

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 09-05-2023		2. REPORT TYPE FINAL		3. DATES COVERED (From - To) N/A	
4. TITLE AND SUBTITLE "Failure is Not Fatal, but Failure to Change Might Be": Operational-Level Logistics the Critical Vulnerability for the Marine Corps				5a. CONTRACT NUMBER N/A	
				5b. GRANT NUMBER N/A	
				5c. PROGRAM ELEMENT NUMBER N/A	
6. AUTHOR(S) Major Chelsea R. Scott, USMC				5d. PROJECT NUMBER N/A	
				5e. TASK NUMBER N/A	
				5f. WORK UNIT NUMBER N/A	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Writing & Teaching Excellence Center Naval War College 686 Cushing Road Newport, RI 02841-1207				8. PERFORMING ORGANIZATION REPORT NUMBER N/A	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A				10. SPONSOR/MONITOR'S ACRONYM(S) N/A	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S) N/A	
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution Statement A: Approved for public release; Distribution is unlimited.					
13. SUPPLEMENTARY NOTES A paper submitted to the faculty of the NWC in partial satisfaction of the requirements of the curriculum. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.					
14. ABSTRACT Logistics is indispensable in modern life, intricately woven into every aspect of daily routine. From eagerly awaiting Amazon packages to relishing an Uber ride to dinner or even getting one's car repaired, every moment of our lives involves a sequence of logistics operations. The Department of Defense recognizes the criticality of logistics in determining the outcome of peer-to-peer conflicts. Therefore, the United States Marine Corps, the Department of Defense's Stand-in Force, must prioritize effective operational-level logistics operations by modernizing its logistics command and control capabilities. This paper is an urgent call for action, admonishing the Marine Corps' antiquated logistics strategy. As the United States' first line of defense in the Indo-Pacific theater, the Marine Corps operational-level logistics capabilities are the service's critical vulnerabilities. Logistics command and control structures, total life cycle management strategies, and logistics data management require rehabilitation and innovation. Given the rapidly advancing military capabilities of the People's Republic of China, failing to change will lead to the United States losing a war in the Pacific before it even begins.					
15. SUBJECT TERMS (Key words) Contested Logistics, Logistics, Marine Corps, Sustainment, Critical Vulnerabilities, Peoples' Republic of China (PRC), World War II, Command and Control, Maneuver					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT N/A	18. NUMBER OF PAGES 22	19a. NAME OF RESPONSIBLE PERSON Director, Writing Center
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code) 401-841-6499

“Failure is Not Fatal, but Failure to Change Might Be”:

Operational-Level Logistics *the* Critical Vulnerability for the Marine Corps

A paper submitted to the Faculty of the United States Naval War College Newport, RI in partial satisfaction of the requirements of the Department of Joint Military Operations.

DISTRIBUTION A. Approved for public release: distribution unlimited. The contents of this paper reflect the author's own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

THE CASE FOR CHANGE

When we look to the last major peer war that the United States fought in the Pacific, the great naval historian Samuel Eliot Morison tells us in his *Victory in the Pacific*:

To mount so distant an operation, at a moment when the European war reached its final crisis, and supplies of every sort were being rushed to General Eisenhower's immense army groups, and when the Philippines were not yet completely liberated, required *fresh efforts* in American war production and logistic supply.¹

Operational-level logistics is the *sine qua non* of effective warfighting in the Indo-Pacific theater.² The geographical challenges affecting the theater's sustainment operations are not new; the United States was haunted by logistics challenges in World War II's Pacific campaign, so much so that the most relevant sources to address "Contested Logistics" in 2023 are the trials and tribulations of amphibious battles at Guadalcanal, Leyte, the Marianas, and Okinawa.³ The complexity of supporting combat operations in a theater spanning roughly 52 percent of the Earth's surface, or 100 million square miles, of which most is water, required exquisite joint logistics planning, a robust defense industrial base, and multifaceted distribution methods to create a competitive overmatch against our Japanese adversaries.⁴ Lest we forget eighty years later, tackling the intricacy of global logistics operations and preserving a competitive advantage in logistics remains at the forefront of challenges senior military leaders must address when aligning their respective service visions to a National Defense Strategy (NDS) focused on the Indo-Pacific theater and the People's Republic of China (PRC) as the pacing challenge.⁵ The

¹ Samuel Eliot Morison, *History of United States Naval Operations in World War II* (Annapolis, MD: Naval Institute Press, 2012), 156.

² "Definition of SINE QUA NON," April 13, 2023. <https://www.merriam-webster.com/dictionary/sine+qua+non>. Defined *sine qua non* means something absolutely indispensable or essential. An example, "reliability is a sine qua non for success."

³ Samuel Eliot Morison, *History of United States Naval Operations in World War II* (Annapolis, MD: Naval Institute Press, 2012), 156-162.

⁴ "Shoestring Logistics Lessons from Guadalcanal," U.S. Naval Institute, November 1, 2019, <https://www.usni.org/magazines/proceedings/2019/november/shoestring-logistics-lessons-guadalcanal>.

⁵ "National Defense Strategy," U.S. Department of Defense, accessed March 17, 2023, <https://www.defense.gov/National-Defense-Strategy/>, 10. One of the primary focuses of the NDS is developing a strategy to effectively deter the PRC and maintain the international rules-based order. Within the NDS the following section highlights the need for new operational concepts validating the Marine Corps development of the Force

issue of contested logistics is the most consequential for the Marine Corps due to the limited opportunities to set theater conditions prior to conflict and the anticipated distributed force laydown in a war against the PRC.

As a service, the Marine Corps is undertaking one of the most comprehensive organizational overhauls seen by any service in the last 100 years.⁶ Documented in Commandant of the Marine Corps (CMC), General David H. Berger's "Force Design 2030" (FD2030)⁷, the Marine Corps is reinventing itself as the Department of Defense's (DoD) "Stand-In Force"(SIF).⁸ As a SIF, operational materiel readiness and force sustainment for Marines operating across a multi-domain and noncontiguous battlefield requires a Marine Corps

Design 2030 initiative to prepare the service in the next 10 years for potential conflict in 2030 and beyond. "Deterring PRC Attacks. The Department will bolster deterrence by leveraging existing and emergent force capabilities, posture, and activities to enhance denial, and by enhancing the resilience of U.S. systems the PRC may seek to target. We will develop new operational concepts and enhance future warfighting capabilities against potential PRC aggression. Collaboration with Allies and partners will cement joint capability with the aid of multilateral exercises, co-development of technologies, greater intelligence and information sharing, and combined planning for shared deterrence challenges. We will also build enduring advantages, undertaking foundational improvements and enhancements to ensure our technological edge and Joint Force combat credibility."

⁶ Paul McLeary, "Historic Marine Plan to Reinvent The Corps EXCLUSIVE," *Breaking Defense* (blog), April 1, 2021, <https://breakingdefense.sites.breakingmedia.com/2021/04/historic-marine-plan-to-reinvent-the-corps-exclusive/>.

⁷ David H. Berger, "Force Design 2030," March 2020, <https://www.hqmc.marines.mil/Portals/142/Docs/CMC38%20Force%20Design%202030%20Report%20Phase%20I%20and%20II.pdf>. Developed in March 2020, at the beginning of General Berger's tenure as the CMC, this initiative was outlined as "the work of redesigning the Marine Corps is threat informed, concept based, and accountable to a campaign of learning. Strategic guidance calls for a Marine Corps able to survive and thrive inside contested spaces. Developed concepts are tested through experimentation and wargaming. Integrated planning teams' study and analyze the concepts for validation and refinement." The concept includes multiple publications and functionally focused reports for how the Marine Corps plans to reorganize to support warfighting in 2030 against peer-competitors, and more specifically a hyper focus on the PRC. These documents are updated annually, and have led to the development of the Concept for Stand-in Forces, Talent Management 2030, Training and Education 2030, and Installations & Logistics 2030 as separate but complimentary reports to encapsulate the FD2030 approach to warfighting.

