NDIA

22nd Annual Expeditionary Warfare Conference



Conference Program

October 24–26, 2017 | The Westin Annapolis | Annapolis, MD
#EWC17

MISSION

The Expeditionary Warfare Division is the focal point and coordinating element within NDIA for the identification, study and resolution of expeditionary warfare and force protection issues in the littoral regions of the world, affecting the strength of the national defense industrial base and the armed services.

The group conducts its activities through seven committees: industry, amphibious warfare, littoral and mine warfare, expeditionary unmanned vehicles, C4I in the littorals, seabasing and sustainment, and force protection/anti-terrorism. Close coordination is maintained with the director of the U.S. Navy Expeditionary Warfare Directorate (N95), the U.S. Marine Corps deputy commandant for plans, policy and operations, and the U.S. Coast Guard's assistant commandant for operations. The division's annual symposium attracts participants from government, industry and the military services.

OBJECTIVES

- Develop and foster industry/Defense Department communications on expeditionary warfare issues, including missions, systems, technologies, training and manpower resources.
- Develop and foster industry understanding of DoD expeditionary warfare capabilities, current and emerging requirements, issues and future plans.
- Develop and foster DoD understanding of expeditionary warfare capabilities, resources and technologies available within industry.
- Develop and foster effective and efficient use of industrial capabilities in meeting DoD current and future requirements.
- Conduct an annual expeditionary warfare conference and other forums, as appropriate, for the exchange of information, ideas and issues of mutual interest to the military services and industry.
- Provide a vehicle for broad-based industrial input to DoD concerns on expeditionary warfare matters.

LEADERSHIP

RADM Sinclair "Sinc" Harris, USN (Ret)
NDIA Division Chairman
Vice President, Defense Market, LMI

Col Jim Strock, USMC (Ret)
NDIA Division Vice Chairman
Independent Consultant, Jim Strock Consulting, LLC

Col Clyde Woltman, USMC (Ret)
NDIA Expeditionary Warfare Conference Chairman
Executive Director, Defense, Aerojet Rocketdyne
Washington DC Operations



ABOUT NDIA

The National Defense Industrial Association (NDIA) is the trusted leader in defense and national security associations. NDIA, comprised of its affiliates, chapters, divisions, and 1,600 corporate and 85,000 individual members, is a non-partisan, non-profit, educational association that has been designated by the IRS as a 501(c)3 nonprofit organization - not a lobby firm - and was founded to educate its constituencies on all aspects of national security.

CONFERENCE CONTACTS

Ms. Elizabeth Richards, CMP, Meeting Manager, NDIA
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erichards@ndia.org

Ms. Andrea Lane, Meeting Planner, NDIA
(703) 247-2573
alane@ndia.org

CONFERENCE THEME

The NDIA Expeditionary Warfare Conference continues to serve as the premier venue for defense and industry expeditionary warfare leaders to assemble each year to discuss the issues and challenges facing the forces of today and tomorrow. This year's theme is "*Distributed Expeditionary Operations in a Contested Environment*."

This year NDIA is partnering with the Mine Warfare Association to add a session dedicated to exploring and educating on aspects of mine warfare.

ID BADGE

During conference registration, each attendee will be issued a conference badge. Please be prepared to present a valid picture ID. Please wear your badge at all conference-sponsored functions.

SURVEY & ATTENDEE LIST

A survey and list of attendees (name and organization only) will be e-mailed to you after the conference. NDIA would appreciate your time in completing the survey to help make our event even more successful in the future.

PROCEEDINGS

Proceedings will be available 10-14 business days from the last day of the conference. All proceedings require release confirmation from the presenter. A secure, direct link to the proceedings will be sent to attendees after review from the Defense Technical Information Center (DTIC).

SOCIAL MEDIA

Conference hashtag: #EWC17 Twitter: @ndiatoday Instagram: @ndiatoday

Facebook & LinkedIn: National Defense Industrial Association

MINE WARFARE ASSOCIATION

The Mine Warfare Association was formed in 1995 to create an awareness of mine warfare and to assist government, industry, and academia in optimizing their combined contributions to solving the challenges associated with military sea and land mine warfare. MINWARA's founders believed solutions would be found in emerging technologies and sharing information. MINWARA established a program of conducting symposia to expose people and organizations to these emerging technologies and their application to mines, mining and mine countermeasures.

The symposia are an effort to cross-pollinate knowledge about mine warfare among government, industry, and academia. Symposia address military doctrine, policies, organization, concepts of operations, ongoing and needed research and development, acquisition programs, exercises and operation, and logistics and training programs.

Mine warfare includes both mining and mine countermeasures. Mine countermeasures includes the software, sensors, systems, tactics, techniques and procedures required to address the traditional mine threat as well as the potential threat from terrorist placed mines or improvised explosive devices (IEDs), to U.S. ports. The Mine Warfare Association is a strong supporter of mining capabilities, based on the tenet that knowledge of mine design and effects are critical to maintaining an effective mine countermeasures capability. The Mine Warfare Association is also a firm supporter of mine designs that have self-destruction capabilities after an appropriate period, so as not to pose a threat to civilians after cessation of hostilities.

The Mine Warfare Association understands the increasing importance of commercial industry in developing technologies which will benefit the Department of Defense. Accordingly, a major activity of the association is to expand outreach to the commercial sector.

TUESDAY, OCTOBER 24, 2017

7:00 AM - 5:30 PM	**Registration** *Capitol ABC Pre-Function*
7:00 AM - 8:00 AM	**Networking Breakfast** *Capitol Pre-Function*
8:00 AM - 8:30 AM	**Welcome Remarks** *Capitol Ballroom* • Col Clyde Woltman, USMC (Ret), Executive Director, Defense, Aerojet Rocketdyne Washington DC Operations • RADM Sinclair Harris, USN (Ret), Vice President, Defense Market, LMI
8:30 AM - 9:30 AM	**Keynote Address** • VADM Kevin Scott, USN, Director, Joint Staff J7 Force Development
9:30 AM - 7:00 PM	**Table Top Displays Open** *Capitol Pre-Function*
9:30 AM - 10:00 AM	**Networking Break** *Capitol Pre-Function*
10:00 AM - 12:00 PM	**Session: Current Operations** **Session Chair:** Mr. Jon Padfield, Corporate Director, Customer Affairs, Amphibious and Auxiliary Ship Programs, Huntington Ingalls Industries The Commanding General, II Marine Expeditionary Force will provide an overview of the responsibilities and challenges facing his Marines and the expeditionary/amphibious forces as they continue to operate at the forefront of naval operations at sea and ashore. The General will discuss how the naval concept of *Littoral Operations in a Contested Environment* will impact the strategy of naval engagement. Commodore Mike Crary, USN deployed with the 11th Marine Expeditionary Unit as the MAKIN ISLAND Amphibious Ready Group and Commodore Larry LeGree, USN deployed with the 24th Marine Expeditionary Unit as the BATAAN Amphibious Ready Group, will provide an overview of their deployment events and accomplishments particularly conducted in “split” and “disaggregated” operations. Commander Shawn Lansing, Program Manager of the United States Coast Guard Expeditionary Forces Division, will provide an overview of the USCG in expeditionary operations and the potential for Coast Guard involvement in future efforts.
10:00 AM - 10:45 AM	**Keynote Speaker - Joint Current Ops Focus** • LtGen Robert Hedelund, USMC, Commanding General, II Marine Expeditionary Force
10:45 AM - 12:00 PM	**Panel Session - Current Operations** **Moderator:** Mr. Jon Padfield, Corporate Director, Customer Affairs, Amphibious and Auxiliary Ship Programs, Huntington Ingalls Industries • CAPT Mike Crary, USN, Commander, Amphibious Squadron 5 • CAPT Larry LeGree, USN, Commander, Amphibious Squadron 8 • Col Ryan Rideout, USMC, Commanding Officer, 24 MEU (Invited) • CDR Shawn Lansing, USCG, Program Manager for Expeditionary Operations, USCG Headquarters

12:00 PM - 1:30 PM

Networking Lunch
Capitol Ballroom

1:30 PM - 5:30 PM

Session: Mine Warfare
Session Co-Chair: Mr. David Holt, Mission Systems, Navigation & Maritime Systems Division, Northrop Grumman Corporation
Session Co-Chair: Mr. Mark Rios, Director, Business Development & Sales, ATLAS North America

By popular demand, this year's Mine Warfare session has expanded to accommodate more speakers and questions from attendees. The focus of the session is to convey a perspective from operational MCM Task Group and Task Force Commanders; experienced and objective Mine Warfare assessors, whose findings are forwarded to the highest levels of the Navy; the OPNAV Resource Sponsor responsible for funding MCM capability and capacity; and the Navy's acquisition leader who will maintain present systems and develop and field promising future ones. After all invited speakers have made their presentations, there will be a panel session with all speakers, moderated by VADM John Miller (Ret), which will answer insightful and probing questions from the audience.

1:30 PM - 2:00 PM

Keynote Speaker
- VADM John Miller, USN (Ret), President, The Fozzie Miller Group

2:00 PM - 3:30 PM

Individual Remarks
- CAPT Mark Leavitt, USN, Commander, Helicopter Sea Combat Wing Atlantic
- Mr. Neal Kusumoto, Director Mine Warfare, Surface and Mine Warfare Development Center
- CAPT Michael Egan, USN, Commander Task Force 52, USNAVCENT
- MajGen David Coffman, USMC, Director Expeditionary Warfare Division, OPNAV N95
- RADM John Neagley, USN, Program Executive Office, Littoral Combat Ship

3:30 PM - 4:00 PM

Networking Break
Capitol Pre-Function

4:00 PM - 5:30 PM

Panel Session - Mine Warfare
Moderator: VADM John Miller, USN (Ret), President, The Fozzie Miller Group
- CAPT Mark Leavitt, USN, Commander, Helicopter Sea Combat Wing Atlantic
- Mr. Neal Kusumoto, Director Mine Warfare, Surface and Mine Warfare Development Center
- CAPT Michael Egan, USN, Commander Task Force 52, USNAVCENT
- MajGen David Coffman, USMC, Director Expeditionary Warfare Division, OPNAV N95
- CAPT Hans Lynch, USN, Mine Warfare Branch, OPNAV N952
- RADM John Neagley, USN, Program Executive Office, Littoral Combat Ship

5:30 PM - 7:00 PM

Networking Reception
Capitol Pre-Function

WEDNESDAY, OCTOBER 25, 2017

7:00 AM – 5:30 PM	**Registration** *Capitol ABC Pre-Function*
7:00 AM - 5:30 PM	**Table Top Displays Open** *Capitol Pre-Function*
7:00 AM - 8:00 AM	**Networking Breakfast** *Capitol Pre-Function*
8:00 AM - 8:15 AM	**Welcome Remarks** *Capitol Ballroom* • Col Clyde Woltman, USMC (Ret), Executive Director, Defense, Aerojet Rocketdyne Washington DC Operations
8:15 AM - 9:00 AM	**Keynote Address** • Mr. Gary Motsek, Deputy Assistant Secretary of Defense for Program Support
9:00 AM - 3:00 PM	**Session: Capabilities Development & Acquisition** **Session Co-Chair:** Mr. Reed Bolick, USMC Field Representative, Mistral Group **Session Co-Chair:** Col Jim Strock, USMC (Ret), Independent Consultant, Jim Strock Consulting, LLC Taking concepts to reality is not an easy task and requires innovative collaboration between government and industry to attain future warfighting capabilities. This panel discussion will discuss required capabilities to realize operational end states described in *Littoral Operations in a Contested Environment*; the ongoing rapid capabilities development plans, programs and processes designed to accelerate capabilities to the field and fleet; and provide an update on experimentation and exercises to allow naval forces to identify seams and capabilities shortfalls that must be resolved to influence and enhance planning and execution of integrated Navy and Marine Corps operations on and from the sea.
9:00 AM - 10:00 AM	**Keynote Speakers** • LtGen Brian Beaudreault, USMC, Deputy Commandant, Plans, Policies, and Operations • VADM Andrew Lewis, USN, Deputy Chief of Naval Operations, Plans and Strategy
10:00 AM - 10:30 AM	**Featured Speaker - Capabilities Conceptual Overview** • Mr. John Berry, HQMC Combat Development & Integration
10:30 AM - 11:00 AM	**Networking Break** *Capitol Pre-Function*
11:00 AM - 12:30 PM	**Panel Session - Capabilities Development, Experimentation & Exercises, Rapid Capabilities Development** **Moderator:** Col Jim Strock, USMC (Ret), Independent Consultant, Jim Strock Consulting, LLC • Col Marshall Swor, USMC, USMC Lead, Defense Innovation Unit Experimental (DIUx) • Dr. John Pazik, Expeditionary Maneuver Warfare, Code 30, Office of Naval Research • LtCol Dan Schmitt, USMC, Marine Corps Warfighting Lab Field Testing Branch • Col Craig Streeter, USMC, Director, Maritime Expeditionary Warfare Integration Division, HQMC Combat Development and Integration • CDR Dave Lewis, USN, U.S. Fleet Forces Command, N9 Fleet Design

12:30 PM - 1:30 PM **Networking Lunch**
Capitol Ballroom

1:30 PM - 2:15 PM **Keynote Speaker**
- **Mr. Thomas Dee**, Performing the Duties of the Under Secretary of the Navy

2:15 PM - 3:00 PM **Featured Speaker - Acquisition**
- **Mr. William Williford, III**, Executive Director, Marine Corps Systems Command

3:00 PM - 3:30 PM **Networking Break**
Capitol Pre-Function

3:30 PM - 5:30 PM **Session: Expeditionary Logistics Integration & Expeditionary Medicine**
Session Co-Chair: Mr. Tom Wetherald, Director Business Development and Strategic Planning, General Dynamics NASSCO
Session Co-Chair: Col Jim Strock, USMC (Ret), Independent Consultant, Jim Strock Consulting, LLC

The importance of Navy, Marine Corps and Coast Guard interdependency in both naval and joint warfighting environments and the continued need to transform naval logistics requires integrated logistics and medical processes to obtain greater efficiency and effectiveness in supporting the warfighter. This panel will discuss how naval logisticians are challenging the status quo in areas of science and technology, policy and doctrine, business practices and processes, and training and education as well as logistics innovation initiatives such as additive manufacturing and technological enhancements in warfighter performance. The end state is to enhance integrated naval logistics and expeditionary medicine capabilities that can operate seamlessly afloat or ashore, successfully supporting and sustaining operating units in a joint warfighting environment.

3:30 PM - 4:15 PM **Keynote Speakers**
- **MajGen Vincent Coglianese**, USMC, Commander, Marine Corps Installations Command/ Assistant Deputy Commandant, Installations & Logistics (Facilities)
- **RDML Peter Stamatopoulos**, USN (SC/AP), Director, OPNAV N41

4:15 PM - 5:30 PM **Panel Session: Naval Logistics Integration, Expeditionary Medicine, Additive Manufacturing**
Moderator: Col Jim Strock, USMC (Ret), Independent Consultant, Jim Strock Consulting, LLC
- **Dr. Patrick Mason**, Head, Warfighter Performance Department, Code 34, Office of Naval Research
- **CAPT Jason Bridges**, USN, OPNAV N41, Fleet Readiness and Logistics
- **LCDR Andrew Lovgren**, USN, OPNAV N41
- **Col Edward Bligh**, USMC, HQMC LPV
- **Col Howard Marotto**, USMC, HQMC, LPV-3, NexLog, Additive Manufacturing

THURSDAY, OCTOBER 26, 2017

7:00 AM – 12:30 PM **Registration**
Capitol ABC Pre-Function

7:00 AM - 12:30 PM **Table Top Displays Open**
Capitol Pre-Function

7:00 AM - 7:55 AM	**Networking Breakfast** *Capitol Pre-Function*
7:55 AM - 8:00 AM	**Welcome Remarks** *Capitol Ballroom* • Col Clyde Woltman, USMC (Ret), Executive Director, Defense, Aerojet Rocketdyne Washington DC Operations
8:00 AM - 12:30 PM	**Session: Resource Sponsors** **Session Chair:** Mr. Joe Martin, Crowley The Navy and Marine Corps continue to face unprecedented resource challenges in the development and continued sustainment of the world's preeminent Expeditionary and Amphibious Force. The Navy-Marine Corps Team must make balanced and well-informed decisions to field a force capable of executing the full range of military operations in domain-contested environments to enable Joint Force success. The Resource Sponsors Exchange panel will provide insight into the Navy's resource decisions to support the fielding of the most lethal and survivable Expeditionary and Amphibious Force, for today's Navy and Marine Corps and tomorrow's. This panel is comprised of the N95 Resource Sponsors who adjudicate investment priorities and decisions for our Nation's Expeditionary and Amphibious Force. As one of the Defense Department's largest acquisition organizations, Program Executive Office Ships (PEO Ships) manages the design and construction of destroyers, amphibious ships, special mission and support ships, as well as a wide range of boats and craft for U.S. agencies and foreign military sales. These platforms enable our nation and its allies to project presence in peace, power in wartime, and assured access at all times.
8:00 AM - 10:00 AM	**Panel Session: Resource Sponsors Exchange** **Keynote & Moderator:** MajGen David 'Stretch' Coffman, USMC, Director Expeditionary Warfare Division, OPNAV N95 • CAPT Dave Markle, USN, Naval Special Warfare Branch, OPNAV N951 • CAPT Hans Lynch, USN, Mine Warfare Branch, OPNAV N952 • CAPT Dave Bossert, USN, Amphibious Warfare Branch, OPNAV N953 • CAPT John Moulton, USN, Navy Expeditionary Combat Branch, OPNAV N957
10:00 AM - 10:30 AM	**Networking Break** *Capitol Pre-Function*
10:30 AM - 12:30 PM	**Panel Session: PEO Ships Exchange** **Keynote & Moderator:** RADM William Galinis, USN, Program Executive Officer, Ships • Col Samuel Mowery, USMC, Team Ships Marine Corps Liaison • Mr. Clif Mitchell, Deputy Program Manager, PMS 385, Strategic and Theater Lift • CAPT Brian Metcalf, USN, Program Manager, PMS 317, LPD17/LX(R) • Mr. Thomas Rivers, Program Manager, PMS 377, Amphibious Warfare
12:30 PM	Conference Adjourns

Thursday afternoon classified session at Northrop Grumman - see details on following page.

In lieu of speaker gifts, a donation is being made to the Fisher House Foundation.

The optional classified session on Thursday, October 26 will begin at 2:00pm. It will be held at Northrop Grumman's offices in Annapolis, MD. This session will be conducted as SECRET/NOFORN. **You must have a secret clearance and be a U.S. citizen to attend this optional session. Pre-registration is required.** Please arrive in time to check in and pick up your badge. A photo ID will be required for check in.

NORTHROP GRUMMAN ADDRESS

895 Oceanic Drive, Annapolis, MD 21409

DIRECTIONS FROM ANNAPOLIS TO NORTHROP GRUMMAN

From Rt 50 East, take Exit 32 (last exit prior to tolls). At the stop sign turn right; at the end of the road turn left; turn right at the next road, O'Brien Rd. Look for the Northrop Grumman signs.

PARKING

Follow O'Brien Rd, bear left once you enter the property, drive between the building towards the Chesapeake Bay. Turn right into the visitor parking lot. NDIA spots will be marked. Overflow parking will be behind the building but will be clearly marked. 30 MPH while on access road, watch for wildlife crossing the road.

SCHEDULE

1:00 PM - 2:00 PM	**Classified Session Check In** *Northrop Grumman*
2:00 PM - 4:30 PM	**Classified Session - Expeditionary & Mine Warfare** **Session Co-Chair:** Mr. David Holt, Mission Systems, Navigation & Maritime Systems Division, Northrop Grumman Corporation **Session Co-Chair:** Mr. Roger Garay, Defense Technical Information Center ONI will be presenting a classified Secret/NOFORN mine threat brief at the Northrop Grumman Undersea Systems Campus Thursday afternoon. Following this brief, the Commander, Task Force 51/5 will discuss current Expeditionary Warfare Operations. Lastly, the panel will discuss military requirements and the private-sector, defense-oriented technology solutions that can align with warfighter and national security problem sets.
2:00 PM - 2:10 PM	**Welcome to Northrop Grumman** • Dr. Alan Lytle, Vice President, Northrop Grumman Undersea Systems
2:10 PM - 3:30 PM	**Featured Speakers - ONI & Commander, Task Force 51/5 Operations**
3:30 PM - 4:30 PM	**Panel Session** **Moderator: Mr.** Roger Garay, Defense Technical Information Center
4:30 PM	Classified Session Adjourns

The Amphibious Warship Industrial Base Coalition advocates for Congress to provide funding for the sustained and stable construction of amphibious warships vital to the mission of the U.S. Navy and U.S. Marine Corps. Members of the coalition advocate for amphibious warship funding and underscore the importance of amphibious warships to our country's security and global stability.

