Modernizing MARCORLOGCOM

An industrial base for the Information Age

by Maj Jon Thomas

The year is 2043, 3d Marine Littoral Regiment is conducting a named bilateral training exercise with a partner nation in the INDOPACOM Area of Responsibility. Five days prior to the culminating training event, a Navy-Marine Expeditionary Ship Interdiction System (NMESIS) live fire, two of the NMESIS equipped Joint Light Tactical Vehicles (JLTV) designated for the exercise are determined to be safety deadlined and cannot be utilized for the live fire. 3d Littoral Logistics Battalion (LLB) has been tasked with replacing the platforms. At a glance, the 3d LLB operations officer is able to view a secured dashboard that provides total asset visibility of all Marine Corps equipment in theater—depicting equipment locations and quantities, maintenance statuses and histories, and the owning entity. Quick research shows one NMESIS-equipped JLTV located nearby at Global Positioned Network (GPN) site "X" which is managed by Blount Island Command-Pacific Detachment and another available NMESIS-equipped JLTV held on Okinawa by Marine Force Storage Command Pacific. Using the same total asset visibility platform, the 3d LLB Operations Officer can see that the GPN Site "X" JLTV has been recently overhauled in theater through Marine Depot Maintenance Command's next-generation processes, and the Marine Force Storage Command Pacific JLTV has received all required care of supplies in storage services 43 days ago. Both JLTVs are suitable to address the 3d Marine Littoral Regiment problem set. Through service requests on secured Global Combat Service Support–Marine Corps 2030, which is tablet enabled and is networked to the same total asset visibility platform, 3d LLB initiates the requisition of both assets, coordinates remote data enabled Joint Limited Technical Inspections, and sources intra-theater distribution with an estimated delivery timeline of four days—an operational logistics solution to a tactical problem.

So how do we get here?

>Maj Thomas is currently executing his Naval Postgraduate School utilization tour as a Plans Officer in the MARCORLOGCOM G-3/5. He is a 0402 Logistics Officer whose previous assignments include 1/7 Mar, the Marine Corps Mountain Warfare Training Center, and Combat Logistics Battalion–2.

To equip distributed FMFs in peer-contested environments, the Marine Corps requires a modern organic industrial base with Information Age capabilities.

Modernizing MARCORLOGCOM

To equip distributed FMFs in peer-contested environments, the Marine Corps requires a modern organic industrial base with Information-Age capabilities. The introduction of *Force Design 2030* by the 38th CMC provided a catalyst for Marine Corps Logistics Command (MARCORLOGCOM) to examine its processes and procedures, business practices, organizational construct, workforce competencies, and the modern data and information technologies needed to maximize materiel readiness and sustainment support to the future force. As the Service-level Inventory Control Point and Supply Depot, MARCORLOGCOM provides command and control over depot-level maintenance, storage, and prepositioning operations to ensure combat-ready equipment and supplies are available so the FMF can conduct and sustain military operations. Over the last three and half years, MARCORLOGCOM has taken a hard look at how the organization conducts these three core competencies. The paragraphs below provide an overview of how and where MARCORLOGCOM has applied new technologies and processes to modernize the Marine Corps Organic Industrial Base to fully enable the future force.

Depot Maintenance

Force Design has necessitated significant changes to the Marine Corps' approach to lifecycle sustainment and depot-level maintenance. While the Industrial-Era practices of large-scale overhaul and remanufacturing will certainly continue in the near term, new approaches to the Service-equipping strategy and lifecycle decisions will demand modernization of the organic

industrial base and require these capabilities to be pushed as close as possible to the point of need. Marine Depot Maintenance Command has undertaken a deliberate modernization campaign that enhances the effectiveness and efficiency of existing operations while creating new opportunities that will directly impact readiness within the FMF in realtime. At both production plants at Albany, GA, and Barstow, CA, digitization has formed the backbone of the overall modernization effort. One key improvement includes a state-of-the-art shop floor control system where virtual and actual data match in near realtime, enabling more informed decision making for depot resource use. Additionally, Marine Depot Maintenance Command is actively experimenting with the application of digital-twin technology in plant operations, employing modeling and simulation to inform maintenance decisions, improving data-capture techniques, vetting systems for material flow and key performance metrics, and continuing advancements in additive manufacturing. The modernization efforts discussed above are not pipe dreams—they are active, funded efforts that are all in various states of implementation with the sole purpose of achieving a best-in-class organic industrial base capability ready to support the needs of our Corps.

