NPS-CM-24-006

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Sustainment of Stand-In Forces: Analysis of Contracting Capabilities in Support of 3d Marine Littoral Regiment

December 2023

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Prepared for the Naval Postgraduate School, Monterey, CA 93943

ACQUISITION RESEARCH PROGRAM
DEPARTMENT OF DEFENSE MANAGEMENT
NAVAL POSTGRADUATE SCHOOL

The research presented in this report was supported by the Acquisition Research Program of the Department of Defense Management at the Naval Postgraduate School.

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ABSTRACT

The purpose of this Master of Business Administration professional project is to explore challenges in, and possible process or product improvements to, contracting support for stand-in forces such as 3d Marine Littoral Regiment (3d MLR). Operational contract support (OCS) and contingency contracting play a crucial role in providing nonorganic support to units training for and operating in contested environments. However, Blythe's 2020 research indicates that the Marine Corps may experience delays in fulfilling contracted requirements at the tactical level beyond the period of self-sustainment. This study reviews the potential impact of current force initiatives and emerging concepts on the logistical planners and contracting facilitators of stand-in forces. A literature review of current research and other published works on the topics of OCS and contingency contracting informs the project and identifies areas for further exploration. The project utilizes Yoder's Three Integrated Pillars for Success (TIPS) model as the underpinning theoretical framework from which process analysis is performed. The principles of lean thinking are applied to value stream mapping and root cause analysis of qualitative data gathered for the study. Ultimately, the project identifies several key findings concerning the contracting personnel, platforms, and protocols that support 3d MLR and provides recommendations to improve the contracting support process or products.

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ABOUT THE AUTHOR

Capt Matheu Weaver graduated from the United States Naval Academy in 2018 with a Bachelor of Science degree in History and German. After completing the Basic Officer Course in 2018, he was assigned the military occupational specialty (MOS) of Ground Supply Officer. Capt Weaver attended Supply Chain Management Officer Course in 2019 and reported to 1st Battalion, 3d Marine Regiment in Kaneohe Bay, HI. He served as the battalion supply officer for two years where he deployed to Okinawa, Japan as part of the Unit Deployment Program (UDP). Capt Weaver then reported to Marine Corps Air Station Kaneohe Bay where he served as the unit's supply officer for 12 months. He then attended the Naval Postgraduate School to earn a Master of Business Administration degree in defense contract management and advanced acquisition studies. He has follow-on orders to Combat Logistics Regiment 17 in Camp Pendleton, CA. Capt Weaver married his wife Raylene in January 2019, and they currently have no children.

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ACKNOWLEDGMENTS

I would like to express my deepest appreciation to those who provided me with support and guidance during this process. To my loving wife, thank you for your unwavering support and encouragement throughout this academic journey. Your belief in my abilities has been a has been a constant source of motivation and a driving force behind the completion of this project. I extend my sincere gratitude to Professor Kelley Poree for lending his knowledge, expertise, and wisdom throughout this endeavor. His teachings and insightful feedback have been instrumental in shaping the direction of this work. Sir, thank you for your patience and selfless dedication in helping me get through the bitter piece of the pie and place my brick in the larger wall of research. I also extend my utmost appreciation to Dr. Robert Mortlock for contributing his time and energy to improving the quality of my work. Sir, thank you for providing thoughtful and constructive criticism, and more importantly for your mentorship. Finally, thank you to all other NPS faculty who provided me with the necessary education to accomplish this task and to the research participants, without whom this study would not have been possible.

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TABLE OF CONTENTS

LIST OF FIGURES

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LIST OF TABLES

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LIST OF ACRONYMS AND ABBREVIATIONS

AAR	after action report
ACSA	acquisition cross-servicing agreement
AGATRS	acquisition cross-servicing agreement (ACSA) global automated tracking and reporting system
CBE	contingency business environment
CCF	Contingency Contracting Force
CCO	contingency contracting officer
COA	course of action
CONUS	continental United States
CWCIA	Commission on Wartime Contracting in Iraq and Afghanistan
DAI	Defense Agencies Initiative
DoD	Department of Defense
DON	Department of the Navy
DOTmLPF-P	doctrine, organization, training, material, leadership and education, personnel, facilities, and policy
EABO	expeditionary advanced base operations
e-business	electronic business
ECP	expeditionary contracting platoon
FD2030	Force Design 2030
FOO	Field Ordering Officer
GCPC	Government-Wide Commercial Purchase Card
I&L2030	Installations and Logistics 2030
IPE	integrated planner and executor
JEBCES	Joint Effects-Based Contracting Execution System
JLEnt	Joint Logistics Enterprise
JP 4-10	Joint Publication 4-10
KO	contracting officer
LCO	leveraging contracting officer

MAGTF	Marine Air Ground Task Force
MARFOR	Marine Corps Forces
MBA	Master of Business Administration
MCCLL	Marine Corps Center for Lessons Learned
MCRP 3–40B.6	Marine Corps Reference Publication 3-40B.6
MEB	Marine Expeditionary Brigade
MEF	Marine Expeditionary Force
MLG	Marine Logistics Group
MLR	Marine Littoral Regiment
NPS	Naval Postgraduate School
OCONUS	outside the continental United States
OCS	operational contract support
PA	Pay Agent
PBAC	Phase-Based Acquisition Capability
PR	Purchase Request
PRALT	Purchase Request Acceptance Lead Time
PZCO	Phase Zero Contracting Operations
RCO	Regional Contracting Office
SE	supporting establishment
SWOT	strengths, weaknesses, opportunities, and threats
TIPS	Three Integrated Pillars for Success
YTTM	Yoder Three-Tier Model

I. INTRODUCTION

This chapter introduces the practical problem facing Marine Corps logistics planners and contracting personnel considering recent force initiatives, operating concepts, and doctrinal revisions. The primary research question is provided, followed by a list of secondary research questions from which semi-structured interview questions are derived. The research methodology and objectives are briefly presented to outline the theoretical and methodological frameworks as well as the intended purpose of this professional project.

A. PROBLEM STATEMENT

Contracting is a critical component of the overarching logistics support structure, which, when planned for and executed effectively, can significantly impact mission success. The Marine Corps faces challenges in providing timely nonorganic logistical support through operational contract support (OCS) and contingency contracting. This problem is amplified by the demands of current force initiatives and operational concepts that call for the sustainment of stand-in forces in a contested environment. Additionally, existing research suggests that the Marine Corps may experience delays in fulfilling contracted requirements at the tactical level beyond the period of self-sustainment (Blythe, 2020).

This study focuses on the demands of contracting support at the tactical logistics level, with specific emphasis on OCS planning for the Marine Littoral Regiment (MLR). Recent operating concepts, such as *A Concept for Stand-In Forces* and *Expeditionary Advanced Base Operations* require a force capable of persisting inside an enemy's weapons engagement zone (WEZ) with limited access to traditional means of logistical support (Berger, 2021b). As a result, the Marine Corps' current guidance and initiatives call for systemic change and modernization of logistics, including new approaches to local contracting techniques and capabilities (Marine Corps, 2021a).

Furthermore, doctrinal updates and reorganization of the contingency contracting force structure suggest a greater emphasis on contracting capabilities in support of stand-in forces like the MLR. The Marine Corps' current period of modernization and

experimentation must be supplemented by improved contracting processes or products at the tactical unit level. In a contested logistics environment, access to operational and strategic contracting capabilities is complicated for units operating as stand-in forces. Thus, the Marine Corps needs to examine doctrinal implications, organizational structure, and training or education as they relate to planning and contracting execution at the MLR or tactical level.

This study explores how the Marine Corps can improve its contracting capabilities to adequately sustain tactical units such as 3d MLR in a stand-in force capacity. Contributions of the study include the identification of process or product deficiencies from the perspective of both requirements generators and support personnel, contracting capability gaps at the tactical level, and barriers to providing timely contracting support in a contested logistics environment. Finally, these contributions draw on existing linkages to strategic and operational contracting tools or procedures and ultimately recommend changes to the Marine Corps' current doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTmLPF-P) as it relates to contracting.

B. RESEARCH QUESTIONS

The primary research question is, *How can the Marine Corps improve its contracting processes or products to adequately sustain tactical-level units such as 3d MLR?* The secondary research questions are:

- How do contracting facilitators and logistics planners perceive the effectiveness of current processes and products available to provide contracted support to 3d MLR?
- What is the current process for 3d MLR to obtain contracted supplies and/or services?
- Are there any process improvements or underutilized tools that may benefit contracting support for 3d MLR?
- What operational- or strategic-level contracting capabilities can be leveraged to help address 3d MLR's requirements as a stand-in force?
- Are there any barriers to providing timely contracting support for tactical units like 3d MLR?

C. METHODOLOGY

To address the problem, the research must provide insight into how Marines involved in logistics planning and contracting execution perceive the effectiveness of contracted support for nonorganic supplies and services. The methodology used in this professional project includes a literature review of Marine Corps and joint contracting policies and doctrine, Naval Postgraduate School (NPS) theses, and related technical reports and guidebooks. The literature review is organized into subtopics of contingency contracting and OCS using the Three Integrated Pillars for Success (TIPS) model as a theoretical framework. Additional data is collected through semi-structured interviews and a review of after-action reports (AARs) submitted to the Marine Corps Center for Lessons Learned (MCCLL). The methodological framework is derived from the principles of operations management and process analytics. Finally, the research utilizes process flow diagrams, or value stream mapping, and root-cause analysis as the primary methods to analyze the qualitative data gathered during the study.

D. OBJECTIVES

The primary objective of this study is to identify potential changes to Marine Corps DOTmLPF-P that would improve contracting capabilities in support of 3d MLR operating as a stand-in force. The research determines how contracting facilitators perceive the effectiveness of communication and coordination from their logistics counterparts at the tactical unit level. Secondary and tertiary objectives seek to provide further detail on the nature of proposed improvements. The second objective is to determine similarities or differences between the perspectives of logistical planners and contracting facilitators as they relate to the effectiveness of current contracting processes or products. The third objective is to identify gaps or deficiencies in contracting support at the tactical unit level and possible linkages to operational or strategic capabilities.

E. SUMMARY

This chapter provides an overview of the practical problem and purpose of this professional project. The research questions include an exploration into how the Marine Corps can improve its contracting processes or products to provide timely nonorganic

support to 3d MLR. The research is supported by an extensive literature review and analysis of qualitative data collected via semi-structured interviews and from the MCCLL repository. Finally, the researcher seeks to identify deficiencies in current contracting capabilities and propose recommendations for changes to Marine Corps DOTmLPF-P.

II. BACKGROUND

This chapter provides an overview of Marine Corps Force Design 2030 (FD2030) and Installations and Logistics 2030 (I&L2030) initiatives and their potential implications for contracting enablers and logistics planners at the tactical unit level. This chapter also provides information about the stand-in force and expeditionary advanced base operation (EABO) concepts as they relate to logistical sustainment via contracting. Finally, this chapter identifies key organizational responsibilities and structure of the Marine Corps Contingency Contracting Force (CCF).

A. CONTEXT

The Marine Corps' current period of modernization and redesign was initiated by 38th Commandant of the Marine Corps (CMC) General David H. Berger's (2019, 2020, 2023) planning guidance in 2019 and has been further pursued through initiatives such as FD2030 and I&L2030. These documents outline the Marine Corps' vision for strategic relevance against the nation's pacing threats and in the future operating environment, as identified by the National Defense Strategy (NDS). The continued modernization and "campaign of learning" is informed by several new operating concepts that prioritize EABO and the use of stand-in forces (Berger, 2021b, p. 202). The organizational overhaul establishes logistics as the pacing function for operations with further implications for contracting stakeholders in the new era of deterrence and conflict.