Located in the U.S. and a subsidiary of Kongsberg Maritime, Hydroid is the world's most trusted manufacturer of advanced, field proven Autonomous Underwater Vehicles (AUVs). Our REMUS AUVs and marine robotics systems provide innovative and reliable full-picture solutions for the marine research, defense, hydrographic and offshore/energy markets. Developed by a veteran team of engineers, Hydroid products provide a safe and reliable answer to the challenges that have hampered ocean exploration and security. For more information on our technologies, please visit www.hydroid.com.

Ingalls Shipbuilding is located in Pascagoula, Mississippi on 800 acres of the most important real estate in America. With 11,500 employees, Ingalls is the largest manufacturing employer in Mississippi and a major contributor to the economic growth of both Mississippi and Alabama. Our 79-year legacy has continuously proven we have the talent, experience and facilities to simultaneously build more classes of ships than any other shipyard in America. We are the builder-of-record for 35 Aegis DDG 51 class guided missile destroyers, LHA 6 class large deck amphibious ships, National Security Cutters for the U.S. Coast Guard and the sole builder of the Navy's fleet of San Antonio (LPD 17) class amphibious assault ships. Ingalls Shipbuilding has what it takes to build the military ships that keep America and our allies safe.

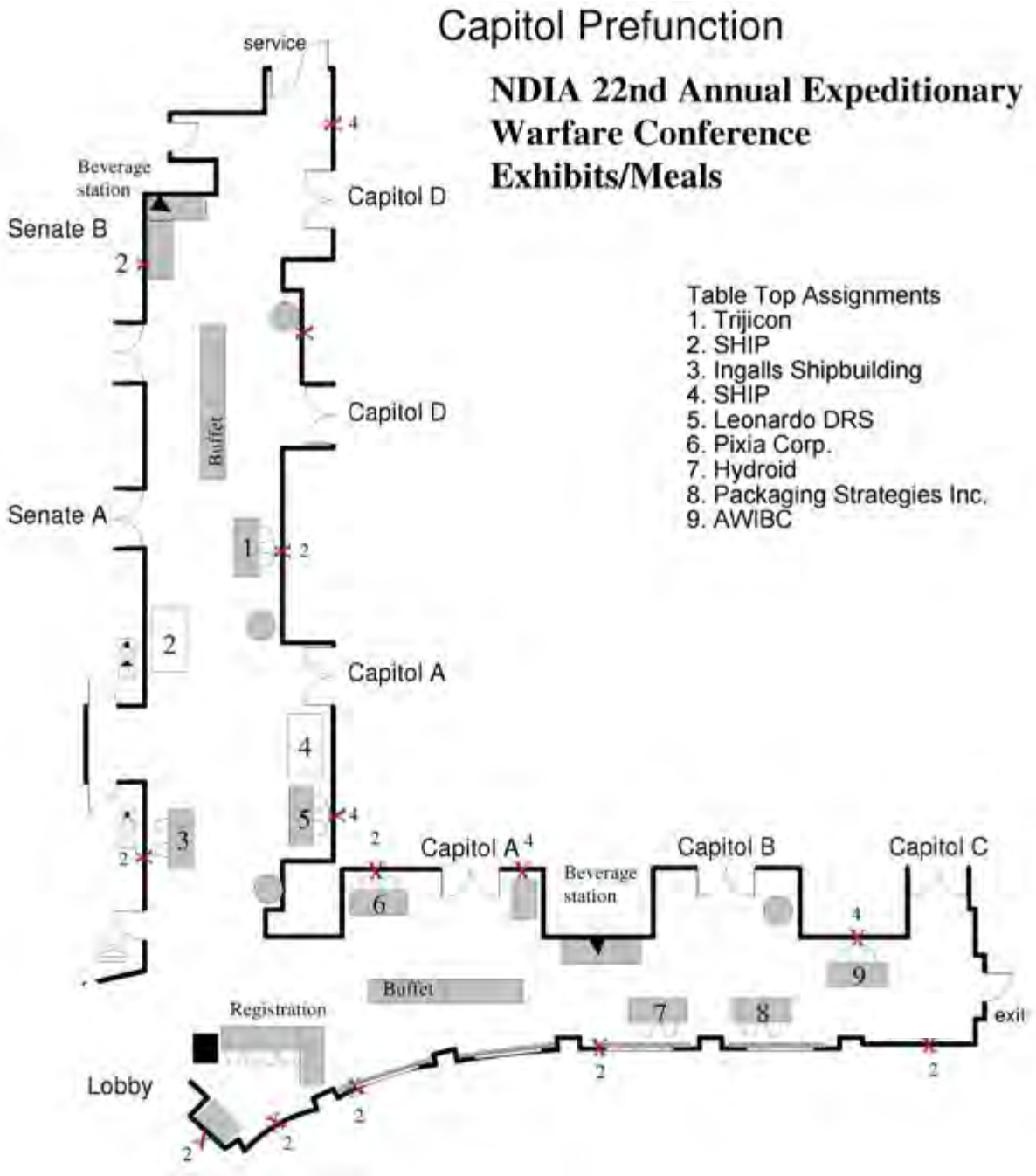
Leonardo DRS is a prime contractor, leading technology innovator and supplier of integrated products, services and support to military forces, intelligence agencies and defense contractors worldwide. The company specializes in naval and maritime systems, ground combat mission command and network computing, global satellite communications and network infrastructure, avionics systems, and intelligence and security solutions. Additionally, the company builds power systems and electro-optical/infrared systems for a wide range of commercial customers. Headquartered in Arlington, Virginia, Leonardo DRS is a wholly owned subsidiary of Leonardo S.p.A., which employs more than 47,000 people worldwide.

PIXIA® is the industry leader in high-performance, scalable data access solutions for large geospatial datasets. PIXIA's products – HiPER LOOK®, HiPER STARE® and HiPER WATCH®, and HiPER CLOUD – focus on increased storage I/O, scalability and interoperability across large enterprise systems online, offline, or hosted in the cloud. PIXIA software delivers tools to organize, visualize, and expose geospatial data, reducing maintenance burden and search time while empowering critical missions. Additionally, PIXIA's capabilities allow users to take maps and imagery into network disconnected environments for conducting operations offline. PIXIA makes data fast and flexible through integration with third party analytical tools via open standard interfaces like Open Geospatial Consortium (OGC) standards and web services, eliminating the need for many copies of data and a unique software stack to operate on it.

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Trijicon has led the industry in the development of superior any-light aiming systems since the company's founding in 1981. World-renowned for its innovative applications of tritium and advanced fiber-optics, Trijicon manufactures the most advanced riflescopes and sights for tactical and sporting applications. Backed by a Limited-Lifetime Warranty, Trijicon's aiming systems are proven on the range and in the field. The company is proud to count as our customers the United States Marine Corps, United States Army, United States Special Operations Forces, United States Government, and state and local Law Enforcement, just to name a few. An ISO 9001:2008 rated company, Trijicon Inc., is committed to Customer Satisfaction through the design, development, and manufacture of superior quality products while offering expert technical support. Trijicon's commitment to continuous improvement of products and services is paramount in their endeavors to continue as a world leader in the design and manufacture of high quality, innovative sighting systems.



LtGen Brian Beaudreault, USMC, Deputy Commandant, Plans, Policies, and Operations



Lieutenant General Beaudreault was commissioned in May 1983 and was designated as an infantry officer upon completion of training.

His operational assignments include: Platoon Commander and Company Executive Officer, 1st Bn, 3rd Marines, Kaneohe Bay, HI; Assistant Operations Officer, Logistics Officer, Maritime Special Purpose Force Commander and G Company Commander, Battalion Landing Team 2/9, 15th Marine Expeditionary Unit (SOC), Camp Pendleton, CA (Operation RESTORE HOPE, Somalia); Inspector-Instructor, 3rd Battalion, 23rd Marines, Memphis, TN; Operations Officer, 31st MEU (SOC), Okinawa, Japan (Operation Stabilise, East Timor); Regimental Executive Officer, 1st Marine Regiment, Camp Pendleton, CA; Commanding Officer, Battalion Landing Team 1/1, 13th MEU (SOC)/ Expeditionary Strike Group One (Operation Iraqi Freedom); Commanding Officer, 15th MEU(SOC), Camp Pendleton, CA (Operation Iraqi Freedom); Deputy Commander, Marine Forces Central Command/Commander MARCENT (Forward), Manama, Bahrain; Commanded Task Force South in support of flood relief in Sindh Province, Pakistan; and Commanding General, 2nd Marine Division.

His Supporting Establishment assignments include service as Guard Officer, Marine Corps Security Force Company, Naval Station Roosevelt Roads, Puerto Rico and Director, Expeditionary Warfare School, Quantico, VA.

LtGen Beaudreault completed joint duty assignments as Ground Plans Officer (CCJ3-PP), Operations Directorate, US Central Command, MacDill AFB, FL; Deputy Director, Future Joint Force Development, Joint Staff (J7) and Deputy Director, Joint Training, Joint Staff (J7), Suffolk, VA; and most recently served as Director of Operations and Cyber (J3), U.S. Africa Command.

Mr. John Berry, HQMC Combat Development & Integration

Mr. John C. Berry, Jr. is the Director of the Concepts Branch within the Marine Corps Warfighting Laboratory/Futures Directorate at Quantico, Virginia. He enlisted in the Marine Corps in 1974 and subsequently earned his Artis Baccalaureate, Summa Cum Laude, from Boston College in 1981. He then earned a commission in the Marine Corps and served as a career infantry officer. His operational experience included various command and staff assignments within the Second and Third Marine Divisions, the Sixth Marine Amphibious Brigade, and the 26th Marine Expeditionary Unit (Special Operations Capable). A distinguished graduate of numerous professional military schools, he was also a tactics instructor at The Basic School and was an instructor, exercise design officer, and operations officer with the Marine Air-Ground Task Force (MAGTF) Staff Training Program.

Since his retirement from active duty in 2002, Mr. Berry has been involved in the development of numerous strategy documents, operating concepts, and key doctrinal publications. The most prominent among them are:

- Naval Operations Concept 2006;
- A Cooperative Strategy for 21st Century Seapower (2007);
- Naval Operations Concept 2010: Implementing the Maritime Strategy;
- Marine Corps Doctrinal Publication 1-0, Marine Corps Operations (2011);
- Cooperative Strategy for 21st Century Seapower: Forward, Engaged, Ready (2015);
- Littoral Operations in a Contested Environment (2017).

MajGen David Coffman, USMC, Director Expeditionary Warfare Division, OPNAV N95



Major General Coffman assumed duties as Director, Expeditionary Warfare (N95) in July 2017. As the sole Marine General Officer on the staff of the Chief of Naval Operations (OPNAV), he provides oversight of CNO staff responsibilities pertaining to amphibious lift, mine warfare, naval fire support, and other missions essential to Expeditionary Warfare.

He was commissioned a Marine Second Lieutenant through the NROTC Program in May 1985. He completed flight school and was designated a Naval Aviator in May 1987.

As a CH-46 helicopter pilot, his operational flying tours include multiple deployments across PACOM and CENTCOM AORs. He commanded HMM-161 during their 2004 Operation Iraqi Freedom deployment to Iraq, where the squadron served as the primary Casualty Evacuation squadron for I MEF and was recognized by the Marine Corps Aviation Association as the Edward C. Dyer Marine Medium Helicopter Squadron of the Year for 2004. As a Colonel, he commanded the 13th Marine Expeditionary Unit (13th MEU) at Camp Pendleton from January 2008 to October 2011, leading the "fighting thirteenth" through two full deployment cycles, culminating in seven month deployments aboard BOXER Amphibious Ready Group in 2009 and again in 2011.

Major General Coffman's previous assignments as a General Officer include Deputy Director of Operations for the National Military Command Center on the Joint Staff, Commander U.S. Marine Corps Forces South, Deputy Commander U.S. Marine Corps Forces Command, Deputy Commanding General I Marine Expeditionary Force, and Commanding General 1st Marine Expeditionary Brigade.

MajGen Vincent Coglianese, USMC, Commander, Marine Corps Installations Command/Assistant Deputy Commandant, Installations & Logistics (Facilities)



Major General Coglianese's assignments in the Marine Corps' operating forces include Battalion Motor Transport Officer, 2d Battalion, 12th Marines; Engineer Officer, Det. B, Marine Wing Support Group 27; Motor Transport Officer, Marine Wing Support Squadron 273; Group Motor Transport and Engineer Officer,

2nd Surveillance Reconnaissance Intelligence Group; Company Commander, Headquarters and Service Company, deployed to Southwest Asia in support of Operations DESERT SHIELD/ DESERT STORM; S-4, 2nd Light Armored Infantry Battalion; Operations and Executive Officer, Combat Service Support Group-3; Commander, Combat Service Support Detachment 78; Commanding Officer, MEU Service Support Group 24, deployed with the 24th MEU to Iraq's Northern Babil Province in support of Operation IRAQI FREEDOM; First Deputy Commander, U.S. Marine Corps Forces, Special Operations Command; Commanding Officer, Combat Logistics Regiment 27; Chief of Staff, 2d Marine Logistics Group (Fwd) and Commanding Officer, Combat Logistics Regiment 27 (Fwd), deployed in support of Operation IRAQI FREEDOM.

His other assignments include Marine Corps Representative, United States Merchant Marine Academy: Assistant Operations Officer, Joint Security Directorate, CENTCOM, deployed to Afghanistan in support of Operation ENDURING FREEDOM as a part of Task Force Bowie, a Joint Interagency Task Force; First Marine assigned as J-4 for Special Operations Command, Central Command, deployed in support of Operation IRAQI FREEDOM and served as the J-4 Directorate for Combined Forces Special Operations Component Command.

Mr. Thomas Dee, Performing the Duties of the Under Secretary of the Navy



On Feb. 17, 2017, Mr. Tom Dee was temporarily assigned to perform the duties of the Under Secretary of the Navy where he exercises all authorities of the Under Secretary and of the Department's Chief Management Officer, except those statutory duties that by law or regulation may only be performed by a Senate confirmed Under Secretary or their principal deputy. He previously served as the Vice Director, Navy Staff. As Vice Director of the Navy Staff he served as the senior civilian within the Office of the Chief of Naval Operations (OPNAV) responsible for oversight of management and business processes.

Mr. Dee joined the civil service in 2007 following a 26 year career as a naval officer. Upon his retirement from the Navy he assumed duties as the first Director of Defense Biometrics within the Office of the Secretary of Defense. In March 2009, Mr. Dee was appointed to the Senior Executive Service and served as the Director, Joint Rapid Acquisition Cell in the Office of the Under Secretary of Defense Acquisition, Technology and Logistics where he led efforts to resolve immediate warfighting needs as identified by the Defense Department's Combatant Commanders. He concurrently served as the Executive Secretary to the Deputy Secretary of Defense, Deputy's Management Action Group (DMAG) where he coordinated the preparation of strategic issues for executive decision. His most recent assignment was as the Deputy Assistant Secretary of the Navy for Expeditionary Programs and Logistics Management (DASN ELM) where he served as the principal advisor to ASN (RD&A) on matters relating to expeditionary capabilities, urgent processes and acquisition logistics.

RADM William Galinis, USN, Program Executive Officer, Ships



Rear Adm. William Galinis' initial engineering duty tour was with the supervisor of Shipbuilding, Conversion and Repair, New Orleans, where he worked on both new construction and repair projects including assignment as the PMS 377 program manager's representative for the LSD (CV) Shipbuilding Program. He subsequently served as the senior damage control inspector for the Board of Inspection and Survey, Surface Trials Board as well as in a number of program office and staff positions including the DD 21 and LPD 17 Program Offices, Office of the Chief of Naval Operations in the Requirements & Assessments Directorate (N81) and in the Office of the Deputy Assistant Secretary of the Navy for Shipbuilding as the chief of staff.

His command assignments included LPD 17 program manager—leading the commissioning of the first four ships of the LPD 17 San Antonio Class, delivering the fifth ship and starting construction on four additional ships; supervisor of shipbuilding, Gulf Coast overseeing Navy ship construction projects and Foreign Military Sales work in shipyards along the Gulf Coast and Wisconsin; and as the commanding officer of the Norfolk Ship Support Activity where he led ship maintenance and repair efforts.

Currently, Galinis is serving as program executive officer, Ships, where he is responsible for Navy shipbuilding for surface combatants, amphibious ships, logistics support ships, support craft and related foreign military sales.

LtGen Robert Hedelund, USMC, Commanding General, II Marine Expeditionary Force



Lieutenant General Robert F. Hedelund is the Commanding General, II Marine Expeditionary Force.

He was commissioned in April 1983. He was designated an unrestricted Naval Aviator in May 1985.

Previous command assignments include Headquarters Squadron, Marine Aircraft Group 29; Marine Medium Helicopter Squadron (HMM) 162; Marine Aviation Weapons and Tactics Squadron One (MAWTS-1); Marine Corps Warfighting Laboratory (concurrently serving as the Vice Chief, Office of Naval Research); the 2d Marine Aircraft Wing; and U.S. Marine Corps Forces Korea.

As a CH46E pilot, LtGen Hedelund has deployed with HMM-264, HMM-365 and HMM-162. He has served as a Basic and Advanced Flight Instructor at Helicopter Training Squadron (HT) 18, NAS Whiting Field, FL. LtGen Hedelund has also served as a CH46E Instructor, Division Head and Assault Support Department Head at MAWTS-1, MCAS Yuma, AZ. LtGen Hedelund has flown over 5200 flight hours in rotary wing, tilt-rotor and fixed wing aircraft.

Staff assignments include the Marine Corps Strategic Studies

Group, MCCDC; U.S. Northern Command Desk Officer, U.S. Joint Forces Command; Senior Military Assistant and Marine Aide to the Secretary of the Navy; Director, Marine and Family Programs Division (MF), Manpower & Reserve Affairs; Assistant Chief of Staff UCJ-5, United Nations Command, ROK-U.S. Combined Forces Command, U.S. Forces Korea.

LtGen Hedelund is a distinguished graduate of The Basic School and Marine Corps Command and Staff College. He has also attended the Air War College, Montgomery, AL and the Joint Forces Staff College, Norfolk, VA.

VADM Andrew Lewis, USN, Deputy Chief of Naval Operations, Plans and Strategy



Vice Adm. Andrew Lewis' command tours include Carrier Strike Group 12 deploying with USS Theodore Roosevelt (CVN 71), Naval Strike and Air Warfare Center aboard Naval Air Station Fallon, Carrier Air Wing 3 deploying with USS Harry S. Truman (CVN 75), Strike Fighter Squadron (VFA) 106 aboard Naval Air Station Oceana and VFA-15 deploying on USS Enterprise (CVN 65) and USS Theodore Roosevelt (CVN 71).

Lewis' operational sea tours include a division officer tour for Attack Squadron 72 deploying with USS John F Kennedy (CVN 67), as an exchange pilot/tactics instructor for 800 Naval Air Squadron deploying with HMS Invincible (R05) and as a department head for VFA-192 deploying with USS Independence (CV 62). Other deployed tours have been as a battle director at the Combined Air Operations Center in Al Udeid Air Base, Qatar, and as the maritime operations center director at Naval Forces Central Command Bahrain.

Ashore, Lewis served as an instructor pilot in Air Training Squadron 23, as a branch chief at the Joint Warfare Analysis Center as the executive assistant to the chief of Naval Air Force, and as the executive assistant for the director, Joint Staff. As a flag officer, Lewis has served as the vice director for operations (J3) and director of fleet training (N7) at Fleet Forces Command.

He has flown over 100 combat missions in Operations Desert Shield, Desert Storm, Southern Watch, Deny Flight, Enduring Freedom and Iraqi Freedom. He has accumulated over 5,300 flight hours and 1,100 arrested landings. He was the recipient of the Naval Air Forces Pacific Pilot of the Year in 1996.

Lewis assumed duties as deputy chief of naval operations for operations, plans and strategy in August 2017.

His personal awards include the Defense Superior Service Medal with oak leaf cluster, Legion of Merit (six awards), Bronze Star, Defense Meritorious Service Medal, Meritorious Service Medal, Air Medal (seven Strike Flight and four Individual with Combat "V"), Navy and Marine Corps Commendation Medal (three awards; two with Combat "V"), and the Navy and Marine Corps Achievement Medal, as well as various service and campaign awards.

