

# Academic Year 2021-2022

## Marine Corps University Student Research Topics

Each year, Marine Corps University (MCU) solicits student research topics from Marine Corps general officers and members of the Senior Executive Service. MCU will add to the list if additional topics are submitted. You also may review the topic list for academic year 2020-2021 at the end of this document. Prior to selecting a topic from the AY2020-2021 list, reach out to the point of contact to ensure the organization continues to be interested in the research.

If you choose a topic from this list, be sure to:

1. Reach out to the listed point of contact for additional information and to coordinate submission of your results.
2. Notify MCU's Director of Research ([kerry.fosher@usmcu.edu](mailto:kerry.fosher@usmcu.edu)) to allow project tracking.

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## The Changing Character of War: 2006-2020

*Note: this topic is a high priority for DC PP&O. Should students decide to take on this topic, it may be possible to brief findings to the DC or ADC.*

Classification. Project may be unclassified, but could benefit from classified research

**Topic Description/Problem Statement:** What themes describe the changing character of war based on a survey of conflicts ranging from the Second Lebanon War in 2006 to the 2020 Nagorno-Karabakh War and what are the ramifications for the Service? Ramifications may be associated with the Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities and Policy (DOTMLPF-P) framework, national/theater strategy, operational art, the tactical level of war, or any other area desired.

**Date Submitted:** July 2021

**Date Submitted:** July 2021

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Plans, Policies, and Operations (PP&O)

**Point of Contact:** Col Jason Borovics, Strategy Branch (PLS); Strategy and Plans Division (PL); Plans, Policies, and Operations (PP&O), HQMC

**Email Address:** [Jason.borovics@usmc.mil](mailto:Jason.borovics@usmc.mil)

**Telephone:** 703-692-4383

**Desired Research Completion Date:** 30 April 2022

**Available Funding:** Plans and Strategy Division, PP&O can provide funds for TAD in support of research if necessary.

**Key Words:** Nature of War, Second Lebanon War, Nagorno-Karabakh War, Mosul, Operation Cast Lead, Gaza War, Yemeni Civil War, Houthi Insurgency, Hamas, ISIS/ISIL, Ingushetia, Libya, Syrian Civil War, Iraq, Russo-Ukraine War, Kurdish-Turkish Conflict, China-India Skirmishes

## The Future of Amphibious Operations

*Note: this topic is a high priority for DC PP&O. Should students decide to take on this topic, it may be possible to brief findings to the DC or ADC.*

**Classification:** Project may be unclassified, but could benefit from classified research

**Topic Description/Problem Statement:** In light of the Service's evolving emphasis on Expeditionary Advanced Base Operations; decreasing availability of traditional amphibious platforms; expected fielding of the light amphibious warship; access, basing, and overflight challenges in the INDOPACOM AOR; the benefits that accrue to adversaries that already occupy key maritime terrain; and other variables, what utility may amphibious entry operations (including forcible entry) provide to the joint force in the future?

**Date Submitted:** July 2021

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Plans, Policies, and Operations (PP&O)

**Point of Contact:** Col Jason Borovics, Strategy Branch (PLS); Strategy and Plans Division (PL); Plans, Policies, and Operations (PP&O), HQMC

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**Desired Research Completion Date:** 30 April 2022

**Available Funding:** Plans and Strategy Division, PP&O can provide funds for TAD in support of research if necessary.

**Key Words.** Forcible Entry; Amphibious Raid; Light Amphibious Warship; Amphibious Shipping, Anti-Access/Area-Denial; Access, Basing, and Overflight; Expeditionary Advanced Base Operations

## The Future of the MAGTF

*Note: this topic is a high priority for DC PP&O. Should students decide to take on this topic, it may be possible to brief findings to the DC or ADC.*

**Classification:** Project may be unclassified, but could benefit from classified research

**Topic Description/Problem Statement:** In light of the Service's evolving emphasis on Expeditionary Advanced Base Operations and the contemporary as well as future operating environment, what utility may the Marine Air-Ground Task Force provide to the joint force in the future?

**Date Submitted:** July 2021

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Plans, Policies, and Operations (PP&O)

**Point of Contact:** Col Jason Borovics, Strategy Branch (PLS); Strategy and Plans Division (PL); Plans, Policies, and Operations (PP&O), HQMC

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**Telephone:** 703-692-4383

**Desired Research Completion Date:** 30 April 2022

**Available Funding:** Plans and Strategy Division, PP&O can provide funds for TAD in support of research if necessary.

**Key Words:** Contact, Blunt, and Surge Layers; Joint Warfighting Concept; Anti-Access/Area-Denial; Access, Basing, and Overflight; Expeditionary Advanced Base Operations

## Development of Future Vertical Lift / Attack Utility Replacement Aircraft FVL

**Classification:** Will require access to classified information.

**Topic Description/Problem Statement:** The development of Future Vertical Lift / Attack Utility Replacement Aircraft FVL / AURA requirements did not keep pace with changes in the Joint Operating Environment (JOE), leaving the program ill-equipped to deal with high-end threats and other emerging challenges.

**Date Submitted:** May 2021

**Extended Topic Description:** In a recent Capstone Project, Naval Postgraduate School (NPS) students identified potential acquisition paths for the FVL / AURA program. This research project would leverage work done by the NPS study and examine the efficacy of two specific acquisition paths:

### Acquisition Path (A) - A Hybrid Solution for Meeting Capability Gaps

- This acquisition path would be appropriate if the Marine Corps decides that MV-22 escort operations are still a valid capability requirement for FVL-AURA and desire to explore emerging technologies to operate in a contested environment.
- Acquisition Path-A requires near-term investment in systems that provide MV-22 attached escort. This path would also require modest near-term RDT&E investment in emerging technologies such as High-Speed Vertical Take-Off and Landing (HSVTOL) concepts while delaying significant procurement investments until HSVTOL technology has matured and resources are available in the FY31 timeframe.

### Acquisition Path (B) - Accept MV-22 Escort Gap and Develop High-Speed VTOL Capability

- Acquisition Path B is similar to Path A, except the Marine Corps would continue to accept risk concerning the MV-22 attached escort capability gap. This risk would be mitigated through continued use of detached escort as dictated by mission requirements, specifically by leveraging existing fixed-wing, rotary-wing, and unmanned platforms. Compared to Path A, this option has the advantage of reducing the demands on the already strained MA budget.
- Specifically, this path supports the acquisition of other USMC priorities such as the Medium Altitude Long Endurance (MALE) unmanned aircraft system (UAS), F-35B/C, and CH-53K programs between FY25-30. Through careful analysis of the higher risk areas expected during the HSVOTL Technology Maturation and Risk Reduction (TMRR) phase, measured investments can be made in those areas without adversely impacting existing program procurement objectives. This investment will allow HSVOTL to keep moving in development while delaying significant investment until Marine Aviation TOA becomes available in FY31.

