Combat Development and Integration
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# OPERATIONS ANALYSIS DIRECTORATE

*FY17Q4 Studies Update*

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# OPERATIONS ANALYSIS DIRECTORATE

*FY17Q4 Studies Update*

This quarterly update is the first in a regular series of OAD updates designed to inform the Marine Corps of the efforts currently underway as well as recently completed efforts.

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# COMPLETED STUDIES

| **Study Title:** | **SPMAGTF-CR-CC VMM Aircraft Requirement** |
|---|---|
| Date Completed: | April 2017 |
| Study Sponsor: | TF-51/5th MEB |
| Lead Analyst Organization: | COAST |
| Marine Corps Capability Areas: | 1.0 Force Support |
| 2017 Warfighting Challenge Areas: | N/A |
| Keywords: | MV-22, aircraft readiness, |
| Contact Information: | Maj Adam Foley, adam.foley@usmc.mil |

**Study Summary:**

This analysis examined assigned unit tasks, historical aircraft readiness, and mission requirements to recommend an appropriate number of MV-22 aircraft assigned to the SPMAGTF-CR-CC VMM Squadron. Prior analysis was updated with new data to provide insight into aircraft performance. Historic Non-Combat Evacuation and Foreign Humanitarian Assistance/Disaster Relief information was use to contextualize aircraft requirements.

**Gaps Identified by the Study:**

None Identified.

**Solutions/Impacts/Recommendations:**

Given the classification of the details, additional information should be sought on the SIPR.

| **Study Title:** | **Maritime Prepositioning Force (MPF) Crisis Response Force Package (CRFP) Seabasing Enabled Study** |
|---|---|
| Date Completed: | May 2017 |
| Study Sponsor: | MExWID, CDD |
| Lead Analyst Organization: | Capabilities Analysis Branch |
| Marine Corps Capability Areas: | 3.0 - Force Application |
| 2017 Warfighting Challenge Areas: | 9 - Sustain the Expeditionary Force |
| Keywords: | MPF, CRFP, seabasing, offloads |
| Contact Information: | Mr. Ted Roofner, ted.roofner@usmc.mil |

**Study Summary:**

The purpose of this study was to conduct modeling and analysis to determine timelines for offloading the Maritime Prepositioning Force (MPF) Crisis Response Force Package (CRFP) under varying conditions and identify enhancements that will enable the deployment to be conducted more effectively. The CRFP is a subset of the MPF Marine Expeditionary Brigade (MEB) equipment set loaded across three ships (LMSR, T-AK, and T-AKE) representing all elements of the Maine Air Ground Task Force (MAGTF) including up to 4,809 Marines. The study analyzed pier-side, in-stream (3 nm), and at sea (12 nm) offloads of the full and partial CRFP equipment set. The study team identified several limiting factors and provided recommendations to improve the operational deployment of the CRFP.

Working with subject matter experts from Blount Island Command (BIC), Headquarters Marine Corps, and across the operating forces, data was collected and refined, key assumptions were documented, and the enhanced model was validated. A total of 67 cases were defined for modeling and analysis across 7 offload scenarios. Specific conditions and key enablers such as connectors were varied across the different cases in order to determine the impacts on the CRFP offload. This study established baseline timelines for current CRFP offload capabilities, and developed tools and techniques that can support future recapitalization decisions of MPF shipping.

**Gaps Identified by the Study:**

- Using organic connectors in sea state 2 (SS2), the full CRFP can be offloaded in-stream (from 3 nm offshore) in 5.1 days. However, this increased to 11.0 days in sea state 3 (SS3), because the Roll-on, Roll-off Discharge Facility (RRDF) cannot be used in high seas.
- Without enhanced cranes, the in-stream offload takes 11.0 days.
- At-sea (12 nm offshore) offload is far more challenging in SS3 since conditions preclude anchoring ships which prevents employing cranes as well as the RRDF. Even augmented with the Expeditionary Support Dock (ESD) and three operating Landing Craft Air Cushions (LCACs), approximately 42% of equipment by weight cannot be deployed ashore.

