

MARINE DEPOT MAINTENANCE COMMAND Colonel Kirk M. Spangenberg, USMC smblogcommdmccomm@usmc.mil







MDMC Mission: provide the Fleet Marine Force (FMF) with worldwide organic field level and depot-level maintenance support for rebuild, repairs, engineering solutions, modifications, calibrations, manufacturing and technical services to maximize the operational readiness, lethality, and sustainability of ground combat and combat support weapon systems and equipment.

Our goal is to deliver the highest quality products and services that consistently satisfy the unique needs and expectations of our DoD and Private Partner and Industry customer.

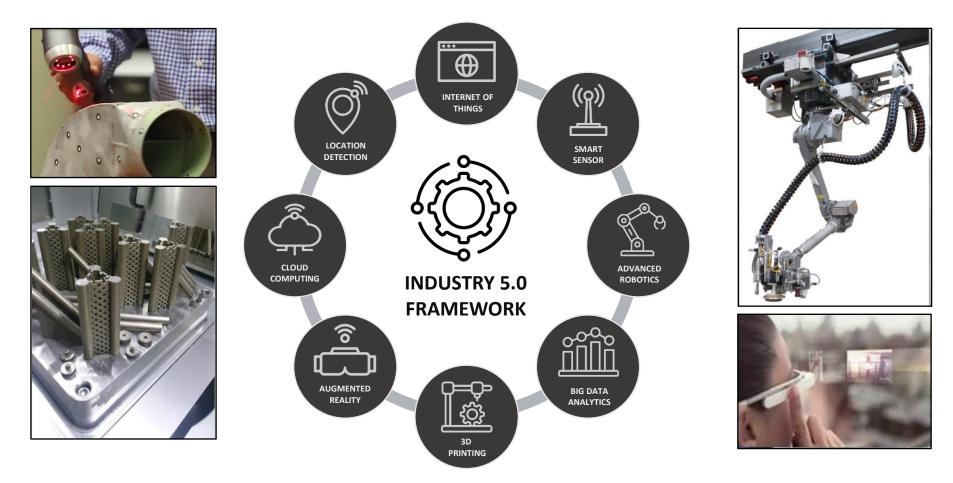




Smart Depot

Challenge:

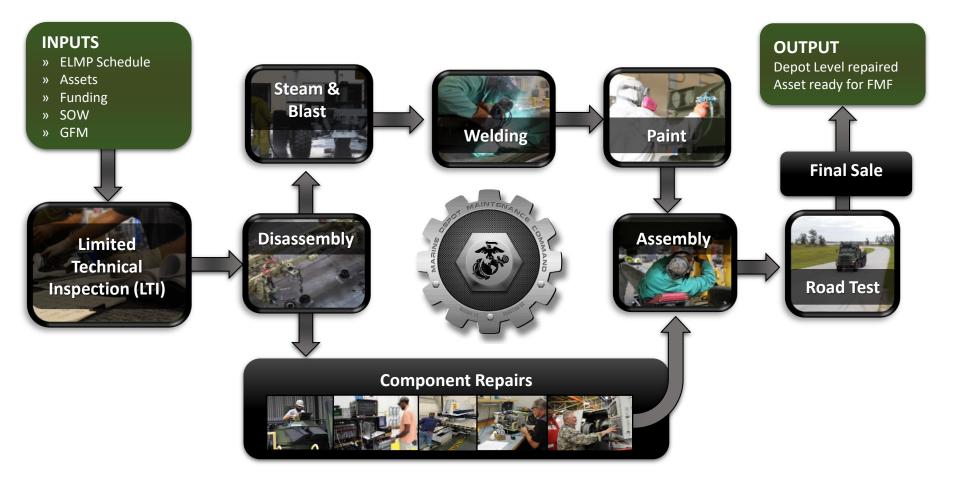
Stay within cost, schedule, and quality while becoming fully relevant to the 2030 Marine Corps



RELEVANT, AGILE, COMPETITIVE & INNOVATIVE



MDMC Capabilities



- **500+ Integrated Production Lines >>**
- ISO 9001:2015 Certified **>>**
- **Global Maintenance Support >>**
- **Navy Working Capital Fund >>**

Rapid Design & Fielding Mobile Trauma Bay

Mine Roller

MAC50 Pulley

3D Metal & Polymer Printing







Advanced Manufacturing Center of Excellence

ADVANCED MANUFACTURING

CENTER OF

Objective

Leverage AM technology to increase depot production, bolster supply operations, enhance expeditionary capabilities, and optimize material readiness to the Fleet Marine Force.

