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The Marine Corps Operating Concept, published in 2016, identifies a Future Operating Environment characterized by complex terrain, technology proliferation and information warfare. It will require tailorable, flexible, and versatile forces able to respond to crises across the Range of Military Operations. To meet these challenges, the Marine Logistics Group will require a new approach to LCE structure, requirements identification, and compositing processes. The structure should enhance training and proficiency standards, optimize the allocation of resources, and effectively absorb unexpected growth and reduction in end strength. The complimentary process would enable the rapid compositing of mission-tailored LCEs to support MAGTFs formed through deliberate or adaptive planning.

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FUTURE WAR PAPER

Logistics Combat Element Task Organization for the Future Force

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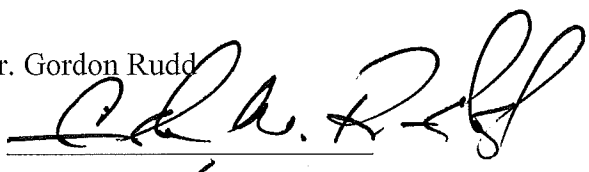
Approved: 

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Introduction

The Marine Corps Logistics Combat Element (LCE) is currently organized into the Marine Logistics Groups (MLG), Combat Logistics Regiments (CLR), Combat Logistics Battalions (CLB) and selected functional battalions to support the MAGTF at the MEF, MEB, and MEU-level, respectively. This design provides standing, rapidly deployable units designed to develop habitual support relationships with elements of the Division, a construct refined in 2005 after Operation Iraqi Freedom (OIF) began. The MLG design functions best when Ground Combat Element (GCE) and LCE training cycles and deployments are aligned and sufficient resources are available to maintain multiple combat service support (CSS) battalions in each MLG. The Marine Corps Operating Concept (MOC), however, published in September 2016, identifies a different operational environment where this construct will be ill-structured to support.

The MOC describes a Future Operating Environment (FOE) characterized by complex terrain, technology proliferation, information warfare, and an increasingly non-permissive maritime domain.[1] It emphasizes the non-linearity of the battlespace and the necessity for a tailorable, flexible, and versatile force that is able to respond to crises across the range of military operations (ROMO).[2] This environment has two primary implications for LCE task organization.

The first implication is the necessity of being tailorable. While this is a core principle of task organization and therefore not a new concept, the MOC highlights a wide range of missions and with an increasingly distributed nature that will require a growing number of unique force compositions. The core unit structures, habitual relationships, and training methods currently in place may not be the most suitable design for the FOE. The Marine Corps must remain prepared to operate as a MEF, MEB, or MEU, but it must also be flexible enough to field a Special

Purpose MAGTF (SPMAGTF) (this definition of SPMAGTF refers to any MAGTF outside the MEF/MEB/MEU construct; it does not refer solely to the currently deployed SPMAGTF-Crisis Response units in Central and European Commands).

The MOC also highlights the deployment of distributable forces, integration with Special Operations Forces (SOF) and the Joint force, leveraging the capabilities of small units to achieve greater effects, and the ability to tailor the force at every level.[3] Adapting to these conditions will necessitate uniquely designed support elements to meet emerging mission requirements which may not be similar in structure to the current CLBs or Combat Logistics Companies (CLC). The LCE may be a small detachment of tailored Military Occupational Specialties (MOS), and may integrate with joint and host nation support. The rapid development of technology will further enable distributed forces to operate and sustain in ways that cannot be entirely foreseen. It will require different, unpredictable support detachment compositions that can adapt with the environment and technology advancements.

Secondly, the MOC highlights the requirement to improve processes to composite a MAGTF through adaptive planning, a process to deploy a credible force to address an unexpected crisis. A force generated through adaptive planning has limited opportunity to conduct collective pre-deployment training, develop local Standard Operating Procedures (SOP), and develop unity of command and effort for a specified mission.[4] Force readiness and mission preparedness must be inherent in the MLG structure and compositing processes, enabling units to form with little notice in a new configuration while maintaining a high level of proficiency and combat readiness. The condensed force generation cycle to meet the unexpected crisis will require new structures and methods to match the tempo of emerging mission requirements. The MOC tasks the Marine Corps to "evolve the MAGTF" to meet such demands (a "critical task"

identified in paragraph 6), thereby improving the compositing processes when formed either through deliberate or adaptive planning.

For the LCE to "evolve," the MLG must alter both its structure and internal processes for task organizing and training LCEs. By doctrinal definition, task organization is a temporary grouping of forces,[5] and therefore intended to change as mission dictates. Most permanent units still require some degree of re-task organization prior to deployment, and the process by which requirements are identified and resourced can mitigate or exacerbate the challenges associated with compositing. In this way, the compositing process complements force structure and the two elements should be assessed collectively.

The process by which units are augmented or composited, along with resource management practices must be synchronized. Resources within the MLG must be allocated so that units maintain the organic capabilities to execute tasks associated with their assigned command relationships. For example, a Direct Support relationship can be defined with an element of Division, but it may not be executable without the necessary resources and training. In this case, the command relationship line diagrams can be misleading.

Developing an LCE force structure is further challenged by the different structural requirements that best enable training and operational missions. Structure must be designed to enable success in war, but also designed to support effective training, an equally important element of combat readiness. The ideal task organization for these two requirements are not the same, a dilemma that will be further explained in subsequent sections. However, the implication for LCE design is that the "train as you fight" core concept may be largely unachievable, especially given the uncertain nature of future war. Instead, the LCE structure within each MEF must be flexible enough to support proficiency through training, and also rapid task organization

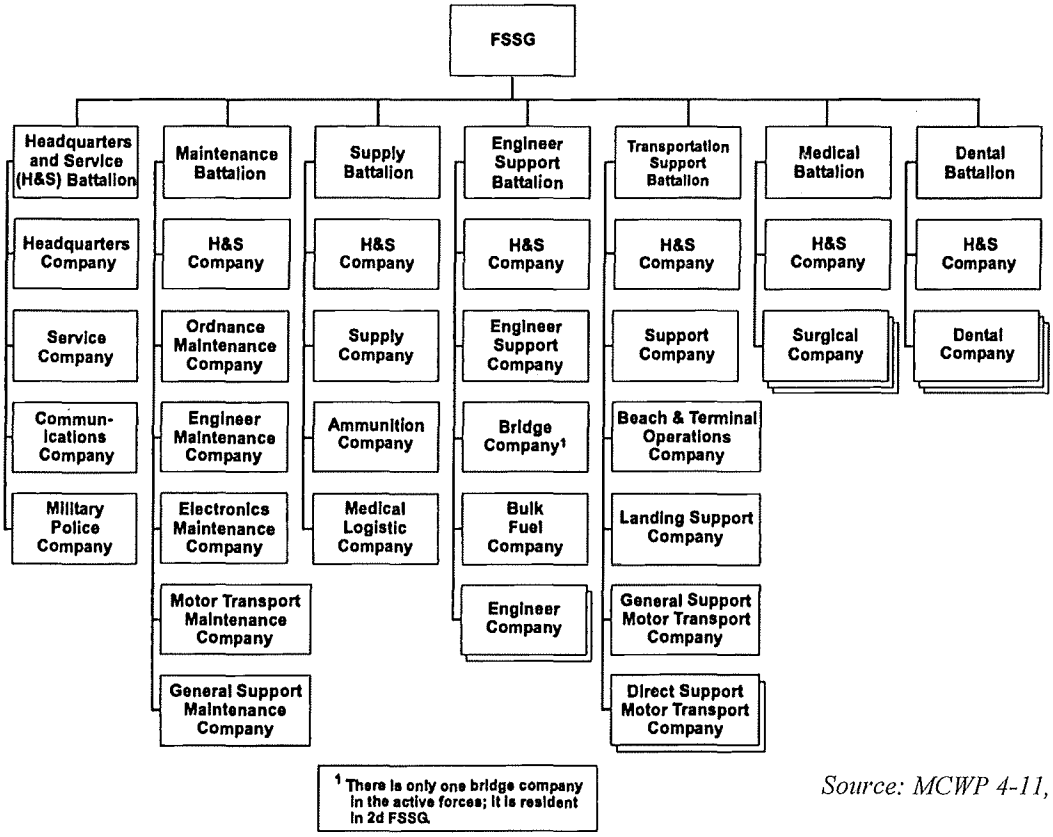
in support of operations without sacrificing effectiveness and supported-supporting relationship building.