**Solutions/Impacts/Recommendations:**

- The two organic LCM-8 landing craft should be utilized to the maximum extent to speed the CRFP offload. Adding even one additional LCM-8 or causeway ferry (CF) can reduce the in-stream offload timeline by approximately 16% in SS2, down to 4.3 days.
- Fielding enhanced cranes with motion compensation technologies can mitigate the impact of operating in SS3 potentially reducing the in-stream offload timeline from 11.0 to 6.3 days.
- Offloading supplies from T-AKE is challenging due to the lack of organic connectors. Adding two LCM-8 for surface offloading substantially improves throughput. The study also highlighted the benefits of using K-MAX, MV-22, and CH-53E to conduct vertical offloading of supplies via the flight deck.
- For pier-side offloads, unloading pallets from the T-AKE is the driving factor requiring 1.1 days to complete.

| **Study Title:** | **MAGTF Unmanned Expeditionary (MUX) Capability and Cost Study** |
|---|---|
| Date Completed: | June 2017 |
| Study Sponsor: | FMID |
| Lead Analyst Organization: | Capabilities Analysis Branch |
| Marine Corps Capability Areas: | 2.0 - Battle Space Awareness |
| 2017 Warfighting Challenge Areas: | 10 - Protect the Force |
| Keywords: | Group 5 UAS, MUX |
| Contact Information: | Mr. David Gibbons, david.gibbons@usmc.mil |

**Study Summary:**

The purpose of this study is to conduct resource informed requirements analysis to:
• Review and validate capability gaps documented in the MAGTF Unmanned Aircraft System (UAS) Expeditionary Capability (MUX) Initial Capabilities Document (ICD).
• Refine requirements needed to fill the gaps.
• Compare cost and capabilities to define the requirements trade space and provide a starting point for an analysis of alternatives (AoA).
This study was designed to prepare the way for a MUX AoA as well as provide insights for a MUX CDD by examining the following issues.
How critical are each of these stated capability gaps?
What is the time frame when the various alternative capabilities are available?
What are the capability tradeoffs between land based and ship based Group 4/5 systems?
What are the cost impacts associated with the different potential solutions?

**Gaps Identified by the Study:**

The USMC has capability gaps for supporting ISR missions, Communication Relay missions, SIGINT missions, Radar Jamming missions, CAS and DAS missions, and Airborne Early Warning Radar missions. Capability gaps were not found for Communication Jamming missions, Aerial Escort missions, or Airborne Cargo Resupply missions.

**Solutions/Impacts/Recommendations:**

Recommended requirements for the CDD (draft) include:

- If ship based – two aircraft should be capable of providing 24 hr ISR coverage for 3 days at a range between 650 NM (T) and 900 NM (O).
- If land based – two aircraft should be capable of providing 24 hr ISR coverage for 3 days at a range between 900 NM (T) and 1200 NM (O).
- If FVL has primary escort duty for V-22 then MUX aircraft require airspeed between 200 kts (T) and 300 kts (O). If MUX has primary escort duty for V-22 then MUX needs to maintain between 240 kts (T) and 300 kts (O).
- Need to specify communication capability inherent to the aircraft and any payload capability.
- Aircraft must have sufficient power to operate; 1 EW pod (such as IT block X) and 2 other non-radar payload types simultaneously (T), 2 EW pods (such as IT block X) and 1 other non-radar payload type simultaneously or operate an airborne early warning radar (O).
- The aircraft shall be capable of carrying: JAGM / AGM-114R, GBU 54/12/38, GBU 39/40 (T), AIM-9X, HARM, and AIM-120 (O).
- A ship based aircraft should be able to deploy 500 lbs of munitions out to 650 NM (T), 2,000 lbs of munitions out to 900 NM (O).
- A land based aircraft should be able to deploy 500 lbs of munitions out to 900 NM (T), 2,000 lbs of munitions out to 1200 NM (O).
- The ability to be refueled in the air does not need to be a MUX requirement if the system can meet the desired endurance at range requirements.
- If a cargo resupply mission remains a MUX requirement; the aircraft should carry 3,000 lbs (T) 6,000 lbs (O) out to 100 NM.

| **Study Title:** | **Small Unmanned Logistics System (ULS) Capability Analysis** |
|---|---|
| Date Completed: | July 2017 |
| Study Sponsor: | DC, I&L |
| Lead Analyst Organization: | Capabilities Analysis Branch |
| Marine Corps Capability Areas: | 4.0 - Logistics |
| 2017 Warfighting Challenge Areas: | 9 - Sustain the Expeditionary Force |
| Keywords: | Unmanned logistics system, small ULS, medium ULS |
| Contact Information: | Mr. Mike Snow, francis.snow@usmc.mil |

**Study Summary:**

The study informs ongoing logistics analysis for the use of small (55-lb and 105-lb payload) and medium (500-lb and 1100-lb payload) unmanned aerial logistics capabilities providing resupply to the companies, platoons, squads, and reconnaissance teams. The study provides potential supply item packaging in the Marine inventory that could be transported by small and medium unmanned systems as well as recommendations for areas of focus for immediate development. Additionally, it identifies distances and a method of use that minimizes the impact on manned aviation while maximizing efficiency of unmanned logistics system (ULS) usage.