VADM John W. "Fozzie" Miller, USN (Ret), President, The Fozzie Miller Group LLC



Vice Admiral John W. "Fozzie" Miller, USN (Ret) is founder of The Fozzie Miller Group LLC, a global national and maritime security consulting firm based in Washington, D.C. He is also a Visiting Fellow at the American Enterprise Institute and a Highly Qualified Expert for the Naval War College, as well as an advisor to several other organizations focused on national and maritime security issues.

In 2015, Miller retired from the U.S. Navy after serving as the Commander, U.S. Naval Forces Central Command, Commander, Combined Maritime Forces, and Commander, U.S. Fifth Fleet. In addition to Fifth Fleet, Miller held numerous commands in the U.S. Navy including: VF-142, VF-101, USS Dubuque (LPD 8), USS Juneau (LPD 10), USS Constellation (CV 64), USS John F. Kennedy (CV 67), Carrier Strike Group 11, and the Naval Strike and Air Warfare Center. After promotion to Rear Admiral, Miller spent a considerable amount of time focusing on the Middle East, serving as Deputy Commander to U.S. Naval Forces Central Command/United States Fifth Fleet and Deputy Director, Strategy, Plans, and Policy (J5); Chief of Staff, U.S. Central Command, and Commander, U.S. Naval Forces Central Command/U.S. Fifth Fleet/ Combined Maritime Forces. Vice Admiral Miller received the Navy Distinguished Service Medal in 2015. He has appeared in the New York Times, Fox News, Defense News, and ABC News, among others. Vice Admiral Miller is a graduate of the United States Naval Academy and a distinguished graduate from the Naval War College. He also has a master's in International Relations from Salve Regina University. He served as a Special Assistant to the Administrator of NASA as a White House Fellow.

Mr. Gary Motsek, Deputy Assistant Secretary of Defense for Program Support



Mr. Gary J. Motsek serves as the principal advisor to senior leaders within the Office of the Secretary of Defense (OSD) on matters pertaining to Operational Contract Support (OCS), contingency program management, policy, support to Geographic Combatant Commands (excluding TRANSCOM), and efforts to promote military effectiveness, interagency cooperation, efficiency, economy, and standardization. He is responsible for developing and maintaining a comprehensive policy framework and program support governing logistical and support operations, contractor planning, management and execution during combat, humanitarian, and disaster relief operations. He is also responsible for developing and publishing federal regulations regarding the use of Private Security Contractors (PSCs) in overseas operations. Mr. Motsek has performed these critical responsibilities since 2006.

He has over 40 years of experience in the Department of Defense, serving in civilian and military assignments. He served a dual role as Acting Principal Deputy Assistant Secretary of Defense

for Logistics and Materiel Readiness (L&MR) from April to July 2016 where his logistics portfolio included program support, maintenance, materiel readiness, supply chain integration, and transportation policy. Prior to his current role, he served as the Assistant Deputy Under Secretary of Defense for Program Support (2006-2011), Deputy G-3 for Support Operations and Assistant Deputy Chief of Staff for Ammunition, U.S. Army Materiel Command (2001-2006); Commander, Pine Bluff Arsenal (1997-1999); and international Military Staff Officer, NATO Headquarters, Brussels, Belgium (1988-1991).

Throughout his career, Mr. Motsek has successfully led large organizations with complex missions and fiscal challenges during periods of substantial change. He was commissioned as a 2nd Lieutenant in the United States Army in 1974 and retired as a Colonel in 2001.

VADM Kevin Scott, USN, Director, Joint Staff J7 Force Development



At sea, Vice Adm. Kevin Scott served as aircraft division officer and maintenance test pilot, Helicopter Mine Countermeasures Squadron (HM) 14; aircraft handler aboard USS Inchon (LPH 12) and HM-14 operations officer and detachment officer in charge. He commanded HM-14, commanded Mine Countermeasures Squadron (MCMRON) 1 as commodore and later served as commander, Expeditionary Strike Group (ESG) 2.

Ashore, Scott served as air combat placement officer, Bureau of Naval Personnel; operations officer, Commander Tactical Wing Atlantic; military aide to the vice president; current operations chief and division chief, Joint Forces Command; director of aviation officer, Distribution Division (PERS 43), Naval Personnel Command; acting director, Expeditionary Warfare Division, Washington D.C.; deputy commander, U.S. Naval Forces, U.S. Central Command and director, Joint Fleet Operations, N3/5, U.S. Fleet Forces Command, Suffolk, Virginia.

Scott assumed duty as director for Joint Force Development (J7) on the Joint Staff, Washington D.C., in July 2016. In that position he oversees the integration of joint training, concept development, operational analysis and lessons learned activities to achieve the chairman's vision for Joint Force 2020. He most recently served as vice director for Joint Force Development (J7), Suffolk.

RDML Peter Stamatopoulos, USN, Strategic Mobility and Combat Logistics Division Director



Rear Adm. Peter Stamatopoulos's operational assignments include USS Chicago (SSN 721); USS Constellation (CV 64); Logistics Forces, U.S. Naval Forces Central Command (CTF 53); Expeditionary Strike Group (ESG 3) embarked USS Peleliu (LHA 5) and Commander, Task Force 59, U.S. 5th Fleet. During those tours he participated in operations Desert Storm, Southern Watch, Determined Response, Enduring Freedom and the Non-Combatant Evacuation of American Citizens from Lebanon.

Ashore, he most recently served as director, fleet ordnance and supply and fleet supply officer (N41) on the staff of Commander, U.S. Fleet Forces Command, Norfolk, Virginia. His other shore assignments include assistant chief of staff, Logistics and Ordnance, Commander, Naval Surface Forces Pacific, San Diego; commanding officer, Naval Supply Systems Command (NAVSUP) Fleet Logistics Center, San Diego; chief of staff, NAVSUP Global Logistics Support, San Diego; Logistics Services Division chief, Joint Chief of Staff J4, Washington, D.C.; head Program Objective Memorandum Development Section, Office of the Chief of Naval Operations N80, Washington, D.C; executive assistant to the vice commander, NAVSUP, Mechanicsburg, Pennsylvania; and supply officer, Fighter Wing U.S. Pacific Fleet and Fighter Squadron (VF) 124, San Diego.

Mr. William Williford, III, Executive Director, Marine Corps Systems Command



Mr. Williford was named Executive Director, Marine Corps Systems Command, in December 2016. In this position, he serves as the senior civilian official responsible for leading and directing daily business operations for the Command.

Mr. Williford formerly served as the Director, Integrated Warfare Systems Engineering responsible for oversight of $10 billion annually of Command, Control, Communications, Computers, Combat Systems, and Intelligence systems (C5I) research, development, delivery, certification for deployment, and life cycle support for United States Navy ships. In this capacity, he was the Deputy Warranted Technical and Certification Authority for Navy Integrated Warfare Capability.

Mr. Williford provided leadership in command-wide efforts to identify and manage engineering workforce related challenges including strategic planning advanced concepts, integrated warfare systems engineering, human systems integration, integration and interoperability (I&I), warfare systems certification and readiness, interior communications and cybersecurity.

Mr. Williford's previous Senior Executive assignment was the Director, Integrated Combat Systems, Program Executive Office, Integrated Warfare Systems responsible for systems engineering to develop world class integrated Combat Systems for the United States Navy. In this assignment, he was responsible for Surface Ship and Submarine Combat Systems including Aegis for Destroyers/Cruisers, and Ship Self Defense System for Carriers and Amphibious Ships. In addition, he was responsible for combat systems that included Total Ship Computing Environment for DDG 1000, the Littoral Combat Ship, and a multitude of sensors, electronic warfare systems, missiles, guns, ammunition, launch systems, and countermeasures encompassing 150+ programs with annual budget authority of $6.4 billion.

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Ingalls Shipbuilding
A Division of Huntington Ingalls Industries

Ingalls Shipbuilding is located in Pascagoula, Mississippi on 800 acres of the most important real estate in America. With 11,500 employees, Ingalls is the largest manufacturing employer in Mississippi and a major contributor to the economic growth of both Mississippi and Alabama. Our 79-year legacy has continuously proven we have the talent, experience and facilities to simultaneously build more classes of ships than any other shipyard in America. We are the builder-of-record for 35 Aegis DDG 51 class guided missile destroyers, LHA 6 class large deck amphibious ships, National Security Cutters for the U.S. Coast Guard and the sole builder of the Navy's fleet of San Antonio (LPD 17) class amphibious assault ships. Ingalls Shipbuilding has what it takes to build the military ships that keep America and our allies safe.

ELITE SPONSOR

GRYPHON TECHNOLOGIES
Where Imagination and Technology Come Together

Since its inception, Gryphon Technologies has provided engineering and technical services to the Expeditionary Warfare community. We are a premiere provider of warfare systems & integration, naval architecture & marine engineering, test & evaluation, program management, and logistics support for amphibious ships and craft, as well as aircraft carriers, surface combatants, submarines and auxiliary ships. Our outstanding reputation is based on 18 years of success supporting national security customers including the U.S. Navy, U.S. Marine Corps, Military Sealift Command, and Missile Defense Agency. Recognized in 2017 as one of "50 Great Places to Work" by Washingtonian Magazine, Gryphon employs 700 people in support of our Nation's defense. Gryphon Technologies… Where imagination and technology come together!

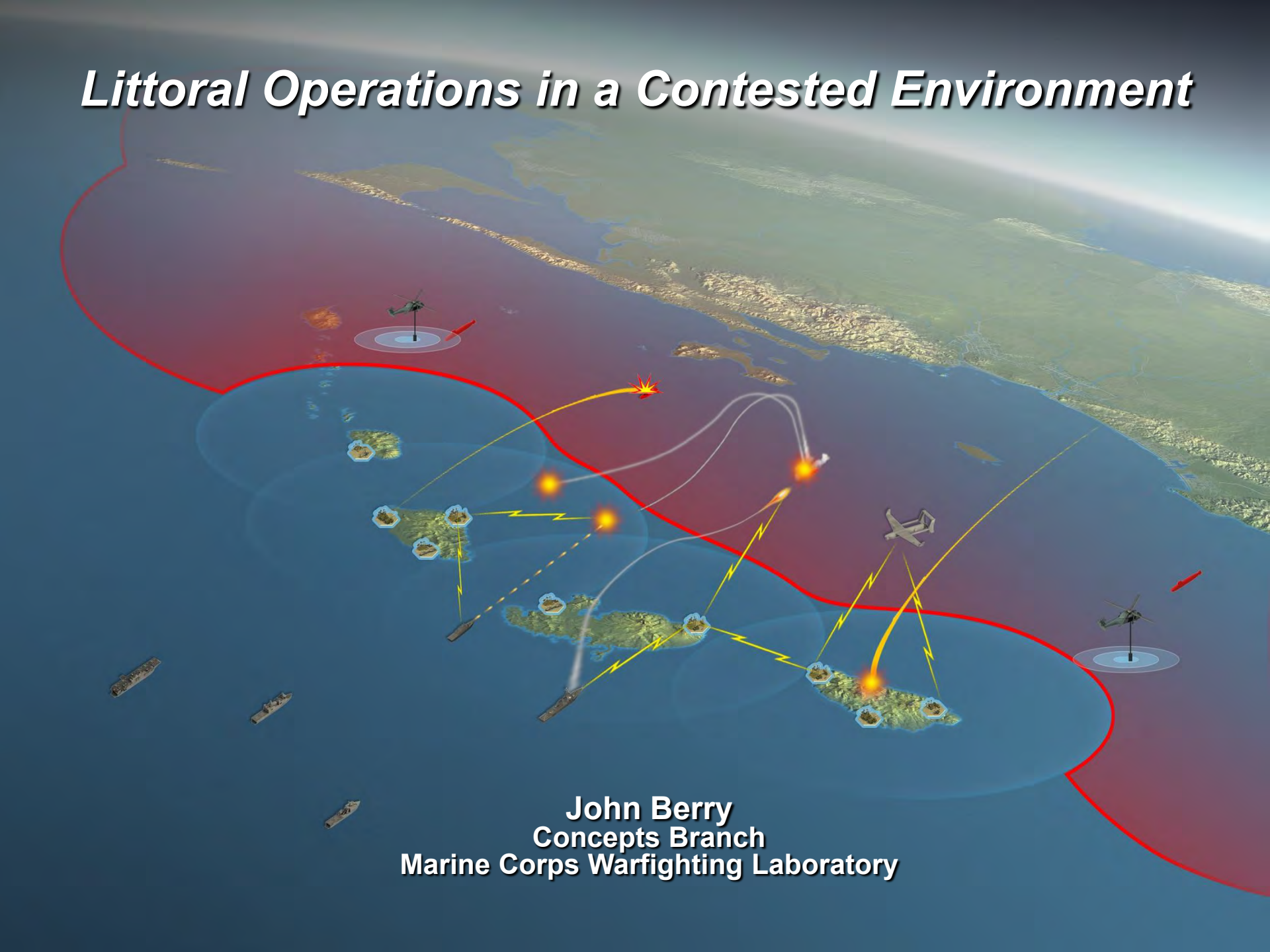
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LMI

Littoral Operations in a Contested Environment



John Berry
Concepts Branch
Marine Corps Warfighting Laboratory

Concept Development

- **Guidance**
  - Navy-Marine Corps Warfighter Talks 10 June 2015.
  - The “littoral” title was specifically chosen to frame the content in a manner that is much broader than just amphibious operations.
  - Permissive environments are increasingly unlikely.
  - The CNO and CMC endorsed the consensus position to explore a more integrated application of Navy and Marine Corps capabilities in operations on and from the sea.
  - This included considering new, scalable models of command and control unconstrained by current force constructs and terminology.

- **Execution**
  - August 2015 PLANORD
  - Dec 15 Center for Naval Analyses game
  - Feb 16 Naval Services Game
  - Literature Review: 60+ titles
    - ***Fleet Tactics and Coastal Combat***, Captain Wayne Hughes, USN(Ret), Professor Emeritus, Naval Postgraduate School. (V167.H84 2000)
    - ***On Littoral Warfare*** by Dr. Milan Vego, Naval War College https://www.usnwc.edu/getattachment/fe330f71-6933-457b-890d-a19726bb508c/On-Littoral-Warfare.aspx

Purpose of the LOCE Concept

- **Describe "naval operations in the littoral environment in light of emerging threats" in order to provide a unified framework for Navy-Marine Corps innovation.**
  - The "ideas put forth in this concept require further testing and refinement through detailed wargaming, experimentation, and exercises…Of particular importance, practical application of the concept during live exercises will allow naval forces to identify the inevitable seams and capability limitations that must be resolved."
  - "Following this rigorous testing and refinement process, the ideas determined to have merit will generate changes to…DOTMLPF-P and influence operational planning and execution of integrated Navy and Marine Corps operations on and from the sea."

Scope

- **Concept derived from an assessment and comparison of friendly and potential adversary capabilities in the 2020-2025 timeframe.**

- **Informed by wargames that spanned a range of naval operations that extends from:**
  - Forward postured formations conducting crisis response in uncertain environments to...
  - Larger formations established to conduct significant contingencies in openly hostile environments.

- **While wargames informing the concept addressed a limited range of naval operations, ideas within the concept itself have applicability to major combat operations.**

- **Content focused on fleet commander/JFMCC to task group level.**

Background

- **The Littoral Battlespace**
  - The maritime domain consists of the “oceans, seas, bays, estuaries, islands, coastal areas, and the airspace above these, including the littorals.”
  - The littoral is comprised of two segments:
    - *Seaward*: that area from the open ocean to the shore that must be controlled to support operations ashore.
    - *Landward* portion is the area inland from the shore that can be supported and defended directly from the sea.
  - Today, the range of modern sensors and weapons extends hundreds of miles both seaward and landward, blurring the distinction between operations at sea and on land and necessitating an operational approach that treats the littorals as a singular, integrated battlespace.

- **The Need for a Paradigm Shift**
  - During the immediate post-Cold War era, the United States enjoyed the luxury of presumptive maritime superiority.
  - That era is fading.
  - The Navy and Marine Corps need to reinvigorate sea control capabilities.

Military Problem

- **“Given advances in adversary sensor and weapon capability and capacity, as well as geographic considerations and global commitments, fleet commanders/JFMCC may be increasingly challenged to assemble the required capabilities, capacities, span of control, or optimal formations to effectively respond to crises, address larger contingencies, and deter aggression in contested littorals.”**

Central Idea

- **The Navy and Marine Corps will refine how we organize, train, and equip forces in order to provide the fleet commanders/JFMCC the ability to operate in all five dimensions of the littorals for the duration required.**
  - seaward (both surface and subsurface);
  - landward (both surface and subterranean);
  - the airspace above;
  - cyberspace; and
  - the electromagnetic spectrum.

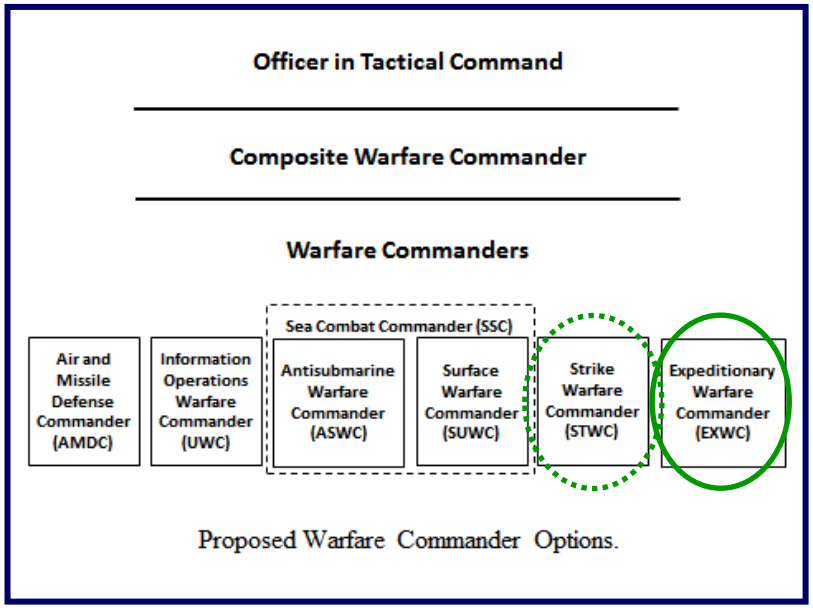
Ensure the fleet commanders/JFMCC have the ability to conduct integrated operations in all dimensions of *a seamless maritime domain*.

- **Give the fleet commanders/JFMCC a wider range of integrated, Navy-Marine Corps force options and additional sensor and weapons capacity.**
  - Unity of command
  - Networked, sea-based and land-based capabilities
  - Common doctrine and operating principles

Create a modular, scalable, and integrated naval network of sea-based and land-based sensors, shooters, and sustainers that provides the capabilities, capacities, and persistent yet mobile forward presence necessary to effectively respond to crises, address larger contingencies, and deter aggression in contested littorals.

Supporting Ideas: Staff & Doctrinal Integration

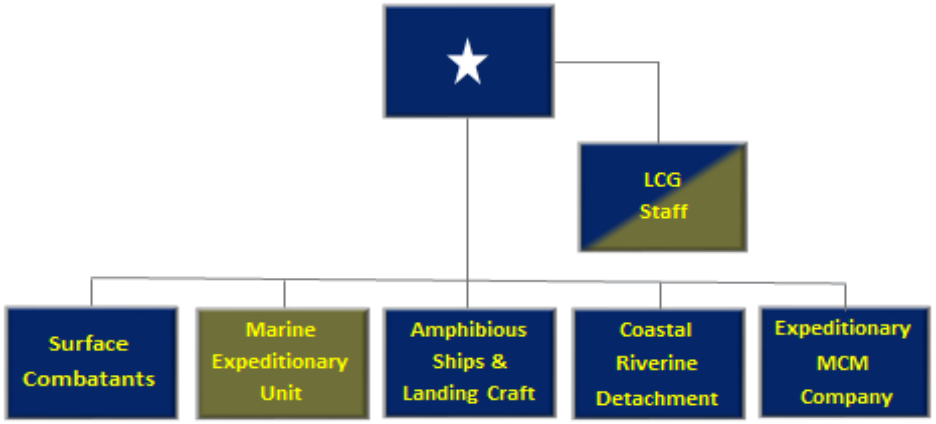
- **Operational Level: "Blue/Green" Fleet / JFMCC staffs**
- **Tactical Level: Composite Warfare Commander**
  - Marine participation raised during 2015 Navy-Marine Corps Warfighter Talks.
  - Literature review:
    - Col Bill Rakow, "MAGTF Operations With the Fleet in the Year 2000." MC Gazette, (Jul 1990)
    - Col Chip Gregson, "Keeping Up With Navy Doctrine." MC Gazette, (December 1990)
    - Maj Tom Waldhauser, "Composite Warfare/Amphibious Warfare Doctrine Dilemma." MC Gazette, (Nov 1992)
  - Insights from Expeditionary Warrior 2015 and Naval Services Games 2016 & 2017
  - LOCE proposes experimentation with an **Expeditionary Warfare Commander (EXWC)**
    - MAGTF commander as EXWC
    - In some situations, an officer from Navy Expeditionary Combat Command might be EXWC
    - MAGTF commander might also serve as the Strike Warfare Commander if he has preponderance of aviation



Proposed Warfare Commander Options.