This study builds on previous NPS research, which recommends further efforts to identify contracting products and processes that facilitate or inhibit support for nonorganic requirements at the tactical level (Blythe, 2020). In his paper, Blythe (2020) addressed the problem of unsynchronized logistical support timelines and contract support timelines within III Marine Expeditionary Force (MEF). He argued that standardizing the III MEF OCS process would improve the timeliness and throughput of nonorganic support (Blythe, 2020). However, these improvements would likely only benefit MEF- and Marine Expeditionary Brigade (MEB) –level units, leaving the Marine Expeditionary Unit (MEU) or, similarly, the MLR with inadequate support beyond their period of self-sustainment (Blythe, 2020, p. 71). The issue remains that tactical units may

not have timely sustainment "if operationally required … and [given] they are incapable of an organic resupply" due to deficiencies in current Marine Corps contracting processes (Blythe, 2020, p. 73).

B. MARINE CORPS INITIATIVES

Among recent initiatives, Force Design 2030 and Installations and Logistics 2030 establish a relevant framework for Marine Corps' logistics priorities in the coming decade. These modernization efforts have direct implications for the CCF and the way it supports operational forces. Moving forward, contracting processes and procedures must be adapted to improve capability and meet the demands of the future operating environment.

1. Force Design 2030

The Marine Corps' primary initiative, FD2030, serves as the overarching guidance for institutional change in the 21st century. Several annual updates to the original document, published in March 2020, echo the commandant's sentiment that vast restructuring and modernization are required to meet the challenges of the future operating environment: "Logistics capabilities must be organized to enable and sustain the Stand-in force while retaining appropriate capacities to support global crises and contingencies. The mechanisms we employ to sustain Stand-in forces must remain applicable for competition, crisis, and conflict" (Berger, 2021a, p. 6).

Subsequent iterations of FD2030 highlight logistical sustainment in a contested environment as key a finding of the Marine Corps' campaign of learning. Moreover, Gen Berger's (2021a, 2022) guidance prioritizes the investment in expeditionary logistics systems and modernization of the logistics functional area. Ultimately, FD2030 seeks to optimize the Marine Corps for conventional deterrence while retaining global crisis response abilities (Berger, 2021a). Achieving this vision demands that "Stand-in Forces must be set and sustained by logistics capabilities designed for distributed operations over long distances in a contested environment" (Berger, 2022, p. 5). The FD2030 initiative suggests needed improvements to all activities of logistics, including implied tasks for the CCF to satisfy the requirements of stand-in forces.

2. Installations and Logistics 2030

The I&L2030 report was published in conjunction with FD2030 as an effort to support the redesigned force in the future operating environment. I&L2030 outlines five objectives for change across the Marine Corps Installations and Logistics Enterprise (MCILE):

- Create Global Logistics Awareness
- Diversify Distribution
- Improve Sustainment
- Make the Installations Ready for a Contested Environment
- Develop Logistics Professionals for 21st Century (Berger, 2023, p. 1)

These objectives are accompanied by several imperatives that emphasize fundamental reevaluation of the Marine Corps' approach to identifying solutions for improving logistical resiliency in a contested environment (Berger, 2023). This research primarily focuses on the third I&L2030 objective of improving sustainment. In addition to leveraging demand reduction principles, I&L2030 requires Marines to utilize multiple methods of sustainment. Additional methods may include *forward provisioning* of commodities, also known as 21st century foraging (Berger, 2022, p. 7). In their 2021 *Marine Corps Gazette* article, Major Thermos and Captain Maldonado defined the term *21st century foraging* as "the local commercial procurement of supplies and services as a means of supplementing organic methods of support with non-standard logistics to improve sustainment and mobility in maritime operations" (Thermos & Maldonado, 2021, p. 50). I&L2030 further emphasizes agile sustainment pathways as an element of modernized logistics that can expand the use of nontraditional sources of supply, such as OCS and forward provisioning (Berger, 2022, p. 9). Finally, I&L2030 envisions improved sustainment as a Marine Corps sustainment system that is integrated with Joint Logistics Enterprise (JLEnt) capabilities and postured for the sustainment of stand-in forces (Berger, 2022, p. 10). The priorities set forth in I&L2030 weigh heavily on contracting stakeholders throughout the Marine Corps and distinctly on tactical units intended to operate as stand-in forces.

C. OPERATING CONCEPTS

The operating concepts of EABO and stand-in forces accompany recent initiatives and provide a vision of force employment that addresses new challenges facing the Marine Corps. These concepts require consideration of contracting as a means of logistical support in contested areas. Therefore, the Marine Corps must assess the effectiveness of current contracting capabilities at all organizational levels, including tactical units operating as stand-in forces.

1. A Concept for Stand-In Forces

The 2021 document *A Concept for Stand-in Forces* envisions Marines operating in contested areas as forward-positioned reconnaissance and counter-reconnaissance assets in support of a joint force naval campaign (Marine Corps, 2021a). Moreover, *A Concept for Stand-In Forces* is intended to support the overarching objectives of FD2030 by offering a means for integrated deterrence across the competition continuum. The purpose of the concept can be summarized as "generating new capabilities and operating in novel ways" to guide force design and force development in the direction of the future operating environment (Marine Corps, 2021a, p. 1). However, these goals cannot be achieved without altering sustainment methods for logistical support in a contested area. The concept relies on a redundancy mindset that calls for "planning two or more ways to obtain each required element of support" (Marine Corps, 2021a, p. 21). Contracting represents one method the Marine Corps can leverage to avoid challenges associated with distribution. The use of local contracting in such an environment will require significant effort on the part of OCS advisors and contingency contracting officers (CCOs) to adopt new approaches to existing techniques or develop new capabilities. It is imperative that new contracting processes or products be established, integrated, and experimented with before their use in an operational setting to sustain stand-in forces.

2. Tentative Manual for Expeditionary Advanced Base Operations

The *Tentative Manual for Expeditionary Advanced Base Operations* (TM EABO) lays the foundational framework from which *A Concept for Stand-In Forces* employs Marines at forward expeditionary advanced bases (EABs). The newest edition expands

on its 2021 predecessor with pre-doctrinal considerations for the capabilities and methods of stand-in forces conducting EABO (Marine Corps, 2023b). The term EABO is defined as

> a form of expeditionary warfare that involves the employment of mobile, low signature, persistent, and relatively easy to maintain and sustain naval expeditionary forces from a series of austere, temporary locations ashore or inshore within a contested or potentially contested maritime area in order to conduct sea denial, support sea control, or enable fleet sustainment. (Marine Corps, 2023b, p. 1-2)

This study is particularly concerned with the EABO mission of providing forward sustainment and the task of conducting sustainment operations. As described in the logistics operations chapter of TM EABO, stand-in force planners must utilize forward provisioning across the spectrum of survival, supplemental, and sustainment techniques (Marine Corps, 2023b). Most applicable to contracting capabilities at the tactical level are the supplemental techniques of field ordering officer (FOO) and pay agent (PA) teams, the Government-Wide Commercial Purchase Card (GCPC) program, and expeditionary contracting platoon (ECP) assets. The stand-in force should also leverage strategic and operational capabilities such as the broader CCF and theater multiple award contracts. Therefore, persistence is "facilitated by incorporating a framework of naval integration, joint logistics enterprise (JLEnt), and Allied and partnered logistics" to sustain decentralized forces like 3d MLR (Marine Corps, 2023b, p. 6-1). In a contested logistics environment, the tactical, operational, and strategic levels of logistics may overlap to provide optimized delivery of supplies and services to the warfighter.

D. ORGANIZATIONAL STRUCTURE OF THE MARINE CORPS CONTINGENCY CONTRACTING FORCE

Marine Corps contracting organization, personnel, and operations are governed by Marine Corps Order (MCO) 4200.34, *Contingency Contracting Force (CCF) Program* (Department of the Navy [DON], 2016). CCF Marines are assigned to billets as either OCS advisors or contracting officers (KOs). OCS advisors serve in operational billets and are responsible for planning, synchronizing, integrating, and facilitating contracted support (DON, 2016), whereas KOs serve in operational or supporting establishment (SE) billets and are responsible for planning and executing the contracting support

function of OCS (DON, 2016). A key distinction between the two roles is that only KOs are delegated contracting warrant authority. Marine Corps contracting authority flows from the assistant deputy commandant, installations and logistics for contracts (ADC I&L (Contracts)) to operating forces and the SE, as seen in Figure 1.

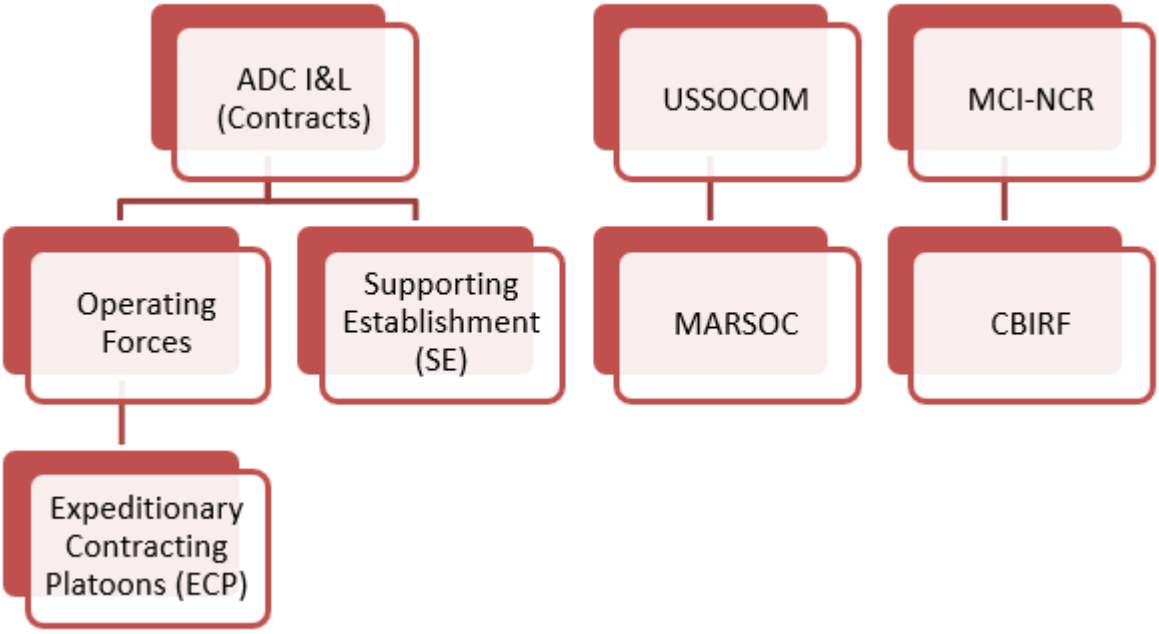

Figure 1. Marine Corps Contracting Authority. Adapted from DON (2016).

CCF personnel in the operating forces reside at the Marine Corps Forces (MARFOR) and MEF/MEB levels. The MEF is a fully scalable Marine Air–Ground Task Force (MAGTF) capable of responding to threats across the range of military operations (ROMO). Each MAGTF is comprised of a command element (CE), ground combat element (GCE), aviation combat element (ACE), and logistics combat element (LCE). OCS advisors are assigned to the MARFOR G-4 and MEF CE G-4 to "plan, coordinate, validate and synchronize mission requirements" and "educate units on requirements necessary to obtain contracting support" (DON, 2016, pp. 2–1–2-2). KOs are assigned to the MEF ECP within the Marine Logistics Group (MLG), Headquarters Regiment, Service Company to "oversee, plan, coordinate, supervise and execute [KO] support for the MEF, smaller unit operations and exercises" and "provide comprehensive contracting support to any size MAGTF" (DON, 2016, p. 2-2). The contracting authority of KOs

assigned to the ECP is "limited to contracts executed in support of exercises and deployments" conducted outside the continental United States (OCONUS) (DON, 2016, p. 1-4). While this authority extends to exercises within the continental United States (CONUS) where garrison support is not provided, the primary role of SE contracting authority is to support garrison operations and tenant commands (DON, 2016, p. 1-4).