**Desired Objectives of Research:** This project's final outcome would be a specific recommendation on which acquisition path the Marine Corps should pursue.

**Requesting/Sponsoring Organization:** HQMC Aviation

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**Desired Research Completion Date:** contact requesting organization

**Available Funding:** contact requesting organization

## USMC Integration with USSF

**Classification:** Unclassified

**Topic Description/Problem Statement:** Following the designation of U.S. Space Force (USSF) as a branch of the U.S. military, how will the USMC integrate with the USSF to improve interoperability, increase lethality, and outpace near peer competitors such as China and Russia that are modernizing their armed forces and thus challenging U.S. military advantage in every domain and across all joint warfighting functions?

**Date Submitted:** May 2021

**Extended Topic Description:** The purpose of this topic is to encourage thought about how the Marine Corps can leverage emerging concepts and capabilities such as JADC2 that will be heavily dependent on outer space.

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Joint Staff, J6,

**Point of Contact:** LtCol Jason Quinter, National Strategy Chief, J6

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**Telephone:** 703-571-9588

**Desired Research Completion Date:** N/A

**Available Funding:** none

## C4/Cyber Literacy Across the MAGTF

**Classification:** Project could benefit from classified research

**Topic Description/Problem Statement:** How can the USMC improve its entire education and training continuum to increase C4/cyber literacy across the MAGTF?

**Date Submitted:** May 2021

**Extended Topic Description:** With the proliferation of game-changing technologies such as artificial intelligence (AI), machine learning, manned-unmanned teaming, 5G, low earth orbit (LEO) satellite constellations, quantum computing, and modernized cryptography, Marines of every rank must improve their knowledge and understanding of command, control, communications, computers, and cyber. There is a saying that “amateurs talk tactics and professionals talk logistics”. No such saying exists for the command and control warfighting function. Historically, the USMC has done a fine job of teaching MCDP-6 and our C2 philosophy (at every level of war) in our formal schools (education) and in the FMF (training). Simply stated, ensuring that every Marine has a basic understanding of C4/cyber isn’t good enough anymore; the Marine Corps must raise the bar. Gone are the days when Commanders at any level can simply rely on Marines from the 06XX, 72XX, and 17XX communities to just “go do some of that comm / cyber stuff”. Similar to the Marine Corps’ efforts to improve cultural literacy as a way to fight and win in a counterinsurgency throughout OIF and OEF, the Marine Corps must improve C4/cyber literacy in order to prevail in future conflicts that promise to be highly dependent on all of the aforementioned complex game-changing technologies. It is time to leap forward by focusing on the knowledge and understanding of every Marine, not just select military occupational specialties. We don’t need to make every Marine a C4 / cyber expert, but we need to improve knowledge and understanding across the board to fight and win in a highly connected operating environment.

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:**

**Point of Contact:** LtCol Jason Quinter, National Strategy Chief, J6

**Email Address:** [jason.p.quinter.mil@mail.mil](mailto:jason.p.quinter.mil@mail.mil)

**Telephone:** 703-571-9588

**Desired Research Completion Date:** N/A

**Available Funding:** none

## USMC Force Design attributes, limitations, and impacts to the European Theater

**Classification:** Project may benefit from access to classified resources or produce a classified result

**Topic Description/Problem Statement:** What are the key USMC Force Design attributes, limitation and impacts to the European Theater for both EUCOM plans and NATO Alliance consideration? Related messaging and considerations for NATO Allies and preferred Partners.

**Date Submitted:** May 2021

**Extended Topic Description:** Considerations for access, basing and overflight (Ex. Caves in Norway). Inform NATO Nations' own investment / divestment calculus. Future collaborative research, development, experimentation (Ex. UK Future Commando Force). Future cooperative deployment models (Ex. HMS QUEEN ELIZABETH, ITS CAVOUR, etc.)

**Desired Objectives of Research:** Inform EUCOM OPLAN 4020, and 4104 planning horizons by 2022. SACEUR's Strategic Planning ongoing for the next few years to ~ 2023. Inform NATO Allies and strategic Partners for their own force model decisions.

**Requesting/Sponsoring Organization:** Naval Striking and Support Forces, NATO (STRIKFORNATO)

**Point of Contact:** BGen Marcus Annibale, Chief of Staff

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**Desired Research Completion Date:** 1 Jun 2022

**Available Funding:** none



## Time for a change?: Elevation of NATO from a regional to a strategic-level organization

**Classification:** Project may benefit from access to classified resources or produce a classified result

**Topic Description/Problem Statement:** NATO is touted as the world's most successful and enduring political/military alliance. Arguably, no other organization has the capacity, expertise, or historical experience to shape the strategic environment. What are the factors that are preventing NATO from achieving this expanded role across the global stage?

**Date Submitted:** May 2021

**Extended Topic Description:** N/A

**Desired Objectives of Research:** Objectively present and defend a proposal for NATO's future role as an unique, political-military organization at the strategic level.

**Requesting/Sponsoring Organization:** Naval Striking and Support Forces, NATO (STRIKFORNATO)

**Point of Contact:** LtCol Sean Carroll, Deputy J5

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**Desired Research Completion Date:** 1 Jun 2022

**Available Funding:** none

## Integration with Allies and Partners to Support Competition

**Classification:** Project could benefit from classified research

**Topic Description/Problem Statement:** What are activities that the Marine Corps can invest in currently to support competition activities with allies and partners globally? How do these activities support joint force commanders and US interests abroad? How are these activities support US strategic objectives while denying adversary objectives?

**Date Submitted:** May 2021

**Extended Topic Description:** How does the Marine Corps take advantage of opportunities to work with allies and partners in competition? Competition activities with allies and partners provide a venue in which to enhance interoperability and potentially deny our adversaries strategic objectives. What are the activities that the Marine Corps can invest in today which provide operational preparation of the environment, increase interoperability, and deny adversary objectives? How are these activities scheduled and aligned to maximize their impact relative to our adversaries? How does the Marine Corps ensure that competition activities are synchronized to build greater capability and capacity over time?