The study focused on the scenario Wargaming Vignette 2 from MCWL's Unmanned Logistics Systems Wargame 2016. The scenario represented the most demanding conditions for a MEU ashore in combat operations. The primary issues for analysis post wargame were determining optimal packaging for ULS options, optimal range, and appropriate payloads for small and medium ULS options. A total of five ConOps for resupply were analyzed. Those ConOps ranged from centralized resupply via ULS (resupplying all units from the LSA and from the Seabase), two ConOps of decentralized resupply via ULS (LSA to BLT, BLT to Companies, and Companies to Platoons/Teams), and a combination of manned aircraft resupply and ULS.

**Gaps Identified by the Study:**

The following gaps were identified if logistics is going to be distributed by ULS:

- All classes of supply had to be re-packaged to effectively utilize Small ULS (SULS) and Medium ULS (MULS).
- Minimum SULS payload of 55 lbs is required to deliver at 5-gallon water can. Minimum MULS payload of 1100 lbs can deliver all class I, III, and V, except the line charge ammo. MULS with a 500 lb payload is capable of delivering over 99% of classes I, III, and V requirements of scenario.
- A range threshold of 30 miles for SULS and 75 for MULS proved optimal for the scenario regardless of payload capability.

**Solutions/Impacts/Recommendations:**

- The MULS is the backbone of the logistics flow. Place emphasis on development and fielding of a MULS first.
- The optimal packaging is the elemental level for all supplies. Specifically, the elemental level is defined as the water cans, MRE cases, fuel cans, ammunition by can or box depending on the DODIC, etc…
- The ULS should not be limited to carrying just classes I, III, and V. Use the ULS to carry all classes of supply.
- A Medium ULS should be able to carry at least 500 pounds. This will enable resupply of all class I, III, and V supplies except 155mm ammunition and line charges. A MULS with a payload of 1100-lbs can carry all but line charges.
- The ULS can deliver supplies to units, freeing manned aircraft to conduct other missions. The ULS can carry supplies that are in excess of a full aircraft, increasing efficiency of manned systems.
- The fewest total MULS and SULS comes from distribution from the LSA directly to the unit.

| **Study Title:** | **Analyzing Aviation Readiness of the Crisis Response SPMAGTFs (Central and Africa Commands)** |
|---|---|
| Date Completed: | September 2017 |
| Study Sponsor: | SPMAGTF-CR-AF and SPMAGTF-CR-CC, TF-51/5th MEB |
| Lead Analyst Organization: | Current Operations Analysis Support Branch |
| Marine Corps Capability Areas: | 1.0 - Force Support |
| 2017 Warfighting Challenge Areas: | 9 - Sustain the Expeditionary Force |
| Keywords: | readiness, MV-22, SPMAGTF ACE |
| Contact Information: | Maj Holly Zabinski, holly.zabinski@usmc.mil |

**Study Summary:**

This paper is a compelation of multiple lines of effort performed by OAD deployed analysts from 2015 to 2016 in support of the Air Combat Elements at the SPMAGTFs at Africa and Central Commands. This analysis provided insights on aircraft readiness in terms of supply, maintenance, and operations.

**Gaps Identified by the Study:**

The full paper can be obtained by contacting OAD. Distribution authorized to the Department of Defense and U.S. DoD contractors only.

**Solutions/Impacts/Recommendations:**

Analysis continues at the SPMAGTFs to inform decisions.