Using structure, training requirements, and LCE design and compositing processes as the three elements of effective LCE task organization, lessons learned from the MLG design and its predecessor, the Force Service Support Group (FSSG), can inform a new architecture that would meet the requirements of the FOE. This design would merge the functional benefits of the FSSG with the responsiveness of the multi-function units within the MLG. The force structure would be flexible and responsive, providing lean, tailored, and effective LCEs in support of the MAGTF. A functionally aligned structure with small elements of multi-function design would enhance training and proficiency standards, optimize the allocation of resources, and effectively absorb unexpected growth and reduction in end strength. A formalized LCE generation process would enable the flexibility of the structure, providing a forward-leaning method to forecast LCE requirements with a well-developed concept of support and troop-to-task analysis. CSS support packages of any size could be developed through a mature Battle Roster concept, tailoring units for projected operational requirements. Personnel would be apportioned to the structure to ensure rapid and orderly unit formation and enable the pre-identified leadership to conduct planning with supported unit counterparts.

Current State

The current MLG task organization reflects lessons learned from Desert Storm and OIF, designed to create a more responsive structure than the FSSG. The FSSG structure did not have standing, multi-function battalions or regiments that provided DS without significant reorganization. Instead, it was organized on a purely functional design where support

detachments were generated ad hoc. While this system provided mission oriented task organization and promoted MOS proficiency, the compositing processes lacked responsiveness and initial unit cohesiveness. Functional battalions were reluctant to provide low density, high demand capabilities within the timelines requested by the MAGTF and relationships were not developed with the supported unit in advance of composite. This prevented early development of local SOPs, parallel planning efforts, and the building of trust between supported and supporting units. The previous FSSG structure is provided below:

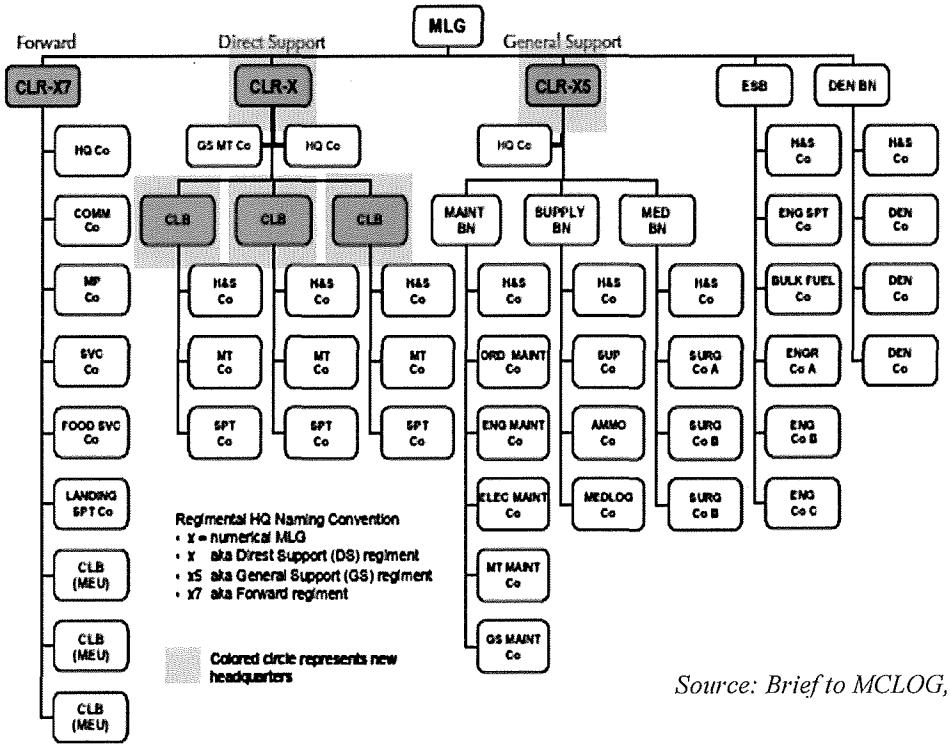


Source: MCWP 4-11, Figure 2-2

The current MLG structure is a combination of functional and multi-functional task organization. Within the MLGs, the CLBs are typically aligned in Direct Support (DS) relationships with Division, and MEU Command Element (CE) counterparts. One CLR typically provides DS to one Division and its three subordinate DS CLBs provide transportation support to an aligned infantry regiment (3rd MLG structure differs slightly). For example, CLR-2 provides

DS support to 2d Marine Division, but also provides medium and heavy-lift transportation support the MEF; a mission which could compete with DS taskings. CLR-2's subordinate CLBs provide DS to 2d Marine Division's subordinate regiments, i.e. CLB-2 provides DS to 2d Marine Regiment. While CLBs only have organic transportation support, they can provide other services when augmented by the functional battalions for training or deployment. However, through garrison routine, infantry units will receive support from multiple providers in the MLG, such as maintenance, supply, medical, and engineer support battalions. Unless fully augmented for deployment, the "one stop shop" support with DS counterparts does not exist.

The MLG structure has evolved since its inception in 2005, however the original design is provided below. The diagram highlights the intended support relationships and the overarching concept of combining functional and multi-functional design. The purple boxes indicate the DS and GS components. The green shading indicates multi-function CLB and CLR structure that was added when the MLG was formed. While structural changes have occurred since 2005 and are currently planned for future Fiscal Years, the habitual support and multi-function concepts have remained consistent.



Source: Brief to MCLOG, BGen Reist

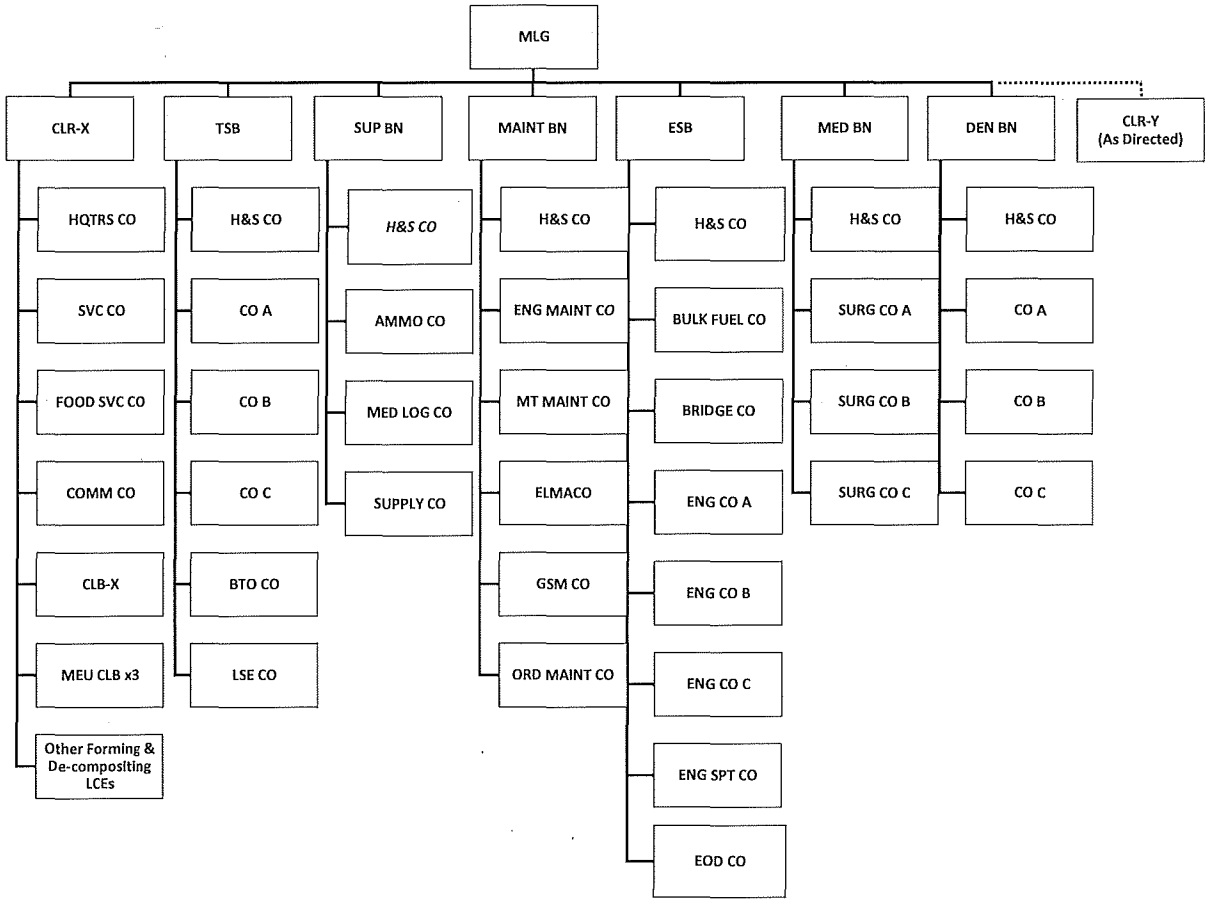
The current MLG design seeks to optimize support to the MAGTF through standing battalion and regimental command and control (C2) structure that is responsive and facilitates habitual relationships with GCE counterparts.[6] It is intended to provide continuity of support, cohesive and readily deployable units, and parallel command structure with the rest of the MAGTF (i.e. three regiments, each with three subordinate battalions). While this remains a desirable outcome, the challenges of maintaining habitual support relationships in the FOE and training multi-function CLBs to provide effective support across the CSS spectrum will require changes in both structure and processes for generating LCEs.