⁸ David H. Berger, "A Concept for Stand-in Forces" (Department of the Navy, United States Marine Corps, December 2021), https://www.hqmc.marines.mil/Portals/142/Users/183/35/4535/211201_A%20Concept%20for%20Stand-In%20Forces.pdf, 1-7. Developed as part of General Berger's Force Design 2030 Initiative, the SIF concept "is about generating new capabilities and operating in novel ways. In this sense, it provides an aim point for force design and force development." From a strategic context, the "SIF concept directly aligns to the operational approach contained in the Joint Warfighting Concept. The Commandant's Planning Guidance (CPG) directs publication of the SIF concept in support of the Navy's Distributed Maritime Operations (DMO) concept. The CPG explains that SIF integrate with the Expeditionary Advanced Base Operations (EABO) concept by describing how SIF will be supported by these advanced bases." From a geographical context, General Berger contends, "the People's Republic of China (PRC) is the pacing challenge for the joint force; thus, while the concept is applicable globally, the INDOPACOM area of responsibility is appropriately the focus of the Stand-in Forces concept."

Installations and Logistics Enterprise (MCILE) that is agile, resilient, defensible, and globally accessible.⁹

The MCILE's current state impedes the Marine Corps' ability to fight effectively within the United States Indo-Pacific Command's (USINDOPACOM) weapons engagement zone (WEZ) against the PRC. The logistics enterprise is plagued by the residual effects of decades of land-based combat operations, highly dependent on "iron mountains"¹⁰, graciously facilitated by permissive distribution channels across mature logistics theaters.¹¹ The supply chains supporting those theaters were brittle and managed by disparate logistics C2 systems that lacked interoperability and end-to-end visibility across ten supply classes.¹² The consequence of the past operating environments is a bulky and archaic version of military logistics strategy, never tested by a formidable threat. This logistics strategy does not account for the PRC's ability to exploit critical vulnerabilities. It leaves the institution with a "sub-optimal unity of effort regarding the

⁹"Enterprise Logistics Integrated Planning Team Final Report" (United States Marine Corps, December 2021). This report was developed by Marine Corps logisticians in a September 2021 Integrated Planning Team (IPT). Logistics professionals from across the Marine Corps sought to create operational-level logistics solutions for the future of Marine Corps warfighting concepts, as directed by the CMC. The report defines the Marine Corps Logistics Enterprise (MCLE), the precursor to MCILE, as "the MCLE consists of organic unit-level logistics capability and capacity, Logistics Combat Element capability and structure, Marine Corps Logistics Command (MARCORLOGCOM) structure, infrastructure, capability, and capacity, and Service policy, oversight, and resourcing functions performed at Headquarters, Marine Corps under the Deputy Commandant, Installations and Logistics." From this IPT, the team derived six service-wide problems and recommend solution sets. One of which is the focus of this paper, "Problem 5: Sub-optimal Unity of Effort across Equipment Life Cycle from Acquisition through Disposal: Based on problem framing briefs from various commands, there is a sub-optimal unity of effort regarding the acquisition, sustainment, and disposal of equipment and materiel. Disagreements exist between Marine Corps Systems Command (MCSC), Marine Corps Logistics Command (MARCORLOGCOM), DC CD&I, DC I&L, the FMF, and others about who designs and is responsible for life cycle management and sustainment plans for fielded equipment. Further, the FMF and Support Establishment maintain different equipment sets – table of equipment (T/E) versus war reserve and pre-positioning – that only tangentially overlap and do not prioritize warfighter readiness."

¹⁰ *Contested Logistics: Strategies + Challenges*, 2022, <https://www.youtube.com/watch?v=jJ8ROL720Zk>. The proverbial "iron mountain" is a term to address the massive logistics build-up in the land campaigns of Operations Desert Storm, Enduring Freedom, and Iraqi Freedom.

¹¹ David H. Berger, "Installations and Logistics 2030 February 2023" (Department of the Navy, United States Marine Corps, February 2023), <https://www.marines.mil/Portals/1/Docs/Installations%20and%20Logistics%202030.pdf>, 1.

¹² "DAU Acquipedia: Supply Classes," accessed May 3, 2023, <https://www.dau.edu/acquipedia/pages/ArticleContent.aspx?itemid=217>. The U.S. military defines ten classes of supply: CL I – Subsistence; CL II – Clothing and Individual Equipment; CL III – Petroleum Fuels, Oils, and Lubricants (POLs); CL IV – Construction materials; CL V – Ammunition, of all types; CL VI – Personal Demand Items; CL VII – Major End Items; CL VIII – Medical Materiel; CL IX – Repair parts and components; CL X – Material to support non-military programs.

acquisition, sustainment, and disposal of equipment and materiel.”¹³ The future operating theater will not allow US forces to set conditions amidst conflict. To be ready, our forces in USINDOPACOM must be present and sustainable today, not ten years from now. With a wave of momentum behind the CMC’s decision to modernize the force and a focus on the service’s expeditionary advanced basing operations (EABO) and the Navy’s distributed maritime operations (DMO) concepts, one must seek this opportunity to “be bold.”¹⁴ The Marine Corps’ operational-level logistics capabilities need to be overhauled for the future. In the word of legendary UCLA Basketball coach John Wooden, “Failure is not fatal, but failure to change might be.”¹⁵ Far worse than losing a basketball game, the consequence of failed logistics on a battlefield is the excessive and unnecessary loss of lives.

This paper examines the critical vulnerabilities and gaps in the Marine Corps’ current MCILE. It analyzes issues associated with cultural aversion to change within logistical C2 structures, the brittleness of a bifurcated supply chain that sustains the Corps’ ground weapon systems, and the lack of a single integrator for supply chain risk management (SCRM) and data-driven logistics. Furthermore, these organizational chasms support an argument for creating an operational-level logistics command that would integrate acquisitions, sustainment, and enterprise logistics data management under a single command construct. Such a command would allow the Marine Corps to see improved operational materiel readiness of its ground weapons systems, the development of a more responsive and globally resilient supply chain network, and an organization that would bring the Marine Corps parity to other uniformed services--benefits accrued by focusing on the total lifecycle management of weapon systems, the ability to develop global asset visibility for the Marine Corps, and more synergistic integration with the joint force.

¹³ “Enterprise Logistics Integrated Planning Team Final Report” (United States Marine Corps, December 2021), 12.

¹⁴ Major General Joseph F. Shrader, Commanding Officer Marine Corps Logistics Command, Discussion at the 2021 Enterprise Logistics IPT for Service-Level Problem Framing, September 2021.

¹⁵ ESPN.com. “John Wooden’s Greatest Quotes,” June 4, 2010. <https://www.espn.com/mens-college-basketball/news/story?id=5249709>.

In a possible Sino-American war, our logistics C2 vulnerabilities will be severely tested in a distributed operating environment with concomitant failure.

