

# Logistics in the Littorals

Designing the future tactical-level LCE

by Maj Nicholas R. Boivin

**T**his article seeks to inform discussions and future planning regarding the design and force structure of the LCE at the tactical level by examining the history of logistics units in the Marine Corps and highlighting considerations and capability gaps moving forward.

Logistics units in the Marine Corps performed admirably over the last twenty years of conflict; now a new (or old, depending on perspective) challenge presents itself to the enterprise with sustaining distributed forces in a maritime environment through expeditionary advanced bases. There are numerous buzzwords in the Marine Corps lexicon for the next fight (expeditionary advanced base operations, distributed maritime operations, littoral operations in a contested environment), but the principle of the LCE mission remains the same: sustain the warfighters and prevent culmination.

Historically, senior logisticians and planners in the community have shown a willingness to modify the combat service support (CSS) structure to ensure the Corps' success and will need to do so moving forward by creating task-organized, multi-functional littoral logistics battalions (LLB).<sup>1</sup> Twenty years ago, leaders transitioned units from functionally based to the better-known combat logistics battalions employed during the Iraq and Afghanistan wars. Now logisticians will need to sustain multiple maneuver elements across island chains.

## Evolution of LCE Force Structure

Following the Vietnam War, the logistics major subordinate commands organized into the Force Service Support

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Group (FSSG). The FSSG structure predicated itself on functionally aligned battalions that were arguably overly specialized and required units of employment (companies, platoons, sections) to composite under a task-organized command structure for deployments. In the early 2000s, the Marine Corps moved from the functional alignment of the FSSG to the task-organized MLG to address the demands of Operation IRAQI FREEDOM and Operation ENDURING FREEDOM.<sup>2</sup> Unfortunately, the concept never found widespread enthusiasm, and some argue this is because

the MLG construct does not provide the flexibility needed for a distributed environment and vast mission sets required to sustain amphibious forces. Others counter the regression to functional battalions is a result of the over 30 years of FSSG culture ingrained in the institution. Revisionist reflections of *how it used to be* are evident in the LCE resurrecting elements of the FSSG like landing support battalions and transportation battalions of yore.

The continuous transitions over the last seven decades for the LCE were well-intentioned, but the logistics com-



*The Corps' logistic community has always task organized to ensure success and creating multi-functional LLB will be no different. (Photo by LCpl Brienna Tuck.)*

munity is still in its identity crisis. In the initial transition, each MLG consisted of three regiments: Combat Logistics Regiment (CLR) X (direct support to an infantry division); CLR X5 (general support to the MEF); and CLR X7 (headquarters regiment for the MLG).<sup>3</sup> Today, during internal reorganizations the last twenty years, general support regiments are deactivated and products of this reorganization are direct support combat logistics battalions (DS CLBs) with significantly less capability to make way for functional battalions that now report directly to the commanding general with no O-6 level command mentor, guide, or command and control (C2). The most recent commandant-directed force design is continuing to evolve the Marine Corps' logistics structure for the next fight in the littorals.

Because of its geographic location and distribution of forces across multiple islands, CLR 3 is seeking to develop task-organized forces to provide CSS for the 3d Marine Regiment, 4th Marine Regiment, and 12th Marine Regiment as a precursor to future force structure. Although MLG commanders may claim there were distributed CSS forces in Afghanistan and Iraq, the projected future fight reveals a bigger challenge: the ocean. CLR 3 recognizes the immediacy of this shortfall and is unable to wait for force design. Recently, the regiment reorganized into task-organized battalions with resident force structure, and over the next ten years, the Marine Corps will re-establish task-organized battalions via the LLB.

### The Future LLB

A projected fight in a littoral environment across multiple islands and atolls presents an old challenge to Marine Corps logisticians. The institution solved the problem of amphibious landings in contested environments during World War II and will seek to solve similar problems with new and advanced technologies. Marine littoral regiments are the solution for the next fight and will consist of an O-6 level command with the structure of an infantry regiment and robust staff sections, a littoral combat team, a littoral anti-air battalion, and the LLB to

logistically support all elements resident in the regiment.

