TMEABO* provides more detail on how the Marine Corps can achieve the goals of integrated deterrence because it addresses competition in the diplomatic, economic, and informational space, but it becomes clear that the preponderance of detail for the future force is geared toward conventional military operations. As one would expect a military document to do, it emphasizes kinetic fires and new military structural changes,

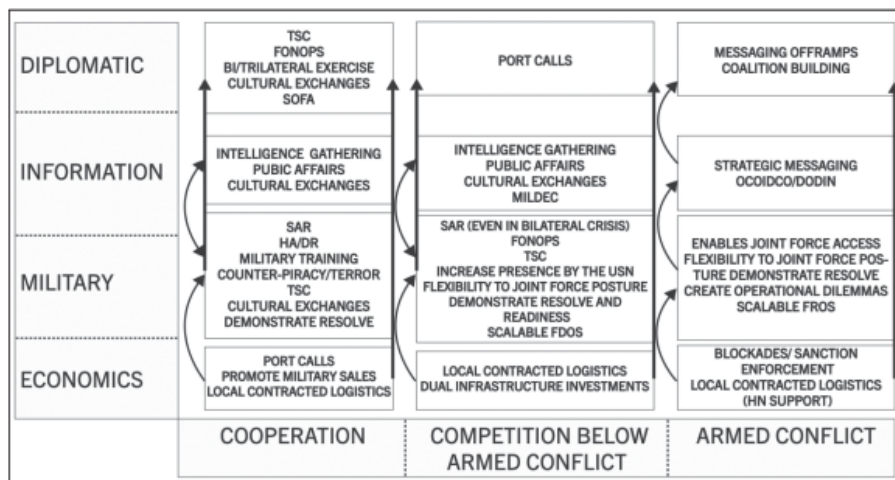


Figure 1. Application of Naval forces to enable DIME across the competition continuum.<sup>13</sup> (Figure provided by author.)

such as the composition of new Marine Littoral Regiments.

*TM EABO* hints at what role the Marine Corps could provide within the framework of integrated deterrence, but falls short in detail concerning the diplomatic, informational, and economic domains. Figure 1 graphically depicts potential roles Marine Corps forces could provide within a DIME framework across the full spectrum of competition with an adversary from cooperation to armed conflict.

On the diplomatic and economic front, *TM EABO* effectively outlines the importance of diplomacy in enabling the Marine Corps' role as a deterrent force (such as supporting basing and staging rights and investments in foreign-nation infrastructure) but does not detail how the Marine Corps can contribute to diplomatic or economic engagement. In fact, the current trendlines for cross-service and cross-agency cooperation in this space are negative. The Marine Corps has shuttered the Marine Corps Security Cooperation Group, an O-6 command that coordinated all security cooperation activities for the force, and it is the only Service to not have a dedicated foreign area officer (FAO) track for its FAOs.<sup>14</sup> As increasingly large volumes of scholarly work show, the analytical pathologies associated with developing intelligence cultures—whereby data collection and information processing of an adversary acknowledges not only the

target culture, but one's own strategic nature—is perhaps the largest obstacle hamstringing intelligence gathering.<sup>15</sup> As related to USINDOPACOM, the cultural distinctions are so significant between Chinese and U.S. culture that career service officers who thoroughly understand these disparities are not just desired but absolutely required to help analyze and adjust methodologies.<sup>16</sup> Currently, the absence of these dedicated FAOs leaves the Marine Corps at a profound disadvantage when it comes to engaging with both U.S. government agencies and host-nation forces to ensure access and bilateral ties through security-cooperation activities, since the Joint Force relies disproportionately on FAOs in embassies and combatant command staffs to prioritize this economic and diplomatic engagement.<sup>17</sup> While proposed talent management changes have indicated the possibility of a limited technical career path pilot for the Marine Corps' international affairs community, the creation and retention of a dedicated cadre of these experts for USINDOPACOM cannot come soon enough.<sup>18</sup>