FAILURE TO ADAPT: A CULTURE PERPETUALLY AT THE TACTICAL EDGE

Organizational change is an arduous undertaking, no matter the institution. Like other industries and businesses, the Marine Corps is skeptical of change until some event forces the organization to adapt. The zeitgeist for change in the MCLIE spurred out of a post-Global War on Terror service-wide identity crisis, where the Marine Corps used the latter part of the last decade to return to its amphibious roots and pivot the service strategy away from the Middle East and into the Indo-Pacific theater based on the 2018 NDS.¹⁶ Since 2018, the Marine Corps and the rest of the world have also witnessed the collapse of global supply chains in the wake of the COVID-19 pandemic, another zeitgeist making the overhaul of the Marine Corps logistics system an institutional imperative.¹⁷

The Marine Corps no longer needs to be a second army supporting major land operations.¹⁸ Instead, the Corps must adopt operating concepts reminiscent of World War II, where it was tightly entrenched with the United States Navy and skilled at amphibious maneuvers sustained by responsive multi-modal logistics systems. Moreover, the expectation that Marines will serve as an enduring presence within USINDOPACOM to deter PRC aggression generates the need for what General Berger defines as an “ecosystem of modernization.”¹⁹ To support the 2030 warfighting concept, the service must critically examine its seven doctrinal warfighting functions. Of the seven warfighting functions for the Marine

¹⁶ “U.S. Marine Corps Is Getting Back to Its Amphibious Roots,” *Defense Media Network* (blog), accessed April 29, 2023, <https://www.defensemedianetwork.com/stories/return-to-the-sea/>.

¹⁷ “How COVID-19 Impacted Supply Chains and What Comes Next,” accessed May 2, 2023, https://www.ey.com/en_us/supply-chain/how-covid-19-impacted-supply-chains-and-what-comes-next.

¹⁸ “Expeditionary Advanced Maritime Operations: How the Marine Corps Can Avoid Becoming a Second Land Army in the Pacific - War on the Rocks,” accessed April 16, 2023, <https://warontherocks.com/2019/12/expeditionary-advanced-maritime-operations-how-the-marine-corps-can-avoid-becoming-a-second-land-army-in-the-pacific/>.

¹⁹ 2023 McAleese “FY2024 Defense Programs” Conference - Gen. David H. Berger - #DPC23, 2023, <https://www.youtube.com/watch?v=t0J2ZQ45Go4>, 06:05.

Corps, General Berger emphatically stated logistics serves as the “pacing function, not one of, its *actually the* [pacing function]” for FD2030.²⁰ Logistics “dictates a unit's tempo and operational reach” and is attributed to being the cornerstone for success in contested environments.²¹ The Commandant has taken quantifiable steps to reevaluate how to equip and sustain the force for the future fight. General Berger implored the logistics community to propagate innovation, and technology, and to reshape the MCLIE from a United States Central Command (USCENTCOM) focused sustainment operation bloated with materiel to one that can support and withstand the expanse of USINDOPACOM’s battlefield geometries and the EABO movement and maneuver models.²²

For the Marine Corps, the Achilles heel of logistics is a culture that champions an “excessive focus on tactical logistics without sufficient understanding of the linkages to operational and strategic logistical systems or the processes and platforms critical to tactical logistics execution.”²³ The Marine Corps logistics community lacks the foundational knowledge and an integrated C2 structure to support developing operational-level logistics processes and professionals. This hyper-focus on tactical logistics and “the last tactical mile” of support created an institutional knowledge gap for operational and strategic logistics integration and the ability to leverage operational logistics providers within the DoD.

This pervasive culture is based on a comfort level within Marine Corps to execute at the tactical edge, complemented by a hyper-focus on small unit tactics and execution. The experiences of USCENTCOM reinforced this hyper-focus making the gulf between the tactical

²⁰ *Maritime Security Dialogue: An Update on the Marine Corps with Commandant Gen. David H. Berger*, 2021, <https://www.youtube.com/watch?v=St2O-w1sVO0>, 46:10.

²¹ David H. Berger, “Installations and Logistics 2030 February 2023” (Department of the Navy, United States Marine Corps, February 2023), <https://www.marines.mil/Portals/1/Docs/Installations%20and%20Logistics%202030.pdf>, 1.

²² David H. Berger, “Installations and Logistics 2030 February 2023” (Department of the Navy, United States Marine Corps, February 2023), <https://www.marines.mil/Portals/1/Docs/Installations%20and%20Logistics%202030.pdf>.

²³ Warfighting. MCDP-1.[Washington, D.C.]:U.S. Marine Corps, 1989.

and operational logistics even wider. Rather than focusing on end-to-end supply chain survivability, the Marine Corps uses new logistics technologies and distribution methods as the proverbial band-aids on the sucking chest wound that is the existing MCLIE. Rather than a weighted focus on logistics technologies, the service should treat the root causes for the atrophying MCLIE, focusing on the improved technical acumen and integration of its operational-level logistics providers.

Most Marine Corps logistics organizations remain at the tactical level²⁴, and the expertise of most Logistics Officers and Staff Non-Commissioned Officers (SNCO) also resides at the tactical level, where many leaders remain throughout their careers. Diversification of logistics billets must be prioritized to increase the number of individuals executing tours at operational-level logistics commands such as Marine Corps Systems Command (MCSC) or Marine Corps Logistics Command (MARCORLOGCOM). These commands provide a unique opportunity for logistics professionals, both military and civilian, to gain experience in total life cycle management of weapon systems and an exhaustive understanding of how the Marine Corps fits within the larger schematic of the Joint Logistics Enterprise (JLEnt). The lack of exposure to different operational-level logistics capabilities across the DoD sets the upcoming generation of Marine Corps logistics professionals at a distinct disadvantage compared to peers in other services. To mitigate this, the Marine Corps outlined “Objective 5: Develop Logistics Professionals for the 21st Century” in the I&L 2030 strategy, leveraging human capital and

²⁴ “MCDP-4 Logistics” (Department of the Navy, Headquarters United States Marine Corps, March 21, 2023), <https://www.marines.mil/News/Publications/MCPEL/Electronic-Library-Display/Article/899840/mcdp-4/>.

professional education opportunities to sharpen the skills of logisticians inside the Marine Corps and JLEnt.²⁵

As examined in Jason Fincher's "Slaughtering a Sacred Cow: A Disruptive Proposal to Achieve Marine Corps Operational Logistics," the lack of operationally focused logistics processes and integration is further exacerbated by:

The Marine Corps [being] the only service without a dedicated operational logistics enterprise. The garrison model of the Marine Logistics Group (MLG) is oriented entirely on tactical support and is not resourced or trained to deal with operational coordination requirements. Marine Corps Logistics Command exists to fill shortfalls in operational support, not to provide it holistically.²⁶

While the Marine Corps considers MARCORLOGCOM by definition an operational-level command, it does not facilitate the same capabilities or capacities of other services operational logistics organizations.²⁷ In comparison, Army Materiel Command's (AMC) mission for strategic and operational-level logistics provides the critical link between the Army's organic industrial base and weapon system management functions and the Army's regionally aligned Theater Sustainment Commands (TSC).²⁸ This supporting/supported relationship provides a more robust aperture for global asset visibility and operational readiness. Of note, while the model should be examined for potential applicability to mitigate the Marine Corp's future

²⁵ David H. Berger, "Installations and Logistics 2030 February 2023" (Department of the Navy, United States Marine Corps, February 2023), <https://www.marines.mil/Portals/1/Docs/Installations%20and%20Logistics%202030.pdf>, 1.