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Marine Corps Warfighting Lab

**Point of Contact:** Maj Steven D. Kasdan, USMC, Assessments Officer, G35

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**Desired Research Completion Date:** June 2022

**Available Funding:** None

## Environment-specific forces: The Marine Arctic Regiment

**Classification:** Project may benefit from access to classified resources or produce a classified result

**Topic Description/Problem Statement:** The Marine Corps devotes a large amount of resources and training to be generally capable of winning in any climate and place. However, unit rotation schedules, retention impacts, and a service-level intent to deploy forces across a wide spectrum of environments and range of operations has artificially limited the attainment of enduring expertise. Retaining a competitive edge against peer adversaries who are displaying increased determination to thrive in contested environments is increasing the risks placed on employed units and individual Marines. The High North (Arctic) is arguably becoming the most high-visibility contested environment.

**Date Submitted:** May 2021

**Extended Topic Description:** N/A

**Desired Objectives of Research:** Frame a proposal to HQMC on the benefits and realistic implementation of a Marine Arctic Regiment, and other units specifically designated for distinct environments.

**Requesting/Sponsoring Organization:** Naval Striking and Support Forces, NATO (STRIKFORNATO)

**Point of Contact:** LtCol Sean Carroll, Deputy J5

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**Desired Research Completion Date:** 1 Jun 2022

**Available Funding:** none

## Multi-Domain Reconnaissance and Counter-Reconnaissance Concepts in Support of Expeditionary Advanced Base Operations

**Classification:** Project could benefit from classified research

**Topic Description/Problem Statement:** What are the composition and employment considerations associated with a multi-domain reconnaissance/counter-reconnaissance capability which operates in support of Expeditionary Advanced Base Operations?

**Date Submitted:** May 2021

**Extended Topic Description:** A central line of effort in support of Force Design 2030 is redesigning the Marine Corps to conduct multi-domain reconnaissance and counter-reconnaissance in support of naval campaigning. No less important is an approach to how the Marine Littoral Regiment (MLR) and its subordinate elements will conduct reconnaissance and counter-reconnaissance in support of local commanders to ensure sufficient knowledge of the operational environment and the ability to seamlessly maneuver and displace as required to remain below adversary targeting. In this context and the future operating environment, what is the ideal Marine Corps reconnaissance force in support of Expeditionary Advanced Base Operations? What missions will this force execute and how will it shape the battlespace in competition and in conflict to support MLR operations? How does this force operate in multiple domains? How does the Marine Corps counter these capabilities when employed by our adversaries?

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Marine Corps Warfighting Lab

**Point of Contact:** Maj Steven D. Kasdan, USMC, Assessments Officer, G35

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**Telephone:** 703-432-8126

**Desired Research Completion Date:** June 2022

**Available Funding:** None

## Marine Corps Contribution to Undersea Warfare

**Classification:** Project could benefit from classified research

**Topic Description/Problem Statement:** What are potential opportunities for the Marine Corps to conduct cooperative activities with the Navy in support of undersea warfare? What capabilities or concepts can the Marine Corps invest in to permit communications and cooperative engagements with the undersea community.

**Date Submitted:** May 2021

**Extended Topic Description:** Operating as a part of the Naval Force, the Marine Corps and the Navy's submarine force will both operate as "Stand-in" Forces against our adversaries. The Marine Corps may benefit from assessing capabilities which support undersea activities and provide cooperative gains for both the submarine force and a littoral force. What concepts and capabilities best accomplish this contribution in a manner that enhances lethality and survivability? What specific technologies should the Marine Corps consider?

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Marine Corps Warfighting Lab

**Point of Contact:** Maj Steven D. Kasdan, USMC, Assessments Officer, G35

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**Desired Research Completion Date:** June 2022

**Available Funding:** None

## Strategic Implications of Marine Littoral Regiment Employment in the TRICOM Area of Responsibility

**Classification:** Project could benefit from classified research

**Topic Description/Problem Statement:** The Marine Corps is investing in three Marine Littoral Regiments (MLR) which will operate in USINDOPACOM. Is there value in investing in additional MLRs for employment in EUCOM, CENTCOM, and AFRICOM? How might these multi-domain capable formations support operations which are strategically advantageous to the nation and the geographic combatant commanders.

**Date Submitted:** May 2021

**Extended Topic Description:** What capability would investing in additional MLRs oriented on the TRICOM area of responsibility (AOR) provide the Marine Corps and the nation to provide presence, contingency and crisis response? How does the MLR construct contribute to national defense in competition and in conflict outside of USINDOPACOM? What are the benefits and shortcomings of the MLR formation in the TRICOM AOR?

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Marine Corps Warfighting Lab

**Point of Contact:** Maj Steven D. Kasdan, USMC, Assessments Officer, G35

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**Telephone:** 703-432-8126

**Desired Research Completion Date:** June 2022

**Available Funding:** None

## Littoral Maneuver Requirements and Implications in Support of Expeditionary Advanced Base Operations

**Classification:** Project could benefit from classified research

**Topic Description/Problem Statement:** What are the operational requirements and associated DOTMLPF implications of developing additional littoral maneuver capabilities beyond the Light Amphibious Warship to support reconnaissance, counter-reconnaissance, maneuver, and sustainment at the small unit level in support of Expeditionary Advanced Base Operations?

**Date Submitted:** May 2021

**Extended Topic Description:** What are the littoral maneuver requirements of the future Marine Corps? How does the Marine Corps maneuver at the small unit level in littoral waterways? How are small boat squadrons employed and how do they support Expeditionary Advanced Base Operations?

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Marine Corps Warfighting Lab

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**Telephone:** 703-432-8126

**Desired Research Completion Date:** June 2022

**Available Funding:** None

## 21st Century Foraging in Support of Expeditionary Advanced Base Operations

**Classification:** Project could benefit from classified research

**Topic Description/Problem Statement:** What is the ability to execute “21st Century Foraging” within the AOR? Need to identify what the local economy at the various locations can actually provide to the Naval force without causing mass inflation and overburdening local access to goods.

**Date Submitted:** May 2021

**Extended Topic Description:** How do Marines operating in austere environments in the South China Sea live off the local economy in the absence of robust logistics capabilities? What classes of supply can be obtained from local economies? What is the impact of purchasing goods and services from the local population? A good analysis will provide details on specific countries, locations, and an assessment of how foraging could be employed and the implications it may have on the local population using open source information and data or intelligence reports.

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Marine Corps Warfighting Lab

**Point of Contact:** Maj Steven D. Kasdan, USMC, Assessments Officer, G35

**Email Address:** steven.kasdan@usmc.mil

**Telephone:** 703-432-8126

**Desired Research Completion Date:** June 2022

**Available Funding:** None



## Command and Control of Logistics in Support of Distributed Operations

**Classification:** Project could benefit from classified research

**Topic Description/Problem Statement:** What is the future requirement for Logistics C2? What are the current data requirements for Logistics C2 across the disparate logistics systems (e.g. GCSS-MC, CLC2S, TCPT) and how will those systems function in a distributed comms degraded environment?