Similarly, while *TM EABO* provides more detail on the Marine Corps' role in deterrence in the information domain, there are gaps in detail that could undermine the effectiveness of the force. First, there is an opportunity for confusion because instead of adopting the Navy's concept of information warfare (IW) or the *JP 3-13's* use of informa-

tion operations, *TM EABO* promulgates a new term of operations in the information environment (OIE) to denote competition within the information environment.<sup>19</sup> Additionally, while much helpful detail is put into outlining the new conventional fires units of the future Marine Corps—the Marine Littoral Regiment—there is scant information about the role that MIG or the Marine Corps Information Operations Center will play in supporting EABO. The desirability of OIE is stated at length, but the vague and at times contradictory nature of how these operations are envisioned gives pause. The recent publication of *MCDP 8, Information*, provides much-needed clarity on the Marine Corps' conception of information and the forthcoming *MCWP 8-10* may provide more answers on *what* warfighting in an information environment entails, but gaps remain.<sup>20</sup>

A hypothetical vignette helps illustrate why this lack of detail for OIE could undercut the viability of the Marine Corps to serve as a non-kinetic deterrent force. Consider a scenario where U.S. policymakers at the strategic level want to deter the Chinese Communist Party from taking aggressive action in a specific region of USINDOPACOM. Currently, the Marine Corps EABO construct provides a clear roadmap for how tactical-level forces can deploy to austere islands and establish temporary and remote bases to deter Chinese aggression through the threat of precision long-range fires. Presumably, these forces would have delegated Title 10 authorities that allowed tactical-level commanders the ability to manage the risks/rewards of passive sensing, vice actively firing on enemy forces, and act accordingly. Non-kinetic OIE actions, however, that include attacking and exploiting enemy networks and executing influence operations are not clearly defined in this EABO scenario. Specifically, while the Littoral Regiments executing EABO would likely have MIG enablers to support OIE, the Marine Corps' tactical-level emphasis on decentralized command and control is incompatible with some non-kinetic OIE actions (such as offensive cyberspace operations) which require strategic-level



authorization.<sup>21</sup> Moreover, to the extent that influence operations are mentioned in the EABO construct, it is to “create a permissive environment for EABO,” which is confusing; EABO should not be an end state in and of itself, rather influence operations should be part of a larger EABO action that is part of a joint effort to deter the Chinese Communist Party.<sup>22</sup> It is, therefore, unclear which Marine Corps entity is managing the Service’s information-related capabilities to ensure that EABOs are contributing to the larger joint integrated deterrence campaign.<sup>23</sup>

In sum, both the Marine Corps’ *Force Design* and *TM EABO* steering documents provide useful and constructive guidance to shape the future of the force but fall short of the requirements of integrated deterrence. There is effective guidance as concerns the expansion of conventional fires and the Marine Corps’ role in supporting the military aspects of deterrence, but insufficient detail across the other domains of competition in the diplomatic, economic, and information realms. The following section provides constructive recommendations to address some of these gaps to strengthen future iterations of *Force Design* and *TM EABO* and improve the Marine Corps’ ability to act as a deterrent force in USINDOPACOM.

### Addressing Deterrence Shortfalls in the Informational Domain

As addressed in *A Concept for Stand-In Forces*, forward-deployed forces reassure the Nation and allies and partners through “the application of military power on the part of adversaries by establishing forces designed to persist forward alongside allies and partners within a contested area, providing the fleet, joint force, interagency, and allies and partners more options for countering an adversary’s strategy.”<sup>24</sup> Executing influence operations to deter China’s leaders requires a close integration with allies and partners in substantively different ways than the United States is currently doing now. Simply “being there” with an ally conducting military-to-military training is no longer sufficient. The types of partner

engagements, and where Marines conduct them, need to be part of a larger, synchronized effort that is tracked over time. It is here that more clearly defining the role of the MIG in the Marine Corps’ EABO construct could help provide clarity on how the Marine Corps supports integrated deterrence. This would include establishing a collectively agreed-upon understanding of what the OIE is between the Navy and Marine Corps and reconciling doctrinal distinctions between the two Services. Lastly, the Marine Corps needs to ensure that it can provide quantifiable means to support influence operations within the larger USINDOPACOM deterrence campaign.