E. SUMMARY

This chapter provided the necessary context from which the problem identified in Chapter I can be analyzed. The scope of the forthcoming literature review and analysis is centered on Marine Corps modernization initiatives and operating concepts. Moreover, the research questions and objectives must be addressed through the lens of information presented in this chapter. Familiarity with the Marine Corps CCF organization, personnel, and operations is required for a detailed understanding of the challenges discussed in later chapters.

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III. LITERATURE REVIEW

This chapter provides an overview of the existing research on the topics of OCS and contingency contracting. The field of contingency contracting "encompasses all contracting performed in a contingency environment, including military operations" (Defense Pricing & Contracting, n.d., para. 1), during both declared and not declared contingency environments. Contingency contracting is a subset of OCS, the broader "process of planning for and obtaining supplies, services, and construction from commercial sources in support of combatant commander-directed operations" (Chairman of the Joint Chiefs of Staff [CJCS], 2019, p. ix). While these two topics are interrelated, it is important to understand the subtle distinctions between them. The scope of the literature review is restricted to key findings, conclusions, and recommendations relating to the Marine Corps' CCF. Due to the recency of current force initiatives and operating concepts, contemporary research is most valuable in the context of this study. Furthermore, there are several theoretical frameworks present among the current body of literature. The leading theory is the TIPS model, which envisions strategic contracting integration within the deliberate and contingency planning framework through the pillars of personnel, platforms, and protocols (Yoder et al., 2012). Therefore, the literature review is organized by the pillars of the TIPS model for commonality and ease of synthesis.

A. PILLAR I: PERSONNEL

The first pillar of the TIPS model comprises the three levels of CCO personnel as defined in the Yoder Three-Tier Model (YTTM). The YTTM specifies job tasks and responsibilities for CCOs at all levels of the organizational hierarchy with emphasis on contracting integration. Additional aspects of the personnel pillar are examined through prior research on the topic of contracting capabilities in the Marine Corps. These studies make similar findings and recommendations about the role of contracting personnel in a supporting-supported relationship.

1. The Yoder Three-Tier Model for Optimal Planning and Execution of Contingency Contracting

The YTTM for optimal planning and execution of contingency contracting forms the theoretical basis of the personnel pillar. The YTTM establishes a hierarchical and codependent framework designed to maximize the "effectiveness and efficiency of theater contingency contracting operations … through integrative planning and execution" (Yoder, 2004, p. 14). The model prescribes three levels of CCO employment based on job tasks, education, skills, and personnel characteristics (Yoder, 2004). The first and simplest tier is the ordering officer model, which involves minimal responsibility, training, or education. The ordering officer benefits from limited integration with the joint force structure but cannot provide operational planning or broad liaison functions to the commander (Yoder, 2004). The second and more complex tier is the leveraging contracting officer (LCO) model, which includes and expands upon functions of the ordering officer model by "leveraging the capacities and capabilities of the local and regional economies in the contingent theater" (Yoder, 2004, p. 14). The LCO model alleviates the demand for organic requirements through improved local operational planning but is not integrated with theater-level planning (Yoder, 2004). The last and most complex tier is the integrated planner and executor (IPE) model. The IPE model builds on the previous two tiers by integrating the IPE CCO into the operational planning phases of contingencies to perform operational and theater analysis (Yoder, 2004). The IPE model is particularly important to the Yoder TIPS framework; however, this study is mainly concerned with the Marine Corps' use of LCOs and linkages between the tactical and strategic levels of contracting support.

The Marine Corps has experimented with the 3d MLR organizational structure by employing CCF personnel at the tactical level. These changes seek to exploit the benefits of the LCO model, such as increased contracting capability and optimized local operations. However, as Yoder (2004) cautioned, "In the worst case, some of the tactical execution may actually be counter to those higher-level goals" (p. 14). It is important to consider the advantages and drawbacks of all tiers in the YTTM. The appropriate use of these models helps ensure that organizational structure supports contingency contracting operations instead of undermining strategic, or theater-level, goals.

2. Marine Corps Acquisition Optimization

In recent years, NPS students have addressed personnel challenges facing the Marine Corps CCF in their research. A 2018 study by Marine Corps Captains Pasindorubio, Yu, and Carnazza concluded that operational value could be improved through better employment of the CCF. For their Master of Business Administration (MBA) professional project, the research team studied the relationship between contracting activities and Marine Corps' lethal effectiveness in the context of 21st century expeditionary operations. The research team asked whether a better method exists to employ and utilize the Marine Corps CCF (Pasindorubio et al., 2018). Although their project predates the efforts of FD2030, it acknowledged the demands of the future operating environment, such as distributed forces and contested logistics. Moreover, research about Marine Corps contracting operations is inherently limited to contingency contracting and OCS. Thus, the findings and conclusions are relevant to current research on the subject.

The methodology employed a three-pillar approach that separates Marine Corps' contracting operations into people, processes, and platforms. Furthermore, the research team undertook a strengths, weaknesses, opportunities, and threats (SWOT) analysis to align proposed courses of action (COAs) with Department of Defense (DoD) and Marine Corps strategic objectives (Pasindorubio et al., 2018). The status quo for each pillar was used as the first COA, with additional COAs presented for people and processes but not for platforms. Each COA was then evaluated for optimization based on SWOT analysis. The authors admitted insufficient knowledge of enterprise systems to propose additional COAs for the platform pillar and instead recommended expanded use of the GCPC based on existing policies (Pasindorubio et al., 2018). The study provided a qualitative analysis for the optimization of Marine Corps OCS, which led to several recommendations and answered the previously stated research question.

The research team concluded that contracting is a viable method of sustaining lethal effectiveness in expeditionary operations. However, the Marine Corps can improve its contracting workforce by "leveraging networks to not only inform and educate, but to also assist Marines with getting what they need" (Pasindorubio et al., 2018, p. 76). The

authors recommended improving the interaction between contracting facilitators and the requiring activity using contracting liaison officers. While KOs are not responsible for the requirements generation process, they possess greater knowledge of contracting vehicles and acquisition methods than their logistical counterparts responsible for planning. The recommendation entails uniformed KOs fulfilling the collateral duty of contracting liaison officer "to bridge the gap in communication and build a stronger supporting-supported relationship" (Pasindorubio et al., 2018, p. 73). While this type of customer education may already occur informally, the use of contracting liaison officers can help to integrate KOs into the planning process. This step would increase functional responsibilities and education of the CCF and theoretically raise Marine Corps KOs from Tier 1 ordering officers to Tier 2 LCOs. However, the research team did not address the implications of tactical-level support to units such as 3d MLR operating in the capacity of a stand-in force. Factors of organizational structure and levels of training and education should also be considered when implementing the contracting liaison officer recommendation.

3. An Analysis of Contracting Activity Purchase Request Acceptance Lead Time for USMC Using Unit Acquisitions Under the Simplified Acquisitions Threshold

Marine Corps Captains Letterle and Kantner made similar recommendations in a 2019 study concerning contracting office coordination with the requiring activity. The authors sought to identify time variation between requirement generation and acceptance by the contracting office, known as Purchase Request Acceptance Lead Time (PRALT), for contracts below the simplified acquisitions threshold (Letterle & Kantner, 2019). Using several secondary research questions, they explored the reasons for delays, nuances in requests for supplies and services, and impact of the submission timeline (Letterle & Kantner, 2019). The authors analyzed quantitative data to identify variances that affect PRALT measurements and provided four recommendations on how to potentially reduce PRALT. Although the authors did not identify a specific theoretical framework, the findings generally fit within Yoder's TIPS model (Yoder et al., 2012).

The authors found that requiring activity supply officers' experience and proficiency directly impacted PRALT. Additionally, the authors found that contracting

office support offered to requiring activities had the potential to influence the effectiveness of purchase request submissions. The authors concluded that "an individual liaison capable of providing procedural guidance, requirement preparation resources, and technical writing advice would benefit both the using unit and the contracting activity" (Letterle & Kantner, 2019, pp. 67–68). Not only does this recommendation serve to reduce PRALT and provide the warfighter with timely contracting support, but it also enhances integrative planning as depicted in the YTTM.

The results of the study emphasize the importance of cooperation between contracting facilitators and logistical stakeholders. However, the findings can only be partially applied to current research on sustainment of stand-in forces. The data collected represent the entire Marine Corps from Fiscal Years 2016 to 2018. Therefore, the analysis encompasses all types of units and contracting organizations, including both operating forces and the SE. The authors may not have intended their recommendations to be for a tactical level infantry unit like 3d MLR. Moreover, Purchase Request (PR) Builder is no longer the Marine Corps' system for generating requirements. The new system, Defense Agencies Initiative (DAI), was introduced in Fiscal Year 2022 and likely presents new procedural implications for PRALT.

B. PILLAR II: PLATFORMS

The second pillar of the TIPS model entails the contract systems and tools designed to facilitate integrative planning and execution of contracted requirements. The concept of Phase Zero Contracting Operations (PZCO) seeks to establish contracting processes and products within existing platforms utilized by operational planners. Research has shown that early coordination and use of appropriate tools as outlined in the contingency business environment (CBE) guidebook can improve contracted support throughout all phases of an operation.

1. Phase Zero Contracting Operations

The second pillar of the TIPS model consists of contract systems, or platforms, that integrate contracting throughout all phases of military operations (Yoder et al., 2012). The PZCO concept was introduced to better align strategic OCS systems, such as

the Adaptive Planning and Execution (APEX) system, with the joint operation phases of the combatant commander's campaign plan (Yoder et al., 2012). Phase Zero integrative planning takes form in the "advance planning, exercising, and rehearsal of robust contracting support plans" (Yoder et al., 2012, p. 21) that correspond with the shaping phase of military operations. The authors of NPS professional report titled *The Joint Effects-Based Contracting Execution System* (JEBCES) first attempted to align tactical contracting efforts with strategic objectives using the effects-based contracting (EBC) model (Poree et al., 2008). As a precursor to the PZCO concept, the authors of JEBCES proposed integrating CCOs within operational planning cycles to achieve a Phase-Based Acquisition Capability (PBAC). The concepts of PBAC and PZCO were later codified by Joint Publication (JP) 4–10, *Operational Contract Support,* which established a notional operation model of six phases and parallel OCS activities. A comparison of the operational plan phases and contingency contracting support phases is illustrated in Figure 2.