Proposed MLG Structure

To meet the challenges of the FOE, the MLG should reorganize and capitalize on the best practices from both the FSSG and MLG. This would entail functional structure similar in concept to the FSSG (reducing, but not eliminating, standing CLBs and CLRs), to regain the resource management efficiencies and training opportunities gained from centralization. Yet, it would also maintain the responsiveness provided by the MLG through a redesigned LCE force generation process. This concept would provide dedicated structure to forecast LCE requirements and assign resources as approved by the Commanding General (CG). To avoid the unresponsiveness of the LCE compositing process associated with the FSSG, the process would be formalized with dedicated staff, battle rhythm events, and the use of Battle Rosters with supported training programs. The Battle Roster concept, which will be further explained in the next section, would ensure unit leadership is identified to conduct planning with supported units, resources are applied to expected missions in accordance with the CG's priorities, and the unit is able to composite quickly upon mission assignment. The supporting structure would ensure

sufficient staff is available for planning, process management and execution oversight, while maximizing training opportunities for all MOS' within functional battalions.

The proposed MLG structure is depicted below:



In this construct, all commodities would be aligned by function: Transportation (Landing Support and Motor Transportation), Supply, Maintenance, Engineering, Medical and Dental as force providers. This would ensure low density, high demand resources are prioritized in accordance with the CG's priorities and also ensure that Marines and Sailors receive the highest quality MOS training. This is especially critical for supply and maintenance commodities where specialized training (particularly intermediate level) is not offered by formal schools but through on-the-job training (OJT) provided by resident subject matter experts (SME). SMEs are typically

staff non-commissioned officers (SNCO) and Warrant Officers that are only found in functional battalions due to low, service-wide personnel density.

With the structure consolidation into functional battalions, existing DS CLBs would be deactivated. However, MEU CLBs would remain standing organizations because the MEU is the only MAGTF with standing structure (CE and Major Subordinate Elements). This demand will likely endure in the FOE. However, the unique lifecycle of the MEU CLB may encourage local MLG SOPs, nested within MEF MEU SOPs, to de-composite MEU CLBs when a MEU de-composites. They would form with selected Marines and Sailors with End of Service / Permanent Change of Station dates which would allow them to complete the following deployment (a system that has been used in the past). This would promote off-cycle training, proficiency, and resource management. Use of mapping rather than assignment to the unit Monitored Command Code (MCC) may enhance this process.

Although the DS CLBs would be de-activated, one CLB (CLB-X) would remain activated to serve as the Higher Headquarters (HHQ) for the Combat Logistics Companies (CLC) within 1st and 2nd MLG (3rd MLG maintains one CLC and does not require a HHQ). Structure from an existing DS CLB would be re-allocated to establish the new command. In addition, the MLG would maintain the flexibility, authority, and resources to form other CLBs or tailored LCEs through deliberate and adaptive planning when the CG directs. DS or GS LCEs could be formed for garrison training or deployment purposes on a temporary or semi-permanent basis. For example, if the MLG and Division within a MEF are able to establish specific CSS requirements and support duration, the MLG CG may form a DS LCE of appropriate size to fulfill the requirement and leverage the training opportunity. Likewise, a DS relationship can be established in response to expected assignment. Flexibility is maximized at the Group to

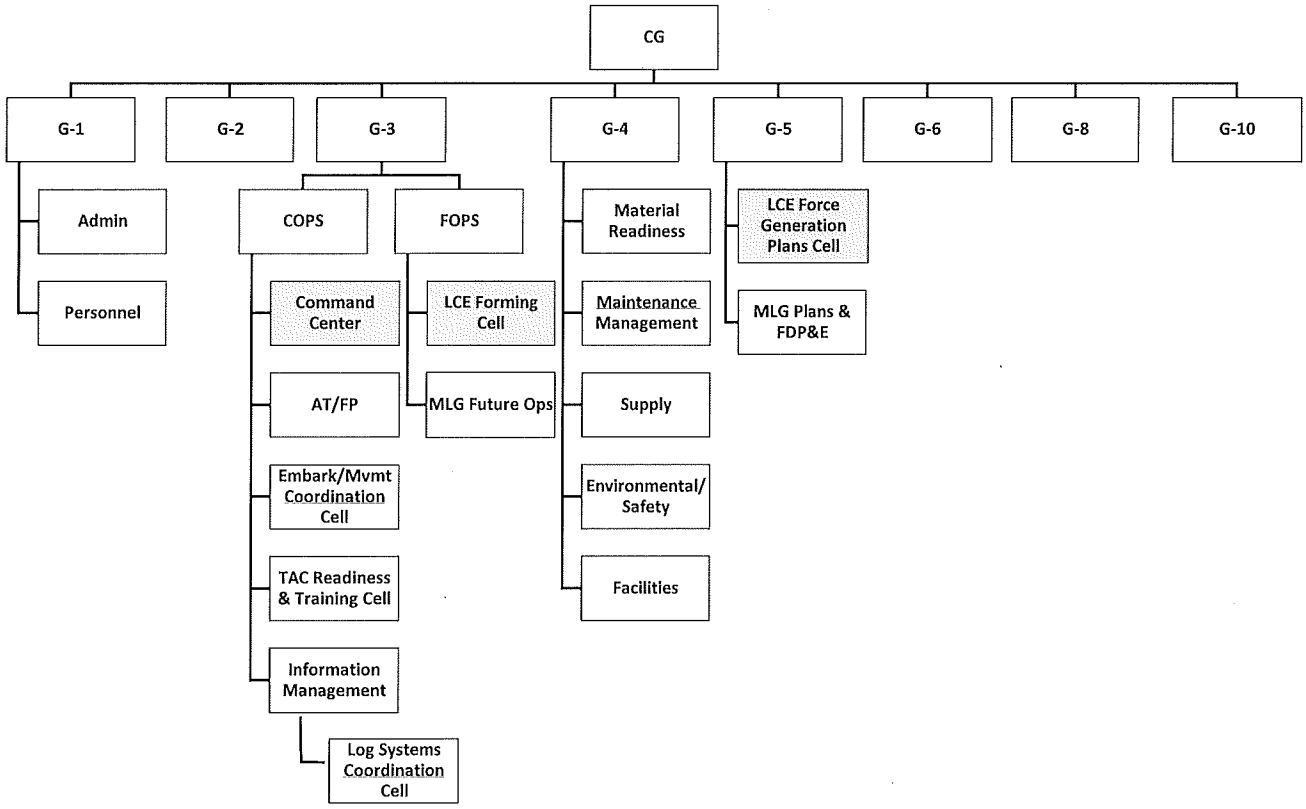
establish local DS relationships at lower levels while maintaining the training and resource management benefits of functional structure. This process seeks to maximize DS relationships but recognizes that they may not be enduring.