**Date Submitted:** May 2021

**Extended Topic Description:** How does the Marine Corps command and control logistics operations in contested environments? Communications denied and degraded environments will adversely affect supply and distribution in support of EABO. What capabilities and methods will enable command and control for the sustainment of the force in this environment?

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Marine Corps Warfighting Lab

**Point of Contact:** Maj Steven D. Kasdan, USMC, Assessments Officer, G35

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**Telephone:** 703-432-8126

**Desired Research Completion Date:** June 2022

**Available Funding:** None

## Transformative Options for Competitive Advantage During Gray Zone Conflict and Contingency Operations

**Classification:** Project could benefit from classified research

**Topic Description/Problem Statement:** What are transformative options for the future ARG/MEU model that would offer joint force commanders a competitive advantage during gray zone conflict and contingency operations?

**Date Submitted:** May 2021

**Extended Topic Description:** What are transformative options for the future ARG/MEU model that would offer joint force commanders a competitive advantage during gray zone conflict and contingency operations? How does the new construct reassure our global allies and partners and how does the future ARG/MEU project power in support of national political and security objectives? How would these activities deny adversary objectives without causing unintentional escalations.

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Marine Corps Warfighting Lab

**Point of Contact:** Maj Steven D. Kasdan, USMC, Assessments Officer, G35

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**Telephone:** 703-432-8126

**Desired Research Completion Date:** June 2022

**Available Funding:** None

## Securing Networks and Hardware of Unmanned Aerial Systems in the Marine Corps

**Classification:** Project could benefit from classified research

**Topic Description/Problem Statement:** How does the Marine Corps ensure that Unmanned Aerial Systems (UAS) are secured against adversary disruptions and denial? What investments in capabilities and procedures will harden Marine Corps against the counter-UAS capabilities of our adversaries?

**Date Submitted:** May 2021

**Extended Topic Description:** Marine Corps investment in unmanned systems will enhance lethality and persistence in the future operating environment. In order to operate effectively and as designed, these unmanned systems must be hardened against the counter-UAS capabilities of our adversaries. The Marine Corps is investing in counter-UAS capabilities, and our adversaries will also pursue options to limit the employment of unmanned systems. What are ways in which the Marine Corps can ensure that the software, hardware, and command and control of our unmanned systems are resilient and capable of operating in the presence of adversary systems?

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Marine Corps Warfighting Lab

**Point of Contact:** Maj Steven D. Kasdan, USMC, Assessments Officer, G35

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**Telephone:** 703-432-8126

**Desired Research Completion Date:** June 2022

**Available Funding:** None

## Reducing the Signatures of Marine Corps Operations Across the Competition Continuum

**Classification:** Project could benefit from classified research

**Topic Description/Problem Statement:** How does the Marine Corps reduce its physical and electromagnetic signatures during operations in competition and conflict? What capabilities and tactics, techniques, and procedures (TTP) enhance the ability of Marines to operate in contested environments and challenge adversary detection capabilities?

**Date Submitted:** May 2021

**Extended Topic Description:** The Marine Corps will operate as “Stand-in” Forces within the precision guided weapons regimes of our adversaries. In order to persist within this environment, Marines must operate in a manner that reduces physical and electromagnetic signatures as well as respects the detection capabilities of our adversaries. What are the capabilities and TTPs that will enable Marines to retain sufficient lethality and capability to pose a credible threat to our adversaries while remaining difficult to detect and below the targeting threshold of our adversaries?

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Marine Corps Warfighting Lab

**Point of Contact:** Maj Steven D. Kasdan, USMC, Assessments Officer, G35

**Email Address:** steven.kasdan@usmc.mil

**Telephone:** 703-432-8126

**Desired Research Completion Date:** June 2022

**Available Funding:** None

## Staff Integration Opportunities to Enhance Interoperability

**Classification:** Project could benefit from classified research

**Topic Description/Problem Statement:** How do the Navy and Marine Corps conduct integrated maritime operations to provide a naval force that is flexible and responsive along the competition continuum? What are ways in which the Navy and Marine Corps can develop more integrated staffs to conduct maritime operations with sufficient competency in maritime command and control arrangements.

**Date Submitted:** May 2021

**Extended Topic Description:** The future operating environment demands naval staffs in the Navy and Marine Corps who understand the complex nature of maritime campaigning. This requires integration of staffs in the Navy and Marine Corps as well as improved professional military education which produces officers who are well versed in naval operations and concepts. What are ways in which the Navy and Marine Corps can achieve this objective of developing staffs who are capable of implementing maritime command and control arrangements which achieve the requirements of joint force commanders in competition and conflict?

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** Marine Corps Warfighting Lab

**Point of Contact:** Maj Steven D. Kasdan, USMC, Assessments Officer, G35

**Email Address:** steven.kasdan@usmc.mil

**Telephone:** 703-432-8126

**Desired Research Completion Date:** June 2022

**Available Funding:** None

## Historical Study of Cross-Domain Deterrence

**Classification:** Unclassified

**Topic Description/Problem Statement:**

Secretary of Defense Austin introduced integrated deterrence as an emerging concept that will likely be a priority for the Department for the duration of his tenure. Although a precise definition has not been issued, integrated deterrence will likely promote whole-of-government approaches; leverage allies and partners; and employ cross-domain deterrence.

- Within the context of cross-domain deterrence, theorists define a “domain” broadly as any coercive means or path, whether military or non-military.
- The most relevant definitions of cross-domain deterrence are: 1) the act of deterring an action in one domain with a threat in another domain, or 2) a condition in which an opponent has no incentive to initiate conflict via any domain or escalate an existing conflict by any means. How DoD ultimately defines this term could have significant implications for the Service.
- The assumed centrality of integrated deterrence in emerging DoD documents underscores the need to understand deterrence theory, cite specific historical examples, and argue how the Marine Corps supports integrated, cross-domain deterrence. Where possible, highlight examples where Navy and/or Marine Corps capabilities directly or indirectly contributed to deterrence strategies.

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** HQMC, PP&O

**Point of Contact:** Col Jason Borovics, Strategy Branch, Strategy and Plans Division

**Email Address:** [Jason.borovics@usmc.mil](mailto:Jason.borovics@usmc.mil)

**Telephone:** 703-571-9588

**Desired Research Completion Date:** 30 April 2022

**Available Funding:** None

## The Service Headquarters Operating Environment

**Classification:** Unclassified

**Topic Description/Problem Statement:**

Publications such as the MCWP 5-10 provide processes to describe the operating environment such as preparing systems diagrams. Other useful tools may include operational variables such as PMESII and civil variables such as ASCOPE. While a planner may draw inspiration from these variables, their intended use does not fully address the needs of a service headquarters directed by law to organize, train, and equip forces.