Currently, the LLB will consist of one Headquarters and Service company, two task-organized combat logistics companies, and one general support company. Future equipment and technologies for these companies would exhaust this article, so this discussion will focus on capabilities and force structure only. Similar to CLBs attached to MEU afloat, these new battalions' biggest asset is the ability to provide all functions of logistics, albeit with limited depth. Currently, a DS CLB with truck and Headquarters and Service companies have 276 Marines and Sailors on their table of organization, while the new LLB, with *all* functions of logistics, will be 310 Marines and Sailors; every Marine will become a jack of many trades, and leaders will need to accept additional risk with Marines executing a multitude of tasks.

This lack of depth is critical in manning the force. The expectation for the future infantryman is to become multifaceted warfighters who can shoot, move, communicate while *also* being able to direct unmanned systems, drive boats, and conduct future activities not yet known. Multi-functional logistics Marines will also be the expectation, if not the requirement, for the future LLB. No longer can Marines expect to be exceptional in a single occupational field; future electricians must also understand how to establish cantonment, employ generators, purify water, and drive a boat.

Maintaining personnel and materiel readiness will be critical for the anticipated deployment schedule for the LLBs, which will be similar to current unit deployment programs. By employing the rotational schedule for LCE battalions, the future employment of DS combat logistics regiments becomes interesting; the dissolution of general support regiments means individual battalions are reporting directly to MLG commanding generals. The Hawaii command relationship will be different because of the PCS nature of the units. During its respective unit deployment programs rotation, the LLB will fall directly under the permanently

staffed Marine Littoral Regiment command structure to ensure unity of effort and advocacy from the supported commander.

### Considerations Moving Forward

Recently, I had the opportunity to visit a field exercise conducted by an Army brigade service battalion (similar to the Marine Corps CLB). The unit was conducting brigade service area operations (think combat service support area) and identified the requirement of seven to ten kilometers to doctrinally establish its footprint and the need to plan linearly, reinforcing traditional battlefield continuums concepts. Additionally, the brigade commander highlighted the importance of hardening the position to absorb blows from enemy missiles and rockets, a concept foreign to the Marine Corps, which seeks to distribute its forces and reduce its signature. There is no fault in the Army's concept; it is an occupational force with enough structure to move the "steel mountain," but the Marine Corps logisticians do not have that luxury.

Moving forward, the logistics community will need to focus on some core principles to enable the future force structure to evolve appropriately. Ideally, the community's willingness to improve flexibility and develop new concepts sets the standards for our brothers and sisters in combat arms and aviation. First, accept *risk*. Experimenting with new ideas will become strange and uncomfortable, but if we sustain legacy processes, gains will be marginal. Second, build *resiliency* in equipment and our C2 structure. Lastly, *resource* experimental units appropriately. Although future equipment hypothesized for 2030 is not fielded, appropriately man and equip experimental battalions to train with bridging solutions to identify gaps and seams early.

### Risk

There are multiple levels where risk becomes critical in the development of our future force. At the institutional level, major subordinate commands and offices like Installations and Logistics (I&L) must be willing to empower battalion and regimental commanders to

explore new ideas with existing equipment. Tactically, regimental and battalion commanders must begin entrusting small unit leaders to explore novel concepts and dismiss any ramifications of failure in testing new ideas. With the appropriate structure in place and reinforcing basic leadership principles like moral and ethical decision making, it will be effective and safe.

Author Christian Brose of *Kill Chain* identifies the increase in risk aversion throughout the DOD, particularly following the catastrophic success of the U.S. military during the Cold War and DESERT STORM.<sup>4</sup> The DOD as a whole, he argues, is mired in bureaucracy and red tape, further discouraging new players to enter the field of military equipment. To narrow the aperture further, leaders within the logistics chain of authority must encourage battalions across the fleet and supporting establishments to not fear failure while testing new concepts and ideas. For example, there are exciting developments in power generation with generators in the commercial industry not resident as a “program of record” in the Marine Corps. In order for units to test the potential of these assets in a distributed and austere environment, the institution must be willing to accept risk in the acquisition of prototypes (always more than one) and the testing of the equipment with government vehicles.