The two CLRs are represented by CLR-X and CLR-Y. A third CLR exists in current structure but is assumed to be deactivated due to prior HQMC determination. It is therefore not incorporated in the proposal. CLR-X (comparable to current state HQ Regt, formerly CLR-X7) would serve as the parent unit of forming and composited LCEs. This includes MEU CLBs (when not composited with the MEU), LCEs in support of SPMAGTF-Crisis Response, and all other LCEs formed through adaptive and deliberate planning. CLR-X would provide oversight of the forming and de-compositing process, serving as the subordinate unit's advocate for resources and the O-6 interface with sister Major Subordinate Commands. CLCs would become subordinate units of CLR-X since it is best resourced to provide C2 of the multi-function units. CLR-X would maintain the Marine Prepositioning Force LCE mission for planning and execution.

CLR-Y would only activate upon orders from the CG. The 20 officers and 103 enlisted from the CLR-Y structure[7] would be added to the MLG staff, an arrangement that would provide additional manning resources for centralized planning and CSS execution oversight. When activated, CLR-Y would serve as the MEB LCE or LCE component of the MEF FWD. By being integrated within the MLG staff on a daily basis, they would have increased situational awareness, understanding of HHQ intent, and established relationships within the HQ and sister Major Subordinate Commands (MSC). Service level training exercises would exercise the staff, such as Bold Alligator or Large Scale Exercise in 29 Palms, CA.

The flattened structure would provide greater flexibility and cross-functional integration in planning capacity. This is critical to support adaptive planning processes, which are inherently rapid. The proposed G-3 and G-5 staff organization below is intended to offer one way in which staff could organize and collaborate to support the LCE generation process, but it is by no means the only viable method.

Sections highlighted in yellow are key components of the LCE force generation process and will be described in greater detail in the following section:



The CLR-Y Commanding Officer would serve as the newly established G-5 with his or her Operations Officer, Future Operations Officer, and select company grades and Staff Non-Commissioned Officers. (The current MLG structure does not include a G-5; instead the G-3 includes a Plans section with, by Table of Organization (T/O), three Marines: (2) 0505 Majors

and (1) MGySgt 0491). The G-5 would provide an enhanced interface with the MEF G-5 and sister MSCs for long-range planning. The CLR staff would augment the Plans section to create two sections within the G-5: one focused on internal MLG plans, such as the MLG campaign plan, and the other for external support planning, from which potential LCE requirements may derive. The latter would be a cell focused on forecasting LCE force requirements and developing corresponding task organizations, which could be called the LCE Force Generation Plans (LFGP) Cell. It would participate in MEF/Division/MAW Operational Planning Teams (OPT), maintain situational awareness of current contingency plans, develop "on-the-shelf" LCE task organization shells for potential future requirements (such as the OIF or Desert Storm MEF deployment construct), modular capabilities packages, and consolidate best practices from assessments and lessons learned.

The LFGP cell would be the process owners for deliberate and adaptive planning in support of compositing MAGTFs. It would develop and maintain the Pre-Deployment Training requirements and forming actions for deliberately planned MAGTFs, monitor unit lifecycles, execution timetables, and refine training and resourcing requirements. It would also be responsible for identifying standards and forming processes for LCEs composited in response to adaptive planning. Assignment of LCEs for service level exercises and deployments is closely aligned to this process.

In this example, the MLG G-3 section would be broken into two sections: Current Operations (COPS) section and Future Operations (FOPS) section. The COPS section could be led by a Lieutenant Colonel 0402 currently the operations officer within the existing G-3 T/O. The section could consist of five sub-sections: Information Management (including the Logistics System Coordination Cell), Anti-Terrorism/Force Protection, Embarkation and Movement

Coordination, and the Command Operations Center (COC), which receives CSS requests and monitors current MLG CSS operations and training events. The centralized COC would encompass the responsibilities outlined in Marine Corps Tactical Publication 3-40, major tasks being: centrally manage the logistics support request (LSR) system for the MLG with cradle-to-grave oversight (receive support requests from supported units, task appropriate MLG unit, oversee execution), inform appropriate leadership when unable to support, and maintain a current capability dashboard of resources maintained, allocated, and available for tasking. With the possible exception of maintenance and supply support requests submitted through Global Combat Support System-Marine Corps (GCSS-MC), it would provide a "one stop shop" for customer service. The process would be standardized and could serve as a guide for subordinate LCEs in CSS SOP development. Future LCE staff could gain experience working with the system prior to composite. The COC would enable logistics C2 for the MLG CG through centralized, real-time oversight of available and allocated resources within the Group and support assessments of current operations.

The Tactical Readiness and Training (TRT) cell would be led by the 0302 Major as assigned in the current structure, however it would be augmented with CSS company grade officers and SNCOs from CLR-Y to serve as the comprehensive training focal point for the MLG. This includes basic combat skills, Training and Readiness (T&R) completion, Marine Corps Combat Readiness Evaluations, and service level exercise participation. An enhanced training cell would be especially critical in designing training packages and providing exercise support for compositing, multi-function LCEs in the FOE.

The FOPS section would be led by the CLR-Y Executive Officer, Lieutenant Colonel 0402. It could consist of two sub-sections: the LCE Forming Cell (LFC) and MLG Future

Operations. The current T/O allocates one Major 0402 to FOPS, which could lead the MLG Future Operations sub-section. The LFC would be a newly formed, cross-functional cell that would lead a resourcing working group to man and equip the Commander-approved LCE structures produced by the LFGP. While the LFGP would produce numerous LCE structures for contingencies, only those approved by the CG, in accordance with his or her vision of the LCE employment in the FOE, would have directed resource solutions developed. Working group membership could include representatives from the G-1 (personnel), G-2, G-3, G-4, G-6, G-8, and the functional battalions. LFC staff would include the majority of the currently functionally assigned staff within the G-3: Law Enforcement, Explosive Ordnance Disposal, Engineer Support Coordination, Chemical, Biological, Radiological Nuclear (CBRN) personnel. The SMEs also could be leveraged for MLG assessments and additional OPTs as required. The section would benefit from the integration 0505 planner(s) due to the requirement for design, OPTs, and working groups.

The MLG Future Operations section would include the current 0402 Major provided per the T/O and additional staff to interface between the G-3 and COPS for MLG future operations on events such as MLG field exercises and major training events. The section could provide a source of OPT leads for other specific tasks and requirements, such as Large Scale Exercise or MPF exercises, able to conduct centralized planning with access to SMEs within the HQ and other MSCs. This would enable the staff of potentially forming LCEs that work within the section on a day-to-day basis to conduct planning with future GCE and CE counterparts for coordinated training and employment.

Battle Roster Concept and Battle Rhythm Development

The proposed task organization would not be effective without a complimentary staff process and battle rhythm to promote coordination, synchronization, and information sharing to support the Commander's decision making process.[8] The process must be staffed properly, well-managed, and understood by all stakeholders.

The process would be largely centered on the LFC's working group as the focal point of cross-functional resource collaboration between the MLG staff and functional battalions. Having received commander approved, LCE structure requirements from the LCE Force Generation Cell, the LFC would ensure resources were applied in accordance with the CG's priorities and with inputs from all applicable stakeholders thereby creating a Battle Roster.