²⁶ Jason Fincher, "Slaughtering a Sacred Cow: A Disruptive Proposal to Achieve Marine Corps Operational Logistics," AMCL, July 29, 2019, <https://www.marinecorpslogistics.org/post/slaughtering-a-sacred-cow-a-disruptive-proposal-to-achieve-marine-corps-operational-logistics>. The Association for Marine Corps Logisticians is a non-profit organization designed to support communication on emerging logistics issues and solutions. This article highlights a specific service disparity between the Marine Corps and the other uniformed services in which their dedicated operational logistic commands support straddle both garrison and deployed logistics requirements. Those Logistics organizations include [1] Operational logistics organizations by service: US Army: Army Materiel Command (AMC), Combined Arms Support Command (CASCOM); USN: Navy Supply Systems Command (NAVSUP); USAF: Air Force Materiel Command, Air Force Global Logistics Support Center (AFGLSC).

²⁷ "Marine Corps Logistics Command," accessed March 17, 2023, <https://www.logcom.marines.mil/>. This mission of Marine Corps Logistics Command is to provide globally responsive ground equipment inventory control and integrated operational-level logistics capabilities in order to maximize Marine Corps materiel readiness and sustainment.

²⁸ "Army Materiel Command Video (Long Version)," accessed May 2, 2023, <https://www.amc.army.mil/>.

sustainment challenges, the Army is still larger and considerably more resourced because it serves as the sustainment enabler for the Joint Force.²⁹

Within the Fleet Marine Force (FMF), there is a desire to maintain tactical-level logistics and some operational-level logistics capabilities and capacities under the Marine Expeditionary Force (MEF) MLGs. While this construct worked well during the Global War on Terror, the lack of organizational C2 and the autonomy of each MEF's logistics operations contradicts and directly impedes the prioritization of equipment readiness globally.³⁰ Each MEF maintains its operations and maintenance (O&M) budgets aligning with their respective MEF lines of effort (LOE). Therefore, each MEF's subordinate MLG can prioritize supply and maintenance functions that could directly affect the supply chain for specific weapon systems and impact another MEF's equipment readiness. While MEF commanders remain adamant that they need to own the execution of supply and maintenance operations, the evolving nature of a contested logistics environment highlights a need for centralized logistics management in support of global response operations.³¹

A single logistics integrator for the Marine Corps at the operational level can set policy and priorities for the MEFs, regarding supply and maintenance operations, thereby improving asset visibility and global inventory management processes. The effect of this change is a reduction in Marine Corps' operating costs, improved supply chain resiliency, and the mitigation of service critical vulnerabilities by placing stocks in the right place, at the right time, in the right quantity.³² Given that each MEF can operate in a silo, the Marine Corps creates the potential for supply chain disruptions where the service effectively competes with itself for operational-level

²⁹ "JOINT PUB. 3-33, JOINT TASK FORCE HEADQUARTERS." (JOINT CHIEFS OF STAFF, January 31, 2018), https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_33.pdf.

³⁰ Joslyn Fleming et al., "Equipping the 21st Century Marine Corps: Alternative Equipping Strategies for Task-Organized Units" (RAND Corporation, February 18, 2021), https://www.rand.org/pubs/research_reports/RR2822.html, xvii.

³¹ Ibid, 52.

³² "Enterprise Logistics Integrated Planning Team Final Report" (United States Marine Corps, December 2021).

logistics support via executive agencies.³³ Moreover, how the operations and maintenance budgets are allocated is highly discretionary within each MEF and could create disruptions in the supply chain without centralized oversight due to data opacity, ultimately executive agents like DLA or original equipment manufacturers are left with disaggregated demand signals from small units across the Marine Corps versus a gross demand plan aligning to the MCILE's logistics lines of operation.³⁴

Before the FD2030 initiative, some might contend that logistics support wasn't problematic and that the Marine Corps could operate successfully without a single logistics integrator or process owner. Given the high state of operational readiness through the last twenty years of conflict, critics could make a case that a tactically focused logistics enterprise can be survivable.³⁵ At the end of the day, Commander's will say Marines can always manage to do more with less. While that statement is true, it is essential to recognize that the robust forward logistics footprint in USCENTCOM, for all supply classes, mitigated the risk to materiel readiness by sheer materiel saturation. In contrast, the FD2030 operating concept requires an arsenal of logistics planning and prepositioning capabilities not presently resourced for by the service. Without a multi-year blueprint to overhaul operational level logistics C2, the goal of global asset visibility is nothing more than an exercise in futility. Contiguous with planning is a need to be predictive in our C2 structure, meaning the Marine Corps must proactively plan and position materiel and logistics capabilities before the need. The Marine Corps lives in a reactionary world, which makes speed and responsiveness critical for success. If the service supplements proper planning and integrated C2 with predictive analysis to pre-position global

³³ "DoD Executive Agent," accessed May 6, 2023, <https://dod-executiveagent.osd.mil/Agents/ByCompPSA.aspx>.

³⁴ Joslyn Fleming et al., "Equipping the 21st Century Marine Corps: Alternative Equipping Strategies for Task-Organized Units" (RAND Corporation, February 18, 2021), https://www.rand.org/pubs/research_reports/RR2822.html.

³⁵ Joslyn Fleming et al., "Equipping the 21st Century Marine Corps: Alternative Equipping Strategies for Task-Organized Units" (RAND Corporation, February 18, 2021), https://www.rand.org/pubs/research_reports/RR2822.html.

assets, it lessens the dependency on the Marine Corps' ability to react. Furthermore, predictive analysis increases your resiliency as pre-positioned materiel affords the luxury of time to overcome supply line disruptions once conflict starts.³⁶

FAILURE TO INTEGRATE: SUB-OPTIMAL TOTAL LIFECYCLE MANAGEMENT

The previous section illuminates challenges with cultural impediments to change and FMF commanders' desire to maintain autonomy over resources at the tactical level. This section focuses on institutional knowledge and process gaps for the Marine Corp's designated operational-level logistics commands that impact the total lifecycle management of ground weapon systems. The commands include MARCORLOGCOM, MCSC, Deputy Commandant Installations & Logistics (DC I&L), and to a lesser extent, the MLGs. These commands are not functionally equipped to execute this objective due to a lack of command integration, undefined roles and responsibilities, no collaborative data sharing, and logistics system interoperability obstacles. As the Marine Corps examines the future of contested logistics and naval logistics integration (NLI), this logistics ecosystem will be mission-critical. Yet, the aforementioned institutional challenges stymie the Marine Corps' total life cycle management actions, creating a sub-optimal sustainment methodology that will quickly fracture in a fight with the PRC.

This is not a new issue; the discussion surrounding logistics C2 and reorganization remains a relevant but redundant conversation. In 1996, the Marine Corps recommended the formation of Marine Corps Materiel Command (MATCOM), activated in 1998 and stood down in 2003.³⁷ As

³⁶ Murali Veluswamy, Discussion on for USMC Materiel Command (MATCOM) and Future of Marine Corps Logistics Command, MS Teams, March 31, 2023.