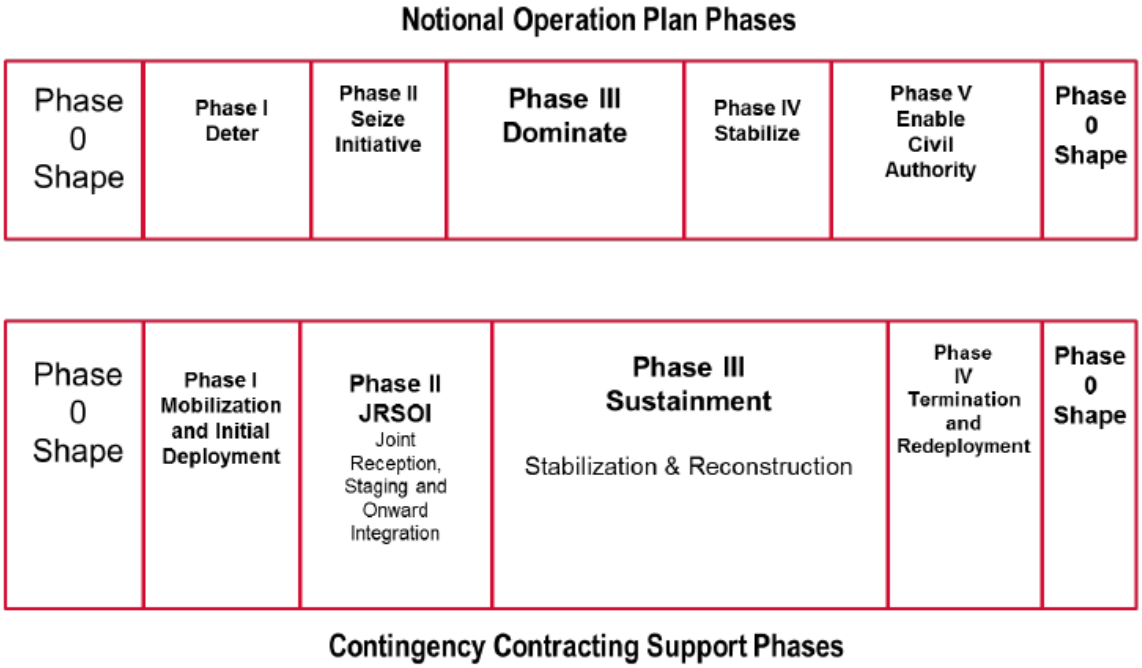

Figure 2. Comparison of the Notional Operation Plan and Contingency Contracting Support Phases. Source: C. E. Yoder (PowerPoint Slides August 7, 2023)

2. Department of Defense Contingency Business Environment Guidebook

The contingency business environment (CBE) guidebook provides guidance for the use of six electronic contracting tools in contingency environments. This electronic business (e-business) initiative was established "in part due to several reports that came from wartime contracting in Iraq and Afghanistan" (Department of Defense [DoD], 2014 p. iii). The Gansler Commission, chaired by Jacques Gansler, identified problems related to contracting and offered four recommendations based on the commission's findings (Gansler et al., 2007). The recommendation to "provide training and tools for overall contracting activities in expeditionary operations" (Gansler, 2007, p. 54) specified the development and fielding of contracting tools to meet the warfighter's needs faster. The CBE guidebook contains the resulting user-friendly e-business tools developed to expedite the acquisition process in a contingency environment. Following the Gansler Commission, the Commission on Wartime Contracting in Iraq and Afghanistan (CWCIA) conducted a 3-year study that uncovered contract waste, fraud, and abuse during contingency operations and encouraged the DoD to institutionalize OCS and restructure the contingency contracting workforce (Commission on Wartime Contracting in Iraq and Afghanistan [CWCIA], 2011). The commission's 15 recommendations to Congress were summarized in a final report titled *Transforming Wartime Contracting: Controlling Costs, Reducing Risks.* As a result, the DoD established the CBE Board of Governors (BOG) to oversee and manage contracting e-business tools to improve support for OCS and future contingencies (DoD, 2014). A complete list of Gansler Commission and CWCIA recommendations are found in Appendices A and B, respectively.

The six tools highlighted in the CBE guidebook are designed to enhance the speed of contracting solutions when suitable to the characteristics of a contingency environment. There are two tools for which mandatory usage is required: the 3in1 Tool and the acquisition cross-servicing agreement (ACSA) global automated tracking and reporting system (AGATRS). The four other tools are available for discretionary usage: the Contingency Acquisition Support Model (cASM), Dollars and Sense (D&S), the Joint Contingency Contracting System (JCCS), and Theater Business Clearance (TBC). Each tool offers unique capabilities and benefits, as summarized in Figure 3.

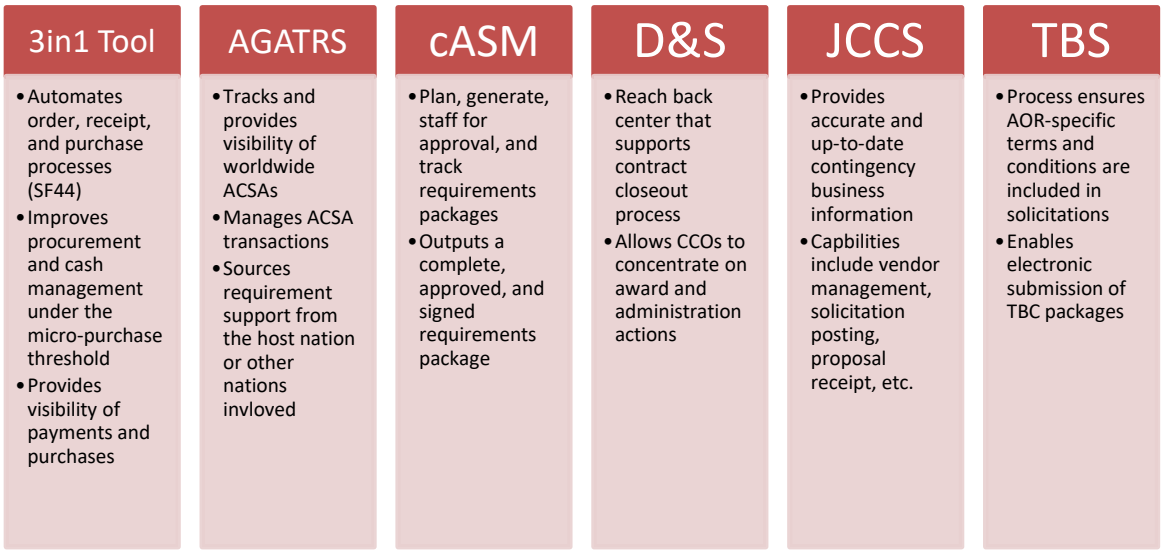

Figure 3. Summary of CBE Tools. Adapted from DoD (2014)

While these tools are intended for use by the joint force to simplify the acquisition process in a theater-wide contingency environment, their use is not precluded from service-level exercises or expeditionary operations. Furthermore, the products are aligned to the operational phases previously discussed. The tools are designed to facilitate contract support requirements as early as the initial deployment phase and prove highly beneficial when integrating contract support. Although size, duration, and complexity of the contingency environment may ultimately affect their usage, the tools are an essential planning consideration at any level of command (DoD, 2014). The full integration of these e-business platforms to provide sustainment for tactical units like 3d MLR is no exception.

C. PILLAR III: PROTOCOLS

The final pillar of the TIPS model encompasses the guiding publications of OCS and contingency contracting. The two main references discussed in this chapter are the Joint Publication 4-10 and Marine Corps Reference Publication 3-40B.6. These doctrinal procedures have been shaped by reports, directives, and congressional acts over the past decade and a half. Still, they have immense implications for contract planning and execution at the tactical level given current force design and operational imperatives.

1. Joint Publication 4-10: Operational Contract Support

Yoder et al.'s (2012) TIPS model describes the protocols pillar as existing rules and procedures, including military doctrine, that govern contract planning and execution alongside the operational plan. The impetus to formalize OCS doctrine stems from previous research and congressional mandates beginning with the Gansler Commission. The report addresses shortfalls in doctrine, regulations, and processes, and finds contracting and contract management "not adapted in order to enable responsive acquisitions and sustainment for expeditionary operations" (Gansler, 2007, p. 1). Among the report's four recommendations, the commission urged reform of existing legislation, regulations, and policy to enhance contracting effectiveness in future expeditionary operations (Gansler, 2007). The 2007 National Defense Authorization Act (NDAA) directed the development of joint OCS policies, which came to fruition with JP 4-10.

Originally published in 2008, JP 4-10 serves to fully integrate and institutionalize OCS in DoD operations (C. Yoder, PowerPoint slides, July 10, 2023). The principles and functions of OCS are formally established in JP 4-10. The publication provides the most comprehensive OCS guidance available, yet it depicts the macro-level perspective of contracting support for operations. Therefore, service-specific policy and regulations must also be examined to determine how the guidance is implemented below the strategic theater of operations.

2. Marine Corps Reference Publication 3-40B.6: Multi-Service Tactics, Techniques, and Procedures for Operational Contract Support

Marine Corps Reference Publication (MCRP) 3–40B.6 expands on the overarching principles of JP 4-10 with emphasis on tactical- and operational-level requiring activity functions (Marine Corps, 2021b). While joint planning guidance still applies, the integration of OCS at tactical and operational units is necessary to sustain deployed forces that have grown increasingly dependent on contracting support in contingency environments (Marine Corps, 2021b). The publication is designed for use by service component commanders and staff of requiring activities, as well as contracting organizations, for the planning and execution of OCS. The Marine Corps service

component level is referred to as MARFOR, and each MARFOR is aligned to the respective Geographic Combatant Command (GCC).

MCRP 3–40B.6 translates joint doctrine for OCS into tactical-level planning and promotes coordination between a unit's OCS staff and its theater support contracting organization (Marine Corps, 2021b). The publication also provides Marine Corps OCS organizations and capabilities that reveal strengths and weaknesses of the CCF. The Marine Corps CCF uniquely provides OCS advisor capabilities in addition to contracting support. Moreover, the Marine Corps CCF is primary concerned with theater support contracts, defined as "a type of contract awarded by contingency contracting officers in the operational area serving under the direct contracting authority of the Service component" (CJCS, 2019, p. I-9). MCRP 3–40B.6 lays the groundwork for contract planning and execution at the operational and tactical levels. However, it has yet to be determined how well the Marine Corps has implemented the guidance in support of tactical units such as 3d MLR.

D. SUMMARY

This chapter includes an exploration of the main findings from prior research on the topics of contingency contracting and OCS. An exhaustive review of theses, professional projects, technical reports, guidebooks, and doctrinal publications has been summarized by findings related to the Marine Corps CCF. Although the literature varies by theoretical framework and methodology, it has been organized by the underlying theme of the TIPS model for simplicity. Each source provides valuable guidance, recommendations, or otherwise useful information to improve the Marine Corps contracting processes or products in support of tactical units such as 3d MLR. However, further research is required to explore the implications of current force initiatives and operating concepts on contracting support and OCS integration for tactical-level units operating as stand-in forces. Since 3d MLR's activation in March 2022, force design experimentation has interacted with each pillar of the TIPS model. The next chapter provides a qualitative analysis of interview responses and AARs to assess the impact of personnel, platforms, and protocols on providing timely contracted support to 3d MLR.

IV. METHODS, ANALYSIS, AND FINDINGS

This chapter outlines the research methods, frameworks for analysis, and findings of the study. The methods section includes discussion of data collection procedures and both theoretical and methodological frameworks used to analyze the data. The analysis section then captures the results of qualitative analysis using tools of operations management and process analytics. The Navy Performance Improvement Educational Resource (N-PIER) supplements existing academic work on the topic of operations management and tailors the analysis to process improvement methods designed for the DON. Finally, the analysis is distilled into key findings related to the problem of how the Marine Corps can improve its contracting processes or products to better support 3d MLR.

A. METHODS

This study incorporates qualitative data from various sources discussed in this section. The procedures of data collection are provided to enable future verification of information and duplication of the research. The research methodology hinges upon the principles of operations management and process analytics as described in the overall process improvement section. The measure and analyze problem-solving methods are later applied in the analysis section of this project.

1. Data Collection

The researcher collected qualitative data from numerous sources, including semi-structured interviews, AARs, and other Marine Corps documents relevant to the topic. Together, these sources provide information from the perspectives of logistical planners, contracting facilitators, and other organizational stakeholders. Due to the recent redesignation of 3d MLR in March 2022, a qualitative approach best engages the research questions posed in this study. Moreover, statements from personnel intimately familiar with the problem provide better insight than the limited qualitative data available. The means of data collection are further discussed in the following paragraphs.

The researcher conducted several semi-structured interviews with key personnel assigned to 3d MLR and its supporting units aboard Marine Corps Base Hawaii.