Capability

- » StratasysFortus400MC Polymer Printer
- » StratasysFortusF900 Polymer Printer
- » StratasysFortus450MC Polymer Printer
- » EOS M400-1 Metal Printers (3)
- » CreaformHandyscan700 Laser Scanner (2)
- » Obsolescence Mitigation

Printable Materials

- » Metals
- » MS1 Maraging Steel
- » AlSi10Mg Alum. Alloy
- » Ti64 Titanium
- » Polymers
- » PC-ABS

- » Nylon 12
- » Nylon 12 (Carbon Fiber Infused)
- » ASA
- » ABS
- » ULTEM 1010
- » Polycarbonate





MARINE DEPOT MAINTENANCE COMMAND

North American Industry Classification System (NAICS) "Nakes" Codes:

Self-Assigned based on primary business activities. Targets marketing efforts for companies in similar industries.

Maintenance Repair and Overhaul (MRO) NAICS Codes:

811310,541380,541380,423120

- » Corrosion Preventive and Control
- » Material Finishing
- » Blasting
- » Conversion and Phosphate Coating
- » Robotic Painting, Conventional Powder Coating
- » Engine and Drive Train Rebuild
- » Electrical Rebuild
- » Hydraulic Systems Rebuild and Repair
- » Optics and Weapons Stations
- » Communications/ Radio Repair
- » EOD Robotic Repair Capabilities

Engineering & Technical Services NAICS Code: 54120

- » Engineering Solutions
- » Reverse Engineering
- » Rapid Prototyping

Manufacturing NACIS Code 332710, 33621X

- » Advanced Manufacturing
- » Parts Manufacturing
- » Tool Manufacturing
- » CNC Machining Center
- » Electrical Manufacturing



Public Private Partnerships (P3) Opportunities : Title 10 USC 2474

- » Workshare Agreements: Combination of organic and commercial facilities and employees.
- » **Teaming Arrangements:** Deport and Commercial firm joint contract with DoD third party to perform work.
- Ground Based Air Defense (GBAD)
- Advance Man-Portable Air Defense Systems (A-MANPADS)
- Medium Range Intercept Capability (MRIC)- Enter additional context here.
- Marine Air Defense Integrated Future Weapons Systems (MADIS/FWS)
- » Lease of organic equipment/facilities: Large industrial footprint to accommodate a variety of requirements.

Partnership Advantages

- » Improved Operational Efficiency: Access to advanced repair, manufacturing and engineering capabilities and facilities.
- » Strengthened Proposal Submissions: Leverage proven past performance, access to resident subject matter experts
- » **Positive Community Relations:** Investing in local workforce and resources.
- » Reduced Operational Risk: Partnership agreements provide opportunities to share risk and responsibilities



Questions?



MDMC Business Development Branch 229-639-6330 smblogcommdmccomm@usmc.mil

VISIT OUR BOOTH IN THE MARINE ZONE



OFFICE OF SMALL BUSINESS PROGRAMS

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MARINE DEPOT MAINTENANCE COMMAND

Relevant, Agile, Competitive & Innovative

What WF do is IMPORTANT! Everyday a MARINE'S LIFE will depend on it!



PRODUCTION PLANT ALBANY Albany G

PRODUCTION PLANT BARSTON Barshor

OUR MISSION

Provide the Fleet Marine Force with worldwide organic field level and depot-level maintenance support for rebuild, repairs, engineering solutions, modifications, calibrations, manufacturing and technical services to maximize the operational readiness, lethality, and sustainability of ground combat weapon systems and equipment.