Supporting Idea: Littoral Combat Group (LCG)

- **Command Element**
  - Navy Flag Command
  - Integrated blue/green staff
- **Littoral sea combat capabilities**
  - ASW and SUW
  - Some number of surface combatants TBD
- **Expeditionary MCM capabilities**
- **Air and Missile Defense**



Notional Example of a Littoral Combat Group.

- **Littoral Raid Forces**
  - Need for long-range surface maneuver capability for raids and amphibious advanced force operations
  - Use existing NECC boats as surrogates for experimentation

Supporting Idea: Increase Capacity

- **Distributed Lethality (DL)**
  - SURFOR initiative: “if it floats, if fights”
  - Mitigate adversary sensor and missile capacity
  - Dispersed offensive formations
  - Increase battlespace complexity

- **Expeditionary Advanced Base Operations (EABO)**
  - Employ mobile, low-signature capabilities from a series of landward / shallow water locations
  - Expand capacity persistently postured forward to improve resiliency and complicate adversary targeting
  - ISR, coastal defense cruise missiles, anti-air missiles, and forward arming and refueling points to support the fleet’s sea control fight
  - Control key maritime terrain/conduct sea denial operations
  - Temporary fleet logistic nodes (Ex: forward VLS reloads)

- **Screening / Scouting Surface Forces**
  - Explore establishing in key operating areas via EABO or afloat staging bases
  - Reduce the risk of operations in complex archipelagoes and confined and shallow waters
  - Employ in concert with EABO and DL to complicate adversary targeting and change missile ratios

Refining How We Will Fight

- **Force on Force Littoral Exercises**

"The fleet problems offered invaluable learning opportunities for naval officers…Much of their behavior in actual combat was conditioned by experiences gained from nearly two decades of practice."

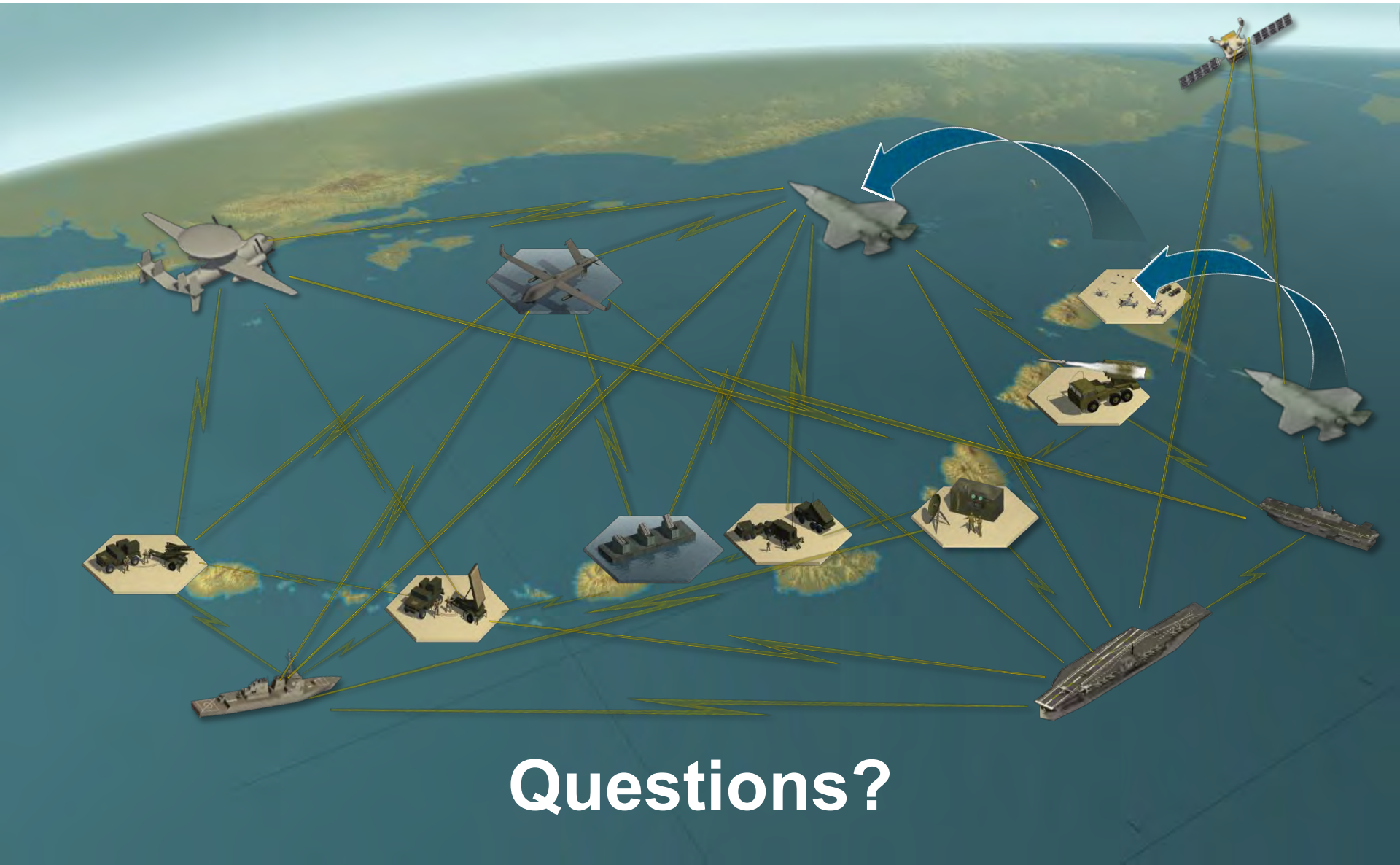
—Captain Craig C. Felker, USN, *Testing American Seapower*, 2007

"If the battle of Waterloo was won on the playing fields of Eton, the Japanese bases in the Pacific were captured on the beaches of the Caribbean."

—Lieutenant General Holland M. Smith, USMC, *Coral and Brass*, 1949

“Littoral War, when wisely prepared and discretely conducted, is a terrible Sort of War. Happy for that People who are Sovereigns enough of the Sea to put it in Execution!”

—Thomas More Molyneaux, 1759



Questions?

Expeditionary Logistics Integration

25 October 2017

MajGen V. Coglianese, USMC
Commander, Marine Corps Installations Command

UNITED STATES MARINE CORPS













The Speed of Innovation!

Biplane Fighter
Speed: 186 MPH



Messerschmitt Me 262
Speed: 541 MPH



Man-in-Balloon Spotting



Radar/Sonar



Then…and Now….

Three dimensions of warfare…….

Air



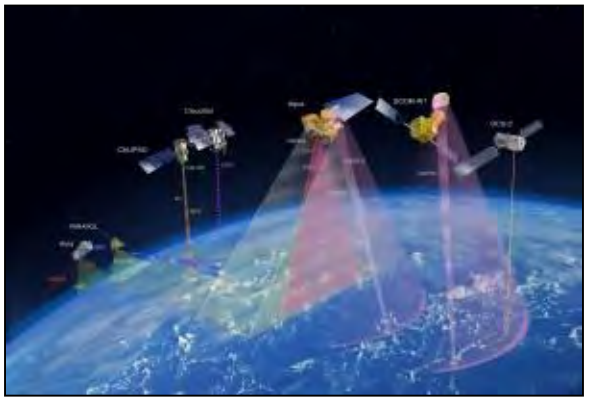
Sea





Land

Five dimensions of warfare…….



Space



Air



Sea/Sub-Surface



Cyber



Land

The Need for Hybrid Logistics

Then: American Way of War





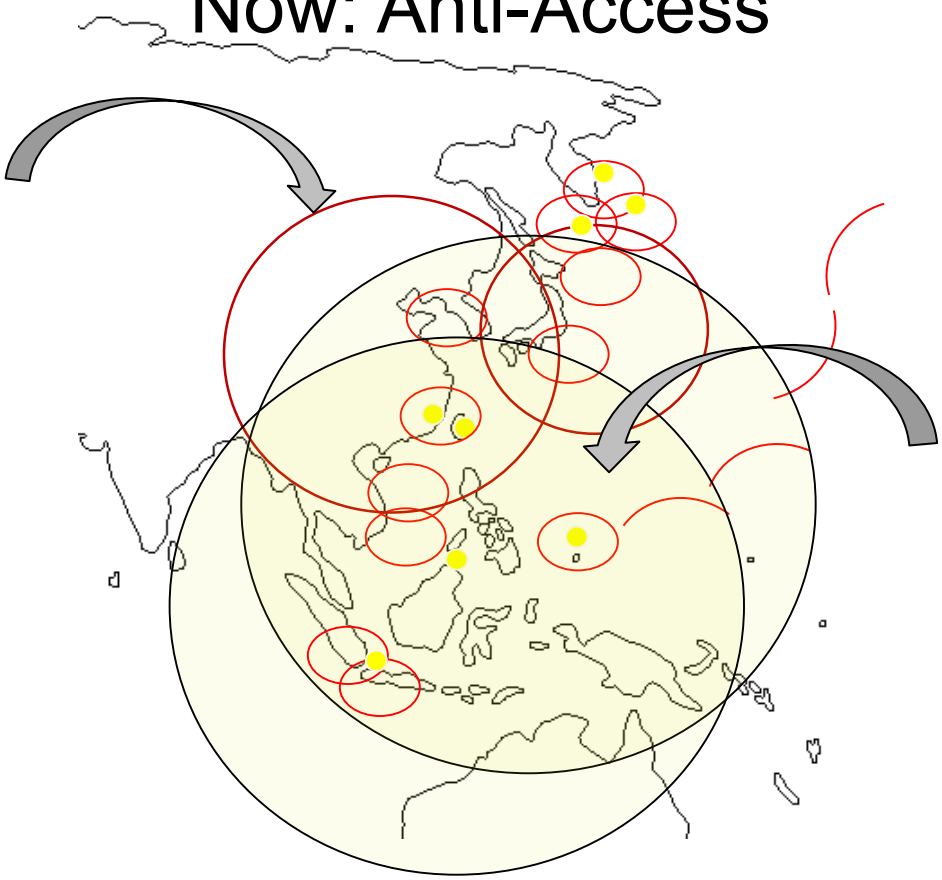






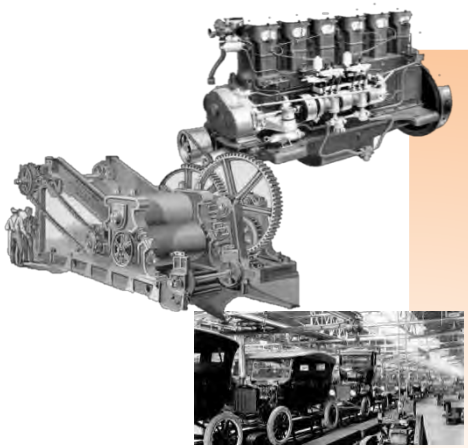


Now: Anti-Access



- **Contested Air / Sea / Space**
- **Intermittent Air / Sea LOC's**
- **Degraded C4I**
- **Fluid – Dynamic AOR (s)**

Maturing Technology: Past & Future



Maturing Tech: Past

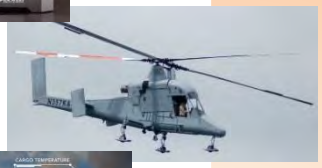
Combustion

Interoperable Parts

Mass Production









Maturing Tech: Future

Additive Manufacturing

Unmanned Platforms

Smart Logistics





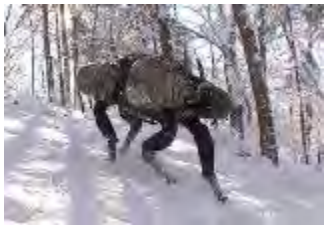
Naval Logistics Integration and Hybrid Logistics CONOPS

Unmanned Logistics Systems (ULS): For Transportation, Medical, and Maneuver

cargo drones | self-driving vehicles | quadrupeds | robotics | autonomy



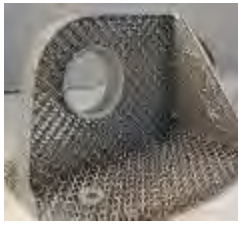





Additive Manufacturing (AM/3D Printing): For Maintenance, Supply, Engineering, Medical

desktop 3d printing | supply chain AM for legacy parts | AM-unique platforms & materials

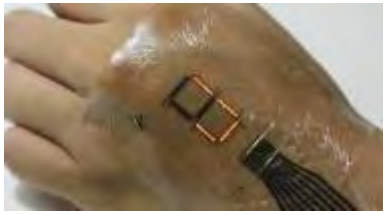



Smart Logistics (SmartLog): For Supply, Transportation, Maintenance, Engineering, Medical, …

internet of things | ubiquitous sensors | advanced analytics | machine learning | big data

blockchain security | mobile computing | lightweight apps | virtual/augmented reality





USS MAKIN ISLAND Amphibious Ready Group/ 11th Marine Expeditionary Unit (ARG/MEU)

22nd Annual Expeditionary Warfare Conference

CAPT Michael Crary

24 Oct 2017

Overall Classification of this brief is: **UNCLASSIFIED**

Agenda

- ARG/MEU Task Organization
- Executive Overview
- Pre-Deployment Training Program Overview
- Operational Discussion
- Recommendations

Task Organization

Supported / Supporting Command Relationship

Amphibious Squadron Five
PHIBRON 5
CAPT Michael Crary

11th Marine Expeditionary Unit
11th MEU
Col Clay Tipton

CPR5 / ARG Personnel:
1, 947 Marines & Sailors

11th MEU Personnel:
2,460 Marines & Sailors



LHD 8 MAKIN ISLAND
CAPT Mark Melson



LPD 25 SOMERSET
CAPT Darren Glaser



LSD 45 COMSTOCK
CDR Bradley Coletti

VMM 163 (REIN)
(Aviation Combat Element)
LtCol Christopher Browning

Battalion Landing Team 1/4
(Ground Combat Element)
LtCol Matthew Lundgren

Combat Logistics Battalion 11
(Logistics Combat Element)
LtCol Patrick Reynolds

Tactical Air Control Squadron 11

Fleet Surgical Team Five

Naval Beach Group One

Assault Craft Unit Five

Assault Craft Unit One

Beach Master Unit One

Helicopter Sea Combat Two One

Executive Overview

- **MAKIN ISLAND Amphibious Ready Group (MKIARG) / 11th Marine Expeditionary Unit (11th MEU) deployed Oct 2015 – May 2017 to the Pacific Command (PACOM), Central Command (CENTCOM), and Africa Command (AFRICOM) Areas of Responsibility (AoR).**

- **Deployed for (214) days, of which the ARG/MEU operated (82) days in an *Aggregated* configuration, (118) days in a *Split* configuration, and (14) days in a *Disaggregated* configuration.**

- **Provided forward presence and deterrence in the PACOM AoR. In CENTCOM, ARG/MEU was postured mostly in the Gulf of Aden, supporting maritime trade and sea lines of communication.**

- **Assisted special operations forces (SOF) efforts to counter violent extremism, and provided alert contingency forces for theater requirements.**

- **Provided forces to support coalition forces in CJTF-OIR's Operation INHERENT RESOLVE (counter IS offensive in Syria) with a fires-centric ground task force.**

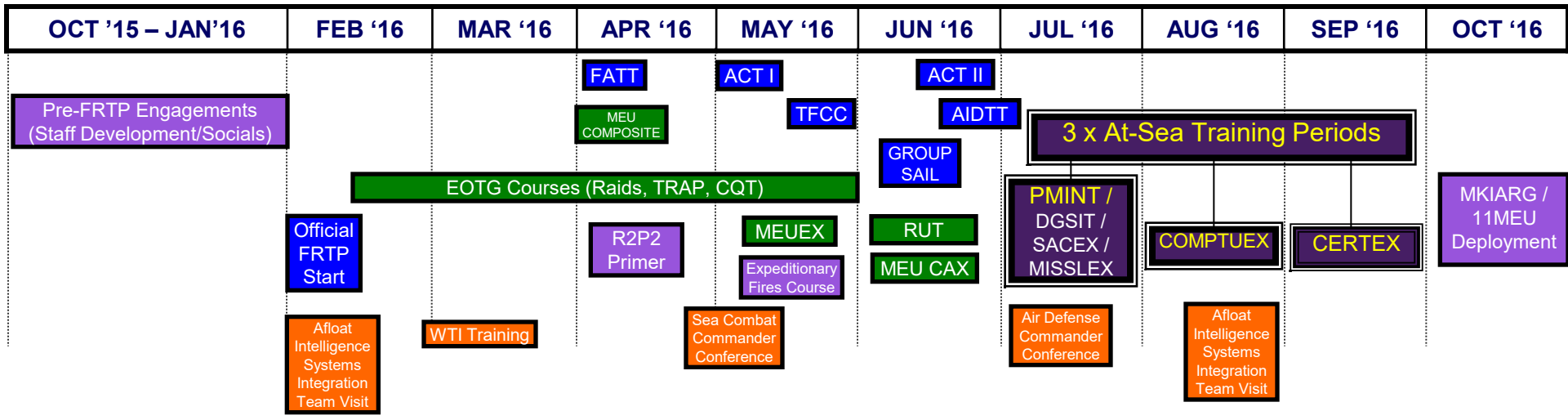
- **Assigned to an postured for AFRICOM's to support to US Department of State mission in South Sudan with sea-based and land-based alert contingency forces.**

- **Supported and developed partner force capability and own force readiness through eight major unilateral and bilateral exercises (six in PACOM and two in CENTCOM) and several smaller advisor and subject-matter-expert exchanges.**