Interviewees were selected based on several criteria that included current billet, potential for involvement in or experience with contracting support for 3d MLR, and availability. As a result, KOs, logistics officers, and a supply officer provided responses to five open-ended interview questions or participated in a discussion on the topic. The interview questions, found in Appendix C, were derived from the secondary research questions of this study. The interview questions received a not human subject research determination from the NPS Institutional Review Board and from the Marine Corps Human Research Protection Program. Due to the semi-structured nature of the interview, respondents were asked to expound upon the questions in any manner they deemed necessary to provide a more wholistic response. Additionally, the researcher asked follow-up questions when necessary to clarify the answers given. Interviews were conducted virtually and recorded for transcription purposes. Interviewee names and other identifying factors are not provided in this professional report to protect the identity of individuals who participated in the study.

Next, the researcher collected unit AARs from the MCCLL from the period of March 2022 to October 2023. Over this span of time, 3d MLR headquarters submitted four documents to MCCLL for named exercises or other events that occurred in the Indo-Pacific area of operations. 3d MLR's subordinate units, 3d Littoral Combat Team (LCT) and 3d Littoral Logistics Battalion (LLB), submitted three additional documents to MCCLL. In total, four out of the seven AARs included lessons learned for the logistics warfighting function. However, only one AAR included topics related to contracting. The resulting discussions and recommendations, though limited, provide valuable information about OCS and expeditionary contracting during a major exercise involving 3d MLR.

Finally, the researcher reviewed documents related to contracting processes and policies with implications for 3d MLR. These documents consist of internal memorandums, policies, and doctrinal publications that provide procedural guidance and plans for MLR experimentation. Together, these documents connect strategic Marine Corps logistics initiatives with tactical implementation. The information contained in the experimentation campaign plans and contract execution and purchase request guidance informed the overall research analysis by providing a contextual understanding of ongoing efforts.

2. Overall Process Improvement Method

The methodology of this professional project is based on the principles of operations management and process analytics. The TIPS model forms the underlying theoretical framework from which these problem-solving methods are applied. The main concepts of performance improvement are distilled into the N-PIER document. This document borrows its Define, Measure, Analyze, Improve, and Control (DMAIC) process improvement method from the American Society for Quality as a standalone quality improvement procedure. For the purposes of this chapter, only the measure and analyze phases of DMAIC are addressed through the methods of N-PIER. The problem was previously defined in Chapter I of this project, and recommendations for improvement and control are made in Chapter V.

In operations management the operating system is comprised of the activities, people, resources, and procedures in an organization. The work accomplished by the operating system helps meet greater organizational objectives through design, management, and improvement of processes that deliver products or services to customers (Shapiro, 2013). In the context of this study, 3d MLR is the requiring activity or customer that generates requirements as inputs to the operating system. The supporting contracting agencies, which consist of various operating processes and subtasks, then perform the necessary steps to deliver needed supplies or services as outputs. Further analysis of the Marine Corps contracting process in support of 3d MLR will determine how to best deliver customer satisfaction and create value in the form of mission success.

The researcher utilizes qualitative data to measure and analyze the problem through value stream mapping and root cause analysis. First, the current state value stream map depicts the process for 3d MLR to obtain contracted support for nonorganic requirements. Then the future state value stream map synthesizes feedback from interview responses to propose a more ideal process. Finally, the contributing factors of current inefficiencies are identified in a fishbone diagram to address the root causes of the problem.

B. ANALYSIS

The theoretical framework of the TIPS model and process improvement methodology are used to analyze the problem identified in Chapter I. This section measures the current and proposed future state value stream maps of the 3d MLR contracting process. The principles of lean thinking are additionally applied to eliminate waste in the process. Finally, a root cause analysis is conducted to explore the factors and subfactors that contribute to the problem.

1. Value Stream Mapping

This section begins with a visual characterization of the contracting process in its current state and concludes with a proposed future state that identifies areas with little to no value. The method of value stream mapping helps understand the sequence of activities in providing contracted support to 3d MLR and its subordinate units. Traditional manufacturing processes emphasize the takt time, or time between production of units, and lead time between initiation and completion of a production process (Director, Fleet Readiness, n.d., p. 16). However, due to limitations in contracting data available for 3d MLR, the researcher identified areas for improvement through interview testimony and other qualitative data. The value stream map also considers capacity, or the number of customers who can be served over a time period (Shapiro, 2013). Since the topic of capacity for III MEF contracting has been extensively analyzed in prior research (Blythe, 2020), this assessment is limited to a qualitative analysis of constraints, or process bottlenecks.

The analysis is further supported by the five principles of lean thinking, which are designed to eliminate waste and improve business processes (Project Management Institute [PMI], 2022). The first principle is to "specify value from the standpoint of the end customer" (PMI, 2022). 3d MLR and its subordinate units are the primary customers in each value stream map. Therefore, proposed changes are intended to improve the contracting process and benefit 3d MLR. The second principle is to "identify all the steps in the value stream, eliminating whenever possible those steps that do not create value" (PMI, 2022). Each value stream map depicts steps in the process from requirements initiation to delivery of supplies or services but excludes the completion of contract administration and closeout, as these steps do not directly create value for 3d MLR. Recommended changes in the future

state value stream map alter steps in the process that conceivably generate value for both 3d MLR and its contracting facilitators. The third principle is to "make the value-creating steps occur in tight sequence so the product will flow smoothly toward the customer" (PMI, 2022). As shown in Figure 6, the Marine Corps can make changes to improve product flow to 3d MLR. The fourth principle is to "let customers pull value from the next upstream activity" (PMI, 2022). Once proposed changes are implemented, 3d MLR can more closely coordinate with its supporting contracting activity and pull value from upstream. The fifth principle is to "repeat this process again and continue it until a state of perfection is reached in which perfect value is created with no waste" (PMI, 2022). The future state value stream map must first be realized before reassessment can take place. However, future research may explore the state of 3d MLR's contracting process with respect to the analysis conducted in this study.

a. Current State Value Stream Map

The current state value stream map, seen in Figure 4, depicts the process for 3d MLR to obtain nonorganic supplies or services in support of exercises and deployments conducted outside the continental United States (OCONUS). Figure 5 provides an icon key for the value stream map. The flow of information and products through customer and supplier tasks are a visual representation of the notional contract support procurement timeline found in MCRP 3–40B.6 (Marine Corps, 2021b). The current state value stream map is predicated on the assumption that 3d MLR requirements will not exceed $250,000 total acquisition value for supplies or services. Therefore, procurement acquisition lead time from the completion of requirements generation to contract award will not exceed 30 days for supplies and 60 days for services. This assumption is based on available budget data sheet estimates for an exercise conducted in March 2023 in which 3d MLR contract line items did not exceed $250,000 total acquisition value for supplies or services. The referenced budget data sheet information can be found in Appendix D. Another assumption is that 3d MLR's requirements will not be subject to a Service Requirements Review Board (SRRB) due to the previously stated dollar threshold.

The process begins with requirement identification and communication between 3d MLR planners and the supporting ECP. The primary ECP in support of 3d MLR operations

is 3d ECP, located in Okinawa, Japan. Due to geographic separation, electronic information flow is the primary means of communication. The preliminary requirements package may be delivered via email to the supporting contracting office. However, the PR package must also be submitted for approval and follow-on actions in the Accountable Property Systems of Record (APSRs), which are currently DAI and Procurement Integrated Enterprise Environment (PIEE). The requirements generation and acquisition planning process include steps to define the requirement, obtain funding and necessary approvals, conduct market research, complete an independent government cost estimate (IGCE), and other administrative documentation depending on the dollar threshold of the requirement. The requirements generation or pre-award phase may take anywhere from 1 to 9 weeks depending on requirement complexity and proficiency of requiring activity personnel (Marine Corps, 2021b).

The next steps in the process are solicitation, evaluation, and contract award. These activities comprise the award phase of the contract procurement timeline. All activities during this phase are performed by the contracting activity. During the solicitation step, prospective contractors may be introduced into the process as suppliers who submit proposals for new contracts. However, use of existing Federal Supply Schedule (FSS) or Indefinite Delivery Indefinite Quantity (IDIQ) contracts may truncate the process timeline by eliminating the solicitation and evaluation steps altogether. Given the previous assumptions, the award phase should not exceed 30 days for supplies and 60 days for services.

After the contract is awarded, the contractor is responsible for delivery of supplies, services, or construction in accordance with the contract terms, conditions, and standards. This may involve local support for an overseas exercise or deployment as envisioned in current force initiatives and operating concepts. The final step, in addition to receipt of goods and services, is contract administration. The contracting activity is responsible for post-award actions with assistance from the requiring activity or supported unit. This phase varies in time based on several factors, including period of performance and final invoice submission.

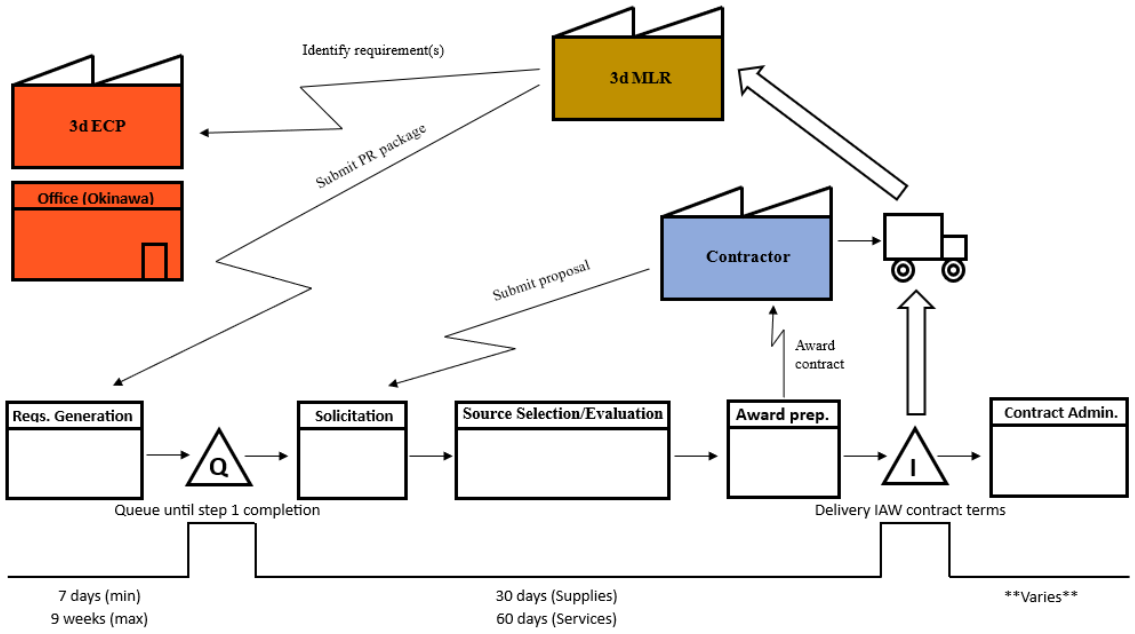

Figure 4. Current State Value Stream Map for 3d MLR Contracting Process

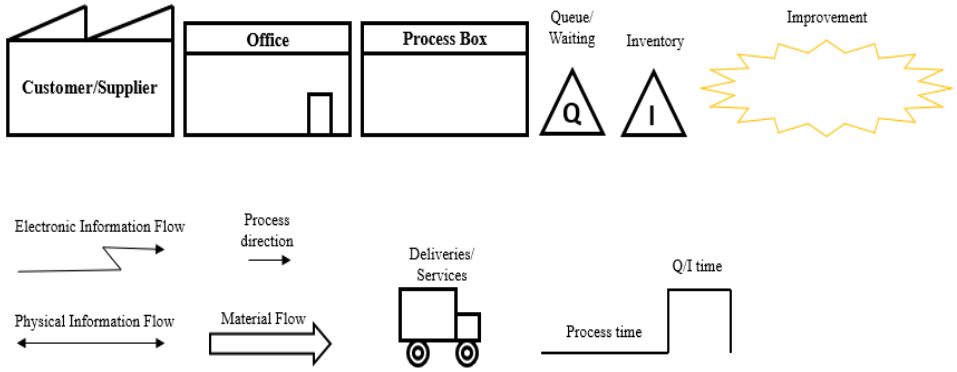

Figure 5. Value Stream Map Icon Key

b. Future State Value Stream Map

The current state process may have suited 3d Marine Regiment under its previous operational employment. Prior to March 2022, the three infantry battalions under 3d Marine Regiment deployed to Okinawa on 6-month cycles as part of the Unit Deployment Program (UDP) Hawaii. However, since being redesignated as 3d MLR in conjunction with Force Design 2030, the demands to operate as a stand-in force have altered the relationship with its supporting contracting activity. 3d MLR does not deploy battalion-size elements to Okinawa under its new structure, yet the supporting contracting activity remains in Okinawa. The

Marine Corps has experimented with 3d MLR's organizational structure and personnel to integrate contracting capabilities at the tactical unit level. However, certain challenges have thus far prevented these efforts from adding value to the process. Specific examples are discussed in the following root cause analysis.