The Battle Roster is not a new concept. However, it has achieved varying degrees of success in application, depending on the adherence to compositing timelines and the effectiveness of resource solutions. During the Gulf War, a similar concept was successfully employed (the contingency force list[9]) in the formation of Brigade Service Support Group (BSSG) 7, effectively growing from a core staff of 35 to its wartime table of organization of nearly 3,000 personnel within 15 days.[10] In January 1991, Maj Craig S. Huddleston, a staff officer in Saudi Arabia, wrote that compositing was part of the "good stuff...we're really a mixed-matched outfit. Units are from every major command. A few problems existed with standing operating procedures and communications at the beginning—otherwise no worries."[11] 1st MEB is still composited through a similar process, where the CE is assigned to other primary billets but activated from the Battle Roster when directed.[12]

The compositing of smaller LCEs, however, has historically achieved less success, mostly due to parent unit reluctance to provide low density, high demand personnel in a timely

manner, a lack of unit training prior to composite, and deficiencies in individual qualifications, particularly within technical MOS'.[13] The process was less mature than those used to composite units at the brigade level. An after action report submitted by Mobile Combat Service Support Detachment – 26 in March 1991 commented on the disorganized nature of composite prior to deployment, and recommended that the FSSG be structure so that it could be "readily adapted into operating units that are traditionally formed and employed in peacetime."[14] Formalizing the Battle Roster concept would achieve this intent, enabling an LCE of any size to be task organized and rapidly composited with pre-established formations and supported-supporting relationships. The units could be exercised for peacetime training without being a standing unit.

Shortfalls of the previous system mentioned previously could be mitigated with enforcement mechanisms within the MLG HQ, ensuring compositing timelines are adhered to by subordinate units, required training is identified and conducted, and transparency in resource allocation is provided to force providers and staff. This would identify risks of over or under allocation and ensure that all apportioned personnel maintain situational awareness of their assignment responsibilities. These mechanisms would require dedicated staff and formalized, commander-driven processes, synchronized with the MLG battle rhythm. The proposed structure and LCE force generation process would provide such support to enable rapid formation of LCEs to meet emerging requirements in the FOE.

The described Battle Roster construct differs from its current use by select standing organizations, such as MEUs, to augment personnel for deployment. While similar in concept, it differs in application. Because the MEU maintains the benefit of regular deployment cycles that are forecasted years in advance, it can establish report dates for Battle-Rostered personnel, rather than require their identification year-round (the Battle Roster is not usually activated until 6 – 12

months prior to deployment). In contrast, the provided construct maintains a regularly maintained Battle Roster, postured for an emergent requirement at any time. Personnel are consistently apportioned to the Battle Roster and replaced when individuals change duty stations or reach end of service dates. The Battle Roster would be rehearsed during training exercises, either service-level (such as Integrated Training Exercise or Rolling Thunder) or MLG-level (developed to exercise the LCE or support the aligned GCE unit). Instead of functional battalions requesting augmentation in order to fulfill exercise support taskings, a process would be in place to consistently generate task organized LCEs based on force packages already being prepared for anticipated employment. This would ensure the LCE force generation process is routinely exercised and refined and Battle Rostered units are regularly exercised. As Colonel Woodhead, the chief of staff of the 2d FSSG, stated in the *Marine Corps Gazette* in 1991, "task organization is a weakness only if we don't practice it. Forming permanent task organizations is a contradiction in terms and the loss of a valuable training evolution that accurately portrays how we fight."[15]

The process would require consistent oversight and HHQ support, formalized in doctrine or SOPs, to avoid the pitfalls experienced in previous applications. The art of LCE task organization has gradually dissipated from CSS doctrine over the past 35 years, leading to a decline in appreciation, proficiency, and confidence in the process. When Education Center Publication 4-1, *Combat Service Support*, was published in 1980 as the precursor to the first volumes of CSS doctrine, it included a 27-page section entitled, "Combat Service Support Organization Objectives/Planning," focused on how to best task organize units. The section included a planner's guide for the task organization of various types of LCEs (such as Shore Party Teams, Combat Service Support Areas, Wing Oriented CSS Detachments and Engineer

Groups), as well as a task organization worksheet sample for personnel and equipment. The series of CSS doctrine published thereafter, *Operational Handbook 4,* published in 1985, *Fleet Marine Force Manual 4-1*, published in 1987 and revised in 1993, and *Marine Corps Warfighting Publication 4-11,* published in 2000, had a reduced emphasis on task organization. The most recent tactical logistics doctrine, *Marine Corps Tactical Publication 3-40B,* published in 2016, includes one paragraph on CSS organization within section 1008, which identifies staff responsibilities in making organizational recommendations, and a three-page appendix (Appendix A: "Logistic and CSS Task-Organization Guide,") which identifies the organic logistic capabilities of each element of the MAGTF. Although the inclusions assist the planner in identifying tasks and a CSS framework, they do not provide guidance in task-organization principles, considerations, and planning tools. The de-emphasis of task organization in doctrine, coupled with limited coverage in training curriculums, reflects a declining interest in improving the effectiveness of task organization design and compositing processes for temporarily formed units. Renewed study and emphasis of LCE task organization, however, could enable the LCE to become increasingly responsive, effective, and efficient.

The LFC's working group would provide a forum to collectively develop the Battle Rosters with the appropriate staff and functional battalion representatives. It would ensure common situational awareness of MLG of capabilities and ensure synchronization with other resource requirements, such as Individual Augment (IA) taskings and other global force requirements. Because personnel would not be assigned by MCC codes to CLBs/CLRs, resources could be specially allocated to each Battle Roster. Individual talents would be maximized when applied to mission sets that make best use of their capabilities, thereby "exploiting the competence of the individual Marine" as directed by the MOC.[16] Multi-function

LCE headquarters could be designed with a blend of MOS' that could best administer command and control and provide CSS execution oversight for the specific mission. This would capitalize on the multi-function design of the CLBs, avoiding the pitfalls of the FSSG in creating multi-function LCEs from functional battalion headquarters that are typically staffed and trained in a specific support area (i.e.1st Supply Battalion largely comprised the staff of Combat Service Support Group 15 during OIF).[17] In addition, the retention of the current CLB and CLR staff, to include unit enablers such as administration and communications Marines, would be retained in this construct. They would therefore be available to resource against a Battle Roster, further reducing the time and friction associated with composite. Resources would be weighted to the CG's priorities and reassessed during each working group meeting. The working group's products would depict the current resourcing status of approved requirements, shortfalls, and items requiring Commander's decision.

The working group outputs would require a method for decision. The development of a functional decision board would provide the guidance, intent, and decision[18] to ensure the allocation of resources are in accordance with the Commander's priorities, risks are identified and mitigated, and projected requirements are aligned with the Commander's vision of future employment of his forces. The decision board would not require an additional staff formation but would meet routinely, as directed by the local battle rhythm, to approve or direct changes to the recommended LCE sourcing solutions and compositing events. The decision board could be chaired by the MLG CG, Chief of Staff, or another designee.

The staff interaction between the aforementioned cells, working group and board as they support the Commander's decision making are depicted on the following page:

LCE Sourcing Working Group

Purpose: Allocate MLG logistic capacity to current and future LCE force requirements through horizontal and vertical, cross-functional information sharing

Tasks:

- Assess the effects of MLG deployable readiness (personnel & equipment) on fulfilling LCE force requirements
- Allocate MLG forces to approved LCE force requirements
- Determine training requirements and shortfalls
- Develop and update the Plan of Action & Milestones (POA&M) for compositing LCEs

Attendees:

- LCE Forming Cell (chair), LCE Force Generation Plans Cell, Training, G-1, G-4, G-6, Functional Bns and compositing LCE reps

Agenda:

- Review current/potential LCE force requirements and Mission Essential Tasks (i.e. Evacuation Control Center, etc.)
- Review current resourcing status (POA&M and shortfalls)
- Review functional battalion readiness from various systems and inputs; determine the impact of resourcing known requirements
  - DRRS (manning and equipment readiness)
  - MCTIMs (training standards)
  - Supplemental information as required
- Review the training, exercise and employment plan (TEEP)
- Determine shortfalls and risks requiring commander's attention

Outputs:

- Weekly updated tracker of LCE force requirements with approved and recommended sourcing solutions (personnel and equipment) with training as required
- Weekly updated status of LCE compositing events
- Due outs and RFIs with assigned responsible persons

LCE Sourcing Decision Board

Task and Purpose: Approve resourcing solutions for LCE force requirements

Attendees:

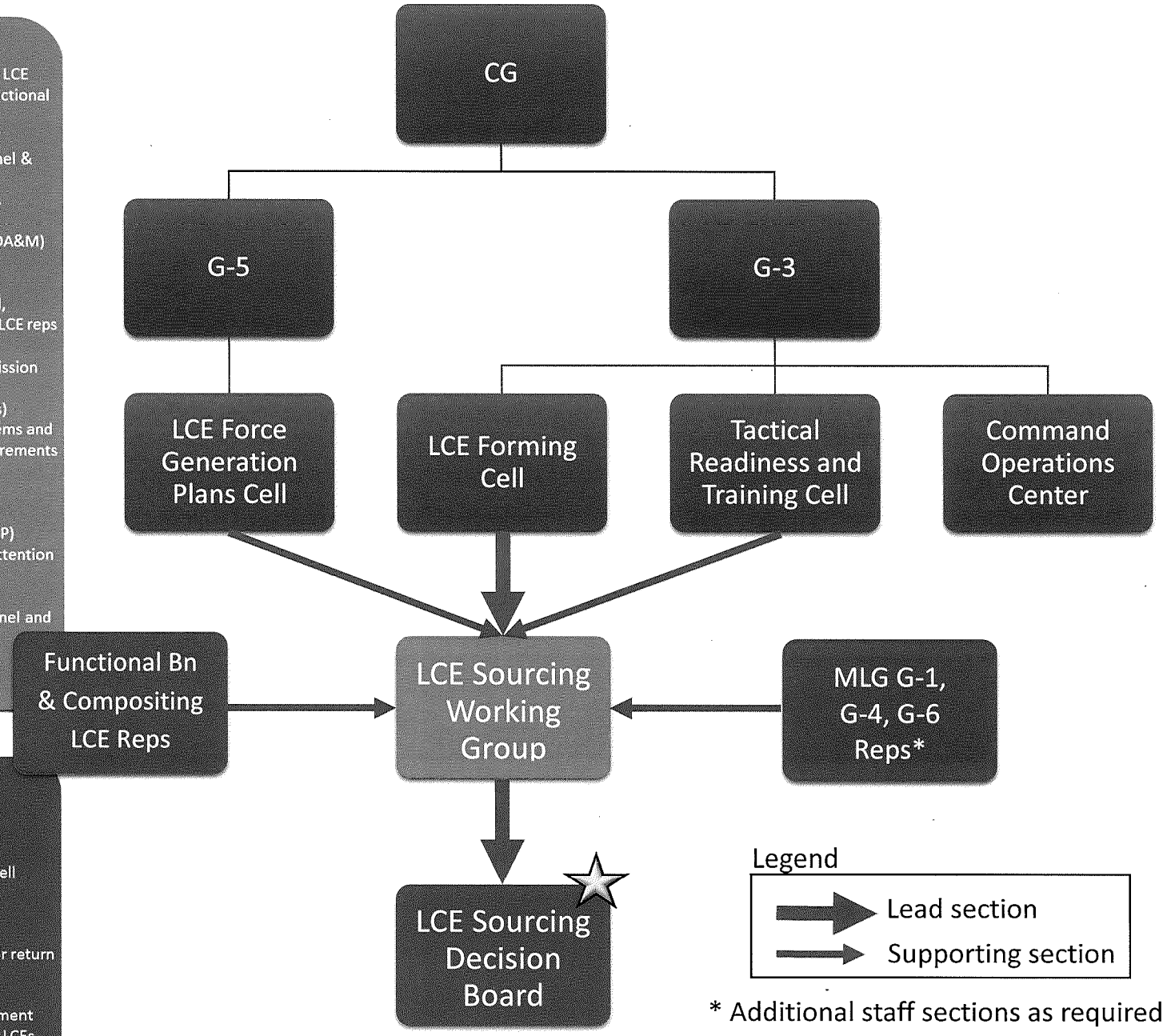
- MLG CG or Chief of Staff/designee (chair), LCE Forming Cell (lead), primaries/commanding officers

Agenda:

- Review outputs from LCE Sourcing Working Group
- Approve LCE sourcing solutions and forming schedules or return outputs to the WG for refineemnt

Outputs:

- Approved LCE sourcing solutions for manning and equipment
- Approved training and forming schedule for compositing LCEs
- Guidance and priorities for future allocation of resources



The outlined LCE force generation process would better support MAGTFs, particularly SPMAGTFs, formed through adaptive planning by anticipating likely LCE requirements, leaning forward into comprehensive resource solutions, enabling the rapid compositing process with the necessary oversight and support from the MSC. The centralized staff structure would provide the personnel resources needed to develop the training, planning, and rehearsal mechanisms[19] for compositing LCEs, to include compositing SOPs and baseline readiness standards as outlined by the CG's vision of future LCE employment in the FOE.

Traditionally, Marine Corps Combat Skills, field training, and those elements of training associated with rapid deployability are more commonly found in multi-functional CLBs. However, when MAGTFs do not have the benefit of a pre-deployment training period, the readiness standards prioritized by the CG must be achieved before personnel are selected for deployment. This would require the LCE to evaluate Defense Readiness and Reporting System (DRRS) and Marine Corps Training Information Management System (MCTIMS) criteria to ensure it encapsulates the elements of combat readiness it believes to be critical for deployability. This may change as the FOE, technology, and the projected concept of employment changes over time.

Benefits of Centralization: Personnel, Training, and Equipment

The centralization of functional capabilities would yield a more flexible system and enable a more effective and efficient application of personnel and equipment. Flattening the organization by removing the CLRs from standing structure would make the MLG more responsive to LCE force requirements while maintaining the identified and resourced Battle Rosters for potential operational requirements. Allocation of low density, high demand

capabilities would be prioritized, ensuring their application to the highest priority missions. The structure would be better suited to respond to unexpected growth and reduction in force size, to include reserve force augmentation. Last, the consolidation of MOS' would make training more effective, ensuring senior SNCO and SMEs are available to provide guidance, direction, and assessment of MOS proficiency. This commodity leadership is not always available in multi-function CLBs, where the depth in each section is limited.

Centralizing the structure of the MLG would also improve equipment life-cycle management, providing more effective assessments of maintenance trends across the MSC and ensuring maintenance resources are allocated to MLG priority requirements. Deployments, particularly aboard amphibious shipping, corrode equipment and requires extensive support during reconstitution. Centralizing equipment within functional battalions would provide holistic oversight to preventative and corrective maintenance actions, to include equipment rotations, corrosion prevention and control, and integration of the latest technologies and improvements. Some may argue that units do not maintain temporary loaned equipment with the same care as organic equipment, however this concern could be mitigated through emphasis on the Joint Limited Technical Inspection process with MLG oversight. In addition, equipment could be resourced to the highest priority missions, ensuring high demand assets of the best maintenance condition are allocated accordingly. Likewise, assets of poor condition would be retained by the functional battalions for continued maintenance.

Counter-arguments

The primary arguments against the centralized structure is the lack of standing and rapidly deployable units with multi-function C2 capability that also have the benefit of unit

cohesiveness and habitual relationships with the customer. While MOS proficiency can be achieved within a functional battalion, unit proficiency takes time. It is not only the accomplishment of collective T&R standards and annual training, but the ability to function coherently as a unit. SOPs are refined and rehearsed, relationships and trust are built inside and outside the unit, and it functions smoothly as a collective whole. This is a critical and enduring factor of success in any operation. The counter-argument is not an attempt to disprove this point, but rather contend that permanent multi-function CLBs will not be able attain the desired level of proficiency, cohesiveness, and habitual relationships in the FOE due to operational realities and lack of organic logistic capacity to sufficiently train. Many of these deficiencies have already begun to surface.

Habitual DS relationships may not be required or feasible in the FOE. Changes in deployment cycles may misalign the units and cause ripple effects throughout the MLG. For example, if an infantry regiment conducts a one-year deployment as a MAGTF headquarters and major subordinate commands deploy on six month rotations, the CLBs would struggle to support rotating infantry battalions that are split between deployed and garrison locations since they are designed to support a centralized regiment. To manage support in various locations, they would likely become misaligned from the assigned infantry unit. That unit would support a different infantry unit, which may result in assuming a different deployment cycle. It is unlikely that there will be one mission that will require one battalion and one CLR. Instead, the FOE may necessitate an infantry battalion to execute several missions; the disaggregated nature of support between deployed sites and garrison sites may require a logistic support plan that does not equate to a CLB or CLR capabilities.