# ON-GOING STUDIES

| Title | Sponsor | POC | e-mail | Classification | Key Words |
|---|---|---|---|---|---|
| Information Environment Operations Metrics Study | ADC, IW | Max Hipsher (CAB) Contracted Study | max.hipsher@usmc.mil | SECRET | IW, IW metrics, information environment, information environment metrics |
| COMBAT XXI Maintenance & Sustainment | CAB, NPS | Mr. Al Sawyers (CAB) Mr. Curt Blais (NPS) | william.sawyers@usmc.mil | SECRET | COMBAT XXI, NPS research panel, NRP |
| Wargaming Requirements | CDD/MID | Mr. Brett Telford (MCMSO) | brett.telford@usmc.mil | UNCLASS | requirements analysis, POM, capabilities development |
| Future Vertical Lift AoA | DC Aviation | Dennis Rude (CAB) | dennis.rude@usmc.mil | SECRET | future vertical lift, UH-1 replacement, AH-1 replacement, FVL AoA |
| NATO SAS Study Effort on Integration of Women into Ground Combat Units | DC CD&I | Ms. Laura Chewning (AB) | laura.chewning@usmc.mil | UNCLASS | gender integration |
| Analytic Support to POM-19 Resource-Informed MCEIP Development | DC CD&I | Mr. Rob Grillo (AIC) | robert.grillo@usmc.mil | UNCLASS | resource-informed, POM, MCEIP |
| Analytic Support to POM-20 Resource-Informed MCEIP Development | DC CD&I | Mr. Rob Grillo (AIC) | robert.grillo@usmc.mil | UNCLASS | resource-informed, POM, MCEIP, capabilities-based assessment |
| Wargaming Catalogue Initiative | DC CD&I / Futures Directorate / Wargaming Division | Mr. Bill Inserra (AIC) | william.inserra@usmc.mil | UNCLASS | wargame |
| FY17 Wargaming Analytic Support | DC CD&I / Futures Directorate / Wargaming Division | Mr. Bill Inserra (AIC) | william.inserra@usmc.mil | UNCLASS | wargame, adjudication, JWAM, SWIFT |
| Cannon-Delivered Area Effects Munition AoA | DC CD&I, CDD, FMID | Maj Shane Edwards (JEA) | shane.edwards@usmc.mil | SECRET | DPICM replacement, requirements analysis, capabilities development |
| Incremental Implementation of Personnel Protective Equipment | DC CD&I, CDD, FMID | Mr. Dave Sadlier (AB) | david.sadlier@usmc.mil | UNCLASS | equipment, mobility |
| KC-130 Utilization Currently and in 2025 | DC CD&I, FMID | Mr. Rob Stevenson (JEA) | robert.stevenson1@usmc.mil | TBD | KC-130J, PMAA, VMGR |
| FMAST V | DC CD&I, TFSD | Mr. Jim Keller (AB) | james.f.keller@usmc.mil | UNCLASS | OR Tools, TFSMS |

| Title | Sponsor | POC | e-mail | Classification | Key Words |
|---|---|---|---|---|---|
| Logistics Metrics in Support of Major Combat Operations | DC I&L | Maj Jason Fincher (AIC) | jason.h.fincher@usmc.mil | UNCLASS | logistics, metrics, planning factor, sustainment, supply |
| Intermediate Ground Supply Capacity Study | DC I&L | Maj Jason Fincher (AIC) | jason.h.fincher@usmc.mil | UNCLASS | intermediate, supply, capacity, throughput, service request, warehouse |
| MAGTF-TC Equipment Allowance Pool Analysis | DC I&L | Mr. Rick Clinger (AB) | richard.clinger@usmc.mil | UNCLASS | equipment, readiness |
| Analysis of Provisional Unit Equipment Management | DC I&L | Maj Holly Zabinski (AB) Contracted Study | holly.zabinski@usmc.mil | UNCLASS | equipment, readiness |
| Evaluation of the War Reserve System in Order to Improve Efficiency and Effectiveness | DC I&L | Ms. Laura Chewning (AB) | laura.chewning@usmc.mil | UNCLASS | equipment, logistics |
| Logistics Concept of Support for III MEF Cold Weather and Mountain Warfare Equipment | DC I&L/III MEF | Mr. Rick Clinger (AB) | richard.clinger@usmc.mil | UNCLASS | logistics, equipment |
| Marine Corps Integration Implementation Research and Assessment | DC M&RA | Ms. Laura Chewning (AB) | laura.chewning@usmc.mil | UNCLASS | gender integration |
| Naval Standard Score for Jet Selection | DC M&RA | Ms. Sherry Starego (AB) | sherry.starego@usmc.mil | UNCLASS | aviation, manpower |
| Special Duty Assignment Pay | DC M&RA | Mr. Iric Bressler (AB) | iric.bressler@usmc.mil | UNCLASS | manpower |
| Marine Family Measurement | DC M&RA | LCDR James Carsner (AB) | james.carsner@usmc.mil | UNCLASS | manpower, Marine Family |
| Measures of Effectiveness for Sexual Assault Programs | DC M&RA (MF) SAPR Office | Mr. Rick Clinger (AB) | richard.clinger@usmc.mil | UNCLASS | SAPR, sexual assault |
| USMC Reliance on Space-based Capabilities | DC PP&O | Mr. Andy Farnsler (JEA) | andrew.farnsler@usmc.mil | SECRET | space, A2AD, risk analysis, metric development |
| Assessment, Monitoring, and Evaluation (AM&E) of USMC Security Cooperation (SC) | DC PP&O | Mr. Matthew Aylward (COAST) | matthew.aylward@usmc.mil | SECRET | security cooperation, SC, AM&E, assessment, monitoring, evaluation |