The future state value stream map, seen in Figure 6, depicts the same process for 3d MLR to obtain nonorganic supplies or services in support of exercises and deployments conducted OCONUS. However, the new process map identifies potential improvements to reduce queue time and improve overall process flow. This analysis focuses on the pre-award phase and more specifically, the requirements generation step. The main reason for this distinction is that the requiring activity has the most control over procurement lead time through its ability or inability to accurately define requirements and secure funding (Marine Corps, 2021b). According to one respondent, "Requirements generation is the fundamental gap not only in the MLR but across the Marine Corps" (Interviewee 2, interview with author, July 25, 2023).

A lesson learned from exercise BALIKATAN 22 in the Philippines is that requirements generation drastically impacts contract performance. On multiple occasions, contracted services did not meet the operating force's requirements. The AAR recommended that future contracts provide better specifications for material handling equipment and clearly communicate timelines with local vendors for life support services. As another respondent pointed out, it is equally important that the "local contractor understands our requirement" (Interviewee 3, interview with author, July 20, 2023) as part of requirements definition. Multiple respondents acknowledged deficiencies in the acquisition training and education of requiring activity personnel, which impacts the requirements generation timeline. Some constraints that exist include geographic separation that limits communication, lack of contract-specific training, and lack of proficiency with the APSRs used for submitting PR packages.

Another reason to emphasize the requiring activity/contracting activity relationship and requirements generation step is that provisions already exist to reduce the remaining contract process timeline. For example, contracting tasks during the award and post-award phases are subject to regulation and policies that may be relaxed, streamlined, or eliminated

during declared contingencies (C. Yoder, PowerPoint slides, July 5, 2023). This unique aspect of contingency contracting, or emergency contracting, applies directly to 3d MLR's role in crisis response across the competition continuum. Some acquisition flexibilities during a declared contingency include an increased micropurchase threshold from $10,000 to $35,000 for OCONUS acquisitions, an increased simplified acquisition threshold from $250,000 to $1.5 million for OCONUS acquisitions, and other simplified procedures when certain conditions are met (FAR 2.101, 2023; FAR 18.1, 2023). While it is imperative that OCS planners understand these provisions, there must also be coordination between the requiring activity and supporting contracting activity before executing operations in a contingency environment.

The future state value stream map seeks to improve the relationship between 3d MLR and its supporting contracting agency by collocating 3d ECP personnel with 3d MLR. The current state process requires coordination from Hawaii to Okinawa. Not only is there a 19-hour time difference that severely impacts communication, but information can only be transmitted electronically. Furthermore, the *Tentative Manual for EABO* prescribes a plan of supporting operations in which "contingency contracting officer placement within appropriate forward elements of the littoral force is an essential element of contracting support" (Marine Corps, 2023b). While there are KOs at the Marine Corps Base Hawaii Regional Contracting Office (RCO), their warrant authority is limited to supporting garrison operations. Contracting support for OCONUS exercises or deployments must come from an ECP. As one respondent noted, "If we [3d MLR] leave here tonight, there's zero warrant authority for somebody to go forward" (Interviewee 1, interview with author, July 25, 2023). Therefore, the geographic separation of 3d MLR and its supporting contracting agency must be addressed.

Furthermore, the future state process map identifies a crucial bottleneck at the waiting period between the requirements generation and solicitation steps. The amount of time to prepare an acquisition-ready requirements package depends on levels of experience, familiarity with the process, and complexity of the requirement. However, the supporting contracting organization can also influence the takt time through level of engagement with requiring activity personnel. For example, customer education facilitates rapid requirements generation and may be as simple as providing historical documents (example requirements

packages) and templates to the requiring activity. While 3d MLR lacks historical contract data prior to March 2022, they will likely have similar requirements to other tactical Marine units operating in the Indo-Pacific area of operations. Thus, process time can be reduced by forecasting demand for supplies and services like food service support, general engineering support, and other types of support that operating concepts foresee the use of contingency contracting (Marine Corps, 2023b). These improvements address the non-value-added time it takes to generate requirements and may lead to increased efficiency.

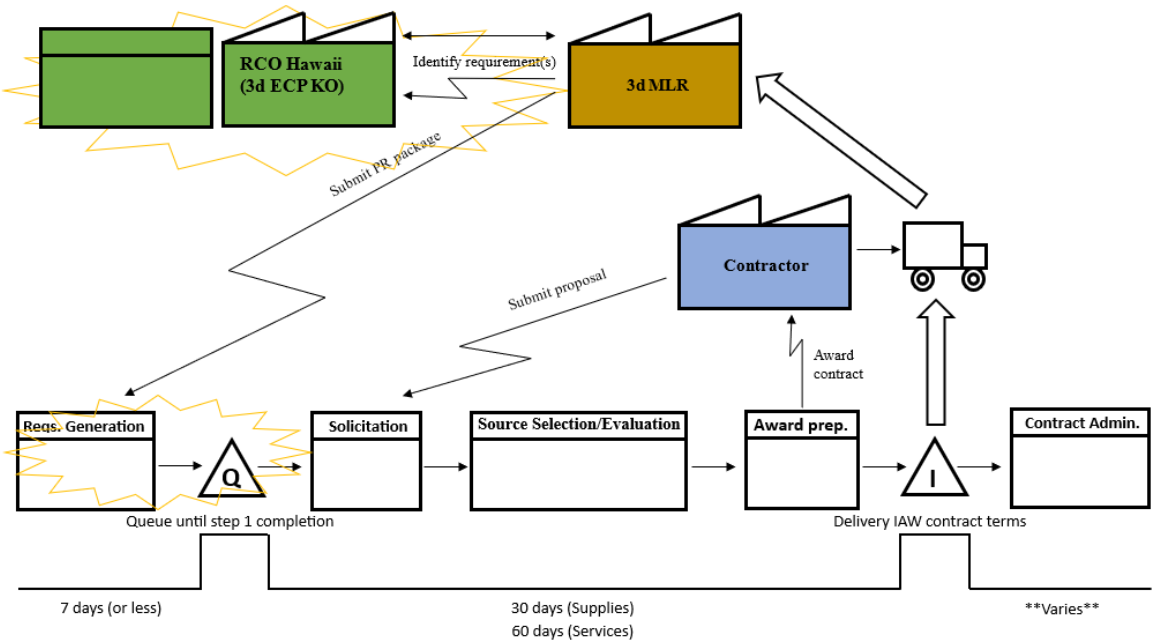

Figure 6. Future State Value Stream Map for 3d MLR Contracting Process

2. Root Cause Analysis

The previous section provided a visual depiction of the contracting process for 3d MLR to obtain nonorganic supplies and services. Value stream mapping identified areas for improved process flow to increase overall efficiency of the process. Through root cause analysis, the areas of suboptimal value are analyzed by their key characteristics. A fishbone diagram is used to consolidate contributing factors into categories of personnel, platforms, and protocols as set forth by the TIPS model.

a. Fishbone Diagram

The fishbone diagram, seen in Figure 7, identifies possible causes for the problem that 3d MLR faces in obtaining adequate sustainment support via contracting. The diagram begins with the first pillar of the TIPS model, personnel. The next branch of the diagram addresses the second pillar of the TIPS model, platforms. The final branch of the diagram corresponds with the third pillar of the TIPS model, protocols. The sub-cause branches of the diagram expound upon why 3d MLR experiences challenges with these factors. Each topic identified on the fishbone diagram is analyzed in the following paragraphs.

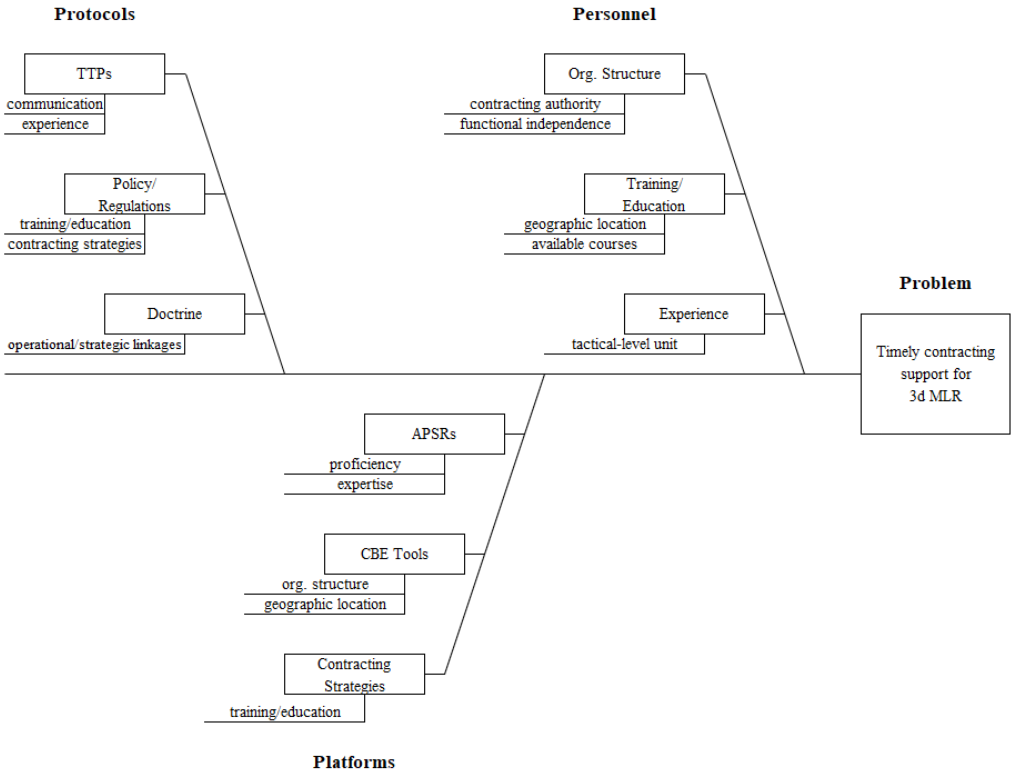

Figure 7. 3d MLR Contracting Process: Fishbone Diagram

(1) Personnel

Organizational Structure. There are no KOs (AMOS 3006), or OCS specialists (MOS 3044) permanently assigned to 3d MLR headquarters or its subordinate units. While 3d MLR has experimented with contracting personnel at the LLB and Littoral Combat Team, functional independence and lack of operating forces contracting

authority make this organizational construct impracticable. The experimental personnel were transferred to the Marine Corps Base Hawaii table of organization as of August 3, 2023, and do not possess proper warrant authority to support 3d MLR exercises or deployments. Functional independence requires a separate contracting authority and command relationship to prevent improper or undue influence (DON, 2016). Operating forces contracting authority is delegated to ECPs that reside in each MLG. However, there is no MLG in Hawaii and thus no ECP collocated with 3d MLR.