Pre-Deployment Training



INTEGRATED TRAINING STARTS WITH TEAM BUILDING



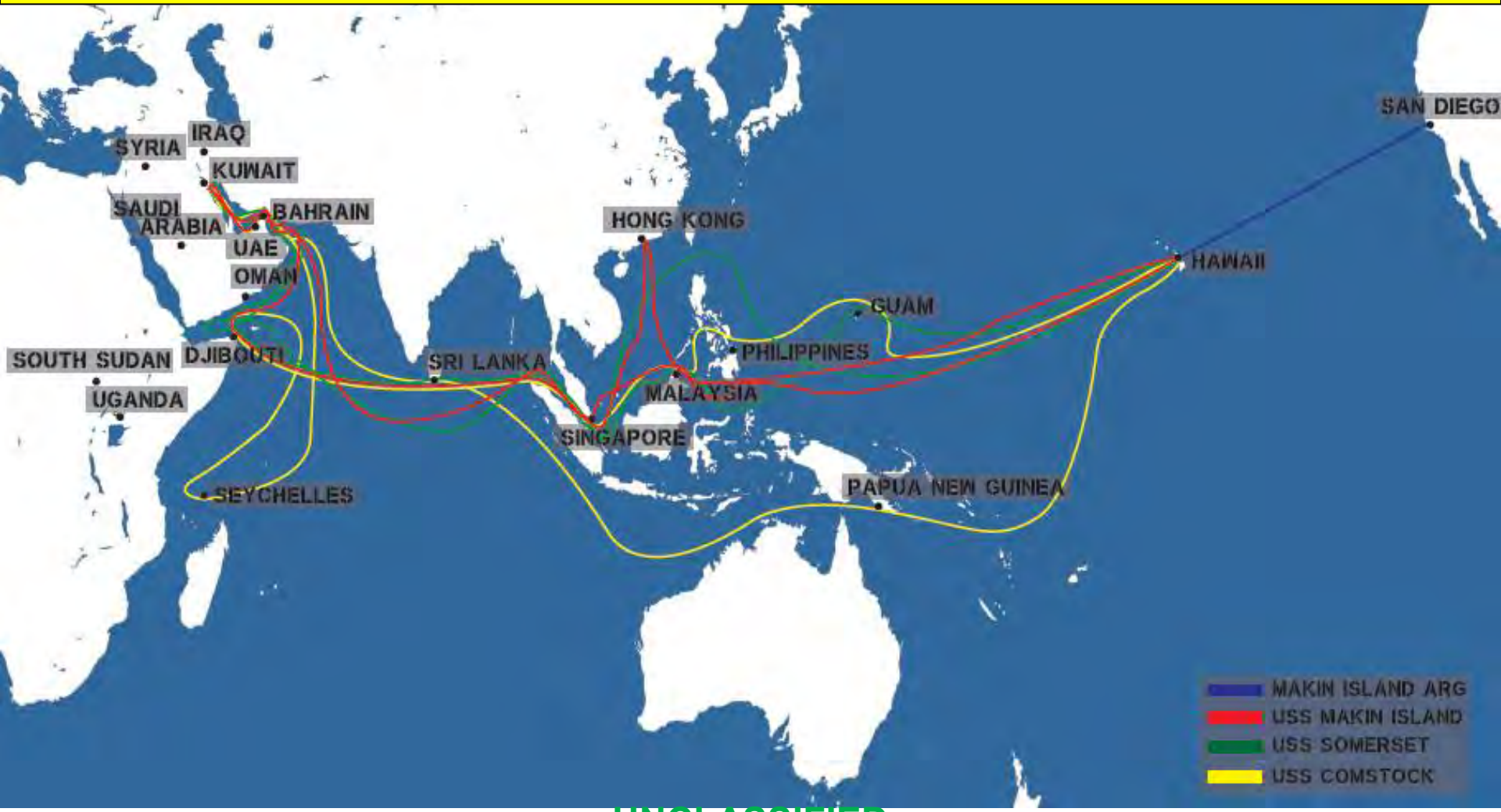
- ❑ **Aggressive, raids and alert contingency mission-based Pre-deployment Training Program (PTP) – validated on deployment**
- ❑ **Pre-deployment Training Program focused on maximizing and "stacking" every event with as many assets of the MAGTF as possible; enabled by all three ships of the ARG deploying on time and remaining healthy for each exercise**
- ❑ **First C3F- I MEF ARG/MEU subject to re-designed evaluation process – ARG and MEU both formally evaluated at CERTEX (not sequentially)**
- ❑ **Early relationship w/ SOFLE and multiple ARG/MEU-SOF integration events throughout the Pre-deployment Training Program**



Overview of Deployment 2016-2017

Four Months in Middle East / Africa

Three Months in Pacific and Indian Oceans



MKIARG/11MEU Operational Overview















KEY THEMES

- Multi-Role / Multi-Mission Force in Readiness
- Rapid & Timely Response to Emerging Crisis
- Flexible and Scalable Integration with Joint and Partnered Forces
- ARG Shipping = Sovereign US Soil

THEATER SECURITY COOPERATION

1. **Japan** – EX KEEN SWORD
2. **Malaysia** – EX TIGER STRIKE
3. **Sri Lanka** – Sri Lankan Marines & Navy
4. **Oman** - EX SEA SOLDIER
5. **Iraq** - CBRN Training Mission
6. **Pakistan** – EX AMAN 17
7. **Sri Lanka** – Sri Lankan Marines & Navy
8. **Malaysia** – TACP/CAS Training
9. **Papua New Guinea** – Training assistance for APEC 18

LEGEND

★ Significant Combat / Combat Support operations

● Theater Security Cooperation

USCENTCOM CONTINGENCY/CRISIS RESPONSE

★1 SUPPORT TO US DIPLOMATIC MISSION IN S. SUDAN

★3 SUPPORT OPERATION INHERENT RESOLVE IN SYRIA

SUPPORT TO US SOF OPERATIONS TO COUNTER VIOLENT EXTREMISM

★2 MARITME SECURITY, PRESENCE, AND INTERDICTION OPERATIONS

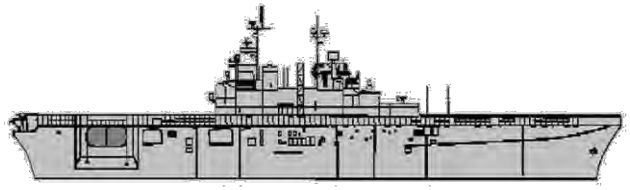
EX KEEN SWORD | EX TIGER STRIKE | SUPPORT TO SOF THEATER SECURITY COOPERATION ACTIVITIES | SRI LANKA TSC | PNG TSC

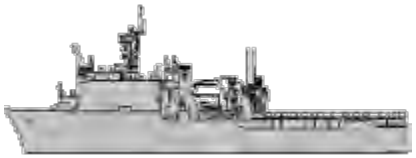
SRI LANKA TSC | Iraq CBRN MTT | EX AMAN 17 | EX SEA SOLDIER

OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY

CPR-5 Summary and Recommendations

Reducing Risk During Split Operations





C5I / PERSONNEL / MEDICAL MANNING

- Enhanced C5I
- Full Motion Video Data Link capability
- Link 16 Interface for MH-60S
- Intelligence Specialists

- Air Intercept Controllers
- Aviation Ordnancemen
- Fleet Surgical Team (FST)/ Expeditionary Resuscitative Surgical System (ERSS) Team for Role II

- **Joint Range Extension Applications Protocol (JREAP)**
- **Flight Deck Manning Enhancements**
- **Role II Medical Capability**

LOGISTICS / INFRASTRUCTURE

- Forward staging of high failure parts
- Develop wash down facilities
- Implementation of aviation logistics in DJI / DUQM
- Facilitation of contractor support (clearances / travel)




(U) Enhance split operations with key upgrades and targeted infrastructure development

Questions



II Marine Expeditionary Force (MEF)

24 October 2017

NDIA
Expeditionary Warfare Conference

Updated: 20 October 17

Purpose / Agenda

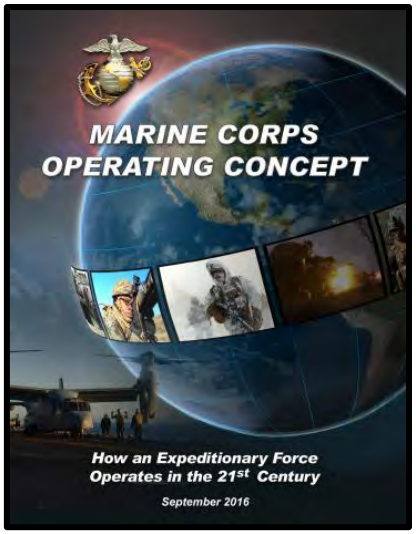
Purpose:

To provide current and future overview of II MEF while addressing operational challenges and conceptual engagements.

Agenda:

- II MEF Overview
  - Mission
  - Task Organization
  - MAGTF Across the ROMO
  - Global Engagement
  - MEB and MEU Operations
  - Current and Future
- Operational Challenges
- Conceptual Engagement
- Where Can You Help
- What Matters to Us

II MEF Mission

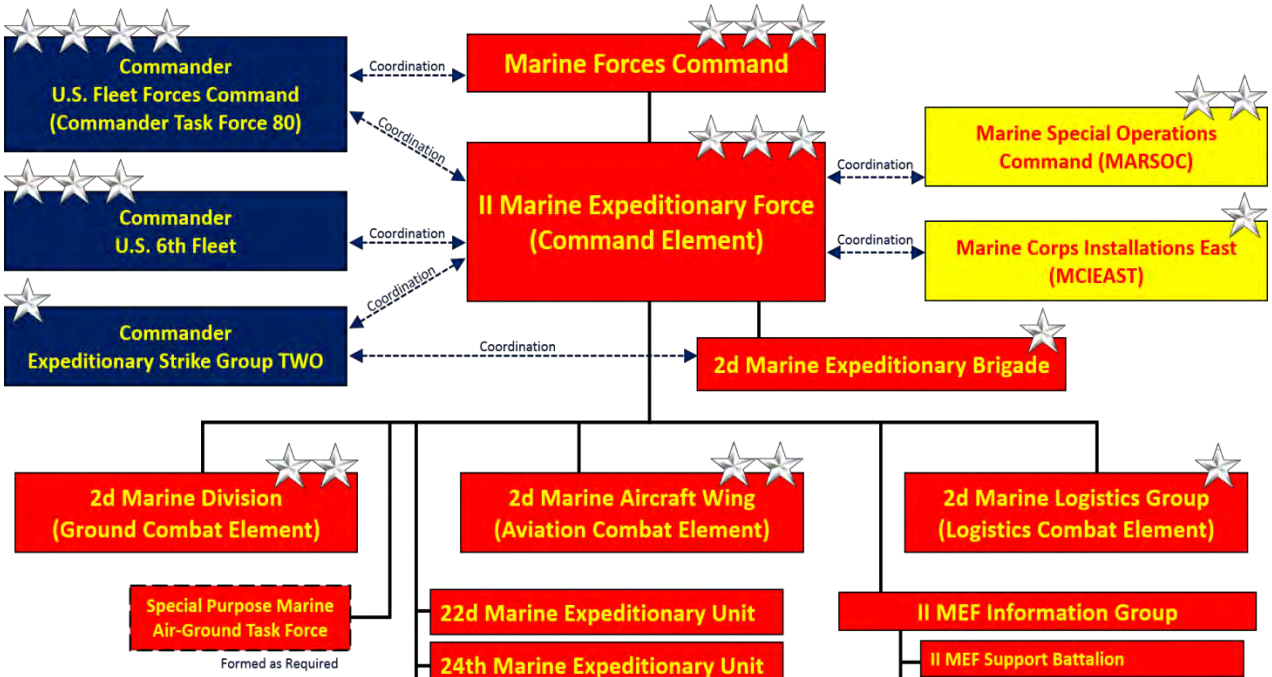


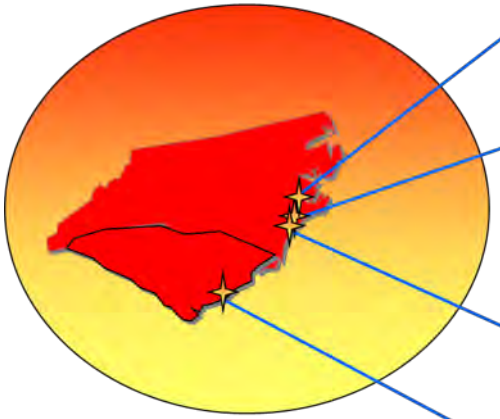
"The MEF remains our most capable MAGTF and is and will remain capable of conducting major operations in the littorals, ashore, and inland."
Marine Corps Operating Concept, Sept 2016

When directed, II MEF deploys and is employed as a ***Marine Air Ground Task Force (MAGTF)*** in support of Combatant Commander (CCDR) requirements for contingency response or Major Theatre War; with appropriate augmentation, serves as the core element of a Joint Task Force (JTF); prepares and deploys combat ready MAGTF to support CCDR presence and crisis response; and supports service and CCDR initiatives as required.

II Marine Expeditionary Force

- **II MEF is**
- Home to over 40K Marines and Sailors deployed worldwide.
- Postured both at forward-deployed locations and at home, to rapidly respond to crises or contingencies around the globe – across the full Range of Military Operations (ROMO).
- Tailorable and scalable.





MCAS Cherry Point, NC
2d Marine Aircraft Wing HQ
MAG-14: VMA, VMGR, VMAQ, VMU
MACG-28: Air C2

Camp Lejeune, NC
II MEF HQ
2d Marine Division
2d Marine Logistics Group
2d Marine Expeditionary Brigade Command Element
II MEF Information Group
22d, 24th, and 26th Marine Expeditionary Units

MCAS New River, NC
Two Marine Aircraft Groups
MAG-26: VMM (Tiltrotor)
MAG-29: HMH, HMLA (Rotary-wing)

MCAS Beaufort, SC
One Marine Aircraft Group
MAG-31: VMFA (Fixed-wing)

MAGTF Capabilities Across the ROMO



Special Purpose Marine Air-Ground Task Forces (SPMAGTFs)



Theater Security Cooperation



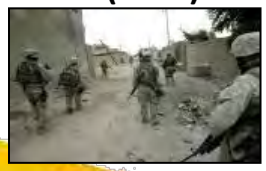
Humanitarian Assistance Disaster Relief

Marine Expeditionary Unit (MEU)



NEOs

Marine Expeditionary Brigade (MEB)



Counterinsurgency

Marine Expeditionary Force (MEF)



Joint Forcible Entry

Partner and Prevent

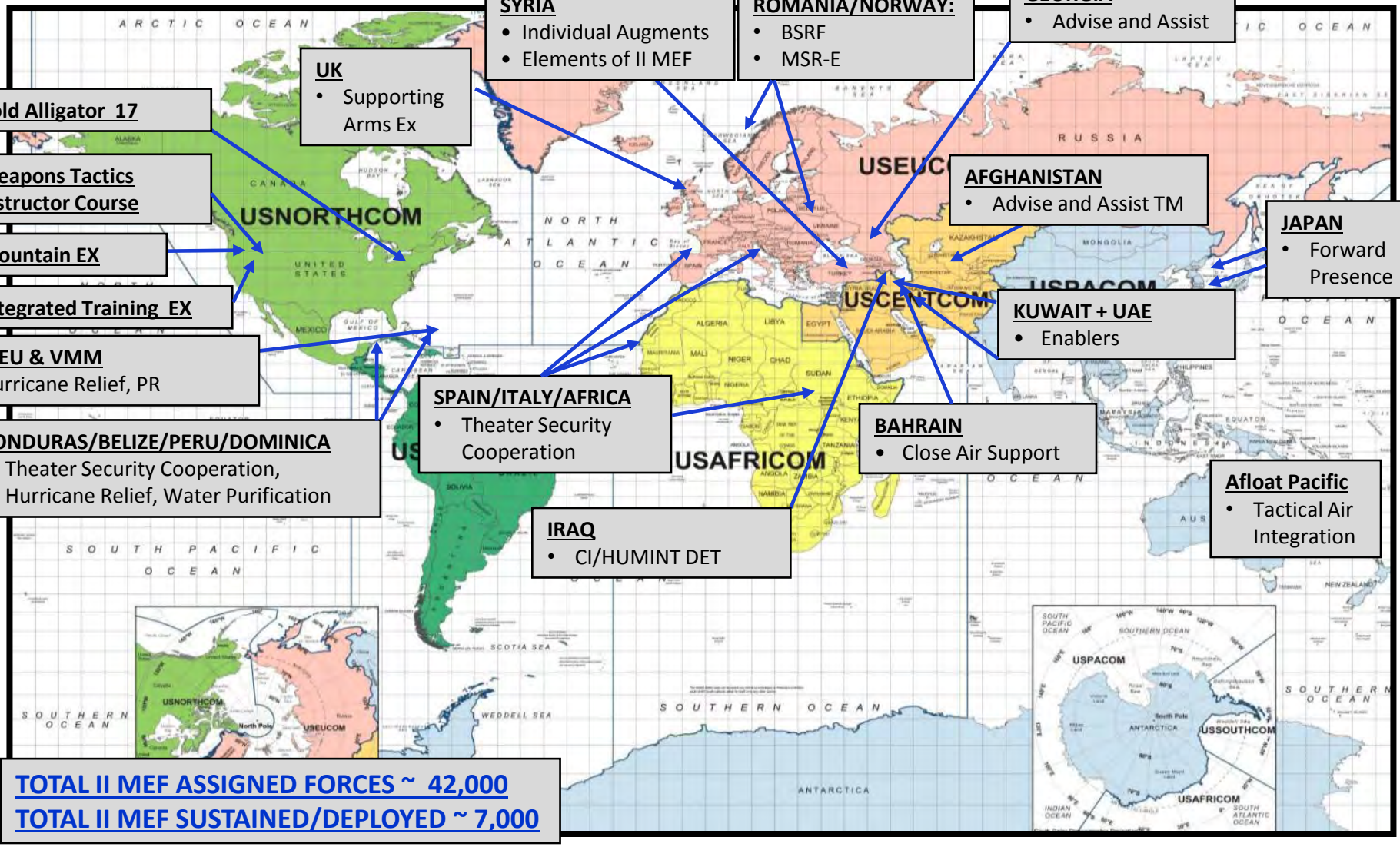
Crisis Response ……Contingency Ops

Major Combat Operations

Integrated with Combatant Commander Theater Campaign Plans

II MEF Globally Engaged

II MEF is globally engaged in every Combatant Command and is poised to respond to crisis.



TOTAL II MEF ASSIGNED FORCES ~ 42,000
TOTAL II MEF SUSTAINED/DEPLOYED ~ 7,000

2d MEB and MEU Operations



2d Marine Expeditionary Brigade

- Supports MARFORAF w/ready joint capable task force (JTF)
- Crisis response in support of combatant commands
- On going: BOLD ALLIGATOR 17,
- Recent exercises : JUDICIOUS RESPONSE 17, MPFEX 17, COLD RESPONSE 16











24 Marine Expeditionary Unit

- USCENTCOM – Inherent Resolve
- USEUCOM
- Hurricane Relief Ops

26 Marine Expeditionary Unit

- Pre-deployment Work-Up
- Hurricane Relief Ops

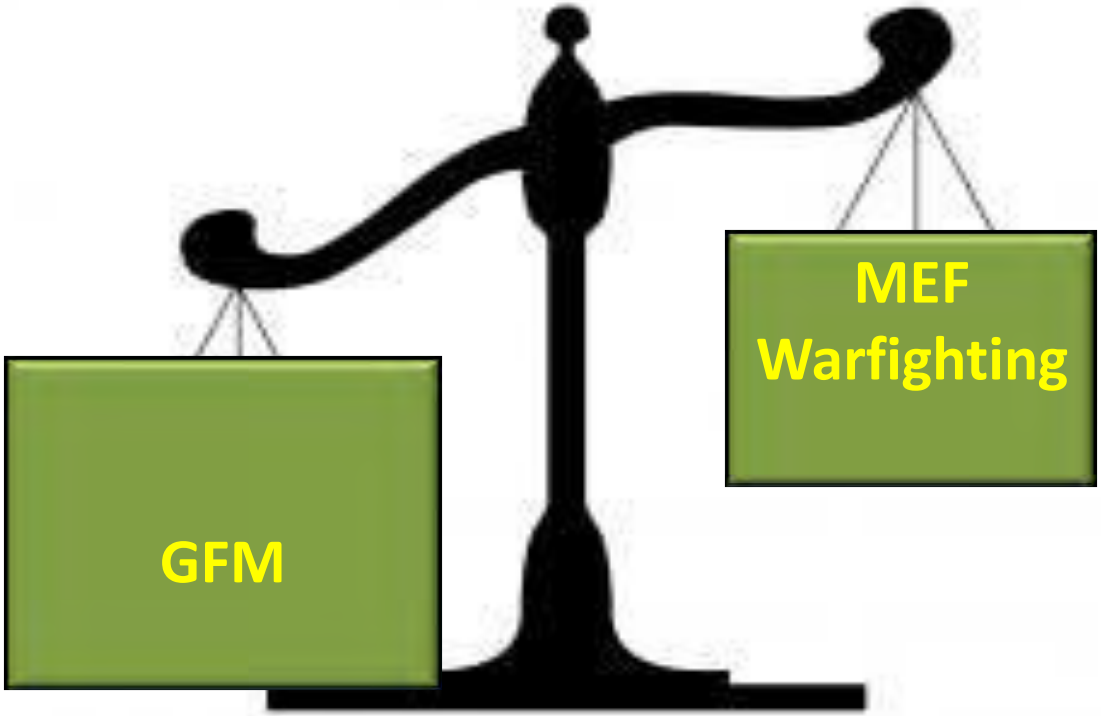
22 Marine Expeditionary Unit

- USEUCOM – Odyssey Lightning
- USCENTCOM – Maritime Security Ops

II MEF in 2015

PRIORITIES

1. Global Force Management (GFM)
2. Crisis response (2d MEB)
3. MEF Warfighting



CMC FY 19-23 Force Management Plan (FMP)

FORCE MANAGEMENT PLAN FY 19-23 Goal

A ready-force postured in accordance with SecDef, CJCS, and CMC guidance, satisfying NMS objectives, JSCP objectives, and Theater Plan requirements, and managed/allocated in a manner that facilities readiness and Force Development.