A critical first step that the Marine Corps could take to improve the efficacy of the MIGs in facilitating deterrence operations would be to reconcile both internal doctrinal confusion about OIE and amongst external stakeholders, especially within the Navy. The *TM EABO* handbook outlines this point, noting that:

The naval character of EABO demands that littoral forces execute OIE in close coordination with fleet objectives. OIE planners and enablers should operate in close coordination with, and, in many cases, under the cognizance of the Navy IWC in composite warfare.<sup>25</sup>

Despite this seemingly straightforward proposition, however, the language and terminology necessary for guiding OIE are fraught with confusion. At the time of writing, the Marine Corps’ vanguard of the forward-deployed MEF, III MIG, declares that it “coordinates, integrates, and employs capabilities for *information environment operations* in order to ensure the MAGTF commander’s ability to facilitate friendly forces maneuver and deny the enemy freedom of action in the information environment [emphasis added].” This is problematic, however, because the Marine Corps’ position on what information environment terminology keeps changing. In 2020, a joint memo between the Deputy Commandant for Information (DCI) and the Deputy Commandant, Combat Development and Integration (DCDI) specifically

highlighted the term “information environment operations” as defunct, meant to be replaced by OIE to better align with joint and DOD conventions.<sup>26</sup> Moreover, this same memo noted that the Marine Corps’ use of OIE encompasses a broader term of activities that extend beyond the Navy’s use of IW, and which in turn has organized its larger IW community (IWC). Then, in 2023, a new memorandum between the DCI and DCDI canceled the previous memo and rescinded the use of OIE.<sup>27</sup> The back-and-forth shifts beg the question, how can III MIG effectively integrate with IWC echelons if they do not have a common language? If it is impossible to reconcile the doctrinal differences between the Marine Corps community of information professionals and the Navy’s IWC community, how will EABO non-kinetic operations nest within a larger naval campaign?

While *TM EABO* acknowledges the need for experimentation, testing, and integrated training between the MIGs and the Navy’s IWC, a helpful starting point would be to force the issue of adopting a common terminology to frame the information environment. At a minimum, if the Navy’s IWC and the Marine Corp’s Deputy Commandant for Information have forces and missions too fundamentally different to allow for a common understanding of the information environment, then EABO doctrine should acknowledge this difference and articulate what non-kinetic efforts the Marine Corps OIE enterprise *can* support. Only once this Gordian Knot has been cut—perhaps with the publishing of *MCWP 8-10*—can equally pressing and undefined challenges impacting both the IWC and MIGs can be worked out. This includes developing a common understanding of the authorities needed for commanders to execute non-kinetic deterrence operations as part of EABO and effectively exercising those authorities.<sup>28</sup>

A second action that the Marine Corps could take to improve its deterrence capabilities would be to develop a centralized cell for coordinating influence operations within USINDOPACOM. Whereas the larger *Force Design*

2030 vision undergirding EABO focuses with laser-like precision on the need to buy long-range missiles and larger numbers of amphibious platforms to deter the PRC (through the threat of kinetic force), there is not a corresponding level of detail about coordinating larger influence operations. This is most apparent in the recommendation for Marine Corps forces to develop an *assessment plan* as an integral part of EABO planning and execution.<sup>29</sup> This approach is flawed because it fails to take into account the Commandant's mandate to focus on the PRC as the pacing threat in USINDOPACOM.<sup>30</sup> In fact, USINDOPACOM should have a larger campaign plan geared toward deterring the Chinese Com-

(MARFORPAC) or III MEF that acts as the operational-level filament linking all tactical-level EABO actions to the theater-level deterrence campaign, in the information domain, and across all other warfighting functions. While it is beyond the scope of this paper to outline the manning requirements for such a cell in detail, it would require at minimum a combination of Marines with information operations and foreign area expertise to ensure effective collaboration across joint and inter-agency organizations.