OUR SERVICES

- Skilled workforce and capacity to perform depot-level maintenance on all DoD ground equipment
- Forward Maintenance Support
- Advanced Manufacturing
- Engineering Solutions
- Reverse Engineering
- DLA Source of Supply
- Parts Manufacturing
- Tool Manufacturing
- Private Partnerships
- Cooperative Research and Development Agreements
- Corrosion Preventive and Control
- Depot Level Repairables
- Test, Measurement, and Diagnostic Equipment



MARINE DEPOT MAINTENANCE COMMAND

Relevant, Agile, Competitive & Innovative

MANUFACTURING PARTNER OF CHOICE

A SOLUTION-BASED MANUFACTURER.

Our team delivers the highest quality products and services that consistently satisfy the unique needs and expectations of our DoD and Private Partner customers.

MDMC uses best-in-class advanced manufacturing equipment and talent to meet and exceed expectations.

- East and West Coast Production Plants
- Produce a wide range of metal fabrication, machining, and finishing processes
- Laser cutting and water jet tables
- HAAS SL Series CNC Lathes
- HAAS ST Series High-Performance CNC Turning Centers With Third Axis and Live Tooling
- HAAS VF Series Vertical CNC Machine Centers with 4 and 5 Axis Capabilities
- Wire Harness Fabrication
- Reverse Engineering
- CAD Drafting & Failure effects analysis
- CAD Modeling
- Polymer and Metal 3D Printing
- Heat treating
- Hardness and Torsion Testing
- Non-Destructive Testing / X Ray
- New 65,000 SqFt Welding Facility with 2 Large Capacity Trunnions and 23 Workstations



Visit our booth in the Marine Zone

MARINE DEPOT MAINTENANCE COMMAND

Relevant, Agile, Competitive & Innovative

ADVANCED TECHNOLOGY & INNOVATION OFFICE



Marine Depot Maintenance Command is home to the U.S. MARINE CORPS' ADVANCED MANUFACTURING CENTER OF EXCELLENCE

Our objective is to leverage AM technology to increase depot production, bolster supply operations, enhance expeditionary capabilities, and optimize material readiness to the Fleet Marine Force.

CAPABILITY

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MARINE DEPOT MAINTENANCE COMMAND

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MDMC FORWARD OPERATIONS SUPPORT

MANAGE MARINE CORPS CORROSION REPAIR FACILITIES (CRF)

- Camp Pendleton, CA
- Camp Lejeune, NC
- Kaneohe Bay, HI
- Okinawa, Japan
- Blount Island, FL

II MEF FORWARD SUPPORT

- Administrative Storage Program (ASP)
- LOGCOM Support Team
- Left Behind Equipment Maintenance
- Electronics Maintenance Company (ELMACO)
- Vehicle Hood Exchange Program
- Vehicle Wheel Assembly Exchange Program
- Battery Exchange Program
- Nitrogen Exchange Program
- MTVR Integration Project

MARINE FORCES RESERVE FORWARD SUPPORT

LOGCOM Mobile Maintenance Team (LMMT)
Small Arm Repair Team (SmART)

What WE do is IMPORTANT! Everyday a MARINE'S LIFE will depend on it!



MARINE DEPOT MAINTENANCE COMMAND

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ELECTRONICS SOFTWARE CALIBRATION & TEST (ESCT)

OUR MISSION

Provides world-class depot-level electronics repair and test, software engineering and development, calibration of test equipment, engineering and development support for Automatic Test Equipment (ATE), and oversees the MDMC Radiation Safety Program. We are a service oriented organization with a highly trained and dedicated workforce striving to meet customer requirements within a framework of cost, quality and schedule to meet the ultimate support goal of ensuring the Warfighter wins battles with superiorly maintained equipment.

OUR SERVICES

- Electronics Repair & Test
- Software Development
- Communication Equipment Rebuild
- Electronic & Physical Dimensional Calibration
- Automatic Test Equipment Support
- Electro-Optical Repair & Calibration
- Radiological Equipment Support
- Onsite Wind Tunnel
- Aircraft Boresight & Armament
- Fixture Repair/Calibration

ISO 17025:2017 Accredited

Visit our booth in the Marine Zone



MARINE DEPOT MAINTENANCE COMMAND

Relevant, Agile, Competitive & Innovative

MODERNIZATION & INNOVATION EFFORTS

HARNESSING THE POWER OF 5G

- Expansion of OUSD 5G Smart Warehouse experiment and tech insertion – Same tech for receipt, ID, tracking, and transport can be adapted for timely, accurate delivery of material to the production line
- All material, labor, robotic and automated equipment and facilities will be sensor laden
- Massive amounts of data
- Better production control, information accuracy, and agile response to changing mission requirements