CMC FY 19-23 FMP

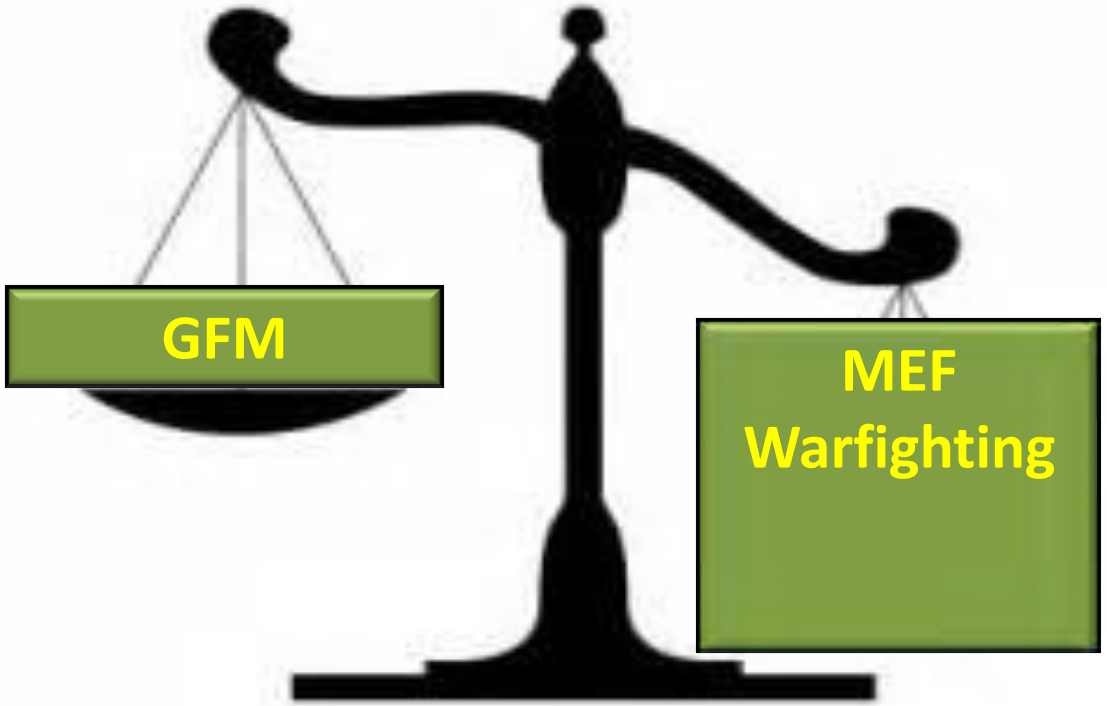
- Classified Document released in May 2017
- Revises the threat focus
- Changes previous Service priorities and focus as they relate to:
  - OPLANs/CONPLANs
  - MAGTF Warfighting
  - Training and Exercises
  - Readiness

"These institutional efforts (MOC and FD 2025 Initiative) were spurred by a critical self-assessment that revealed that the Marine Corps is not organized, trained, equipped, or postured to meet the demands of the rapidly evolving future operating environment. "
CMC Senate Testimony, May 24, 2017

II MEF in 2019-2023

PRIORITIES

1. MEF Warfighting
2. Global Force Management (GFM)
3. Crisis response (2d MEB)



Operational Challenges

- **Manpower**
- **Readiness and Funding**
- **Equipment and Capabilities**



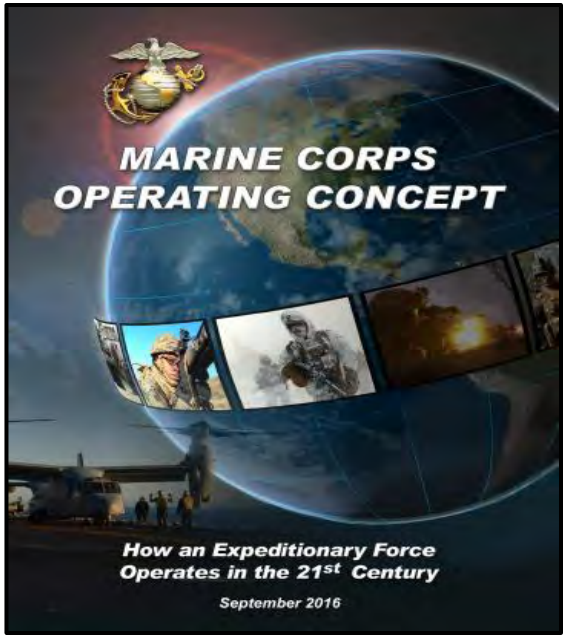


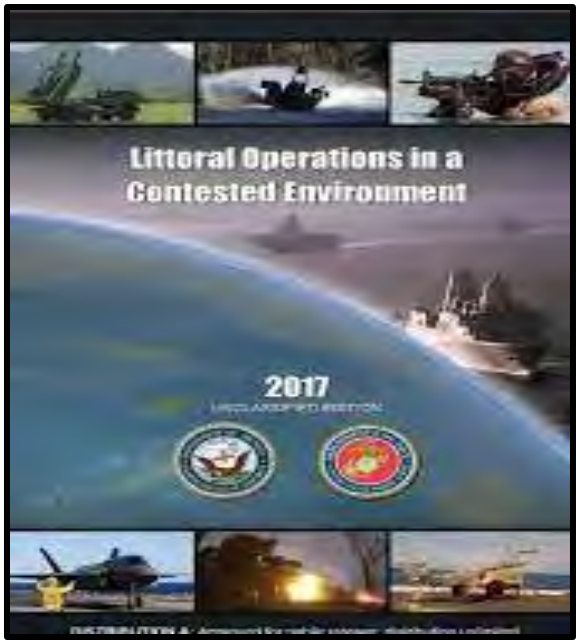


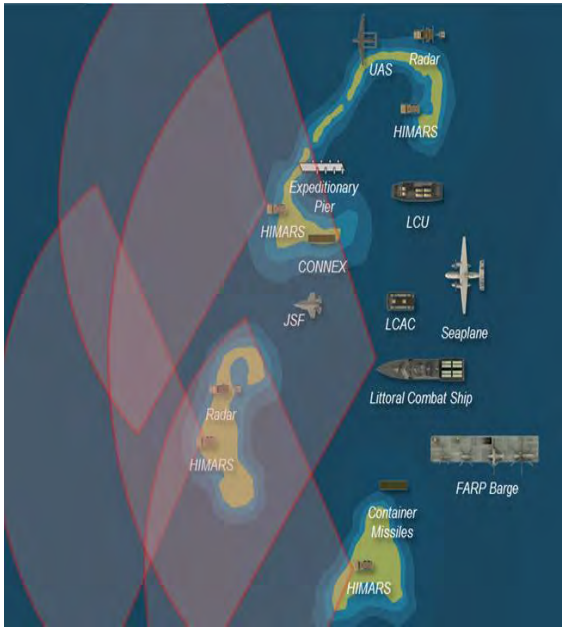
- II MEF is actively engaged in all the operational challenges; from supporting concepts, providing expertise to numerous conferences, working groups, and wargames.
- We provide significant input throughout the POM process, and support experimentation that leads to solutions.

Conceptual Engagement

- II MEF is incorporating the MOC, LOCE and emerging EABO concepts within its training and exercises.
- Supporting MCWL experimentation initiatives.
- Providing critical feedback to CMC and other appropriate naval organizations.







Where can you help?

- Cost effective live, virtual and constructive training support from the individual Marine to MAGTF commanders
- Develop/enhance kinetic and non-kinetic capabilities to penetrate complex A2/AD threats to gain and maintain access
- Develop resiliency within our networks to counter ability of adversaries to signifantly degrade or deny our ability to C2
- Engage in providing solutions to distributed C2, fires, mobility, sustainment and force protection
- Simplify naval, joint, SOF and coalition interoperability
- Simplify integrated ISR architecture

What Matters to Us



Operational Excellence
- Mission Focused
- Lethal, Relevant, Professional
- You Can Count on Us

Readiness
- Ready Marines/Sailors
- Ready Machines
- Ready Families

Standards
- Marines/Sailors First
- MOS Proficiency Always
- Protect What You've Earned

Dignity & Respect
- We All Earned our Eagle, Globe & Anchor
- Golden Rule
- Core Values
- One Team, One Fight

Questions

Mine Warfare Update

NDIA Expeditionary Warfare

Neal Kusumoto
Executive Director
Mine Warfare Division

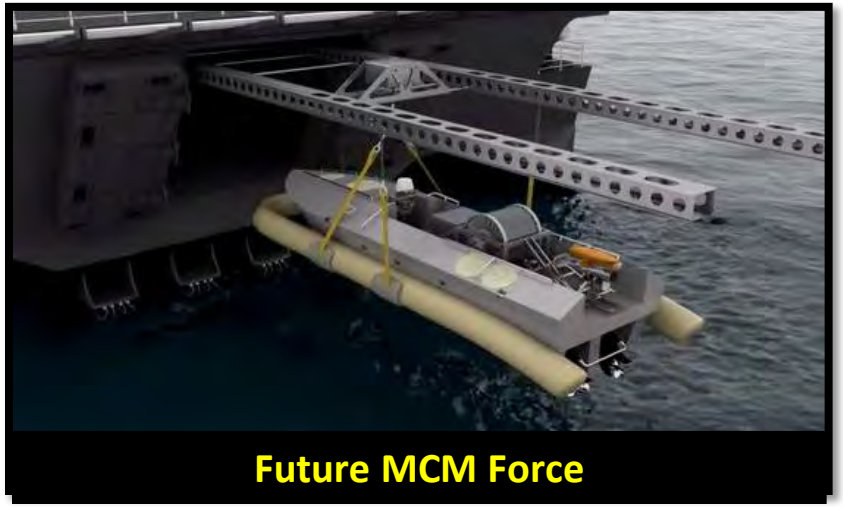
OVERALL CLASSIFICATION: UNCLASSIFIED

MIW Operational and Fleet Support

- Global Mine Warfare Commander
  - Deployable Battle Staff
  - Theater Operations and Plans
  - Intelligence analysis
- MCM Force training / certification
- MIW capability / capacity assessments
- IPCL and State of MIW reports
- Doctrine and tactics



Legacy Force



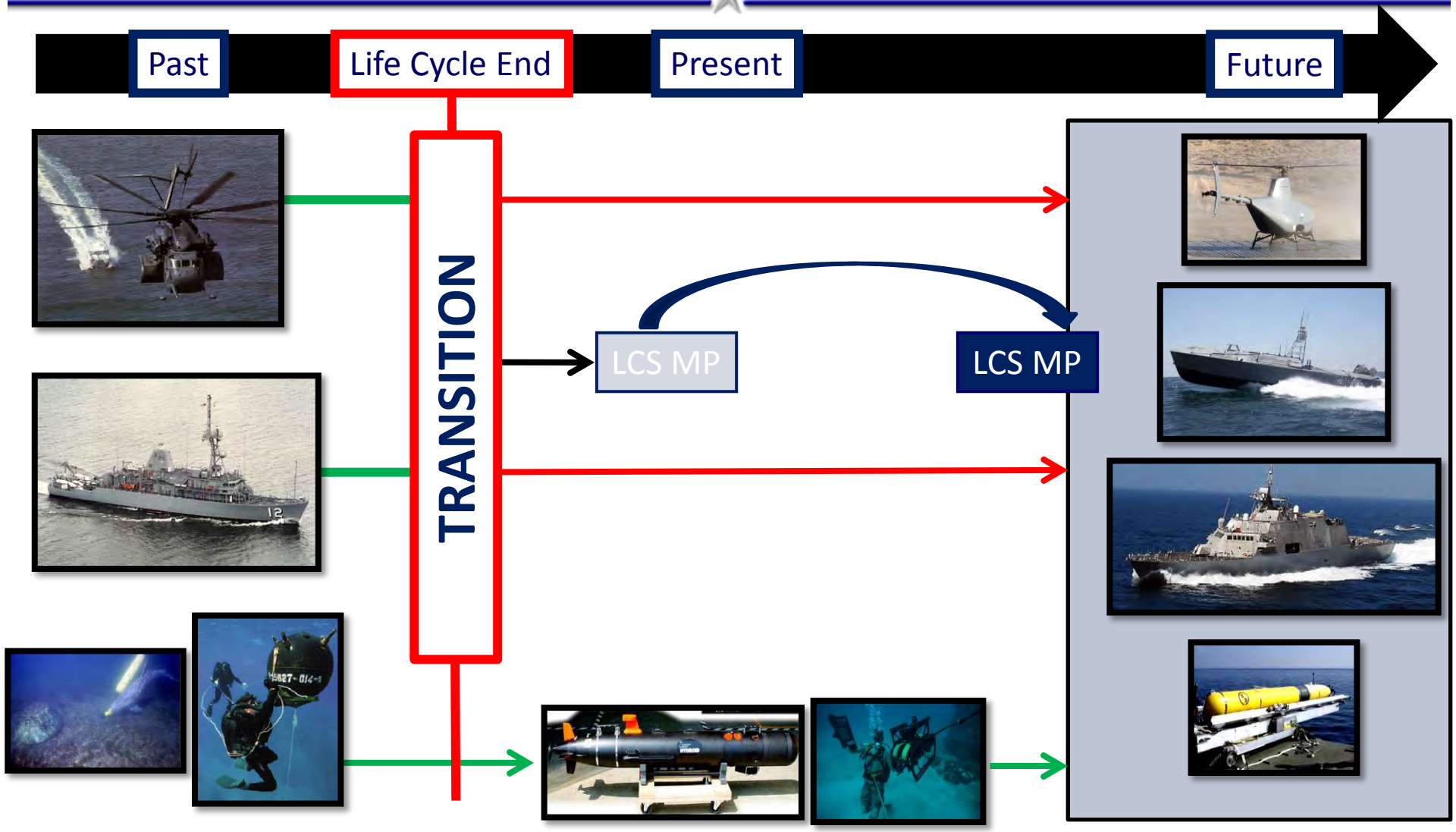
Future MCM Force

Fleet Testing and Experimentation

- FLEX (Fleet Experimentation)
- Wargame Support
- Tactical System Integration Doctrine
- UONS System Testing
- Joint Capability Technology Demo's
- Wargaming
- MIW Readiness and Effectiveness Measuring (*MIREM*)

UNCLASSIFIED

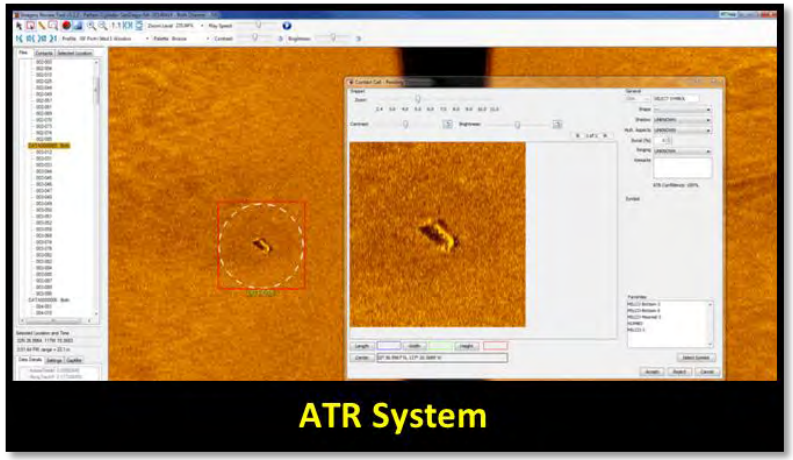
Transition to LCS-MCM



Retaining Legacy Forces until LCS is Ready

Where Can Industry Help?

- MCM ISO Amphibious Operations
  - VSW, SZ, and BZ environments
  - Interoperability between USMC and USN systems and equipment
- MCM Timeline Reduction
  - In-stride communication
  - Automatic Target Recognition (ATR)
  - Single sortie DTE
- Expeditionary MCM
  - Self contained capabilities hosted on multiple platforms
  - Networked from multiple platforms
  - Integrated into LCS
  - Address asymmetric threats


ATR System



UWIED

Where Can Industry Help?

- UUVs / ROVs
  - Improved Sensors
  - Reduced Signatures
  - Networked Autonomy
  - Power and Portability
  - Remote Launch, Recovery and Charging
  - Full DTE
  - Modular/Upgradable
- GPS-Denied Environments
  - Secondary Positioning
- Interoperability
  - Improved Data Transfer
  - Interoperable Planning Tools
  - Coalition Interoperable



US MCM assets integrating with RoK forces



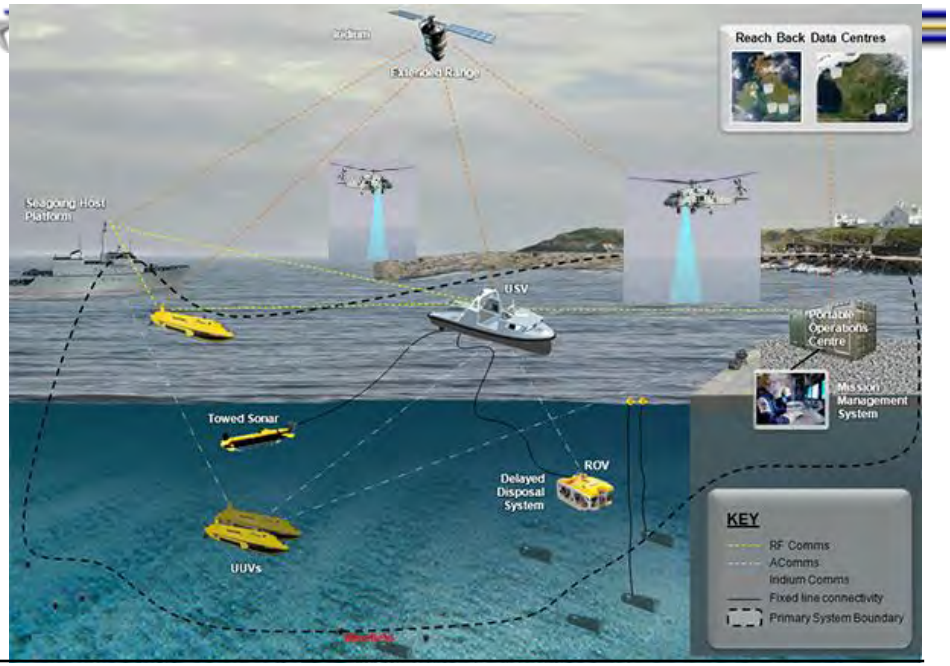
MK18MOD1 Deploying off MKVI Vessel

UNCLASSIFIED

MCM^{next}

Vision

Revolutionary operational concepts must be explored, underpinned by the latest in technological advances, creating a paradigm shift in warfighting, training and resourcing.



Background

- Mines affordable asymmetric equalizers
- MCM not getting easier for the US and allies
- Legacy MCM forces *approaching* sundown; LCS will provide near-legacy MCM approach.
- LCS/ESB modular design enables rapid integration of system-level innovation
- MCM conducted in a similar manner for 50+ years. Advances in tech must be explored to tip equation in our favor.

Approach

MCM^{next} to:

1) Establish a dialogue with leaders in industry, academia, government, and national labs
2) Leverage NPS
3) Advocate for S&T investment
4) Synthesize revolutionary concepts and enable existing and future technologies

MCM^{next} To Revolutionize the Approach to MCM

Questions?