Coupled with this risk of testing equipment is accepting risk with individual logisticians. There is a consensus around military planning circles for the future force to be more distributed and autonomous while being led by junior leaders. Similar to the targeting authorities delegated to junior officers and staff non-commissioned officers, the logistics community will need to trust the judgment of its frontline leaders. If junior officers operate on small island nations and live off the local economy with a bag of cash, we must enable these leaders to employ concepts today and understand mistakes are inevitable (and money lost). It is one thing to make a single purchase of bottled water for a photo opportunity, but it is an entirely different challenge to sustain a

platoon-sized element with all functions of logistics via local commerce.

As *MCDP 1* states, risk is inherent in everything we do, but not to be “imprudent [in our] willing to gamble the entire likelihood of success.”<sup>5</sup> Units, Marines, and Sailors do not have carte blanche to risk life, limb, or eyesight (or end items) in the pursuit of new concepts. With appropriate parameters, feedback loops, and oversight, the acceptance of risk will increase the employment and fielding of new ideas and concepts to sustain supported commands and maintain logistics relevancy.

### Resiliency

This is a twofold principle. First, logistics units must begin training to build resiliency in their command structure. Next, the Marine Corps must build resiliency in its inventory by pro-

viding redundant and cheap equipment with the ability to replace or repair these assets quickly and automated systems to improve and strengthen the analysis of data. For example, the process of repairing a vehicle has not changed in over 50 years. We have made the process quicker and more digitized, but the general mechanisms and human involvement remain the same. This is also evident in our C2 structure.

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A concept that is quickly gaining traction in combat arms is the principle of redundant command via A, B, and C teams. The purpose of these teams is the survivability of not necessarily the individual teams but the C2 of the unit. If A team is eliminated from command by either loss of communications or death, there is a B and C team to mitigate the loss of C2. This is particularly challenging for logistics battalions because of the inherent requirement of a supply chain necessary for the units it supports. Logistics commanders will need to balance the need for C2

with supply chain management across an ocean and multiple island chains. Although it seems the Marine Corps believes a fleet of boats will mitigate this challenge, there needs to be increased investment in additive manufacturing and contracting with foreign partners for parts, labor, and equipment. Institutionally, the Marine Corps needs to continue its pursuit of redundant and cheap platforms; this is advocated ad-nauseum in other books and papers, and this author will provide a plug-in concurrence for acquisition moving forward. More importantly, logisticians need to make their processes and analytics automated. Coupled with the necessity to nest within the naval expeditionary force supply chain, which inconceivably we are not, is the necessity to augment our supplies with host-nation resources. Logisticians must explore

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predictive analytics to help assess potential challenges to distribution because of “exogenous disruptive risks ... including natural-forced [i.e. weather, natural disaster, etc.], geo-political, and economic risks”<sup>6</sup> to the supply chain. The Marine Corps, in concert with the DOD and Logistics Command, should continue to nurture its relationships with states in the Indo-Pacific and generate fair trade deals to augment the Marines’ supply chains and reinforce the principles of the United States as the partner of choice in the area of operations.

Automation and outsourcing will also alleviate personnel from manual and monotonous work. The mechanisms for repairing a vehicle look the same as they did during the Vietnam War. Although we have reduced the time to requisition parts, it is absurd that the process requires human involvement at every step. In the civilian world, we are able to order items on Amazon with next-day delivery or request a taxi on our phone via an application, but

in the military, we continue to manually request parts or transportation that requires approval at multiple levels.

### Resource

In order for trials and experimentation to occur, there must be equipment to accept risk with. Currently, the focus of experimentation and new equipment is combat arms units, with little direction for logistics units. At a minimum, logistics units need similar communications and C2 equipment provided to the units its supports. Today, if a logistics battalion requires the use of tactical data transmission, it is wholly reliant on the infantry regiment it supports. In other words, the logistics unit that is supposed to enable the infantry becomes another mouth to feed by the supported unit—a ludicrous task to levy on an organization whose focus is to find and kill the enemy.

The Commandant understands the importance of resourcing. During a recent hearing with the Senate Armed Services readiness subcommittee, Gen Berger emphasized the need to “very quickly ... develop and field the unmanned surface vessels and unmanned aerial systems that will move those supplies [in distributed operations], because we’ll never get there if we rely only on manned systems.”<sup>7</sup> He went on to identify the learning shortfalls existent in future systems and the need for more experimentation and support from Congress to enable testing.