Likewise, it should not be assumed that full size battalions and regiments will be required to support operations in the FOE. If a CLB (-) or CLC (+) is deployed, the remain behind element (RBE) would be largely consumed in sustaining itself, maintaining facilities, RBE equipment, and the myriad of unit programs that are required of standing battalions (there are up to 92 Functional Area Checklists provided by the Commanding General's Inspection Program[20]). The CSS capacity would not likely be maximized to support a customer, but rather largely consumed in sustaining itself.

The "Catch 22" dilemma of multi-function CLB task organization is that providing CLBs with all or most of the function of logistics, thus making them truly multi-functional, is not usually feasible due to limited depth in resources and garrison training opportunities. This is unlikely to change over the next 15 years. For example, intermediate-level supply and maintenance capabilities are provided as General Support by the MLG to the MEF due to the limited number of tools and technical skills that are only taught as "on-the-job-training" and are not captured in T&R standards or formal schooling. New Equipment Training and senior leadership supervision, as previously mentioned, are best provided by the functional battalion. Similarly, other services, such as postal and disbursing, provide base-wide services in garrison and cannot be permanently allocated to support one infantry regiment. In addition, infantry battalions do not frequently require many logistic functions in garrison, such as landing support (LS). Therefore, LS capabilities are best employed from a centralized transportation battalion to support the Marine Air Wing and amphibious onloads/offloads.

Another proposed option, maintaining standing CLB HQs with a small element of CSS, lacks the routine training opportunities to become effective C2 elements. Transportation is the commodity that is most easily decentralized, however employing one of the six functions of

logistics does little to train a CLB HQ in employment of multi-function capabilities in a deployed environment. Thus the challenge of maintaining a C2 node as a standalone element is building the staff proficiency without having resources to employ. While senior officer and SNCOs may have the requisite knowledge to employ all functions of logistics, the junior officers of the core staff may not. In addition, the staff is not afforded the opportunity to develop into a cohesive HQ without resources to employ and thus CSS procedures to rehearse.

By instead adding the senior CLB and CLR staff to the MLG and assigning them to Battle Rosters, the HQ personnel would gain situational awareness of current operations and MLG capabilities, as well as build relationships with MLG staff. Because they are pre-identified, they could conduct parallel planning with Division counterparts as they would in a CLB HQ and build relationships laterally across the MAGTF through planning functions. The relationships could be built and maintained as in the MLG design. While removing staff from a HQ structure once activated would undoubtedly be challenging, rehearsals and training events would mitigate the surprise and interruption to staff routine.

A final challenge to the proposal is the removal of commands and corresponding O-5 and O-6 CSS command billets. In the proposal, Lieutenant Colonel command opportunities would still be provided by functional battalions, as well as MEU CLBs and one CLB serving as the HHQ for the CLCs within 1st and 2nd MLG. Although DS CLBs are not standing units in this design, compositing CLBs could remain command slated positions. As a non-statutory board, HQMC could opt to command slate Battle Rostered units. Because it would be a non-standard practice, however, it would require oversight mechanisms to ensure subsequent selection boards (for promotion, top-level school, O-6 command screening, etc.) view those billets in equal standing with permanent battalion commands. One option could be including verbiage in the

board precept, stating that if the CLB for which a Lieutenant Colonel was selected did not composite, or was composited for a lesser amount of time than the standard one and a half to two-year command tour, it is not to degrade his or her competitiveness on future boards.[21] Because CLBs would be composited based on needs of the Marine Corps, the selection for command in itself should be viewed as the mark of success, and the time spent in command based on circumstance. However, it is likely that most CLBs would form for exercises and training evolutions, as well as deployment opportunities, so observation time is expected in most cases.

While Sergeants Major would remain slated for functional battalions and permanent CLBs, it may not be possible to keep them slated for Battle Rostered CLBs. In this case, the structure would become Master Sergeant and Master Gunnery Sergeant structure, a process used in the past. While not preferred, the solution is feasible and may be advantageous when LCE detachments are small in size and technical expertise are at a premium.

To mitigate the loss of one Colonel command opportunity, gains could be achieved through installation command positions. If the Marine Corps chooses to redesign its structure based on service-wide requirements, it could consider the reallocation of non-MOS specific Colonel command positions across all communities. As a logistics intensive position, installation commands could be an appropriate method to cross-level command opportunities. In addition, CLR-Y could be command slated as recommended for forming CLBs, despite being a Battle-Rostered unit.

Proposal Shortfalls

This proposal does not address the direct alignment of organic logistics elements to the ACE and GCE (MWSS' and Truck Company) and if they are right-sized for operational requirements in the FOE. Approximately 60% of the MEF's logistics capability is located outside the MLGs,[22] which complicates the LCEs ability to logistically weight the main effort. This is especially critical when allocating low density, high demand capabilities, such as Explosive Ordnance Disposal or specialty maintainers. The structural and procedural concepts provided could be applied to a MEF logistics analysis, examining the MEF's ability to cross-level logistic resources during periods of Marine Corps end strength growth and reduction, and its ability to prioritize and weight logistic capabilities. The incremental decrease of LCE capacity in relation to that of the GCE and ACE over the past 27 years[23] has made this point more salient.

Conclusion

The perspectives favoring centralization or decentralization of logistic capabilities are often framed in terms of efficiency vs. effectiveness, or direct support relationship building vs. general support and economy of force. While there is some validity to the "give and take" nature of these functions, they are not entirely zero sum. Mitigation measures can be developed to maintain responsiveness while maximizing proficiency, readiness, and priority of resource allocation. Moreover, maintaining the effectiveness of DS CLBs is constrained by resource depth and garrison training opportunities for full spectrum CSS employment below the MSC level. These two limitations are unlikely to change over the next decade, thus the LCE structure for the future force must be designed within this constraint.

The proposed design maintains sufficient flexibility to task organize for operational requirements that cannot be forecasted. The next war and how the GCE will organize and fight remains unknown. Support requirements may not necessitate a standard company or battalion, but rather a non-standard mix of CSS MOS'. Habitual relationships assume that some degree of LCE/GCE force structure will be collectively employed, however the Marine Corps' vision of the FOE indicates that such predictability is not likely to be enduring. Nonetheless, the principle could be maintained without permanent DS CLB/CLR structure, generating the LCEs within the MEF based on projected requirements in the FOE.

The combination of structural and procedural enhancements is made possible by realigning CLR-Y staff and elements of the standing DS CLBs to the MLG HQ. Formalizing the LCE generation process and Battle Roster concept in concert with structure and training revisions would ensure the synchronization of resource allocation with mission requirements. While the challenges of forming or stabilizing a unit cannot be eliminated, they can be mitigated through well-developed processes and adaptive structure. Doing so would successfully merge the benefits of the MLG and FSSG, yielding a responsive and flexible structure that promoted the proficiency and effectiveness of the task-organized LCEs.

The development of the MLG following the invasion of Iraq was an important step in improving the responsiveness of the LCE. While the task organization could effectively support a similar type of war, it is not well designed to support the conflicts identified in the MOC. The Marine Corps must be careful to learn the right lessons from each conflict and note the circumstances that made it unique. These lessons must be captured and communicated to the lowest levels for ready application, ensuring confidence and proficiency in task organizing and

employing multi-function LCEs. Maintaining and improving upon the art of task organization will be a critical element of future success.