In the MCWP 5-10's predecessor, the MCWP 5-1, the commander would form his battlespace area evaluation and describe his areas of operations, influence, and interest.

How do you define battlespace for a service chief? What are relevant elements of the environment considering the need to organize, train, and equip forces? What implications for service policy do you derive from your study of the operational environment?

**Desired Objectives of Research:** N/A

**Requesting/Sponsoring Organization:** HQMC, PP&O

**Point of Contact:** Col Jason Borovics, Strategy Branch, Strategy and Plans Division

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**Telephone:** 703-571-9588

**Desired Research Completion Date:** 30 April 2022

**Available Funding:** None

## Academic Year 2020-2021 Topic List

**Note:** The topics on the following pages were submitted for the previous academic year.

**Prior to selecting a topic, reach out to the listed point of contact to ensure the organization continues to be interested in the research.**



If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

## Academic Year 2020-2021 Marine Corps University Research Topic Nominations

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If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

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If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

## Unclassified

### Category: Force Design

#### Research Topic Title

What is the optimal Force Design structure for LCE units to facilitate sustainment in an EABO environment?

**Classification**                      Unclassified

#### Topic Description

What is the optimal Force Design structure for LCE units to facilitate sustainment in an EABO environment as an integrated naval force across all logistics MOSs

#### Extended Topic Description

In an EABO environment, how should the LCE be structured to facilitate sustainment in an integrated naval force?

#### Desired Objectives of the Research

LCE Force Design recommendations to facilitate sustainment in an EABO environment across the entire logistic MOS portfolio.

**Requesting/Sponsoring Organization**      DC I&L LPS-1

**Point of Contact**                      CWO5 Chris Aragon

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3000 Marine Corps Pentagon,  
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**Telephone Number**                  (571) 256-7118

**Desired Completion Date**      6/1/2021

**Funding, if any**                      \$ 0

**Keywords**                              EABO, Force Design, LCE, Logistics, Installations and Logistics

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Category: Policy**

**Research Topic Title**

Additional workload effects of the financial statement audit on the supply (30XX) community.

**Classification**                      Unclassified

**Topic Description**

What are the increased workload effects of the financial statement audit on the Ground Supply (30XX) community?

**Extended Topic Description**

The financial audit has significantly increased the workload on using unit supply sections. As a result, using unit supply sections may be understaffed to complete these requirements in addition to supporting operational requirements.

**Desired Objectives of the Research**

Research into this topic would inform Force Design efforts, necessary technology enablers, and quantify the increased workload the financial audit has levied on the ground supply community.

**Requesting/Sponsoring Organization**      DC I&L LPS-1

**Point of Contact**                      CWO5 Chris Aragon

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**Desired Completion Date**      6/1/2021

**Funding, if any**                      \$ 0

**Keywords**                              Financial, Audit, Policy, Logistics, Installations and Logistics

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Creation of Prior Service Recruiting Warrant Officers to the Active Reserve Program

**Classification**                      Unclassified

**Topic Description**

By creating Prior Service Recruiting Warrant Officers, will this addition of structure strengthen the Prior Service Recruiting Force, and create longevity and continuity to the Prior Service Recruiting field?

**Extended Topic Description**

The Prior Service Recruiting Force should align with the Non-Prior Service Recruiting force has Warrant Officers and serve an important aspect in the recruiting force. Prior Service Recruiting Force is smaller, however with only (2) MGySgts billets leaves no room for continuity and continued growth overall as the AR program will limit the ability of the Marines with the most experience to stay in the program. Warrant Officers can provide the much needed longevity and foundation the Prior Service Recruiting Force is lacking.

**Desired Objectives of the Research**

I'm hoping the research will tell me if it is feasible to create the structure to add Warrant Officers to the Prior Service Recruiting Force (4810s).

**Requesting/Sponsoring Organization**      Prior Service Recruiting Station 9, 9th MCD

**Point of Contact**                      GySgt Damiano Samperisi

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**Email Address**                      damiano.samperisi@usmc.mil

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**Desired Completion Date**      7/31/2021

**Funding, if any**                      \$ 0

**Keywords**                              Warrant Officers, Chief Warrant Officers, Recruiting Officers, Prior Service Recruiting, 4810, Manpower and Reserve Affairs

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Category: Science and Technology**

**Research Topic Title**

Efficiencies and benefits gained by a unified approach to Mobile Computing in the USMC.

**Classification**                      Unclassified

**Topic Description**

What efficiencies, benefits, roadblocks, detriments could be gained by the USMC by having a unified approach to the spectrum of Mobile Computing that may be lost under current stovepiped approaches?

**Extended Topic Description**

Our current environment is poorly understood, inadequately identified and resourced, and barely held together by an aggressive group of dedicated action officers. We have at least a dozen tactical PORs out there with no central cohesion and a garrison effort that is constantly hobbled by the same. PORs and others come to the garrison side looking for guidance, app integration, management capabilities, and more; yet they have been told to wait for a lack of resourcing or driving "Requirements". We can even progress this to "single pane of glass"/VDI/VMC, BYOD/BYOAD, and wearable technology.

**Desired Objectives of the Research**

Knowing when and where to argue for or against a unified approach or how to best go about it would enable the Corps to move forward from stagnation. We *could* have a solution that is deployable, mirrored for NIPR/SIPR, has seamless ops from stateside, to ship, to shore, integrates all apps and capabilities for (what I believe but need proof) far less than we spend on the disparate efforts in labor, funding, and resources. We have no funding to provide, but can leverage our resources to assist, we have equipment and personnel who can contribute. Largely this is a data analysis effort, less a technical design solution effort. While I would argue DC I is the central focus of effort here, Mobile Computing has huge ties to the future business models of I&L, M&RA (via MCRC), DC Avn (MAGTAB provides 5000+ mobile endpoints) and we need MCCDC onboard to address shortfalls.