³⁷ Deal, Kim. "A Short History of the Marine Corps Materiel Command (MATCOM)." 4825 Mark Center Drive, Alexandria, VA 22311-1850: Center for Naval Analysis (CNA), March 30, 2011. www.cna.org. "Pages - Home." Accessed March 17, 2023. <https://www.secnav.navy.mil/rda/Pages/default.aspx>. This CNA Report is one of the few remaining documents outlining the history and mission of MATCOM. The purpose of the memo was to provide a "Short History of the Marine Corps Materiel Command (MATCOM)." The mission of MATCOM was, MATCOM was established because CMC Krulak wanted a single process owner for life-cycle management in order to better inform programmatic decisions within the institution of the Marine Corps. Ultimately, this decision was driven by money and the desire to better understand how both procurement and operations/maintenance funds were spent in the Marine Corps. This memo reconstructs and analyzes Marine Corps leadership decisions surrounding MATCOM's conception, which was established in 1998 and merged with Marine Corps Logistics

a proof of concept, the conception of MATCOM was intended to break down the barriers between Marine Corps organizations, primarily in the sub-specialties between acquisitions and logistics. This reorganization's output included synergy and a unified effort across stakeholders to improve the Fleet Marine Forces' materiel readiness. Additionally, senior leadership expected MATCOM, to improve programmatic decision-making on Marine Corps weapon systems.³⁸ The recommendations for MATCOM are remarkably similar to the recommendation in the 2021 Enterprise Logistics IPT Final Report, which endorsed the establishment of a service-level sustainment command that would first align MARCORLOGCOM as a direct report to CMC. Second, the IPT advocated aligning MCSC as a subordinate command to MARCORLOGCOM while preserving the direct line of authority for system acquisition and milestone decision authority from MCSC to the Assistant Secretary of the Navy for Research, Development, and Acquisitions (ASN RDA).³⁹ The desired endstate for this reorganization would be a command focused on force sustainment, not just system sustainment driven by an integrated, complementary, and supporting C2 structure rather than disassociated and competing C2 structures.”⁴⁰

Heeding the recommendations of the 2021 Enterprise Logistics IPT, the Marine Corps should analyze the existing capabilities and organizations to determine a course of action that would develop a single process owner for operational-level logistics. Creating a single process owner for sustainment prevents the degradation of the SIF's ability to persist in a contested environment.⁴¹ A lack of cohesion and competing priorities amongst these organizations and

Bases (MCLB) in 2003. CNA informs the analysis of historical documentation through interviews with key Marine Corps leadership involved in MATCOM decisions. CNA's goal is to provide insights into the following questions: What were the challenges/issues that MATCOM was designed to address? Are these issues relevant today? How was MATCOM established/organized compared to the plan? What were the unintended consequences of these changes? What factors caused MATCOM and MCLB to merge into MCLC? Are these factor relevant today?

³⁸ Kim Deal, "A Short History of the Marine Corps Materiel Command (MATCOM)" (4825 Mark Center Drive, Alexandria, VA 22311-1850: Center for Naval Analysis (CNA), March 30, 2011), www.cna.org, 5.

³⁹ "Enterprise Logistics Integrated Planning Team Final Report" (United States Marine Corps, December 2021), 5.

⁴⁰ Ibid, 5.

⁴¹ "Sustainment of the Stand-In Force," War on the Rocks, September 12, 2022, <https://warontherocks.com/2022/09/sustainment-of-the-stand-in-force/>.

their respective leaders can lead to disruptive logistics practices, degraded equipment readiness, and a breakdown in life cycle support operations, starting with acquisitions through sustainment and end-of-life disposal.

Moreover, contested logistics is impacted by operational factor time. For the SIF to be successful, it requires smaller caches of prepositioned stocks in multiple archipelagos throughout the first and second island chains to maintain a sustainment web that is resilient and readily accessible.⁴² Throughout the Enterprise Logistics IPT, the concept of a Global Positioning Network (GPN) emerged as one of CMC's most welcomed logistics recommendations. The GPN "leverages afloat and ashore capability sets for responsiveness," the key to the GPN remaining resilient is to centralize inventory management operations under one logistics structure rather than multiple tactical-level logistics commands across the globe.⁴³ This concept focuses on centralized data management while facilitating decentralized distribution methods across the WEZ. Additionally, the centralized management of the GPN under one entity would afford Allies and Partners a single push point for integrated logistics operations should they require support. Without centralized management and unified C2, the GPN concept is faulty and places the SIF at risk.⁴⁴

FAILURE TO CALCULATE RISK: LOGISTICS DATA MANAGEMENT

Two characteristics of logistics data management result in operational-level logistics critical vulnerabilities for the Marines Corps against any near-peer and peer adversaries. First, is

⁴² Richard R. Burgess Editor Senior, "USMC Calls for GPN," Seapower (blog), February 23, 2023, <https://seapowermagazine.org/usmc-calls-for-gpn/>.

⁴³ Ibid.

⁴⁴ Ibid.

SCRM, and the second is the absence of a centralized inventory management policy and system implementation plan for logistics data throughout the MCILE.

SCRM drives logistics organizations to map and evaluate their supply chains from end to end to address chain/web/network weaknesses.⁴⁵ As information rapidly advances as a warfighting function and cyber operations create asymmetric advantages for adversaries in collecting and exploiting our supply chain data sources (software and hardware), the Marine Corps must evaluate vulnerabilities in our logistics systems through a SCRM framework.⁴⁶ The immense amount of logistics data that the MCILE collects and transmits on unclassified systems and equipment can create opportunities for adversaries to manipulate and potentially decimate the Marine Corps' answer to sustainment operations in a contested logistics environment: the Global Prepositioning Network.

In a recent report by the Headquarters Marine Corps Supply Chain Optimization Lead, Major Julie Aho and Strategic IT Initiatives Lead Michael Cirillo, titled, "Let's Talk Weapon System Supply Chain Risk Strategy: Logistics as the Pacing Functions Requires a Service Supply Chain Risk Management Strategy," the team posits that the Marine Corps:

Must develop and adopt a Service SCRM strategy to manage supply chain risks. Delegating SCRM to tactical or regional commanders does not enable us to take advantage of economies of scale. Logistics modernization is progressing slow because unilateral and uncoordinated actions across commands remain largely unknown to others.

⁴⁵ Julie Aho and Michael Cirillo, "Let's Talk Weapon System Supply Chain Risk Strategy: Logistics as the Pacing Functions Requires a Service Supply Chain Risk Management Strategy," February 27, 2023, 5. These are DoD SCRM Definitions from the DOD SCRM Policy. 1. Supply Chain Resilience. The capability of supply chains to respond quickly to unexpected events, adapt to changes, and ensure continuity of operations after a disruption. Resilience is the outcome of proactive Supply Chain Risk Management and Supply Chain Security. 2. Supply Chain Risk Management. A process of proactively identifying supply chain vulnerabilities to potential disruptions and implementing mitigation strategies and actions to ensure the security, integrity, and uninterrupted flow of products as risks are found, or disruptions occur. 3. Supply Chain Security. The application of policies, procedures, processes, and technologies to ensure the security, integrity, and uninterrupted flow of products while moving through the supply chain. Examples include the ability to protect supply chains from cyber infiltrations and the introduction of counterfeit material.

⁴⁶ "Lake, Broker, or as a Service? Models for Navy Data Management," U.S. Naval Institute, October 24, 2022, <https://www.usni.org/magazines/proceedings/2022/october/lake-broker-or-service-models-navy-data-management>.

It would be difficult to ensure SCRM is adhered to if not managed through a Service strategy and centrally funded.⁴⁷

SCRM reinforces the need for the Marine Corps to develop one process owner/command for sustainment by highlighting gaps in our data management practices across the service. Information, precisely logistics information, must be defensible against adversaries at every step in the supply chain.

The second characteristic jeopardizing the Marine Corps logistics system is a centralized inventory management policy and process owner for logistics data governance. This vulnerability stems from disjointed logistics data sets and systems that support operational-level planning. Without one master data repository or a way to aggregate logistics data, the ability to create accurate demand plans for procurement agencies is limited and vulnerable to bad data inputs. Consequently, inventory management operations demonstrated inflated holding costs, low inventory turnover, excess stocks, and no accurate demand signal across the service for each supply class.⁴⁸ If the Marine Corps fails to name one command for logistics data management, the ability to preposition stocks afloat and ashore and move toward predictive sustainment operations becomes unsupportable.