In the absence of the final solution, better efforts need to be made to field rudimentary autonomous systems to logistics units to include reconnaissance and unmanned logistics systems. Another shortfall resident in today’s logistics battalions is the lack of unmanned autonomous systems. By providing small systems like the Raven or Puma, logistics units can begin employing these assets and learn the basics of unmanned employment, lessening the learning curve when actual unmanned logistics systems are fielded.

To reiterate, providing unmanned systems and tactical data capabilities is not the final answer but a bridging solution to ensure the LCE does not fall behind its supported elements. It is a

disservice to Marine Corps logisticians to continue the culture of “haves and have nots” and force them to move and communicate with inferior systems.

### A Focus on the Future

The LCE will require as many new tools as the supported combat arms command in the next fight. Some bright minds in the FMF are expanding on existing technologies, to include the term “regenerative logistics” to reflect an idea of developing renewable and sustainable classes of supply to mitigate long lines of communication. In concert with renewable supplies are unmanned delivery systems. DHL, a world-class logistics service, identified multiple platforms and employment methods but concluded that the two most promising uses are in “urgent express shipment in crowded megacities ... [and] rural deliveries that lack adequate infrastructure.”<sup>8</sup> These uses would be critical for Marines and Sailors located on austere islands and the LLB will require multiple unmanned logistics platforms to support long-range delivery.

The Commandant made his intentions clear: the future fight is in the Indo-Pacific littorals and the bid for the LCE’s success is the LLBs. The evolution of logistics commands, at times dizzying, never strayed from its primary mission of supporting the warfighters at the forward edge of the battlefield. The LLBs will seek to do this in a maritime domain, and it will not be easy. The Marine Corps needs to include CSS in all future war games and experimentation to help identify gaps and seams in the future structure, which will help inform decisions of manning, equipping, and training the future logistics force. This is a positive change from previous experimentation, which traditionally sees a designated infantry battalion receive new equipment leading to logistics battalions being outpaced and unable to communicate.

Some agencies are taking the lead to change, like the Marine Corps Logistics Operations Group, which is developing new courses to empower the future engineers, logisticians, and supply officers that will lead, plan, and fight the new LLBs. However, the FMF must

inject themselves into future planning opportunities, and commanders must be ready to empower their junior leaders to experiment with new concepts, equipment, and ideas. The logistics community cannot do this alone; if it does, it risks a loss of advocacy for new systems and equipment. It is incumbent on all supported commanders to champion the importance of sustainment in a distributed and maritime environment; the LLB can only be as good as the feedback it receives. The quartermaster may never become the field marshal, but we are just as important.

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### Notes

1. Currently, Combat Logistics Battalions will retain its naming convention in garrison, but upon deployment, will assume Littoral Logistics Battalion. For the purposes of this article, “LLB” will refer to the new CLB structure beginning next fiscal year.
2. Kevin J. Stewart, “Future Logistics Challenges: Logistics support for the MOC,” *Marine Corps Gazette*, (Quantico, VA: December 2018).
3. “X” will be dependent on the respective MLG (e.g. 1st MLG = CLR 1, 2d MLG = CLR 2, etc.).
4. Christian Brose, *The Kill Chain*, (New York, NY: Hachette Books, 2016).
5. Headquarters Marine Corps, *MCDPI, Warfighting*, (Washington, DC: 1997).
6. John J. Coyle, Kusumal Ruamsook, and Eric J. Symon, “Weatherproofing Supply Chains: Enable Intelligent Preparedness with Data Analytics,” *Transportation Journal*, (University Park, PA: Penn State University Press, 2016).
7. Megan Eckstein, “Navy, Marines Will Need Recapitalized Sealift, Logistics Capabilities to Succeed in Pacific Operations Sealift,” *USNI News*, (December 2020), available at <https://news.usni.org>.
8. Matthias Heutger and Dr. Markus Kuckelhaus, “Unmanned Aerial Vehicle in Logistics: A DHL Perspective on Implications and Use Cases for the Logistics Industry,” (Troisdorf: DHL Customer Solutions and Innovation, 2014).