**Requesting/Sponsoring Organization**      Marine Corps Recruiting Command

**Point of Contact**                      Maj Marc Wason

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**Email Address**                      marc.wason@usmc.mil

**Telephone Number**                  703.398.8093

**Desired Completion Date**      12/31/2020

**Funding, if any**                      \$ 0

**Keywords**                              Mobility, Mobile Computing, BYOD, BYOAD, Android, iPhone, iOS, Single Pane of Glass, VDI, Wearable, Force Support, Logistics, Command and Control , Corporate Management and Support, DC Combat Development and Integration, Aviation, Installations and Logistics, Information, Manpower and Reserve Affairs



If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Operational supply support in a decentralized and disconnected environment

**Classification**                      Unclassified

**Topic Description**

What are the DOTMLPF-P/C requirements for Naval Logistics Integration as it relates to the Naval Logistics Systems Portfolio?

**Extended Topic Description**

How do we conduct operational supply support in a decentralized and disconnected environment (e.g. GCSS-MC without the internet)?

**Desired Objectives of the Research**

Identify the DOTMLPF-P/C requirements for AIS & AIT in a decentralized and disconnected environment. How do we perform operational supply support without the internet?

**Requesting/Sponsoring Organization**      DC I&L LPS-1

**Point of Contact**                      Maj Julie Aho

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**Email Address**                      julie.aho@usmc.mil

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**Desired Completion Date**          6/1/2021

**Funding, if any**                      \$ 0

**Keywords**                              GCSS-MC, AIS, AIT, Logistics, Installations and Logistics



If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

## Category: Supply Chain Management

### Research Topic Title

Improving end-to-end (E2E) class II supply chain management processes

**Classification**                      Unclassified

### Topic Description

How can the USMC/DoD improve our end-to-end (E2E) class II supply chain management processes?

### Extended Topic Description

The current class II supply chain is characterized by disconnected and inefficient supply chain management practices. As a result, our class II supply chain experiences significant "bullwhip" effects, increased inventory levels, reduced service levels, stockouts, and excess transportation costs associated with expediting orders.

### Desired Objectives of the Research

Methods to improve end-to-end (E2E) supply chain collaboration to reduce the negative effects of poor supply chain management.

**Requesting/Sponsoring Organization**      DC I&L LPS-1

**Point of Contact**                      Maj Julie Aho

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**Telephone Number**                  (734) 277-5639

**Desired Completion Date**      6/1/2021

**Funding, if any**                      \$ 0

**Keywords**                              End-to-End, Supply Chain Management, Supply, Collaboration,  
Logistics, Installations and Logistics

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Modernization of our global supply chain

**Classification**                      Unclassified

**Topic Description**

How do we modernize our global supply chain?

**Extended Topic Description**

Focusing on NAVSUP and DLA integration, how do we modernize our global supply chain to build flexibility, responsiveness, and resiliency.

**Desired Objectives of the Research**

Identify opportunities to modernize our global supply chain through NAVSUP and DLA integration.

**Requesting/Sponsoring Organization**      DC I&L LPS-1

**Point of Contact**                      Maj Julie Aho

**Mailing Address**                      Headquarters, U.S. Marine Corps  
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**Email Address**                      julie.aho@usmc.mil

**Telephone Number**                  (734) 277-5639

**Desired Completion Date**      6/1/2021

**Funding, if any**                      \$ 0

**Keywords**                              Supply Chain Management, Logistics, EABO, Modernization, Force Support, Logistics, Building Partnerships, Installations and Logistics

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Value of relaxing "Berry Amendment" requirements for class II

**Classification**                      Unclassified

**Topic Description**

Value of relaxing "Berry Amendment" requirements for class II in order to build a more responsive and flexible supply chain.

**Extended Topic Description**

The "Berry Amendment" requires that all clothing and textiles purchased by and for the Department of Defense be manufactured in the United States or its territories. Due to the globalization of the clothing and textile industry, the American clothing and textile industry has been significantly reduced in the number of available vendors and production capacity. This has impacted the ability of the Defense Logistics Agency to find alternative vendors or respond to supply chain disruptions.

**Desired Objectives of the Research**

What would be the operational and strategic impacts to the Defense Industrial Base, specifically the American clothing and textile industry if the "Berry Amendment" requirements were relaxed? How would this enable a more responsive and flexible supply chain for class II?

**Requesting/Sponsoring Organization**      DC I&L LPS-1

**Point of Contact**                      Maj Julie Aho

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**Desired Completion Date**      6/1/2021

**Funding, if any**                      \$ 0

**Keywords**                              Supply Chain Management, Clothing and Textiles, Supply, Logistics,  
Corporate Management and Support, Installations and Logistics

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

## Category: Training and/or Education

### Research Topic Title

Financial Literacy

**Classification**                      Unclassified

### Topic Description

How do we make financial literacy a cultural norm in the Marine Corps? Similar to our views on physical fitness.

### Extended Topic Description

We all know the stories and consistently see the negative effects of financial illiteracy on the junior ranks. (primarily E-1 through E-5, O-1 through O-3). If possible, how do we shape the Marine Corps culture to encourage and sustain a culture of financial literacy in its junior ranks?

### Desired Objectives of the Research

I expect the research to detail our current issues regarding financial literacy, what we are currently doing about it, and methods to shape financial literacy at the institutional and team levels.

**Requesting/Sponsoring Organization**      Battlespace Surveillance Company

**Point of Contact**                      Capt Michael Owens

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**Email Address**                      michael.l.owens@usmc.mil

**Telephone Number**                  5127882359

**Desired Completion Date**      8/31/2021

**Funding, if any**                      \$ 1000

**Keywords**                              Marines, Finance, Foundation, Programs and Resources

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Modernization of our logistics training and education

**Classification**                      Unclassified

**Topic Description**

How should our future logistics education/training be modernized?

**Extended Topic Description**

As we continue to implement FD and posture ourselves for 2030, how should our future logistics education and training continuum be structured?

**Desired Objectives of the Research**

Identify changes to our logistics education and training necessary to support tactical, operational, and strategic logistics operations.

**Requesting/Sponsoring Organization**      DC I&L LPS-1

**Point of Contact**                      CWO5 Chris Aragon

**Mailing Address**                      Headquarters, U.S. Marine Corps  
3000 Marine Corps Pentagon,  
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**Email Address**                      christopher.aragon@usmc.mil

**Telephone Number**                  (571) 256-7118

**Desired Completion Date**      6/1/2021

**Funding, if any**                      \$ 0

**Keywords**                              Training, Education, Logistics, Force Design, EABO, 2030, Logistics,  
Installations and Logistics

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

## Category: USMC Componency

### Research Topic Title

Integrating the Reserve Component for the 2030 Marine Corps.