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[1] Marine Corps Operating Concept. Paragraph 4.
[2] Ibid. Paragraph 2.
[3] Ibid.
[4] Ibid. Paragraph 6.2.5.
[5] MCRP 5-12D. Page Glossary-19.
[6] Ibid. Page 7-9.
[7] Unit Table of Organization and Equipment, CLR 2, M27332. Published 8/17/2016.
[8] Joint Publication 3-33. Page xi.
[9] Hopkins, John I. 7th Marine Expeditionary Brigade. "Submission of Command Chronology for 1 July to 3 September 1990." Section 2, Page 7.
[10] *U.S. Marines in the Persian Gulf, 1990-1991*. Page 5.
[11] Huddleston, Maj Craig S. "Commentary on Desert Shield." Page 32.
[12] MCRP 5-12D. Page 1-6.
[13] Blankenship, Chambers, Ross, and Rowe. "Can the Marine Corps Support the Marine Component and Commander of the Joint Task Force?" Page 7-11.
[14] Wittle, D.L. Mobile Combat Service Support Detachment – 26 After Action Report. "Topic: Structure of the FSSG."
[15] Woodhead, Col John A. "Reorganization of the Force Service Support Group." Page 38.
[16] Marine Corps Operating Concept. Paragraph 6.5. Page 24.
[17] U.S. Marines in Iraq, 2003: Anthology and Annotated Bibliography. "Brute Force Combat Service Support: 1st Force Service Support Group in Operation IRAQI Freedom." Page 167.
[18] Joint Publication 3-33. Page II-14.
[19] Ibid. Paragraph 6.2.5
[20] Inspector General of the Marine Corps, Functional Area Checklists. http://www.hqmc.marines.mil/igmc/Resources/Functional-Area-Checklists/
[21] Major General Kessler (ret), Interview, 11 May 2017.
[22] Lieutenant General Faulkner (ret), Marine Corps University Interview.
[23] Brigadier General Ottignon, "More Tooth, Less Tail."

Bibliography

"I Marine Expeditionary Force Order P5000.3, I MEF Staff Regulations." Published 6 June. 2011. http://www.imef.marines.mil/Portals/68/Docs/IMEF/ORDERS/IMEFO_P5000.3.pdf

Alford, Brigadier General, Julian D. Oral presentation, "Marine Corps Force 2025." Delivered 6 October 2016 to the School of Advanced Warfighting, Quantico VA.

"Army Design Methodology: Army Techniques Publication 5-0.1." Published July 2015.

Blankenship, B.S., K.R. Chambers, D.M. Ross, D.S. Rowe, "Can the Marine Corps Support the Marine Component and Commander of the Joint Task Force?" Chapter 7, Research Papers from the Command and Control Systems Course, 1993, #93-15237. Dtd 8 Jul 1993. http://www.dtic.mil/get-tr-doc/pdf?AD=ADA266725

"Education Center Publication 4-1: Combat Service Support." U.S. Marine Corps. Published 8 April 1980.

Faulkner, Lieutenant General William M. Interview for Marine Corps University, Command and Staff Distance Education Program. Accessed through Blackboard, Academic Year 2017, Marine Corps University distance education online material.

"Fleet Marine Force Manual 4. Combat Service Support." U.S. Marine Corps. PCN 139 000272 00. Published 10 August 1993.

"Fleet Marine Force Manual 4. Combat Service Support." U.S. Marine Corps. PCN 139 400000 00. Published 23 January 1987.

Hannigan, Christine. Clinton Jones, Isaebel Marin, Megan Misencik. "Functionally Aligned Battalions: An inevitable and necessary future for logistics." *Marine Corps Gazette*. Oct 2014. https://www.mca-marines.org/gazette/2014/10/functionally-aligned-battalions

Hopkins, John I. 7th Marine Expeditionary Brigade. "Submission of Command Chronology for 1 July to 3 September 1990. 30 Oct 1990. Accessed through Historical Reference Branch, Marine Corps University.

Huddleston, Maj Craig S. "Commentary of DESERT SHIELD." *Marine Corps Gazette*; January 1991. Page 32-33.

"Joint Publication 3-33: Joint Task Force Headquarters." Published 30 July 2012. http://www.dtic.mil/doctrine/new_pubs/jp3_33.pdf

"Joint Publication 5-0: Joint Operation Planning." Published 11 August 2011.

http://www.dtic.mil/doctrine/new_pubs/jp5_0.pdf

Kelley, Michael P. Brief prepared for Deputy Commandant for Installations and Logistics, "Combat Service Support Evolution: WWII–Present." 18 Nov 2016, Version 1.4. Accessed from Marine Corps Historical Reference Branch, Marine Corps University.

Kennedy, Major Christopher M, Wanda J Renfrow, Evelyn A. Englander, Nathan S. Lowrey. Marines in Iraq, 2003: Anthology and Annotated Bibliography: U.S. Marines in the Global War on Terrorism. Washington D.C.: History and Museums Division, Headquarters, U.S. Marine Corps, 2006.

Kessler, James, MajGen U.S. Marine Corps (ret). Interview 11 May 2017.

Marine Corps Doctrinal Publication 1-0. *Marine Corps Operations.* Published 9 August 2011.

Marine Corps Order 3502.6 "Marine Corps Force Generation Process." Published 29 April 2010. http://www.marines.mil/Portals/59/Publications/MCO%203502.6.pdf

"The Marine Corps Operating Concept: How an Expeditionary Force Operates in the 21st Century." Published September 2016. http://www.mcwl.marines.mil/Portals/34/Images/MarineCorpsOperatingConceptSept2016.pdf?ver=2016-12-02-073359-207

"Marine Corps Order 5311.1D: Total Force Structure Process." Published 26 February 2009. http://www.marines.mil/Portals/59/Publications/MCO%205311.1D_1.pdf

"Marine Corps Reference Publication 5-12D: Organization of Marine Corps Forces." Published Oct 1998. http://raider6.wdfiles.com/local--files/mcrp/MCRP%205-12D%20Organization%20of%20Marine%20Corps%20Forces.pdf

"Marine Corps Reference Publication 5-12D: Organization of Marine Corps Forces." Published 26 August 2015. http://www.marines.mil/Portals/59/Publications/MCRP%205-12D.pdf

"Marine Corps Tactical Publication 3-40: Tactical-level Logistics." PCN 147 000011 00. Published 6 May 2016. http://www.marines.mil/Portals/59/Publications/MCTP%203-40B.pdf?ver=2016-06-23-122312-413

"Marine Corps Warfighting Publication 4-11, Tactical Level Logistics." PCN 143 000072 00. Published 13 June 2000.

Marksburg, J.A. "Reorganization of the Force Service Support Group." Expeditionary Warfare School. Published 8 February 2005. www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA504956

Meade, Col Julia A. "The Marine Logistics Group: Poised for the Future." *Marine Corps Gazette;* July 2012. Page 22-25.

Mihocko, Lieutenant Colonel Melissa D., U.S. Marine Corps Reserve. *U.S. Marines in Iraq, 2003: Combat Service Support During Operation Iraqi Freedom.* Washington D.C.: History and Museums Division, Headquarters, U.S. Marine Corps, 2011.

"Operational Handbook 4: Combat Service Support." U.S. Marine Corps. Published November 1985.

Ottignon, BGen David A and Maj John D. Jordan. "More Tooth, Less Tail: A Less Capable MAGTF." *Marine Corps Gazette*; Oct 2016. Page 12-14.

Randall, Omar, LtCol U.S. Marine Corps. Phone interview: 13 December 2016.

Reist, Brigadier General U.S. Marine Corps (ret). Phone interview: 16 December 2016.

----------. Brief to Marine Corps Logistics Operations Group, "How Do We Get to the Fight?" February 2016.

Toth, James E. "2D Force Service Support Group (FSSG), Fleet Marine Force, Atlantic, Proposed Force Service Support Group Structure Reorganization." Memorandum from Commanding General, Marine Corps Development and Education Command to Commandant of the Marine Corps (Code L) dated 26 Nov 1984.

Weinstein, Col Clifford. Oral presentation, "Marine Corps Concepts and Plans." Delivered 15 August 2016 to the School of Advanced Warfighting, Quantico VA.

Wittle, D.L. Mobile Combat Service Support Detachment-26. "After Action Report." 22 Mar 1991. Accessed through Historical Reference Branch, Marine Corps University.

Woodhead, Col John A. "Reorganization of the Force Service Support Group." *Marine Corps Gazette*; October 1991. Page 37-38.

Zimmeck, Major Steven M. U.S. Marine Corps (ret). *U.S. Marines in the Persian Gulf, 1990-1991: Combat Service Support in Desert Shield and Desert Storm.* Washington D.C.: History and Museums Division, Headquarters, U.S. Marine Corps, 1999.