NAVAL SURFACE AND MINE
WARFIGHTING DEVELOPMENT CENTER
TACTICS
DOCTRINE
TRAINING

MCM Force in Transition


Mk18 MOD II UUV

- Must Sustain the Legacy Force throughout Transition
- C5F
  - MK 18 Mod 2 UUV with SSAM and ATLAS
  - Minehunting USV Towing AQS-24B Sonar
  - Expeditionary MCM Company Units of Action
- C7F
  - MCM Assessment Events
  - Increase ExMCM Capacity
- LCS MCM Mission Package System Integration
  - ALMDS/AMNS/COBRA IOC'd
  - MCM USV Minehunting / Sweeping
  - Knifefish UUV for Buried Minehunting
- Fleet Wide Expeditionary Integration
  - ExMCM Company


MCM USV


USV w/ AQS-24 SONAR


KNIFEFISH


AMNS


COBRA

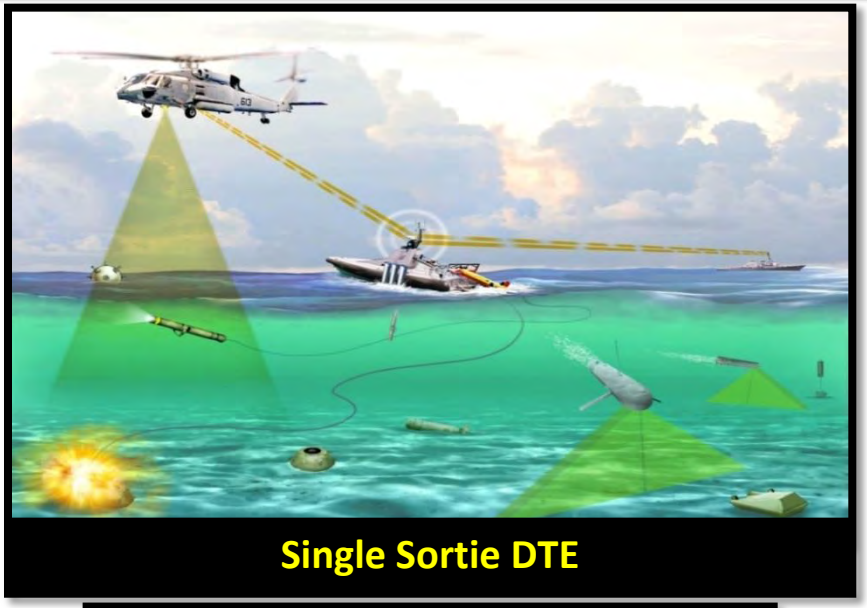

ESB

MCM IS EVOLVING WITH EXPEDITIONARY ASSETS

UNCLASSIFIED

Future Capabilities

- Detection/Neutralization of Near-Surface Drifting/Oscillating Mines
- Single Sortie Detect-to-Engage (DTE)
- Buried Mine Neutralization
- Automation for UxV-Based MCM
- Advanced Mining Concepts



Single Sortie DTE



XLUUV Prototype

UNCLASSIFIED








1118
U.S. COAST GUARD



The Value Proposition



The Value Proposition



The Value Proposition



The Value Proposition



The Value Proposition



The Value Proposition



The Value Proposition



The Value Proposition



The Value Proposition



The Capability Mix









Port Security Units









Tactical Law Enforcement Teams









Maritime Security Response Teams









Maritime Safety & Security Teams









Maritime Patrol Forces

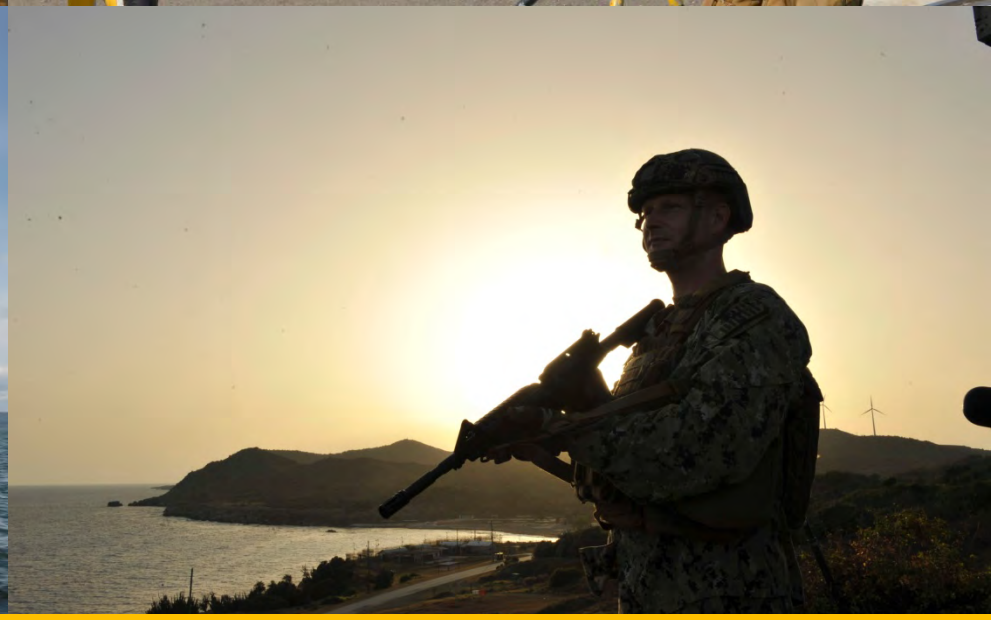


Current Operations









Expeditionary Warfare









Expeditionary Warfare









Hurricane Response Operations









Hurricane Response Operations









Theatre Security Cooperation - Shiprider Program









Theatre Security Cooperation - Train & Advise



Over the Horizon







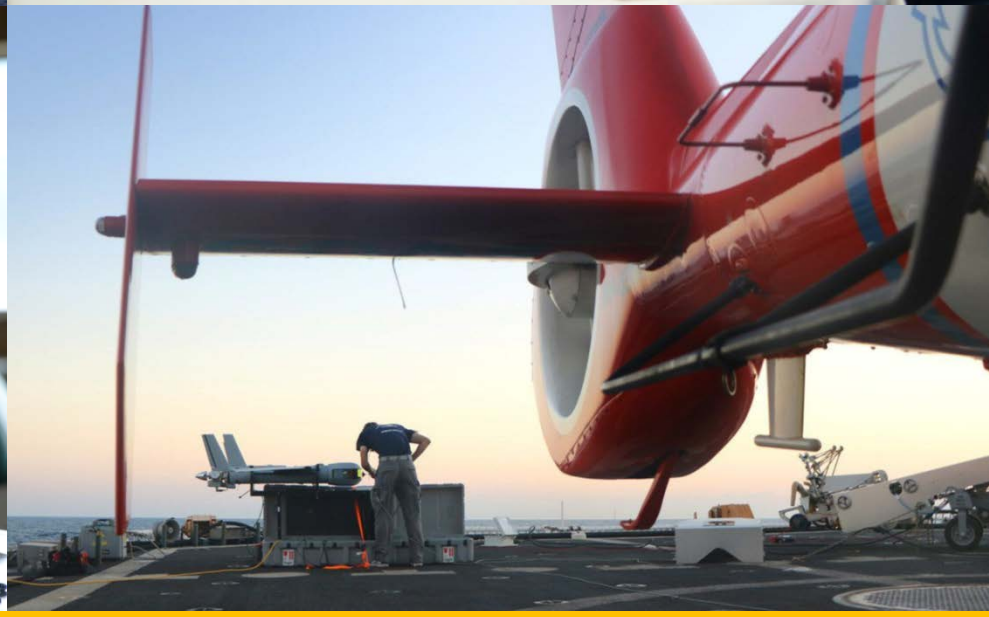


Emerging Vulnerabilities









Emerging Strengths


UNITED STATES COAST GUARD
SEMPER PARATUS
1790

BATAAN Amphibious Ready Group
24th Marine Expeditionary Unit
Post-Deployment Brief

CAPT Larry LeGree

Col Chick Rideout

Overall Classification
UNCLASSIFIED

Current As Of
18 Oct 2017

PHIBRON 8 POC
LCDR Mac Marrone, USN
Operations Officer
mac.marrone1@navy.smil.mil

24th MEU POC
LtCol Chris Niedziocha, USMC
Operations Officer
chris.niedziocha@usmc.smil.mil

Agenda

COE
Generating Resilience
Training & Readiness
SOF I3
Capes & Resources

- Task Organization
- ARG/MEU Mission
- Deployment Overview
- Operations & Exercises
- Theater Security Cooperation
- Employment Methods
- PTP Overview
- Embarkation Plan
- OPSEC
- Table of Equipment

Task Organization

COE
Generating Resilience
Training & Readiness
SOF I3
Capes & Resources

Amphibious Squadron EIGHT
CAPT Larry LeGree

24th Marine Expeditionary Unit
(Command Element)
Col Ryan "Chick" Rideout



USS BATAAN LHD 5
CAPT Eric Pfister



USS MESA VERDE LPD 19
CAPT Max Clark



USS CARTER HALL LSD 50
CDR Tim Carter

ARG Personnel:
2,290 Marines & Sailors

MEU Personnel:
2,492 Marines & Sailors

Battalion Landing Team 3/6
(Ground Combat Element)
LtCol Todd Mahar

VMM-365 (REIN)
(Aviation Combat Element)
LtCol "FES" Krockel

Combat Logistics Battalion 24
(Logistics Combat Element)
LtCol Chris Hafer

Det TACRON 21.1
Det HSC-26.2
Fleet Surgical Team 6
Assault Craft Unit Two
Beach Master Unit Two
Det Naval Beach Group 2
Assault Craft Unit Four
Maritime Raid Force
SOF Liaison Element

ARG/MEU Mission

Provide a forward-deployed, flexible, sea-based MAGTF capable of conducting amphibious operations, crisis response, and limited contingency operations, to include enabling the introduction of follow-on forces and designated special operations in order to support the theater requirements of Geographic Combatant Commanders.

- Expeditionary by nature
- Sea-based, strategic reach with inherent force protection
- Scalable levels of presence and visibility
- Offers wide range of options for national leadership
- Rapid response: within 6 hours of notification
- Self-sustaining: 15 days of organic, sea-based logistics
- Enables follow-on, joint, interagency, and coalition forces
- Combined arms integration of credible combat power
- Operates from over-the-horizon and beyond line-of-sight
- Operates independent of facilities ashore
- Capable of integrating with SOF
- Task-organized to operate across the range of military operations (ROMO)



Deployment Overview

COE | SOF I3
Generating Resilience | Capes & Resources
Training & Readiness

- Deployed 25 Feb-26 Sep 2017 to EUCOM, AFRICOM, and CENTCOM
- Deployment totaled 214 days
  - Split: 39 days (3-24 Mar, 6-13 Jun, 18-25 Aug, 3 Sep)
  - Distributed: 162 days (25 Mar-2 Sep)
  - Disaggregated: 192 days (29 Mar-6 Oct)
- CENTCOM:
  - 420-man task force provided all-weather fires to SOJTF-OIR's Operation ECLIPSE
  - BAT and CTH primarily operated in the GOA in support of SOF counter-AQAP operations
- AFRICOM/EUCOM: MVD operated in the Gulf of Sidra in support of SOF
- Conducted numerous operations, exercises, and exchanges

CENTCOM
- Ex ALLIGATOR DAGGER
- Ex EAGER LION
- OOAD Prosecution
- KSA Medical SMEE
- KSA MISO SMEE
- KSA Amphib Ops SMEE
- Oman Marksmanship SMEE
- UAE Fires SMEE
- UAE Amphib Raid SMEE
- Bahrain FET SMEE
- Kuwait EOD SMEE
- Egyptian Shipriders
- MARCENT RMS
- CHD support to TFSW
- MIO/VBSS

EUCOM
- Spanish Harrier Interop
- Ex JOINT HORIZON
- Spanish PHIBLEX
- Ex JUNIPER FALCON
- Ex SPRING STORM
- Israel Enablers SMEE
- Bastille Day Parade
- Greek Air Force Interop
- Spanish Typhoon Interop
- Harrier Coronet
- OOAD Prosecution

AFRICOM
- Djibouti Civil Affairs
- CHD Support to CJTF-HOA J2X
- Djibouti Sustainment Training

SOCOM
- Op ECLIPSE
- Op ODYSSEY RESOLVE
- Op YUKON SCEPTRE
- Shabwah Offensive
- Op ARSENIC SWORD
- J&Q
- Integrated Survey Program

Theater Security Cooperation

COE
Generating Resilience
Training & Readiness
SOF I3
Capes & Resources

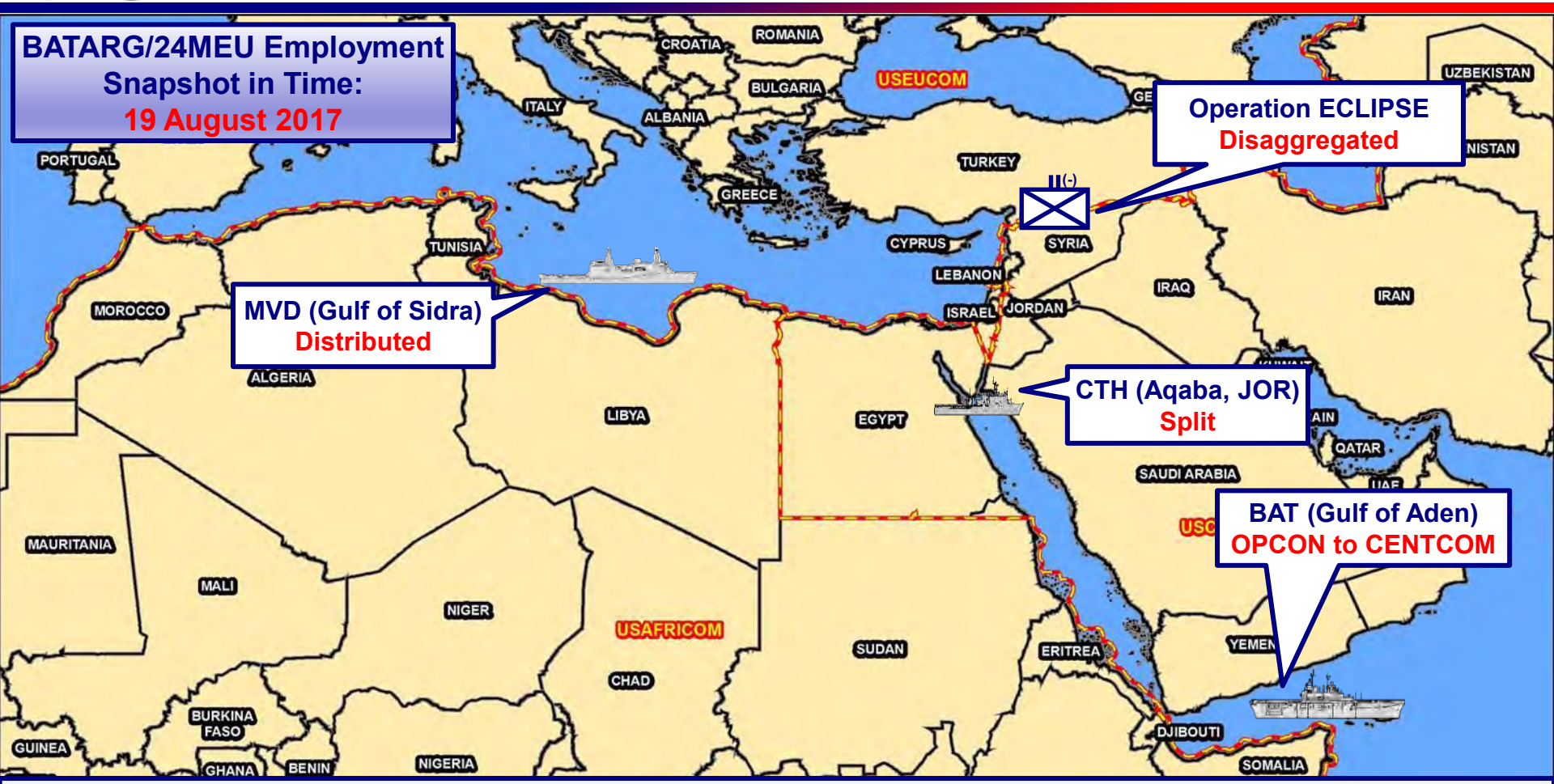


March	April	May	June
1. ISRAEL SMEE		7. SOUDA BAY, GRE PVST	10. KSA SMEE
2. ROTA, ESP PVST		8. KSA SMEE	11. GREEK BI-LAT
3. EGYPT SMEE		9. KUWAIT SMEE	12. UAE SMEE
4. VALENCIA, ESP PVST			13. PIRAEUS, GRE PVST
5. HAIFA, ISR PVST			
6. SOUDA BAY, GRE PVST			

June	July	August	September
14. DJIBOUTI CIVIL AFFAIRS	15. BASTILLE DAY	19. BAHRAIN SMEE	20. UAE SMEE
	16. MUSCAT, OMAN PVST	21. OMAN SMEE	22. MARCENT RMS
	17. KSA SMEE	23. KSA SMEE	24. GREEK BI-LAT
	18. SOUDA BAY, GRE PVST	25. EGYPT SMEE	26. RHODES, GRE PVST
			27. TOULON, FRA PVST
			28. PALMA, ESP PVST

Employment Methods

COE
Generating Resilience
Training & Readiness
SOF I3
Capes & Resources



Aggregated: *all the elements of the ARG/MEU are operating within mutually supporting distances of one another and all the capabilities of the ARG/MEU can be brought to bear on mission accomplishment.*

Split: *elements of the ARG/MEU function separately for various durations and distances with the ARG/MEU commanders retaining control of forces under the same GCC.*

Distributed: *elements of the ARG/MEU function separately for various durations and/or distances, beyond the range of mutual support, with the ARG/MEU commanders retaining control of all forces under the same GCC.*

Disaggregated: *elements of the ARG/MEU function separately and independently, regardless of time and distance, with elements under a command relationship that changes/limits the ARG/MEU commanders' control of their forces.*

(Source: Marine Corps Order 3120.13, *Policy for Marine Expeditionary Units*)

Backup Slides

PTP/FRTP Overview

- COE
- Generating Resilience
- Training & Readiness
- SOF I3
- Capes & Resources

August				September			October			November	
STAFF PLANNING			WCC (TTGL)	PMINT		HURRICANE MATTHEW			RUT		FST-GC (TTGL)
BOLD ALLIGATOR 16						VBSS		ITT2/ FATT		ITT3/ ADITT	
EOTG COURSES											

November		December			January			February			
	THANKS GIVING	ARG/MEU EX + DGSIT		HOLIDAYS/ NEW YEAR	COMPTUEX			PRE-DEPLOYMENT LEAVE BLOCK			





- NAVY
- MARINE
- JOINT
- HA/DR
- OTHER

Embarkation Plan

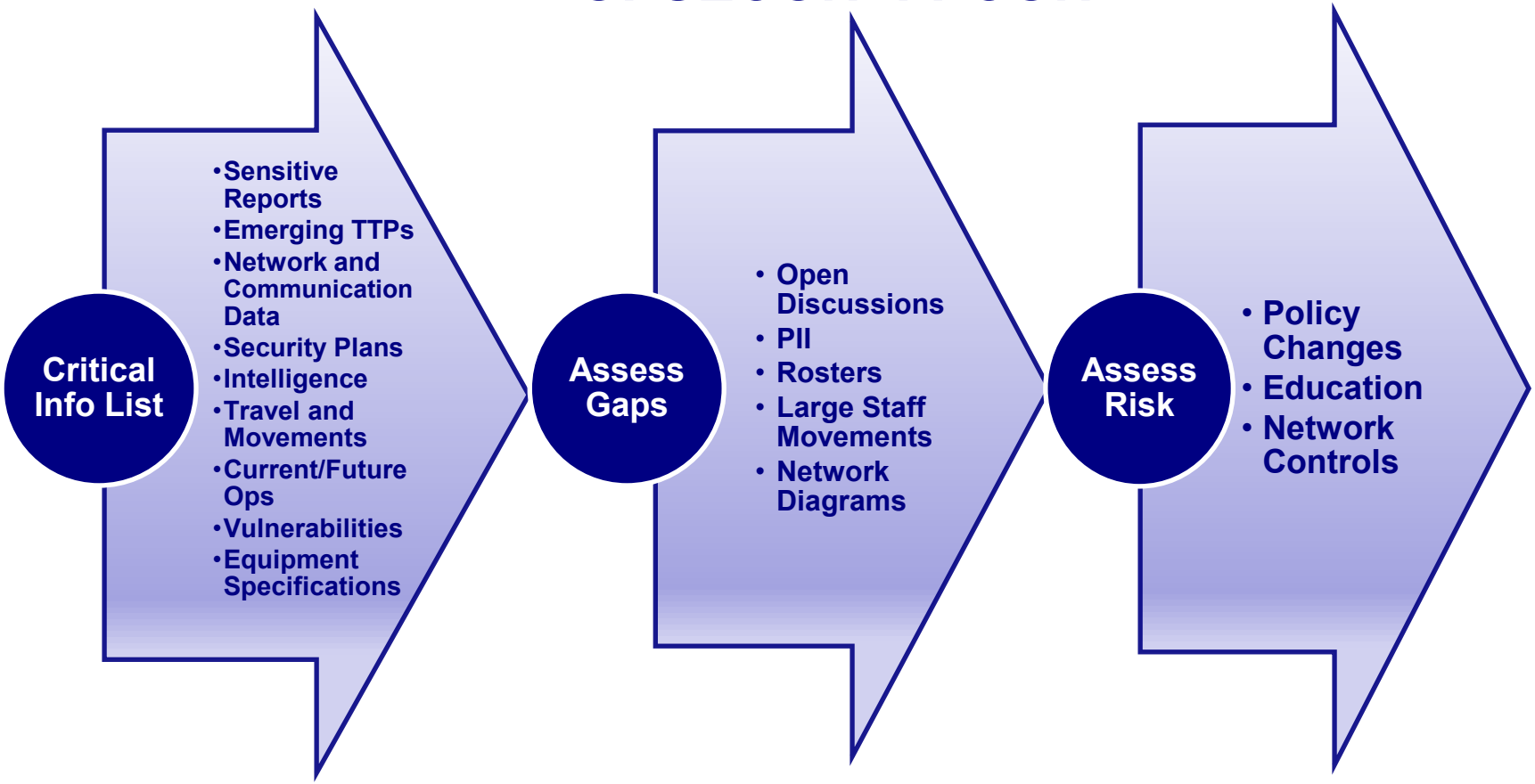
COE
Generating Resilience
Training & Readiness
SOF I3
Capes & Resources