**Classification**                      Unclassified

### Topic Description

Integration of an Operational Reserve

### Extended Topic Description

In concert with the 38th Commandant's Planning Guidance explore the options for full integration of the reserve component forces. Where does a fully integrated reserve component fit within the Contact, Blunt, and Surge layers defined by the National Defense Strategy. Define true costs for operating a reserve component and propose support for an operational reserve or strategic reserve. Additionally, define possibilities of capturing exquisite occupation talents within the OIE, Cyber, and Space from service members that complete and initial contract with the Marine, but move on to grow within the civilian corporate environment.

### Desired Objectives of the Research

Provide validation or alternatives to plan to fully integrate Marine Corps reserve structure within the active component. Leverage unique skills that may reside only within the reserves that are able to augment the active component without duplication of forces.

**Requesting/Sponsoring Organization**      I MEF HQ

**Point of Contact**                      Col John Kelliher

**Mailing Address**                      I MEFPO Box 555320Camp Pendleton, CA 92055-5025

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**Telephone Number**                  703-303-7088

**Desired Completion Date**      7/31/2021

**Funding, if any**                      \$ 0

**Keywords**                              Reserve, Integration, Force Design, Force Support, Command and Control, DC Combat Development and Integration, Manpower and Reserve Affairs

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

## **Classified**

Category: Policy

### **Research Topic Title**

Marine Littoral Regiment's Composition And Employment Methodology

**Classification** Classified

### **Topic Description**

Is the Marine Littoral Regiment's composition and employment methodology the right approach to support competition and deterrence in the Indo-Pacific region?

### **Extended Topic Description**

Speak with sponsor.

### **Desired Objectives of the Research**

How does the new MLR composition and employment methodology influence competition in USINDOPACOM? Does the new MLR construct provide a credible deterrence that reassures allies and disincentivizes malign actors in the region? Alternatively, does the MLR and its employment increase the likelihood of conflict as it raises the level of military action in the region potentially leading to another Cold War?

**Requesting/Sponsoring Organization** Marine Corps Warfighting Lab

**Point of Contact** Maj Steven Kasdan

**Mailing Address** 3255 Meyers Avenue (Newlin Hall)Quantico, VA 22134

**Email Address** steven.kasdan@usmc.mil

**Telephone Number** (703) 432-8126

**Desired Completion Date**

**Funding, if any**

**Keywords** Marine Littoral Regiment, competition, force design

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Multi-Domain Reconnaissance and Counter-Reconnaissance Concepts In Support of Expeditionary

Advanced Base Operations

**Classification** Classified

**Topic Description**

What are the composition and employment considerations associated with a multi-domain reconnaissance/counter-reconnaissance capability?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

Given the future operating environment, what is the ideal Marine Corps reconnaissance force of the future? What missions will this force execute and how will it shape the battlespace in competition and in conflict? How does this force operate in multiple domains? How does the Marine Corps counter these capabilities when employed by our adversaries?

**Requesting/Sponsoring Organization** Marine Corps Warfighting Lab

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**Desired Completion Date**

**Funding, if any**

**Keywords** competition, reconnaissance, counter-reconnaissance



If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Small Boat Operations in the Marine Corps

**Classification** Classified

**Topic Description**

What are the operational requirements and associated DOTMLPF implications of developing small boat squadrons within the Marine Corps?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

What are the small boat requirements of the future Marine Corps? How does the Marine Corps at the small unit level maneuver in littoral waterways? How are small boat squadrons employed and how do they support Expeditionary Advanced Base Operations?

**Requesting/Sponsoring Organization** Marine Corps Warfighting Lab

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**Desired Completion Date**

**Funding, if any**

**Keywords** small boat squadron, littoral maneuver

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Strategic Implications of Three MLRs on Presence, Contingency, and Crisis Response

**Classification** Classified

**Topic Description**

What is the implication of developing three MLRs on global commitments for presence, contingency and crisis response?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

What capability do three MLRs provide the Marine Corps and the nation to provide presence, contingency and crisis response? How does the MLR construct contribute to national defense in competition and in conflict? What are the benefits and shortcomings of three MLRs?

**Requesting/Sponsoring Organization** Marine Corps Warfighting Lab

**Point of Contact** Maj Steven Kasdan

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**Email Address** steven.kasdan@usmc.mil

**Telephone Number** (703) 432-8126

**Desired Completion Date**

**Funding, if any**

**Keywords** Marine Littoral Regiment, competition, force design

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

The 2030 Infantry Battalion

**Classification** Classified

**Topic Description**

What are the required size, composition and employment considerations for the Force Design 2030 Infantry Battalion?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

What are the required size, composition and employment considerations for the Force Design 2030 Infantry Battalion? Explore the proposed manning and equipment of the new structure and provide an assessment of the ability of the battalion to conduct its Mission Essential Tasks against a peer threat in competition or conflict.

**Requesting/Sponsoring Organization** Marine Corps Warfighting Lab

**Point of Contact** Maj Steven Kasdan

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**Desired Completion Date**

**Funding, if any**

**Keywords** force design, infantry battalion, lethality

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

The Future of Naval Expeditionary Tactical Aviation

**Classification** Classified

**Topic Description**

What are the future naval expeditionary tactical aviation roles, missions, and requirements?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

What are the future naval expeditionary tactical aviation roles, missions, and requirements?

**Requesting/Sponsoring Organization** Marine Corps Warfighting Lab

**Point of Contact** Maj Steven Kasdan

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**Desired Completion Date**

**Funding, if any**

**Keywords** force design, aviation

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

The Future of the Amphibious Fleet

**Classification** Classified

**Topic Description**

What are the implications of an amphibious fleet including ten LH big deck platforms and twenty LPDs on global presence and response?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

What are the implications of an amphibious fleet of ten LH big decks and twenty LPDs on global presence and response? How does this fleet design support, or not support, the future needs of the Marine Corps?

**Requesting/Sponsoring Organization** Marine Corps Warfighting Lab

**Point of Contact** Maj Steven Kasdan

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**Desired Completion Date**

**Funding, if any**

**Keywords** fleet design, amphibious operations

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Transformative Options For Competitive Advantage During Gray Zone Conflict and Contingency Operations

**Classification** Classified

**Topic Description**

What are transformative options for the future ARG/MEU model that would offer joint force commanders a competitive advantage during gray zone conflict and contingency operations?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

What are transformative options for the future ARG/MEU model that would offer joint force commanders a competitive advantage during gray zone conflict and contingency operations? How does the new construct reassure our allies in the region and how does the future ARG/MEU project power in support of national political and security objectives?