| Title | Sponsor | POC | e-mail | Classification | Key Words |
|---|---|---|---|---|---|
| Future GCE Fires for MAGTF Operations | DC PP&O | Mr. David Gibbons (CAB) | david.gibbons@usmc.mil | SECRET | indirect fires, fire support, fires capabilities, fires gaps |
| Air-to-ground Weapons Gap Analysis | DC, Aviation | Capt John Sabol (CAB) | john.j.sabol@usmc.mil | SECRET | air-to-ground weapons, aviation weapons gap |
| Bulk Fuel | E2O | Max Hipsher (CAB) Contracted Study | max.hipsher@usmc.mil | UNCLASS | bulk fuel, bulk fuel movement, bulk fuel storage |
| Allocating Force Protection Capabilities for Crisis Response | FPID | Mr. Bill Sentlinger (JEA) | bill.sentlinger@usmc.mil | TBD | force protection, CBRN |
| Managing the Aviation Cyberspace Operations Enlisted Workforce | HQMC Aviation | Ms. Mary Jo Zukoski (AB) | mary.zukoski@usmc.mil | UNCLASS | aviation, cyber |
| Marine Corps Enterprise Network II | HQMC C4 | Mr. Jim Keller (AB) | james.f.keller@usmc.mil | UNCLASS | IT |
| Using Tactical Cloudlet Technology to Extend the Marine Corps Enterprise Network to the | HQMC C4 | Mr. Iric Bressler (AB) | iric.bressler@usmc.mil | UNCLASS | IT, cyber |
| C4ISR Operations in a Communications-Contested Environment | HQMC Intel, HQMC C4 | LtCol Siverts (CAB) Contracted Study | thomas.siverts@usmc.mil | SECRET | C4ISR, communications contested, communications risk, communications resilience |
| CJCS Net Assessments | Joint Staff | Mr. Bill Woodson (JEA) | william.woodson@usmc.mil | TS/SCI | JMNA, CNA, joint analysis, OPLAN, COCOM |
| Scenario 7 (SC7) Joint Campaign Combat Model Baseline | Joint Staff (J8) | Mr. Rob Stevenson (JEA) | robert.stevenson1@usmc.mil | SECRET// NOFORN | campaign modeling; STORM; SC7 |
| Threshold Staffing to Achieve Equipment Readiness | LOGCOM | Mr. Jim Keller (AB) | james.f.keller@usmc.mil | UNCLASS | readiness, equipment |
| Cost-Benefit Analysis of Automatic Collision Avoidance Systems in Marine Aviation | Marine Aviation Detachment, Patuxent River | Maj Holly Zabinski Mr. Dave Sadlier (AB) | holly.zabinski@usmc.mil david.sadlier@usmc.mil | UNCLASS | aviation |
| Ballistic Glass Replacement Analysis for Bravo and Delta TAMCNs | Marine Corps Logistics Command | Mr. Robert Hayden (CAB) | robert.hayden@usmc.mil | UNCLASS | ballistic glass, bravo TAMCN, delta TAMCN, delamination |