ACHIEVING VICTORY IN A NEW PACIFIC WAR

Morison's lessons about the war in the Pacific are more than cautionary tales of yesteryear; they embolden today's logistics professionals to seize the moment for change. We must craft those *fresh efforts* to achieve operational tempo and competitive logistical advantage. A successful pivot to the Pacific requires the Marine Corps to act now; we have a moral

⁴⁷Julie Aho and Michael Cirillo, "Let's Talk Weapon System Supply Chain Risk Strategy: Logistics as the Pacing Functions Requires a Service Supply Chain Risk Management Strategy," February 27, 2023, 9.

⁴⁸Oceaneast Associates and Censeo Group, "SECREP Organizational Transformation & Global Inventory BCA."

obligation to the future force to serve as change agents in developing a sustainment model that will be responsive and resilient today, in 2030, and beyond.

BIBLIOGRAPHY

- 2023 McAleese “FY2024 Defense Programs” Conference - Gen. David H. Berger - #DPC23, 2023.
<https://www.youtube.com/watch?v=t0J2ZQ45Go4>.
- “Adding Value to Supply Chain Command Centers | SupplyChainBrain.” Accessed March 17, 2023.
<https://www.supplychainbrain.com/blogs/1-think-tank/post/36587-adding-value-to-supply-chain-command-centers>.
- Aho, Julie. “Supply Chain Network Design In Support of 2030 USMC Logistics Concepts.” PowerPoint Presentation, February 27, 2023.
- Aho, Julie, and Michael Cirillo. “Let’s Talk Weapon System Supply Chain Risk Strategy: Logistics as the Pacing Functions Requires a Service Supply Chain Risk Management Strategy,” February 27, 2023.
- AMCL. “A Logistics Force Design Imperative: Saturday Afternoon Thoughts,” July 29, 2019.
<https://www.marinecorpslogistics.org/post/a-logistics-force-design-imperative-saturday-afternoon-thoughts>.
- AMCL. “Ask the Author: Brigadier General Stewart and Logistics Observations,” July 29, 2019.
<https://www.marinecorpslogistics.org/post/ask-the-author-brigadier-general-stewart-and-logistics-observations>.
- “Army Materiel Command Video (Long Version).” Accessed May 6, 2023.
<https://www.amc.army.mil/>.
- “Army Sustainment Command.” Accessed May 4, 2023. <https://www.aschq.army.mil/>.
- “Army Sustainment Command > About Us > Fact Sheets.” Accessed May 4, 2023.
<https://www.aschq.army.mil/About-Us/Fact-Sheets/>.
- AUSA. “Contested Logistics CFT Coming,” March 29, 2023. <http://www.ausa.org/news/contested-logistics-cft-coming>.
- “Behind the Front Lines, Russia’s Military Struggles to Supply Its Forces - WSJ.” Accessed May 4, 2023. <https://www.wsj.com/articles/behind-the-front-lines-russias-military-struggles-to-supply-its-forces-11648805401>.
- Berger, David H. “A Concept for Stand-in Forces.” Department of the Navy, United States Marine Corps, December 2021.
https://www.hqmc.marines.mil/Portals/142/Users/183/35/4535/211201_A%20Concept%20for%20Stand-In%20Forces.pdf.
- . “Force Design 2030,” March 2020.
<https://www.hqmc.marines.mil/Portals/142/Docs/CMC38%20Force%20Design%202030%20Report%20Phase%20I%20and%20II.pdf>.
- . “Force Design 2030: Annual Update,” April 2021.
<https://www.marines.mil/Portals/1/Docs/2021%20Force%20Design%20Annual%20Update.pdf>.
- . “Force Design 2030: Annual Update,” May 2022.
https://www.marines.mil/Portals/1/Docs/Force_Design_2030_Annual_Update_May_2022.pdf.
- . “Installations and Logistics 2030 February 2023.” Department of the Navy, United States Marine Corps, February 2023.
<https://www.marines.mil/Portals/1/Docs/Installations%20and%20Logistics%202030.pdf>.
- Cecere, Lora. “Supply Chain Visibility. If It Seems Simple, Look More Closely.” Forbes. Accessed May 4, 2023. <https://www.forbes.com/sites/loracecere/2023/01/18/supply-chain-visibility-if-it-seems-simple-look-more-closely/>.
- “Command and Control in Supply Chains - Part 1: Why a Commanding View Matters | Reuters Events | Supply Chain & Logistics Business Intelligence.” Accessed March 17, 2023.
<https://www.reutersevents.com/supplychain/technology/command-and-control-supply-chains-part-1-why-commanding-view-matters>.
- “Contested Logistics.” Naval History and Heritage Command, n.d.

- Contested Logistics: Strategies + Challenges*, 2022.
<https://www.youtube.com/watch?v=jJ8ROL720Zk>.
- Cooper, Ambershay. "The Case for Change." *MCA* (blog), May 8, 2020. <https://mca-marines.org/blog/2020/05/08/the-case-for-change/>.
- CWO5 Jason Pierce. Discuss USMC Materiel Command (MATCOM) and the Future of Marine Corps Logistics Command. MS Teams, March 18, 2023.
- "DAU Acquipedia: Supply Classes." Accessed May 6, 2023.
<https://www.dau.edu/acquipedia/pages/ArticleContent.aspx?itemid=217>.
- Deal, Kim. "A Short History of the Marine Corps Materiel Command (MATCOM)." 4825 Mark Center Drive, Alexandria, VA 22311-1850: Center for Naval Analysis (CNA), March 30, 2011. www.cna.org.
- Defense Media Network. "U.S. Marine Corps Is Getting Back to Its Amphibious Roots." Accessed May 6, 2023. <https://www.defensemedianetwork.com/stories/return-to-the-sea/>.
- "Definition of SINE QUA NON," April 13, 2023. <https://www.merriam-webster.com/dictionary/sine+qua+non>.
- "Demystifying the Indo-Pacific Theater > Air University (AU) > Journal of Indo-Pacific Affairs Article Display." Accessed May 8, 2023.
<https://www.airuniversity.af.edu/JIPA/Display/Article/2392217/demystifying-the-indo-pacific-theater/>.
- "DoD Executive Agent." Accessed May 6, 2023. <https://dod-executiveagent.osd.mil/Agents/ByCompPSA.aspx>.
- Eckstein, Megan. "The Marine Corps' Logistics System Is Behind — Here's the Overhaul Plan." *Defense News*, February 23, 2023. <https://www.defensenews.com/naval/2023/02/23/the-marine-corps-logistics-system-is-behind-heres-the-overhaul-plan/>.
- Editor, Richard R. Burgess, Senior. "USMC Calls for GPN." *Seapower* (blog), February 23, 2023. <https://seapowermagazine.org/usmc-calls-for-gpn/>.
- "End-to-End Visibility in Supply Chain | EY - US." Accessed May 4, 2023.
https://www.ey.com/en_us/supply-chain/how-end-to-end-visibility-is-the-key-to-ending-supply-chain-disruption.
- "Enterprise Logistics Integrated Planning Team Final Report." United States Marine Corps, December 2021.
- ESPN.com. "John Wooden's Greatest Quotes," June 4, 2010. <https://www.espn.com/mens-college-basketball/news/story?id=5249709>.
- "Expeditionary Advanced Maritime Operations: How the Marine Corps Can Avoid Becoming a Second Land Army in the Pacific - War on the Rocks." Accessed May 6, 2023.
<https://warontherocks.com/2019/12/expeditionary-advanced-maritime-operations-how-the-marine-corps-can-avoid-becoming-a-second-land-army-in-the-pacific/>.
- Federal CDO Council. "CDO Playbook: Advancing the Federal Data Strategy." Federal CDO Council, 2021. https://resources.data.gov/assets/documents/CDO_Playbook_2021.pdf.
- Fincher, Jason. "Slaughtering a Sacred Cow: A Disruptive Proposal to Achieve Marine Corps Operational Logistics." AMCL, July 29, 2019.
<https://www.marinecorpslogistics.org/post/slaughtering-a-sacred-cow-a-disruptive-proposal-to-achieve-marine-corps-operational-logistics>.
- Fleming, Joslyn, Ellen M. Pint, Jessica Duke, Simon Veronneau, Austin Lewis, and Jordan R. Reimer. *Right-Sizing Marine Corps Intermediate Supply Units: A Staffing Model and Proposed Process Improvements*. Santa Monica, CA: RAND Corporation, 2019.
<https://doi.org/10.7249/RR2908>.
- Fleming, Joslyn, Jonathan P. Wong, Matthew W. Lewis, Duncan Long, Angelena Bohman, Kathryn Connor, Rick Eden, and Michael J. Gaines. "Equipping the 21st Century Marine Corps:

- Alternative Equipping Strategies for Task-Organized Units." RAND Corporation, February 18, 2021. https://www.rand.org/pubs/research_reports/RR2822.html.
- Hall, Richard. "LOGISTICS COMMAND AND CONTROL (LOGL C2)WHAT IT IS, IS NOT AND SHOULD B8." United States Army War College, 1992. <https://apps.dtic.mil/sti/pdfs/ADA250914.pdf>.
- Heskett, James L. "Logistics—Essential to Strategy." *Harvard Business Review*, November 1, 1977. <https://hbr.org/1977/11/logistics-essential-to-strategy>.
- "History of Modernization." Accessed May 4, 2023. <https://www.marines.mil/Force-Design-2030/History/>.
- "Home Page of Air Force Acquisition." Accessed March 17, 2023. <https://ww3.safahq.af.mil/>.
- "How COVID-19 Impacted Supply Chains and What Comes Next." Accessed May 6, 2023. https://www.ey.com/en_us/supply-chain/how-covid-19-impacted-supply-chains-and-what-comes-next.
- "How Two Dozen Retired Generals Are Trying to Stop an Overhaul of the Marines - POLITICO." Accessed May 6, 2023. <https://www.politico.com/news/2022/04/01/corps-detat-how-two-dozen-retired-generals-are-trying-to-stop-an-overhaul-of-the-marines-00022446>.
- "Information Paper: SERVICE LEVEL LOGISTICS STRUCTURE." United States Marine Corps, February 15, 2022.
- "Installations and Logistics 2030." Accessed March 17, 2023. <https://www.marines.mil/Installations-and-Logistics-2030/>.
- "JOINT PUB. 3-33, JOINT TASK FORCE HEADQUARTERS." JOINT CHIEFS OF STAFF, January 31, 2018. https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_33.pdf.
- "Logistics and Materiel Readiness: Strategic Plan 2021." Assistant Secretary of Defense for Sustainment, October 2021. https://www.acq.osd.mil/log/lmr/strategic_plan.html/OSD_L&MR_Strategic_Plan_20211004_Final.pdf.
- Luebke, Peter C., Timothy L. Francis, and Heather M. Haley. *Contested Logistics: Sustaining the Pacific War*. Washington: Naval History and Heritage Command - Department of the Navy, 2023.
- Mall, Scott. "FreightWaves Classics: U.S. Military Logistics Help Make It the World's Best." FreightWaves, May 31, 2021. <https://www.freightwaves.com/news/freightwaves-classics-us-military-logistics-help-make-it-the-worlds-best>.
- Marine Corps Logistics Base Albany. "Materiel Command -- Where It's Been, Where It's Headed." Accessed May 6, 2023. <https://www.albany.marines.mil/News/News-Article-Display/Article/508074/materiel-command-where-its-been-where-its-headed/https%3A%2F%2Fwww.albany.marines.mil%2FNews%2FNews-Article-Display%2FArticle%2F508074%2Fmateriel-command-where-its-been-where-its-headed%2F>.
- Marine Corps Logistics Base Albany. "Names Change, Value Stays Same." Accessed May 4, 2023. <https://www.albany.marines.mil/News/News-Article-Display/Article/507587/names-change-value-stays-same/https%3A%2F%2Fwww.albany.marines.mil%2FNews%2FNews-Article-Display%2FArticle%2F507587%2Fnames-change-value-stays-same%2F>.
- "Marine Corps Logistics Command." Accessed March 17, 2023. <https://www.logcom.marines.mil/>.
- "Marine Corps Logistics Command, History." Accessed March 17, 2023. <https://www.logcom.marines.mil/About/Command-History/>.
- "Marine Corps Systems Command." Accessed March 17, 2023. <https://www.marcorsyscom.marines.mil/>.
- Maritime Security Dialogue: An Update on the Marine Corps with Commandant Gen. David H. Berger*, 2021. <https://www.youtube.com/watch?v=St2O-w1sVO0>.

- “MCDP-4 Logistics.” Department of the Navy, Headquarters United States Marine Corps, March 21, 2023. <https://www.marines.mil/News/Publications/MCPEL/Electronic-Library-Display/Article/899840/mcdp-4/>.
- McLeary, Paul. “Historic Marine Plan to Reinvent The Corps EXCLUSIVE.” *Breaking Defense* (blog), April 1, 2021. <https://breakingdefense.sites.breakingmedia.com/2021/04/historic-marine-plan-to-reinvent-the-corps-exclusive/>.
- “Modernizing Military Acquisition and Sustainment for the 21st Century | McKinsey.” Accessed March 17, 2023. <https://www.mckinsey.com/industries/aerospace-and-defense/our-insights/modernizing-military-acquisition-and-sustainment-for-the-21st-century>.
- “Momentous Changes in the U.S. Marine Corps’ Force Organization Deserve Debate - WSJ.” Accessed May 6, 2023. https://www.wsj.com/articles/momentous-changes-in-the-marine-corps-deserve-debate-reduction-david-berger-general-11648217667?mod=opinion_lead_pos10.
- Moore, Nancy Young, Elvira N. Lored, Amy G. Cox, and Clifford A. Grammich. “Identifying and Managing Acquisition and Sustainment Supply Chain Risks.” RAND Corporation, March 4, 2015. https://www.rand.org/pubs/research_reports/RR549.html.
- Morales, Diane K., and Steve Geary. “Speed Kills: Supply Chain Lessons from the War in Iraq.” *Harvard Business Review*, November 1, 2003. <https://hbr.org/2003/11/speed-kills-supply-chain-lessons-from-the-war-in-iraq>.
- Morison, Samuel Eliot. *History of United States Naval Operations in World War II*. Annapolis, MD: Naval Institute Press, 2012.
- “Naval Supply Systems Command.” Accessed March 17, 2023. <https://www.navsup.navy.mil/>.
- “Naval Supply Systems Command > NSS-Supply.” Accessed March 17, 2023. <https://www.navsup.navy.mil/NSS-Supply/>.
- “OUSD Acquisition & Sustainment Homepage.” Accessed March 17, 2023. <https://www.acq.osd.mil/>.
- “Pages - Home.” Accessed March 17, 2023. <https://www.secnv.navy.mil/rda/Pages/default.aspx>.
- Pawelczyk, Marta. “Contemporary Challenges in Military Logistics Support.” *Security and Defence Quarterly* 20, no. 3 (2018): 85–98. <https://doi.org/10.5604/01.3001.0012.4597>.
- Popular Mechanics. “The Marine Corps Is About to Reinvent Itself—Drastically,” April 2, 2021. <https://www.popularmechanics.com/military/weapons/a36005513/us-marine-corps-historic-reinvention/>.
- Professional Development | Harvard DCE. “7 Reasons Why Change Management Strategies Fail and How to Avoid Them,” November 18, 2022. <https://professional.dce.harvard.edu/blog/7-reasons-why-change-management-strategies-fail-and-how-to-avoid-them/>.
- Rice, Nicholas. “An Analysis of Current Inventory Control and Practices to Provide Recommendations on How to Transfer Interim Supply Support From NAVSEA to NAVSUP and Then Manage That Material,” n.d.
- Rogers, Matthew B., Brandon M. McConnell, Thom J. Hodgson, Michael G. Kay, Russell E. King, Greg Parlier, and Kristin Thoney-Barletta. “A Military Logistics Network Planning System.” *Military Operations Research* 23, no. 4 (2018): 5–24.
- “Sam Morison’s War | Naval History Magazine - February 2020, Volume 34, Number 1.” Accessed May 8, 2023. <https://www.usni.org/magazines/naval-history-magazine/2020/february/sam-morisons-war>.
- Schrady, David. “Combatant Logistics Command and Control for the Joint Force Commander.” *Naval War College Review* 52, no. 3 (1999): 49–75.
- Schuh, Christian, Wolfgang Schnellbacher, and Daniel Weise. “3 Steps to Prepare Your Supply Chain for the Next Crisis.” *Harvard Business Review*, November 9, 2022. <https://hbr.org/2022/11/3-steps-to-prepare-your-supply-chain-for-the-next-crisis>.
- “SDM Is the Future of Supply Chain EBook (Ppc).” Accessed May 4, 2023. <https://specright.com/gate/sdm-is-the-future-of-supply-chain-ebook-ppc>.