The designation of a specific unit to own the assessment plan is a deliberate, but necessary, break with current doctrine. In its current form, the joint assessments doctrine is written

port the Joint Force's larger strategic goal of integrated deterrence against the PRC.

### Addressing Deterrence Shortfalls in the Economic and Diplomatic Domains

The creation of a dedicated assessment plan has other embedded advantages; namely, it would help flesh out the Marine Corps' role in supporting the economic and diplomatic domains of integrated deterrence. Going back to Figure 1, *TM EABO* already does a great job of outlining various activities that could support deterrence in these domains. For example, promoting foreign military sales in country X could conceivably create economic incentives to maintain close relations with the U.S. Government at the expense of the PRC while increasing port calls in country Y could do the same on the diplomatic front. Or perhaps not—if country X has an unpopular government, arms sales could drive public opinion against the United States! If country Y had a history of conflict with the U.S. military, a port call meant to improve bilateral relations might just as easily be exploited as evidence of American imperialism. The takeaway for the Marine Corps is that integrated deterrence has messy and subjective aspects that require expertise to navigate successfully.

If a dedicated assessments cell is the solution to this problem—the focal point for tracking the effectiveness of non-kinetic deterrence operations—the manning and staffing of this cell require further scrutiny. While the Marine Corps has taken great steps to improve the capabilities of its forces in the informational domain, such as creating new cyberwarfare MOSs and modernizing the training pipeline for intelligence officers, it has struggled to implement similar efforts for Marines with the specialized regional training that would facilitate competition in the economic and diplomatic realms.<sup>34</sup> Building off the insights of other Marines who have studied this issue, the Marine Corps would benefit greatly by developing a supporting concept for international affairs operations which would inform the Service's contributions to integrated

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### **The takeaway for the Marine Corps is that integrated deterrence has messy and subjective aspects that require expertise to navigate successfully.**

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munist Party from aggressive actions, and the Marine Corps should have an operational-level cell that integrates and quantifies Marine Corps contributions to this plan. Supporting integrated deterrence demands years, if not decades-long time horizon, and the tracking of competition below the level of conflict across the full DIME spectrum.<sup>31</sup>

As the authors have noted in previously published work, the informational domain requires a dedicated information operations cell and assessments plan.<sup>32</sup> Tracking influence operations would build off this notion of an information operations cell but would be more expansive given the requirements of integrated deterrence to account for the full DIME spectrum. Any Marine Corps force within theater or supporting from the continental United States CONUS would therefore need to coordinate their actions to tie into this assessment plan for influence operations, which would in turn support USINDOPACOM's plan. The most straightforward way to address this shortfall would be to have a permanent cell at Marine Corps Forces Pacific

generally to apply to any emergent scenario where a military force must assemble, begin problem framing, and address a crisis.<sup>33</sup> The Marine Corps, however, is accepting the risk of being less prepared for emergent crises worldwide, by focusing predominantly on the threat posed by the PRC within USINDOPACOM. The urgency and difficulty of this challenge demand an assessment plan that is built now, kept updated, and that any rotational force or CONUS supporting component can review in realtime to see where they can support the mission. To maximally gauge the effectiveness of deterrence, consistent measures of effectiveness and measures of performance must be developed and tracked over years or decades at the combatant command level, not reinvented every six months by tactical/operational level Marine Corps forces during rotational force deployment cycles. Failure to integrate Marine Corps forces' actions into a larger USINDOPACOM deterrence campaign will likely result in an ineffectual, patchwork effort of tactical-level assessment plans that do not sup-