| Title | Sponsor | POC | e-mail | Classification | Key Words |
|---|---|---|---|---|---|
| Operational Risk Approach to Prioritizing Defensive Cyberspace Operations | MCCOG | LtCol Tom Siverts (CAB) | thomas.siverts@usmc.mil | SECRET | defensive cyberspace operations, DCO, MCCOG, cybersecurity |
| Factors Influencing OCS Graduation Rates | MCRC | Mr. Tom McFarland(AB) | thomson.mcfarland@usmc.mil | UNCLASS | manpower, recruiting |
| Trimester Phasing | MCRC | Mr. Paul Schneider (AB) | paul.schneider@usmc.mil | UNCLASS | manpower, recruiting |
| Marine Corps Wartime Medical Requirements Study. | Medical Officer, USMC; TFSD | Max Hipsher (CAB) Contracted Study | max.hipsher@usmc.mil | UNCLASS | medical capabilities, corpsman, corpsmen, wartime medical requirements |
| GPS Denial Effects on Amphibious Warfare | N81 | Mr. Andy Farnsler (JEA) | andrew.farnsler@usmc.mil | SECRET | space, joint analysis, PNT, Navy, A2AD |
| OECIF STORM E Study | OASD(OE) | Mr. Mike Strycharz | theodore.strycharz@usmc.mil | UNCLASS w/ SECRET annex | operational energy, campaign modeling, energy analysis |
| Scenario 2 (SC2) Collaborative Campaign Analysis | OPNAV N81 | Mr. Rob Stevenson (JEA) | robert.stevenson1@usmc.mil | SECRET | distributed maritime operations; support for strategic analysis |
| Cyber Mission Force (CMF) Cost and Performance Study | OSD(AT&L) | Mr. Andy Farnsler (JEA) | andrew.farnsler@usmc.mil | TS/SCI | cyber, cost analysis, joint analysis, COCOM, metric development |
| Combating Terrorists (CbT) Scenario Development | OSD(P) | Mr. Andy Farnsler (JEA) | andrew.farnsler@usmc.mil | SECRET | Scenario development, futures, terrorism, COCOM, joint analysis |
| Aviation Maintenance Reduction | SPMAGTF-CR-AF | Ms. Katie Novacek (COAST) | katherine.novacek@usmc.mil | UNCLASS | Maintenance, Aviation, Reduction, Mx |
| Indications and Warnings (I&W) | SPMAGTF-CR-AF | Ms. Katie Novacek (COAST) | katherine.novacek@usmc.mil | SECRET | indications, warnings, I&W, departures, evacuations, military assisted departures, SPMAGTF, State Department |
| Aviation Average Customer Wait Time (ACWT) | SPMAGTF-CR-AF ALD | Ms. Katie Novacek (COAST) | katherine.novacek@usmc.mil | UNCLASS | customer wait time, ACWT, supply chain, aviation, MV-22 |
| LVC-TE Requirements Analysis | TECOM | Mr. Brett Telford (MCMSO) | brett.telford@usmc.mil | UNCLASS | requirements analysis, AoA |

| Title | Sponsor | POC | e-mail | Classification | Key Words |
|---|---|---|---|---|---|
| Operating Force Physical Standards Study | TECOM | Mr. Matt Aylward (COAST) | matthew.aylward@usmc.mil | UNCLASS | gender integration, training |
| TF 51/5th MEB Campaign Plan Assessment | TF 51/5th MEB | Maj Adam Foley (COAST) | adam.foley@usmc.mil | SECRET | assessment, assess, campaign, analysis |
| Crisis Response Country Prioritization | TF 51/5th MEB | Maj Adam Foley (COAST) | adam.foley@usmc.mil | SECRET | crisis, response, CR, prioritize |
| Operationalizing Palantir | TF 51/5th MEB | Maj Adam Foley (COAST) | adam.foley@usmc.mil | SECRET | Palantir, intelligence, data mining |
| Artillery Tube Wear and Replacement Modeling | TF 51/5th MEB | Maj Adam Foley (COAST) | adam.foley@usmc.mil | SECRET | artillery, barrel, M-777, time replacement, life expectancy |
| Operationalizing Logistics | TF 51/5th MEB | Maj Adam Foley (COAST) | adam.foley@usmc.mil | SECRET | logistics, equipment, prioritization, SPMAGTF, MEU |
| ARG/MEU Disaggregation Operational Impacts | TF 51/5th MEB | Maj Adam Foley (COAST) | adam.foley@usmc.mil | SECRET | Marine Expeditionary Unit, MEU, disaggregation, distributed |
| SOF Integration | TF 51/5th MEB | Maj Adam Foley (COAST) | adam.foley@usmc.mil | SECRET | special forces, integration, SOF, MEU |
| Space Modeling, Simulation, and Analysis | USSTRATCOM | Mr. Andy Farnsler (JEA) | andrew.farnsler@usmc.mil | SECRET | Space, joint analysis, wargaming, COCOM, risk analysis |