**Requesting/Sponsoring Organization** Marine Corps Warfighting Lab

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**Desired Completion Date**

**Funding, if any**

**Keywords** Marine Expeditionary Unit, competition, force design

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

## Category: Political Science or Economics

### Research Topic Title

21st Century Foraging in Support of Expeditionary Advanced Base Operations

**Classification** Classified

### Topic Description

What is the ability to execute “21st Century Foraging” within the AOR? Need to identify what the local economy at the various locations can actually provide to the Naval force without causing mass inflation and overburdening local access to goods.

### Extended Topic Description

Speak with sponsor.

### Desired Objectives of the Research

How do Marines operating in austere environments in the South China Sea live off the local economy in the absence of robust logistics capabilities? What classes of supply can be obtained from local economies? What is the impact of purchasing goods and services from the local population? A good analysis will provide details on specific countries, locations, and an assessment of how foraging could be employed and the implications it may have on the local population using open source information and data or intelligence reports.

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**Funding, if any**

**Keywords** foraging, pre-positioning, logistics, intelligence

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

## Category: Science and Technology

### Research Topic Title

Air Defense in Support of Expeditionary Advanced Base Operations

**Classification** Classified

### Topic Description

What are the early airborne warning, air and missile defense capabilities and capacities needed to support expeditionary advanced base operations?

### Extended Topic Description

Speak with sponsor.

### Desired Objectives of the Research

What are the early airborne warning, air and missile defense capabilities and capacities needed to support expeditionary advanced base operations?

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### Desired Completion Date

### Funding, if any

**Keywords** force design, airborne early warning, integrated air and missile defense



If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Assessment of Newly Developed Littoral Maneuver Technological Solutions

**Classification** Classified

**Topic Description**

Do the planned future littoral maneuver platforms such as the LAW and NGLS offer the Marine Corps the appropriate capability to support fleet action and contribute to sea control and denial in a contested littoral environment?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

Do the planned future littoral maneuver platforms such as the LAW and NGLS offer the Marine Corps the appropriate capability to support fleet action and contribute to sea control and denial in a contested littoral environment? What are the anticipated logistics requirements in support of the MLR conducting EABO, and are the proposed logistics platforms of the future sufficient to meet our demands? What is the optimal mix of logistics connectors to meet the distribution demands and ensure sufficient resiliency when operating in a contested environment?

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**Funding, if any** \$

**Keywords** logistics, expeditionary advanced base operations, distributed maritime operations

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Command and Control of Logistics in Support of Distributed Operations

**Classification** Classified

**Topic Description**

What is the future requirement for Logistics C2? What are the current data requirements for Logistics C2 across the disparate logistics systems (e.g. GCSS-MC, CLC2S, TCPT) and how will those systems function in a distributed comms degraded environment?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

How does the Marine Corps command and control logistics operations in contested environments? Communications denied and degraded environments will adversely affect supply and distribution in support of EABO. What capabilities and methods will enable command and control for the sustainment of the force in this environment?

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**Desired Completion Date**

**Funding, if any** \$

**Keywords** logistics, expeditionary advanced base operations, distributed maritime operations

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Marine Corps Contribution to Anti-Air Warfare as Part of the Naval Force

**Classification** Classified

**Topic Description**

What are the capabilities and methods that provide an effective contribution of Marine Corps “Inside Forces” to anti-air warfare (AAW) as part of the Naval and Joint Force? Additionally, what capacity can investment in AAW provide “Inside Forces” to increase survivability in protecting the force from adversary missiles such as Airborne Early Warning and Integrated Air and Missile Defense?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

Operating as a part of the Naval Force what does the Marine Corps contribute to anti-air warfare? What systems can best accomplish this contribution in a manner that enhances lethality and survivability? What specific technologies should the Marine Corps invest in?

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**Funding, if any** \$

**Keywords** composite warfare, anti-air warfare

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Marine Corps Contribution to Anti-Submarine Warfare as Part of the Naval Force

**Classification** Classified

**Topic Description**

What are the antisubmarine warfare capabilities that the Marine Corps can invest in, in order to complement Navy capabilities and contribute to sea denial and sea control within the context of expeditionary advanced base operations?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

Operating as a part of the Naval Force what does the Marine Corps contribute to anti-submarine warfare? What systems can best accomplish this contribution in a manner that enhances lethality and survivability? What specific technologies should the Marine Corps invest in?

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**Desired Completion Date**

**Funding, if any**

**Keywords** composite warfare, anti-submarine warfare

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Marine Corps Contribution to Anti-Surface Warfare as Part of the Naval Force

**Classification** Classified

**Topic Description**

What are the mobile, low signature sensors, and weapons that can offer the Marine Corps a compliment to the Navy capabilities for surface warfare?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

Operating as a part of the Naval Force what does the Marine Corps contribute to anti-surface warfare? What systems can best accomplish this contribution in a manner that enhances lethality and survivability? What specific technologies should the Marine Corps invest in?

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**Funding, if any**

**Keywords** composite warfare, anti-surface warfare

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Supporting Distributed Maritime Operations Within a Contested Environment

**Classification** Classified

**Topic Description**

What are the logistics and sustainment requirements necessary to support a Marine Littoral Regiment or Amphibious Ready Group/Marine Expeditionary Unit during a distributed maritime operation within a contested environment?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

What are the logistics and sustainment requirements necessary to support a Marine Littoral Regiment or Amphibious Ready Group/Marine Expeditionary Unit during a distributed maritime operation within a contested environment? What are the direct support and general support requirements that will be generated by these "Inside Forces" and what are some methods for sustainment?

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**Desired Completion Date**

**Funding, if any**

**Keywords** logistics, expeditionary advanced base operations, distributed maritime operations

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

Sustaining the Marine Littoral Regiment and Marine Expeditionary Force

**Classification** Classified

**Topic Description**

What concepts and technology solutions are required to support and sustain the Marine Littoral Regiment and Marine Expeditionary Force?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

What concepts and technology solutions are required to support and sustain the Marine Littoral Regiment and Marine Expeditionary Force?

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**Funding, if any**

**Keywords** logistics, expeditionary advanced base operations, distributed maritime operations

If selecting a topic from this section of the list, reach out to the listed POC to ensure continued organizational interest.

**Research Topic Title**

The Future of Unmanned Aerial Systems in the Marine Corps

**Classification** Classified

**Topic Description**

What are the future roles, missions, and requirements of unmanned aerial systems operating from both ship and from shore in support of Marine Corps “stand-in” forces?

**Extended Topic Description**

Speak with sponsor.

**Desired Objectives of the Research**

What are the future roles, missions, and requirements of unmanned aerial systems operating from both ship and from shore in support of Marine Corps “stand-in” forces?

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**Desired Completion Date**

**Funding, if any**

**Keywords** force design, unmanned, manned unmanned teaming