deterrence in the political and economic domains.<sup>35</sup>

Developing this supporting concept for international affairs operations would help the Marine Corps maximize its deterrence capabilities in concert with joint and interagency forces. To support this effort, the Marine Corps can start by accelerating nascent efforts to create an international affairs primary MOS, rectifying the shortfall that the Marine Corps is alone amongst the Navy, Air Force, and Army for not having an FAO primary MOS.<sup>36</sup> As part of its most recent March 2023 update to *Talent Management 2030*, the Marine Corps would be well-served by approving a technical career path pilot for the international affairs community no later than the third quarter of the calendar year 2023, in order to support future deterrence operations within USINDOPACOM.<sup>37</sup> These talent management adjustments would not only benefit the Marine Corps, but would dovetail nicely with the Joint Force's tasking—per the most recent National Defense Authorization Act—to review “the process by which Foreign Area Officers ... are recruited, selected, trained, assigned, organized, promoted, retained, and used in security cooperation offices, senior defense roles in U.S. embassies, and in other critical roles of engagement with allies and partners.”<sup>38</sup>

## Conclusion

Since the *2018 National Defense Strategy* formally shifted the U.S. armed services from a predominantly counterinsurgency, Global War on Terror focus to a conventional, great-power competition footing, the Marine Corps has made great strides toward improving its deterrence capabilities. This progress is best exemplified by the development of forward-deployed, stand-in Marine forces using long-range precision kinetic fires assets such as the Naval Strike Missile, to serve as a deterrent force within USINDOPACOM.<sup>39</sup> For the Marine Corps to be effective in deterrence operations below the threshold of armed conflict, however, closer scrutiny is needed regarding its organization and activity in the diplomatic,

informational, and economic domains. Possessing the ability to project conventional fires within the theater of operation is no longer sufficient—integrated deterrence necessitates an in-depth and synchronized approach encompassing the whole of government.

As outlined in this article, addressing these deterrence shortfalls starts first by better defining the role of the MIGs within the informational domain. The Marine Corps' ability to serve as a stand-in force capable of operating in the weapons engagement zone of hostile forces will require close integration with the Joint Force, U.S. allies and partners, and a robust reconnaissance/counter-reconnaissance effort, which the MIG will play a vital role in. For the MIGs to be effective, however, the role of the Marine Corps' OIE enterprise within EABO must be clearly articulated and deconflicted with the Navy's IWC. Additionally, a formal assessments cell must be established, whether within 3d MIG, Marine Forces Pacific, or another III MEF entity, to provide long-term, longitudinal tracking of trends within the operating environment to USINDOPACOM. The feedback and monitoring from this cell will help guide all non-kinetic deterrence actions below the level of armed conflict, maximizing the utility of the Marine Corps' forward-deployed forces within USINDOPACOM.

Developing an assessments cell will also improve the Marine Corps' deterrence capabilities within the economic and political domains. Such a cell will need subject-matter experts (FAOs, RAOs, native language speakers, etc.) to accurately develop and track the various metrics over time. Only with these subject-matter experts integrated into a cell, and working across the larger joint, interagency, and allied and partner forces of USINDOPACOM, can Marine Corps forces begin to track the complex and integrated effects of non-kinetic actions across multiple sectors. These assessments cells, combined with the Marine Corps' expanded conventional-fires capabilities through the execution of expeditionary advanced base operations, will give Marine Corps forces the best means possible to support deter-

rence, in concert with U.S. allies and partners.

This is a vast increase of responsibility beyond the Marine Corps' traditional role of serving as an amphibious force-in-readiness, but it is a necessary and feasible jump in capability that aligns with the *National Defense Strategy's* guidance and the exigencies of integrated deterrence. Moving forward, the Marine Corps must think more broadly about its role in supporting the broader range of competition with China, including the economic, political, and informational domains. This broader focus is essential for the Marine Corps to be able to contribute to the Nation's defense as a lethal and non-lethal deterrent arm of the Joint Force.

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