DIGITAL OPTIMIZATION

- Digital Twin Technology
- Modeling and Simulation
- Material Flow and Key Performance Metrics
- Automation & Advanced Manufacturing

CLOUD AND ARTIFICIAL INTELLIGENCE

- Production Cycle Analytics
- Foundational Data estate
- Address analog problems with digital capabilities to automate manual processes
- Introduce cognitive capabilities and automation at the point and time of need



2023 ADVANCED PLANNING BRIEF TO INDUSTRY

MARINE FORCE STORAGE COMMAND 5G SMART WAREHOUSE INITIATIVE

Stephanie Bryan, PMP Stephanie.bryan@usmc.mil





Introduction Video

Click <u>here</u> for video





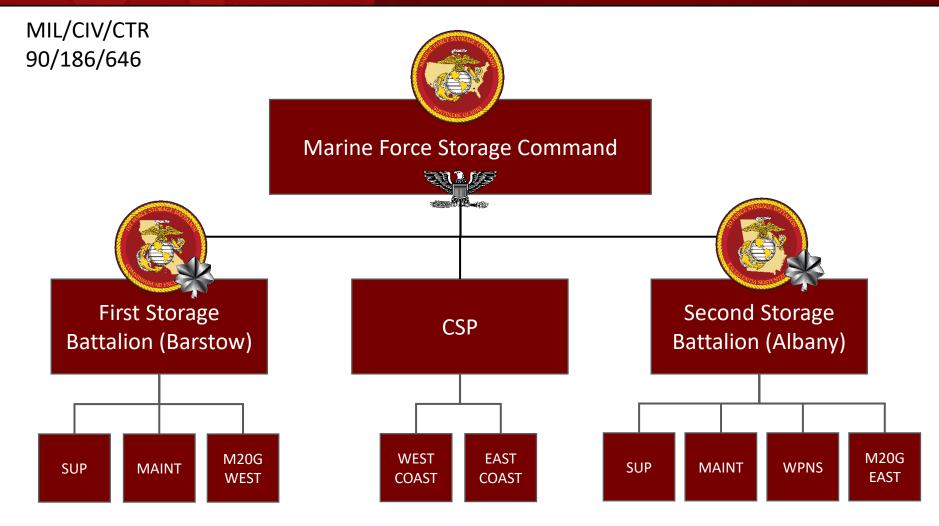








Organization Chart





- Marine Corps Logistics Command has the largest concentration of Military Equipment (ME) and Operating Material and Supplies (OM&S) in the Marine Corps.
- » Over **262,449** individual pieces of ME valued at over **\$7.8B**, represents 25% of the entire USMC ME inventory over 50 locations around the globe.
- » Over 4.1M component items valued at over \$1B, represents ≈10% of the entire USMC OM&S inventory.



Force Storage Simplified Mission Statement

"Store combat ready capability sets in order to sustain the Expeditionary Force in Readiness."



The 5G Smart Warehouse prototype provides a 5G network enabling the speed to need, automated asset tracking & movement, perfect asset visibility, a skilled workforce, and improved data accuracy.



5G Warehouse Objectives:

- » Cyber Secure
- » Increased Accuracy
- » Automation
- » Space Optimization
- » Process manageability
- » Data Analytics
- » Integrated Safety
- » Cost Savings



Logistics Modernization in Support of Force Design 2030



Smart Warehousing delivers a lean, efficient and resilient supply that increases speed to need for the Fleet Marine Force

The "5G to NEXT G" Smart Warehouse Initiative Supports the DON's Climate Smart Warehousing devices and technology ensuring the Marine Corps remains agile, flexible and adaptable through climate changes.

5G technology improves energy resilience and reduces energy dependence beyond previous generation wireless technologies.



- » State-of-the-art Warehouse Automation Tools/Devices
- » Deployable/mobile warehousing
- » Inventory Management
- » Facilities modernization/standardization
- » Advanced Warehouse Safety
- » Legacy system integrations with open architecture solutions
- » Local operating system





Questions?



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