- Shih, Willy C., and Adrien Foucault. "It's Time to Rethink Your Global Logistics." *Harvard Business Review*, March 12, 2021. <https://hbr.org/2021/03/its-time-to-rethink-your-global-logistics>.
- Shipman, Matt. "New Tool Tackles Uncertainty in Military Logistics Planning." *Defense Transportation Journal* 75, no. 4 (2019): 19–21.
- Southern, R. Neil. "Historical Perspective of the Logistics and Supply Chain Management Discipline." *Transportation Journal* 50, no. 1 (2011): 53–64. <https://doi.org/10.5325/transportationj.50.1.0053>.
- Straight Talk Supply Chain Insights - Lora Cecere - No Place For Cowboy Rhetoric* #375, 2022. <https://www.youtube.com/watch?v=wS174mjJXk0>.
- "Supply Chain Risk Management: Reducing Threats to Key U.S. Supply Chains." OFFICE OF THE DIRECTOR OF NATIONAL INTELLIGENCE, n.d. <https://www.dni.gov/files/NCSC/documents/supplychain/20200925-NCSC-Supply-Chain-Risk-Management-tri-fold.pdf>.
- "Sustaining Distributed Forces in a Conflict with China - War on the Rocks." Accessed May 4, 2023. <https://warontherocks.com/2023/04/sustaining-distributed-forces-in-a-conflict-with-china/>.
- The Future of Marine Corps Logistics*, 2023. <https://www.youtube.com/watch?v=Aq48ThrNy7I>.
- U.S. Department of Defense. "National Defense Strategy." Accessed March 17, 2023. <https://www.defense.gov/National-Defense-Strategy/>.
- "U.S. Indo-Pacific Command > About USINDOPACOM > USPACOM Area of Responsibility." Accessed May 8, 2023. <https://www.pacom.mil/About-USINDOPACOM/USPACOM-Area-of-Responsibility/>.
- U.S. Naval Institute. "Lake, Broker, or as a Service? Models for Navy Data Management," October 24, 2022. <https://www.usni.org/magazines/proceedings/2022/october/lake-broker-or-service-models-navy-data-management>.
- U.S. Naval Institute. "Logistics Is a Shaping Factor," November 1, 2020. <https://www.usni.org/magazines/proceedings/2020/november/logistics-shaping-factor>.
- U.S. Naval Institute. "Marine Corps Adaptation: The Future Is Now," April 1, 2023. <https://www.usni.org/magazines/proceedings/2023/april/marine-corps-adaptation-future-now>.
- U.S. Naval Institute. "Marines Need Regenerative Logistics," November 1, 2022. <https://www.usni.org/magazines/proceedings/2022/november/marines-need-regenerative-logistics>.
- U.S. Naval Institute. "Shoestring Logistics Lessons from Guadalcanal," November 1, 2019. <https://www.usni.org/magazines/proceedings/2019/november/shoestring-logistics-lessons-guadalcanal>.
- Varner, James. Discuss USMC Materiel Command (MATCOM) and the Future of Marine Corps Logistics Command. MS Teams, March 31, 2023.
- Veluswamy, Murali. Discuss USMC Materiel Command (MATCOM) and the Future of Marine Corps Logistics Command. MS Teams, March 31, 2023.
- War on the Rocks. "A Chat with the Commandant: Gen. David H. Berger on the Marine Corps' New Direction," April 6, 2020. <https://warontherocks.com/2020/04/a-chat-with-the-commandant-gen-david-h-berger-on-the-marine-corps-new-direction/>.
- War on the Rocks. "'Cocaine Logistics' for the Marine Corps," July 22, 2020. <https://warontherocks.com/2020/07/cocaine-logistics-for-the-marine-corps/>.
- War on the Rocks. "Feeding the Bear: A Closer Look at Russian Army Logistics and the Fait Accompli," November 23, 2021. <https://warontherocks.com/2021/11/feeding-the-bear-a-closer-look-at-russian-army-logistics/>.
- War on the Rocks. "How Can the Marines Learn From the Falklands War?," November 23, 2022. <https://warontherocks.com/2022/11/how-can-marines-learn-from-the-falklands-war/>.
- War on the Rocks. "Redefine Readiness or Lose," March 15, 2021. <https://warontherocks.com/2021/03/redefine-readiness-or-lose/>.

- War on the Rocks. "Sealift Is America's Achilles Heel in the Age of Great Power Competition," January 18, 2019. <https://warontherocks.com/2019/01/sealift-is-americas-achilles-heel-in-the-age-of-great-power-competition/>.
- War on the Rocks. "Sustainment of the Stand-In Force," September 12, 2022. <https://warontherocks.com/2022/09/sustainment-of-the-stand-in-force/>.
- War on the Rocks. "Sustainment of the Stand-In Force," September 12, 2022. <https://warontherocks.com/2022/09/sustainment-of-the-stand-in-force/>.
- War on the Rocks. "The Input-Output Problem: Managing the Military's Big Data in the Age of AI," February 13, 2020. <https://warontherocks.com/2020/02/the-input-output-problem-managing-the-militarys-big-data-in-the-age-of-ai/>.
- Wartime Logistics: How to Deliver Material in Contested Environments*, 2022. <https://www.youtube.com/watch?v=UEDFOzvGGOY>.
- www.army.mil. "Army Focuses on Contested Logistics – a Threat to Enemy." Accessed May 4, 2023. https://www.army.mil/article/265428/army_focuses_on_contested_logistics_a_threat_to_enemy.
- "YouTube." Accessed May 6, 2023. <https://www.youtube.com/>.