Enterprise Storage

The capability to store equipment and sustainment in a serviceable, easily accounted for state, and then subsequently distribute it to the point of need in a timely manner is the crux of how the Marine Corps holistically generates warfighting readiness. Marine Force Storage Command (MFSC) is the MARCORLOGCOM subordinate command tasked with this critical mission set. As the largest account of gear and equipment across the Marine Corps, MFSC executes enterprise storage through its various subordinate activities and commands to include the accountability of Class II items in all Unit Issue Facilities across the globe, the Materiel Management Operations Group co-located within each MEF, and 1st and 2d Force Storage Battalion located in Barstow, CA and Albany, GA. To enable these activities and formations, MFSC has initiated a multifaceted warehouse modernization effort with the intent of creating improved storage conditions that support accountability, auditability, faster inventories that require less manpower, and ultimately the rapid and accurate fulfillment of customer orders. Using the private sector as a model, MFSC has optimized existing spaces and facilities by implementing narrow aisles, adjustable racking, and modern material handling equipment and techniques. Additionally, MFSC has supplemented improvements in physical space utilization with complementary systems and technology

to include handheld scanning devices widely used in commercial applications, optical character recognition, passive radio frequency identification, autonomous technologies, and most notably the Marine Corps Platform Integration Center—a system that has reduced inventory times of military equipment by 99 percent. Both facets of warehouse modernization have been synchronized through overall process improvement. The continually improving use of data management and analytics reduced audit risk by $1.2B in FY21, providing a far more accurate site picture of where inventory is located, the most efficient way of accessing it, and how MFSC can quickly distribute it to the end user in the FMF.

Prepositioning

The Marine Corps' prepositioning activities are largely overseen by another of MARCORLOGCOM's subordinate commands, Blount Island Command (BICmd). BICmd maintains oversight of the Service's ashore sites to include the Marine Corps Prepositioning Program–Norway and MEU Augmentation Program–Kuwait which reached end of mission on 30 September 2022, as well as providing support to the Maritime Prepositioning Force afloat program. In response to directed actions levied by the May 2022 *Force Design 2030 Annual Update* and continued reductions in U.S. Navy fiscal support to Maritime Prepositioning Force shipping, BICmd has been re-scoping and modernizing current prepositioning activities as well as planning to support the implementation of the GPN. BICmd has used vessels placed in Reduced Operating Status to improve selective offload configurations, essentially conducting a rehearsal of concept to validate effectiveness while simultaneously refining afloat supply and maintenance concepts to better enable sustainment functions provided by the Maritime Prepositioning Force during campaigning. Additionally, BICmd has begun the initial groundwork to experiment with level I and II UAS to both equip drones with Marine Corps Platform Integration Center components (facilitating more efficient equipment inventories) as well as examine ship-to-shore UAS sustainment from a Maritime Prepositioning Squadron vessel to forward-deployed elements. BICmd has been deeply involved with the GPN planning effort and is examining how and where the organization should be modified to support a more dynamic and dispersed ashore prepositioning construct. The BICmd staff has also explored the interoperability between the Offshore Support Vessel and other commercial connectors with the Maritime Prepositioning Squadron. Much like Marine Depot Maintenance Command and MFSC, BICmd has aggressively leaned into the application of new technologies, refinement of existing procedures, and detailed planning to best facilitate the *right* operational-level logistics solution for the future force.

Command Data and Analytics Office

To enable the modernization, experimentation, and technology implementation efforts described above MARCORLOGCOM will require sound processes and procedures for capturing and managing vast amounts of logistics data to support decision making. MARCORLOGCOM formally established a Command Data and Analytics Office (CDAO) on 1 October 2022 to tie together these lines of effort with aspirations to achieve a level of realtime transparency and connectivity outlined in the opening vignette of this article. Although the command is still early in the process, some early steps have been taken. First, we have formed a relationship with the recently established Marine Corps Service Data Office with the purpose of making data a *Service capability*. We also continue to support Installation and Logistics–Logistics Division and the Field Supply Maintenance Analysis Office with required data sets while transitioning to a more formalized governance structure provided by the CDAO. Internal to the organization, the CDAO has initiated an analytics consortium drawn from our subordinate commands, staff sections, and centers to formalize the management, process improvement, and reliability of the command's data. Upon maturation, MARCORLOGCOM's CDAO effort will improve the speed, tempo, and accuracy of leadership's decision making to facilitate better business outcomes and overall mission accomplishment.

As the operational logistics provider for the Marine Corps, MARCORLOGCOM exists to facilitate the right logistics solution for the service at the right place and time.

In Closing

Regardless of the century, conflict, or scale of warfare, battlefield success has been predicated on positioning the *right* formations, equipment, and sustainment in the *right* place, at the *right* time. As the operational logistics provider for the Marine Corps, MARCORLOGCOM exists to facilitate the *right* logistics solution for the service at the *right* place and time. While MARCORLOGCOM's modernization efforts and the data-governance structure required to implement them require continued refinement and experimentation, we are implementing them *now* to enable the FMF with the best logistics solution in campaigning, crisis, and high-end conflict.

USMC