Experience. Tactical-level units like 3d MLR are inherently comprised of personnel with limited contracting experience. The unit's supply officer, with input from subject matter experts among the staff, is the primary requirements generator. As a first or second tour supply officer, their acquisition experience is limited to procurement via Military Standard Requisitioning and Issue Procedures (MILSTRIP) and some micropurchase transactions. While there may be instances where the unit's supply officer procures commercial support for supplies and/or services via contracting, these cases do not offer sufficient exposure to the contracting process and the full range of contracting strategies available at the operational and strategic levels.

Training and Education. Logistics planners, serving as OCS staff, require assistance from all primary staff in developing requirements. While some members of the unit may have experience with OCS planning, many have not received formal training on the topic. This could be due to several subfactors, including geographic separation from the supporting contracting activity, access to courses, and priority of training. Customer education between the contracting activity and 3d MLR is vital to the successful fulfillment of contract support. A lack of training and education early in the planning process hinders the ability of logistics planners and staff to generate acquisition-ready requirements packages.

(2) Platforms

APSRs. Requirements generators lack proficiency in their use of APSRs like DAI and PIEE. These platforms are crucial to submitting and tracking acquisition-ready requirements packages through all phases of the contracting process. More importantly, 3d MLR must establish electronic workflows and have the proper DAI structure to

request support before a deployment or exercise takes place (Interviewee 1, interview with author, July 25, 2023). Procurement via contracting represents a small subset of purchasing activities that 3d MLR supply personnel conduct, limiting their expertise with DAI and PIEE procedures. However, additional resources exist that can improve the proficiency of all stakeholders involved in the contracting process.

CBE Tools. 3d MLR does not utilize CBE tools, particularly the 3-in-1 tool and AGATRS. The 3-in-1 tool automates the cash payment process for requirements under the micropurchase threshold and is used by qualified Field Ordering Officers (FOOs) and Pay Agents (PAs). The *3d Littoral Logistics Battalion Experimentation Plan* prioritizes the development of a robust FOO/PA capability within 3d MLR. However, interview responses indicated that "locally here in Hawaii, there's no dispersing support that can deploy. … There's nobody that has cash. There are zero appointed FOOs" (Interviewee 1, interview with author, July 25, 2023) but an internal FOO capability would have filled gaps in support during a major named exercise (Interviewee 3, interview with author, July 20, 2023). Acquisition cross-servicing agreements (ACSAs) are another valuable mechanism to obtain logistics support in a foreign theater, but 3d MLR does not have access to AGATRS, which is "used as need is identified to determine whether ACSAs can be leveraged to meet the requirement in lieu of the traditional acquisition process" (DoD, 2014). Instead, a multinational logistics officer capability is retained at 3d Marine Division for ACSA support during exercises. This requires 3d MLR to deliberately plan for things like life support services and transportation well in advance of any exercise or deployment (Interviewee 3, interview with author, July 20, 2023).

Contracting Strategies. Due to a lack of training, education, and collocated contracting support, 3d MLR is unable to fully leverage available contracting vehicles. There are many acquisition solutions, ranging from the FSS to IDIQ contracts, and other existing multiple award contract vehicles such as the Worldwide Expeditionary Multiple Award Contract (WEXMAC) or Logistics Civil Augmentation Program (LOGCAP), that may support MLR's needs. However, a responder suggested that MLR planners "have to know what their requirements are, and then they have to understand that there are different methods of procurement to get that support" (Interviewee 1, interview with author, July 25, 2023). Rather than submitting an incomplete or poorly researched

requirement to the contracting activity, MLR planners can improve the speed of the process by familiarizing themselves with available contracting strategies or by seeking customer education in advance.

(3) Protocols

Doctrine. Current OCS and logistics doctrine provides ample information about operational- and strategic-level planning and execution. However, the contracting support principles of Marine Corps and joint doctrine do not align with the vision of recent operating concepts such as EABO and stand-in forces. For example, in Marine Corps Doctrinal Publication (MCDP) 4, *Logistics*, regional contracts and OCS are logistics functions at the operational level (Marine Corps, 2023a). While it is true that these capabilities are organic to the MLG and higher echelon units, 3d MLR has not established the necessary linkages to exploit these capabilities fully. MCDP 4 also relegates contracting as a function to "the more expansive topic of sustainment that has a greater emphasis for Joint Force operations" (Marine Corps, 2023a, Notes-3). Joint and strategic-level contracting assets are valuable to 3d MLR operations, but obtaining this support becomes difficult in a contested area or communications-degraded environment. The *3d Littoral Logistics Battalion Experimentation Plan* identifies this gap in OCS planning at the component level and the joint coordination required to facilitate theater contracting support. The experimentation plan states that "3d LLB will pursue coordination with MARFORPAC OCS personnel and develop a robust internal education program" (3d Littoral Logistics Battalion, n.d., p. 3). However, 3d MLR and its subordinate units must also establish associated OCS functions and tasks at their level.

Policy/Regulations. As observed during exercise BALIKATAN 22, certain acquisition regulations and policy have potential to hinder purchasing options. 3d MLR planners reflected on stringent market research requirements and policy guidance for use of the GCPC in their exercise AAR. Despite being perhaps the most widely available micropurchase method, the GCPC program is governed by myriad acquisition and financial management policies, instructions, and local standing operating procedures that complicate its use. Nevertheless, logistics planners must understand these restrictions and be prepared to use alternative procurement vehicles if necessary.

Tactics, Techniques, and Procedures (TTPs). OCS TTPs are force multipliers for efficient and effective contracting support. While service-level OCS TTPs are established in reference publications, this information must be promulgated to tactical unit planners for maximum realization of the benefits. MCRP 3–40B.6, for example, contains operational and tactical planning execution and requirements development checklists that would aid requiring activity personnel in obtaining contracting support.

C. FINDINGS

The findings in this section are derived from the results of value stream mapping and root cause analysis and apply exclusively to 3d MLR. Due to the nature of interview responses and other qualitative data, these findings should not be generalized across the Marine Corps or beyond the scope of 3d MLR and its supporting contracting organizations. Where appropriate, these findings are compared with existing OCS and contingency contracting literature to determine the extent to which they confirm or conflict with previous findings, recommendations, or conclusions.

(1) Contracting capabilities are not integrated within 3d MLR due to constraints like functional independence and contracting authority.

Despite experimenting with contracting personnel assigned to 3d MLR's subordinate units, these efforts were unable to add value in the form of organic contracting capabilities. The requirement for functional independence prevents KOs from being permanently assigned to a non-contracting organization. Furthermore, the geographic separation from an ECP prevents KOs in Hawaii from obtaining a warrant with operating forces contracting authority.

(2) The current organizational structure of 3d MLR and its supporting units does not adequately support stand-in force or EABO operating concepts.

A lack of requisite personnel, including both contracting and dispersing personnel, aboard Marine Corps Base Hawaii prevents 3d MLR from obtaining reliable contracting support for exercises and deployment. While these personnel may be task organized from other units in the Indo-Pacific area of operations, they are not available to accompany elements of 3d MLR from Hawaii given short-notice activation. This may

significantly impact 3d MLR's ability to execute sustainment via local contracting in a stand-in force capacity. Additionally, these limitations prevent 3d MLR from developing a strong supporting-supported relationship or integrating KOs into the planning process as recommended by prior NPS research (Pasindorubio et al., 2018).

(3) Requirements generation is the most significant barrier to providing timely contracting support.

While the problem is not unique to 3d MLR, requiring activity personnel lack the expertise needed to develop requirements efficiently and effectively. Requirements generation is the responsibility of the operational command with assistance from the supporting contracting organization. Defining and capturing requirements accurately may mean the difference in receiving adequate contracted support. Moreover, requiring activity personnel can influence the speed of the contracting support process through requirements generation. Prior research findings recognize the importance of requiring activity and contracting activity relationships in effective requirement submission (Letterle & Kantner, 2019). The same study found that supply officer experience and proficiency have a direct impact on PRALT.

(4) 3d MLR has not established the necessary linkages to fully exploit operational- and strategic-level OCS capabilities.

Many available contracting strategies reside at the joint force command or service component levels in support of combatant commander directed operations. While 3d MLR may interact with theater support contracts during major named exercises, these capabilities are seldom incorporated into operational planning. Additionally, 3d MLR planners do not regularly utilize CBE tools like the 3-in-1 tool and AGATRS, because these capabilities reside at higher echelon commands. 3d MLR has not yet met the criteria to establish a FOO/PA program internally for use as an organic capability. Thus, it must rely on operational or strategic assets to fill this capability gap.

D. SUMMARY

This chapter began with an outline of the research methods, including data collection and the DMAIC process improvement method used to perform the qualitative

analysis. The theoretical framework of TIPS model was reintroduced in addition to the basic principles of operations management and process analytics. Next, measurement of the current contracting process for 3d MLR was presented in the visual form of a value stream map. A future state value stream map identified areas for improvement as well as process constraints. Then root cause analysis of the contributing factors was conducted using a fishbone diagram. The causes and sub-causes of each factor were organized by pillar of the TIPS model and analyzed in detail. The chapter concluded with four main findings derived from the analysis and synthesized qualitative data.

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V. CONCLUSION, RECOMMENDATIONS, AREAS FOR FURTHER RESEARCH

The project concludes by summarizing the previous chapters and individually addressing each research question with insight gained from the analysis and findings. The study offers several recommendations that integrate findings and research question answers with the DOTmLPF-P framework. Finally, this chapter considers areas for further research that may help generate a more comprehensive solution to the practical problem.

A. SUMMARY OF RESEARCH

This study began with an introduction of the problem statement, methodology, research questions, and objectives. This project also provided a thorough background on current Marine Corps initiatives, operating concepts, and organizational structure that gave context to the research conducted. Following the introduction and background chapters, an in-depth literature review identified areas for further exploration of contracting capabilities in support of 3d MLR that the existing body of OCS and contingency contracting research did not include. Finally, this study analyzed qualitative data using principles of operations management and lean thinking to present key findings.

1. Research Questions Addressed

The primary research question was, *How can the Marine Corps improve its contracting processes or products to adequately sustain tactical-level units such as 3d MLR?* The recommendations section of this chapter provides specific examples of how contracting process and products can be improved to better sustain 3d MLR. Value stream mapping revealed challenges associated with geographic separation between the requiring activity, or customer, and the supporting contracting activity. Moreover, interview respondents identified requirements generation as a fundamental gap in providing adequate contracting support to 3d MLR. Through the lens of personnel, platforms, and protocols, root cause analysis identified key factors that inhibit effective

contracting processes and products at the tactical level. Improvement in these areas can help adequately sustain 3d MLR in a stand-in force capacity.

Secondary Research Question 1 was, *How do contracting facilitators and logistics planners perceive the effectiveness of current processes and products available to provide contracted support to 3d MLR?* Contracting facilitators and logistics planners each expressed concerns with the effectiveness of current processes and products available to 3d MLR. The absence of warranted KOs with operating forces contracting authority and dispersing personnel were among the primary issues recognized. While these capabilities exist at the operational and strategic levels, 3d MLR does not have access to these assets organically or even aboard Marine Corps Base Hawaii. In practice, requirements are consolidated at the Major Subordinate Command (MSC) level for large-scale exercises like BALIKATAN 22. This may be acceptable for known training events; however, 3d MLR would not have immediate operational contracting support in the case of a contingency event. Additionally, 3d MLR does not have the requisite training or processes in place to establish useful purchasing options such as a FOO program.

Secondary Research Question 2 was, *What is the current process for 3d MLR to obtain contracted supplies and/or services?* The current process for 3d MLR to obtain contracted supplies and services is depicted visually in the current state value stream map. The process is examined in further detail in the accompanying section of Chapter IV.

Secondary Research Question 3 was, *Are there any process improvements or underutilized tools that may benefit contracting support for 3d MLR?* As addressed in the response to the primary research question, potential process improvements should focus on the relationship between 3d MLR and its supporting contracting activity. Additional improvements to the requirements generation step would add value to the process from the customer's perspective. Contracting tools that may be underutilized or benefit 3d MLR are presented in the root cause analysis fishbone diagram. The platforms pillar includes proficiency or expertise with APSRs, factors of organizational structure or geographic location that impact use of CBE tools, and training or education that hinder use of operational- or strategic-level contracting strategies.

Secondary Research Question 4 was, *What operational- or strategic-level contracting capabilities can be leveraged to help address 3d MLR's requirements as a stand-in force?* According to interview respondents, contracting vehicles such as WEXMAC, LOGCAP, and ACSAs can be used to meet 3d MLR's sustainment requirements as a stand-in force. However, these capabilities do not exist at the tactical level, which requires 3d MLR to closely integrate its OCS planning with MSC and component-level commands. It would greatly benefit 3d MLR to establish independent linkages to higher-level capabilities for future contingencies in the event it must operate as a standalone unit.

Secondary Research Question 5 was, *Are there any barriers to providing timely contracting support for tactical units like 3d MLR?* The existing organizational structure is the most significant barrier to providing timely contracting support for 3d MLR. As determined by value stream mapping, geographic separation from its supporting contracting agency prevents 3d MLR from efficiently communicating requirements. Additionally, root cause analysis reveals contracting authority and functional independence as primary constraints for 3d MLR to obtain contracting support internally or at the same location.

B. RECOMMENDATIONS

The following recommendations are intended to address the findings of this research report. The recommendations are not all encompassing due to the scope of this project and are specifically intended for implementation by 3d MLR and its supporting contracting organizations. The analysis of organizational capabilities has ultimately generated proposed changes that align with the DOTmLPF-P construct, as seen in Table 1. The first recommendation has implications for organizational structure, available personnel, and policy changes that may help overcome the capability gap. The second recommendation focusses on training and education improvements to address the findings. The third recommendation again stresses training and education but also the importance of developing highly competent personnel.

Table 1. Recommendations and DOTmLPF-P Matrix

	Doctrine	Organization	Training	materiel	Leadership/ Education	Personnel	Facilities	Policy
Rec 1		X				X		X
Rec 2			X		X			
Rec 3			X		X	X		

Recommendation 1. Collocate KOs with warrant authority delegated by 3d ECP at the Marine Corps Base Hawaii RCO. Contracting personnel with operating forces contracting authority may reside at the local SE contracting organization as either permanently assigned members of the command or on a temporary basis to support exercises or deployments. These personnel can maintain first-level evaluations within the contracting career chain and a separate command relationship with 3d MLR, as identified in Finding 1. Additionally, this recommendation makes KOs with proper warrant authority available to support 3d MLR as a stand-in force or during EABOs as addressed in Finding 2.

Recommendation 2. Ensure contracting is incorporated into Phase Zero planning activities. 3d MLR OCS planners and staff must integrate the three contracting pillars of personnel, platforms, and protocols into their operational plans. As soon as requirements are identified, coordination between the customer and the supporting contracting activity should occur. This coordination includes initiating the PR package, requesting historical documents or templates, and becoming familiar with external capabilities. It is imperative that these steps are taken prior to mobilization and initial deployment to allow time for rehearsal among organizations and to validate or update requirements as needed. Additionally, contract planning integration should extend beyond 3d MLR to the MSC and higher-level planning cells. These actions address Findings 3 and 4 by improving the efficiency and effectiveness of requirements generations and establishing linkages with external organizations.

Recommendation 3. Logistics planners and staff at 3d MLR can seek additional OCS training or contracting-related resources at any time to gain expertise and enhance proficiency. While some opportunities for customer education do exist by coordinating with the supporting contracting activity, planners and staff are

encouraged to pursue additional training and resources. The Joint OCS Planning and Execution Course (JOPEC) is a joint certified course focusing on OCS planning and execution responsibilities that is highly recommended for all MLR planners. There is also a virtual OCS training course offered through Joint Knowledge On-Line (JKO) titled *Joint OCS Essentials for Commanders and Staff*, J4OP-US380, for those unable to attend a formal resident course offered by the Joint Staff J-4. Additional training resources for contracting APSRs can be found on their respective websites and should be utilized to the maximum extent practicable. Considering Finding 3, these training and educational products can help improve the knowledge and skills of requiring activity personnel.

C. AREAS FOR FURTHER RESEARCH

The following areas for further research were uncovered during the process of consolidating and analyzing data for this project. The areas for further research are either beyond the scope of this research or require substantial effort and merit their own research report.

1. Analyze 3d MLR contract data above the micropurchase threshold to determine the most appropriate, or commonly used, contracting strategies. This research will help forecast demand and identify trends in requirements. However, this type of analysis will require the researcher to deconstruct consolidated requirements at 3d Marine Division or III MEF level. Similarly, consider analyzing procurement data below the micropurchase threshold to forecast requirements.
2. Using the value stream map for 3d MLR contracting process, attempt to measure the cycle time or processing time of each step from requirements generation to delivery of supplies or services. The researcher may need to work closely with 3d MLR supply officers and supporting KOs to gather data. Ideally, this would result in a sample size large enough to model the process and provide additional recommendations for 3d MLR and its supporting contracting organizations.
3. Explore the implications of contractors authorized to accompany the force (CAAF) with 3d MLR operating as a stand-in force. A vast amount of new equipment has been fielded to 3d MLR in recent years, much of which requires Field Service Representative (FSR) support. Through the lens of OCS and external support contracts, study the various planning factors for CAAF as they relate to recent operating concepts like EABO and stand-in forces.

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APPENDIX A. GANSLER COMMISSION RECOMMENDATIONS

1. Increase the stature, quantity, and career development of the Army's contracting personnel, military and civilian (especially for expeditionary operations).

2. Restructure organization and restore responsibility to facilitate contracting and contract management in expeditionary and CONUS operations.

3. Provide training and tools for overall contracting activities in expeditionary operations.

4. Obtain legislative, regulatory, and policy assistance to enable contracting effectiveness in expeditionary operations. (Gansler, 2007)

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APPENDIX B. COMMISSION ON WARTIME CONTRACTING IN IRAQ AND AFGHANISTAN RECOMMENDATIONS

1. Use risk factors in deciding whether to contract in contingencies.

2. Develop deployable cadres for acquisition management and contractor oversight.

3. Phase out the use of private security contractors for certain functions.

4. Improve interagency coordination and guidance for using security contractors in contingency operations.

5. Take actions to mitigate the threat of additional waste from unsustainability.

6. Elevate the positions and expand the authority of civilian officials responsible for contingency contracting at defense, state, and USAID.

7. Elevate and expand the authority of military officials responsible for contingency contracting on the Joint Staff, the combatant commanders' staffs, and in the military services.

8. Establish a new, dual-hatted senior position at OMB and the NSC staff to provide oversight and strategic direction.

9. Create a permanent Office of Inspector General for contingency operations.

10. Set and meet annual increases in competition goals for contingency contracts.

11. Improve contractor performance data recording and use.

12. Strengthen enforcement tools.

13. Provide adequate staffing and resources and establish procedures to protect the government's interests.

14. Congress should provide or reallocate resources for contingency contracting reform to cure or mitigate the numerous defects described by the commission.

15. Congress should enact legislation requiring regular assessment and reporting of agencies' progress in implementing reform recommendations. (CWCIA, 2011)

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APPENDIX C. INTERVIEW QUESTIONS

- What is the current process for 3d MLR to obtain contracted supplies and/ or services?
- Are there any process improvements or underutilized tools that may benefit contracting support for 3d MLR?
- What operational- or strategic-level contracting capabilities can be leveraged to help address 3d MLR's requirements as a stand-in force?
- Are there any barriers to providing timely contracting support for tactical units like 3d MLR?
- Regarding 3d MLR contracting support, is there anything I did not ask that you would like to address?

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APPENDIX D. 3D MLR BUDGET DATA SHEET

(OCE/MSE) Budget Data Sheet (BDS)

Exercise Information			
Name	MLR TE	OCE	3D MAR DIV
Dates	8 Jan-3 Mar 2023	MSC/MSE	3d MLR
Location	29 Palms, CA	Unit POC	
Supporting Units	3d MLR HQ, LCT, LLB, LAAB, Recon	Phone #	
Est. PAX		E-Mail	

Expense Type	*Requested Amount*	*Approved/Funded Amount*
CONTRACTS	$ 993,735.76	$ 995,000.00
MLSRs	$ -	
FUEL/POLs	$ 390,068.80	N/A
BOM	$ 226,947.88	$ 230,000.00
Maintenance	$ -	
MedLog	$ 304,515.24	$ 310,000.00
TAD	$ 240,318.82	$ 250,000.00
PH/IT	$ 287,500.00	N/A
TOT/TOP	$ 6,023,710.44	$ 6,200,000.00
BDS Total	**$ 8,466,796.94**	**$ 7,985,000.00**
Less TOT/TOP	**$ 2,443,086.50**	**$ 1,785,000.00**

Approved by:	
Date:	

Contractual Requirements

All contracts to be submitted to Contingency Contracting

Type of Contract/ Requirement	Start Date	End Date	Unit Cost	Total Cost
DMO Quadcon shipment	12/14/2022	1/20/2023	$ 8,593.80	$ 34,375.20
PARAMOTOR DEMO	1/23/2022	1/27/2023	$ 5,000.00	$ 5,000.00
DMO UTV shipment	12/14/2022	1/20/2023	$ 9,635.76	$ 57,814.56
			$ -	$ -
SWRFT Rental	1/16/2023	3/3/2023	$ 136.00	$ 56,304.00
SWRFT Rental	1/16/2023	3/3/2023	$ 285.00	$ 104,880.00
			$ -	$ -
GSA Short Term Rental, 4x4 Truck	1/16/2023	3/3/2023	$ 285.00	$ 65,550.00
GSA Short Term Rental, 4x4 SUV	1/16/2023	3/3/2023	$ 130.00	$ 17,940.00
GSA Short Term Rental, 12 PAX Van	1/16/2023	3/3/2023	$ 136.00	$ 31,280.00
GSA Short Term Rental, 15 PAX Van	1/16/2023	3/3/2023	$ 136.00	$ 6,256.00
GSA Short Term Rental, Stake Bed	1/16/2023	3/3/2023	$ 98.00	$ 9,016.00
			$ -	$ -
3d LAAB	1/31/2023	3/3/2023	$ 50.00	$ 34,000.00
3d LAAB	2/11/2023	3/3/2023	$ 50.00	$ 26,000.00
3d LAAB	1/31/2023	3/3/2023	$ 10.00	$ 680.00
3d LAAB	2/11/2023	3/3/2023	$ 10.00	$ 520.00
GSA Short Term Rental, 4x4 SUV	1/16/2023	3/3/2023	$ 285.00	$ 39,330.00
GSA Short Term Rental, 15 PAX Van	1/16/2023	3/3/2023	$ 136.00	$ 31,280.00
			$ -	$ -
GSA Short Term Rental, 4x4 Truck	1/16/2023	3/2/2026	$ 285.00	$ 131,100.00
GSA Short Term Rental, 15 PAX Van	1/16/2023	3/2/2026	$ 136.00	$ 68,816.00
GSA Short Term Rental, Stake Bed	1/16/2023	3/2/2026	$ 98.00	$ 9,016.00
Viasat Multi Mission Terminal (MMT) High Capacity Ka-Band (HCKa)	1/16/2023	3/2/2026	$5,450.00	$ 54,500.00
Kymeta VGNet Ku-Band CONUS Roaming Service	1/16/2023	3/2/2026	$35,013.00	$ 210,078.00

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