ARG/MEU	LHD-5 USS BATAAN (1693 capacity) 	LPD-19 USS MESA VERDE (699 capacity) 	LSD-50 USS CARTER HALL (405 capacity) 
PRIMARY UNITS	• MEU HQ: CapSet III+ • ACE HQ: CO, XO, OpsO • BLT HQ: CO, OpsO, FSC • CLB Det: OpsO • MRF HQ and MRF A • FCE • JTFE • ANGLICO FCT	• MEU XO • BLT XO • CLB CO, XO, CopsO (CapSetIV) • FSO, Bty Cdr • ACE HMLA Det • MRF B • FCE • MEU Staff Enablers (S-2, S-3, S-6)	• Co K CO • CLB Det • BLT Det: AFSO CapSet IV
MANEUVER ELEMENTS	• Co L 3/6 (Vertical Assault) • 1 CAAT Plt • 1 x LAR CO (-) (5 x pre-boated) • BLT Sniper Team • 81mm Mortar Platoon (TRAP Force) • CEB Plt (-) • Det, CLB: Trans Spt, Engr, Maint, EOD, Supply, Dental, DLC Food Services • FARP Det • 2 x EOD TM • FET • 4 x LAAD • JTACs • LFSP/HST x 2	• Co I 3/6 (Motorized/Alt Vertical Asslt) • 1 CAAT Plt (4 x pre-boated) • LAR Det (5 x pre-boated) • CEB Det • Arty Btry (Rein) (4 x M777, 8 x MTVR) • CLB (-): Trans Spt, Eng, Maint, EOD, Supply, Health Services, Food Services • 5 x CRRCs (MRF) • 3 x EOD TM • BLT Sniper Tm • 1 x Medium Crawler Tractor • Total MTVR from CLB = 10 (2nd Motorized Co) will required download at beach prior to use of trucks. • 1 x M1152 w/M1102 CE • LFSP/HST x 2	• Co K 3/6 (Mech) • BLT Sniper Tm • AAV Plt (11 x AAV) • 4 x Tanks BLT • 4 X EFSS • 4 x Ammo Trlr • 13 x ITV/LSV BLT • 1 x EOD TM, • 2 x LVSR Refuel, CLB • 1 x LVSR Wrecker CLB • 1 x Backhoe CLB • 1 x R7 CLB • 1 x M88 • 1 x D6 Dozer CLB • 1 x MC Line Charge Trlr (BLT) • 1 x MRC-145 (LFSP) • LFSP / HST x 1
ACE	• 12 x MV-22 • 7 x AV-8B • 4 x CH-53E	• 4 x AH-1W • 3 x UH-1Y • 5 x RQ-21	
NAVAL SUPPORT	• 3 x MH-60S (VBSS Top Down / SAR) • 2 x LCU (pre-boat) BMU • Fleet Surgical Team. • 1 x 7m RHIB (organic to ship)	• 2 x LCAC (pre-boat: 1 x CLZ, 3 LAR, 1 x CAAT/LAR) • 2 x NSW/MRF RHIB • Medical • CLZ (Pre-boat)	• 2 x LCAC 7 x MTVR, 1 x Tram, 1 x M105 • 1 x 7m RHIB • 2 x 11m RHIB
MISSIONS	• Air and Surface-based Raid, AF/Port Seizure, site reinforcement, Co/Plt sized QRF and TRAP • NLW Security Force • FDR • MASCAL (BLT) • MEB / JTF Amphibious Advance Force Operations / Enabler • TSC • Strike • FARP/ISB • VBSS • Water Production: (1) TWPS, (1) LWPS • I-Level Comm & Optics	• Limited Air-based Raid, AF/Port seizure, site reinforcement, Plt Sized QRF and TRAP • FDR • MASCAL • TSC • VBSS • Water Production: (1) TWPS, (1) LWPS • A/DACG • Intermediate Supply • Welding	• Surface-based Raid, Reinforcement / QRF • HA/DR (light) • Hasty NEO • TSC • VBSS (X-Deck) • Water Production: (2) LWPS • Welding • Intermediate Supply

OPSEC in the Current Environment

Integrated Deliberate Planning Methodology

OPSECON~FPCON



INFORMATION TRANSPARENCY

DELIBERATE "OPSECON" DECISION

INFORMATION RESTRICTION

Table of Equipment

COE
Generating Resilience
Training & Readiness
SOF I3
Capes & Resources



2 x LCU

3 x MH-60

4 x CH-53E

7 x AV-8B

12 x MV-22B Osprey

14 x LAV

1 x LAV-EW

36 x HMMWV

1 x MTVR Wrecker

1 x TRAM

7 x MTVR

3 x LAAD



2 x LCAC

3 x UH-1Y

4 x AH-1W

5 x RQ-21A

20 x MTVR

4 x M777

29 x HMMWV

5 x LAV

2 x TRAM

1 x MCT Dozer

1 x LAAD

1 x MTVR Wrecker



2 x LCAC

10 x AAV (P7)

1 x AAV (C7)

1 x AAV (R7)

4 x M1A1

1 x M88

7 x MTVR

9 x HMMWV

13 x ITV

4 x EFSS

2 x LVSR

1 x LVSR Wrecker

1 x TRAM

1 x D6 Dozer

Topic Directory

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COE
Generating Resilience
Training & Readiness
SOF I3
Capes & Resources

Training & Readiness

- PTP/FRTP Overview
- Visual Information
- Non-Traditional SIGINT
- Aviation Training in the COE
- MV-22B Restricted Visibility Landing
- PTP/FRPT Alignment
- Armed HSC Integration
- Aircraft Readiness
- Sustaining the Three MH-60S Surface Warfare Detachment Concept of Operations For Amphibious Assault Ship Deployments
- Cruiser/Destroyer Integration
- Intelligence and Cryptologic Training Program
- ARG/MEU Mine Warfare Training, Experience, and Integration with MIW Assets
- ASRTD Utilization and Opportunities
- OPSEC Methodology
- ARG/MEU Embarkation of Mine Warfare Assets
- FSET Utilization
- 24th MEU AH-1W Repair Time

Generating Resilience

- Medical Consolidation
- Distance Support / OnBoard Tech Assistance
- Effects of Outsourcing on Warfighting
- Distributed Network Management
- Top Ten BATARG Troubled Systems
- TS VTC/Access to NSANET on LPD
- Corsair-lite Cryptologic Carry On Program (CCOP)
- ARG/MEU CERT Targeting
- CIWS Tech Utilization
- Link on LSD
- T-SCIF/Gear on LSDs
- Cryptologic Analysis Support Element Support to Targeting
- Management of SCI Cyber Security Afloat
- Naval Logistic Integration
- UAS System Embarkation on ARG Warships
- Amphibious Ready Group Access to Physical Therapy Services
- Distance Support and Onboard Technical Assist
- Propulsion Reliability
- NMT Reliability
- Radar Reliability
- CLDJ - An Under-resourced Driver of Readiness

SOF I3

- Distributed Bandwidth Management
- SOFLE Program
- CF-SOF Interdependence
- Bandwidth Management
- MEU/SOF Integration

COE

- Strategic Fleet Sustainment
- Djibouti as an Expeditionary Lodgment
- Duqm: Strategic Logistics Hub
- Integrating CRUDES to Gain Sea Control
- OPSEC in the Current Environment
- MV-22B in the COE
- Embarked Aviation I3
- Command and Control
- Force Laydown
- Disaggregated Capabilities
- Distributed and Disaggregated Operations
- Spotting Requirements ISO Task Force Operations
- Best Practices For Aviation Assets During BAM Xsits

Capabilities & Resources

- Embarkation Plan
- Future Expeditionary Force
- Medical Obsolescence Management
- Cost-Effective Solutions
- Increasing Flight Deck Availability
- Embarkation Space Management
- Aviation Wind Envelope Expansion
- Table of Equipment
- Obsolescence management w/ COTs Medical Equip
- ACDS Upgrade To SSDS
- Role 2 Surgical Team Support for LPD Disaggregated Operations
- MK 38 Recording
- GCCS-M 4.1.1.1 and Canes Interoperability Issues
- CANES 4.1.1 Integration Impact To SCI
- Theater Battle Management Core System (TBMCS)
- Employment of Deployed Defense Cyber Operators
- Obsolescence Management of Medical Equipment
- NCIS Agent Allocation
- Increased Bandwidth Requirements to Maximize Distributed Command and Control
- Flight Window Expansion

Core Slides

- Title Slide
- Agenda
- Task Organization
- Themes
- ARG/MEU Mission
- Deployment Overview
- Ops & Ex: 25 Feb-15 Jun 17
- Ops & Ex: 16 Jun-26 Sep 17
- Theater Security Cooperation
- Employment Methods
- ARG/MEU in the Tri-COM Littorals
- Maritime Focus Shifts to the GOA
- SOF I3
- Op ECLIPSE

Storyboards

- CTH Compliant Boarding of DHOW MSV Ali Madat
- EAGER LION
- KSA Medial and Marksmanship SMEE
- KSA MISO SMEE
- Oman Marksmanship SMEE
- UAE JTAC SMEE
- UAE Amphibious Raid SMEE
- Bahrain FET SMEE
- Kuwait EOD SMEE
- Egyptian Shiprider SMEE
- RMS 17
- JOINT HORIZON 17
- Spanish Amphibious Exercise
- JUNIPER FALCON 17
- SPRING STORM 17
- Djibouti Civil Affairs
- Djibouti Sustainment Training Infantry Skills
- Bahrain MRF Wind Tunnel Training
- CENTCOM DV
- KSA KLE King Faisal Naval Base
- Greek Paratrooper Bilat
- Bahrain FAST VBSS sustainment
- SPMAGTF DLQs on MVD
- UH1/AH1 Karavia Range Shoot
- Doha EAP Conference
- Team Misrata KLE

Info Paper and Storyboard POCs
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Capt Aaron Anderson
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UNCLASSIFIED

Naval Logistics Integration

NDIA
ANNAPOLIS, MD
Oct 23-35 2017





UNITED STATES MARINE CORPS | UNITED STATES NAVY | UNITED STATES COAST GUARD

LCDR Andrew Lovgren, USN

OPNAV N41

Agenda

- Naval Logistics Integration:
  - Mission & vision
  - Goals
  - Doctrine & concepts
  - Roadmap
- Naval Logistics Integration Today and Tomorrow:
  - Current Ops
  - SECNAV Innovation Task Force
  - Future Logistics Enablers Development
  - Additive Manufacturing
  - Expeditionary Medical



Operational imperative







"Our ability to effectively sustain our operating forces requires a naval logistics capability that provides continuous and reliable support to the warfighter – whether operating at sea or ashore."

~ LtGen Mike Dana, USMC, Deputy Commandant for Installations and Logistics

Mission & vision

- **Mission**. The Sea Services will actively pursue courses of action to improve naval logistics to the fullest extent possible by integrating Service logistics capabilities and capacities; in order to ensure a naval logistics capability that can operate seamlessly afloat or ashore, successfully supporting and sustaining operating units in a joint warfighting environment.

- **Vision**. Achieve an integrated naval logistics capability that leverages current and future technologies, processes and organizations to enhance the Sea Service's warfighting capabilities as set forth in the Maritime Strategy and Naval Operations Concept.

***Problem Statement**: The USMC logistics enterprise cannot meet the operational requirements as envisioned in the MOC. The MAGTF lacks the logistics design, resources and material solutions required to meet the demands of a highly distributed, five domain force executing maneuver warfare across the ROMO*

Short-Term Goals

- **Naval Logistics Integration in the next three years will:**
  - Serve as principal forum to coordinate among Naval Services
  - Integrate Naval logistics systems
  - Increase asset visibility of Naval logistics systems
  - Integrate acquisition & life cycle management
  - Broaden cross-training & educational opportunities

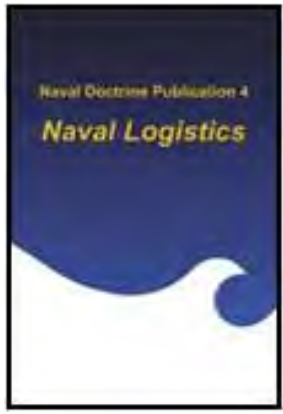
Long-Term Goals

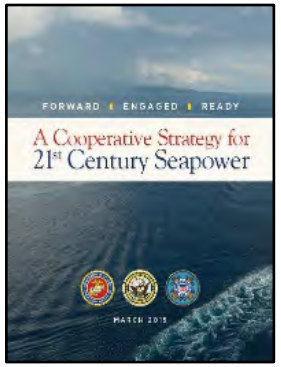
- **Naval Logistics Integration in the next ten years must include:**
  - Optimized expeditionary logistics footprint
    - ✓ Increased resilience, responsiveness, & flexibility
    - ✓ Self-sustaining
    - ✓ Scalable
    - ✓ Support full range of missions
    - ✓ Energy efficient
  - Common logistics processes across Naval force
  - Agile distribution to the smallest element

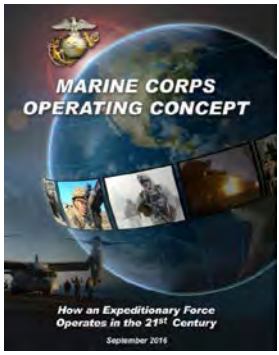
Doctrine & Concepts

- **Doctrine:**
  - Secretary of the Navy's Instruction, 4000.37A
  - A Cooperative Strategy for 21st Century Seapower
  - NWP 4-0/MCWP 4.2, Naval Logistics

- **Concepts:**
  - Marine Operating Concept
  - Naval Operations Concept
  - Distributed Maneuverable Logistics
  - *Expeditionary Advanced Bases (EAB)*
  - *Littoral Operations in a Contested Environment (LOCE)*



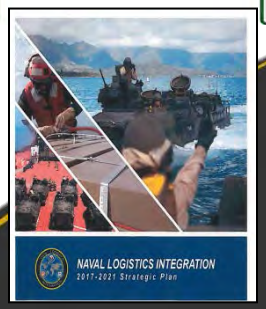




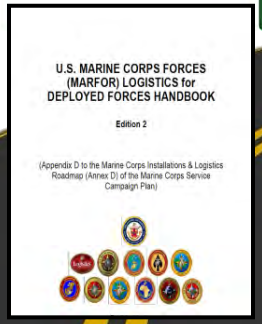


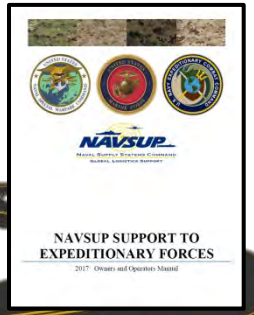
Roadmap

2017-2021 Strategic Plan



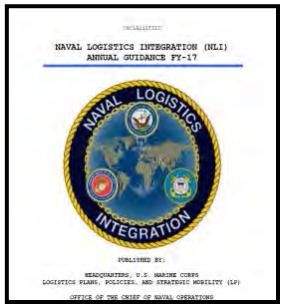
USMC Handbook

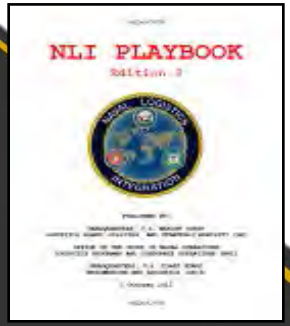




Navy support: Expeditionary Forces

FY-17 Annual Guidance





NLI Playbook

SECNAVINST 4000.37

Terms of Reference 2003

NLI-Today & Tomorrow

Col Edward Bligh, USMC

DC I&L (LPV) HQMC

Principles

- **Today & Tomorrow ‘s Naval logistics are guided by two operating principles:**
  - Support an Expeditionary-Austere-Lighter Mindset:
    - ✓ Minimize footprint ashore/Improve mobility with agile lighter units.
    - ✓ Deploy only mission essential resources – reduce reliance on established infrastructure
    - ✓ Plan for sustained support on/from the sea
    - ✓ Leverage non-traditional naval platforms and minimize large scale shore basing
  - Maximize organic capabilities and capacities through naval integration:
    - ✓ Tailor sustainment to support mission packages in disaggregated operations
    - ✓ Work the agile naval logistics chain outside not just inside forward deployed naval units
    - ✓ Leverage and complement Naval and DOD material distribution network
    - ✓ Plan for A2AD environment

Expeditionary Logistics



***Future Naval Logistics**: Our logisticians must integrate and mature new technologies and processes – such as additive manufacturing and smart logistics – to reduce reliance on the "iron mountain" and deliver precision logistics to units ranging from squads to regiments in future operating environments.*

This document provides a conceptual framework for how we will support the ARG/MAGTF of 2025 – and beyond. To achieve this vision, we must overcome several challenges. In today's Marine Corps and the US Navy we are in the midst of an evolution in logistical affairs. On the one hand, our current inventory of aircraft, vehicles, ships and weapon systems is more lethal, maneuverable and survivable than any time in our history. On the other hand, these systems are heavier and more logistics-intensive. This means that in the next 15-20 years, our naval service will experience a *blend of old and new logistics as it conducts expeditionary logistics*

Today's naval logisticians are on the cutting edge of naval logistics integration. It is incumbent on us to continue to advance and adapt to sustain – and increase – the competitive advantage we have *gained today* of the naval service through Naval Logistics Integration (NLI) and *tomorrow through innovation*.

As we transition to innovative enablers like AM, UAV, we will still have to move large quantities of fuel, water and ammunition throughout the future battlespace. However, Unmanned platforms, 3D printing and predictive maintenance have the potential to optimize tactical distribution, modernize the naval logistics chain and increase equipment readiness.

Naval will have to support ARG/MAGTFs operating as Sea bases across the range of military operations in all five domains of warfare. To do this, we are proposing an *evolutionary shift in how sustainment* is and will be provided support to forward deployed Units.

Operational Design-NLI Lines of Effort



1. Strengthening Naval Power
2. Train & Education
3. Equip-Processes/Technologies
4. Naval Innovation & Modernization

Responsive and Resilient Naval Logistics Chain

Enabling Naval Readiness for 21st Century Warfighting

***Problem Statement**: The USMC logistics enterprise cannot meet the operational requirements as envisioned in the MOC. The MAGTF lacks the logistics design, resources and material solutions required to meet the demands of a highly distributed, five domain force executing maneuver warfare across the ROMO*

NLI Execution Update-Today

Man:

- Personnel Exchanges (Fwd Navy FLC's, NAVSUP HQ, PMO HQ, LOGCOM, MCSC)
- Looking to improve Integrating FLC/DLC Expeditors and Navy CLO/CTF staffs (afloat/ashore
- Working on possible assignment of NECC officer(s) on deploying MAGTF's and Marine logisticians assigned to CNSL/CNSP, and other fwd Navy Commands (Fleet N4's , CTF's)

Equip-Process/Technologies:

- Sharing use of Navy's Advanced Traceability and Control (ATAC) process for efficient/effective *retrograde* process of USMC critical secondary repairables for deployed units. Since 2003 moved 420,000 secondary repairable weighting 74.5M lbs at 800k annual cost with 99% POD.
- Sharing MCSC for logistics life-cycle management of Class II personal protective equipment. Currently Navy Liaison Cell within PM ICCE handles RDT&E and includes a Naval officer that is part of the Navy Supply Corp Internship program, and NAVFAC's NEPO funds the civilian billet.
- Validating GCSS-MC/Navy ERP souring interface process via DLATS
- Sharing both Depot and Tactical level maintenance capabilities to include corrosion control.

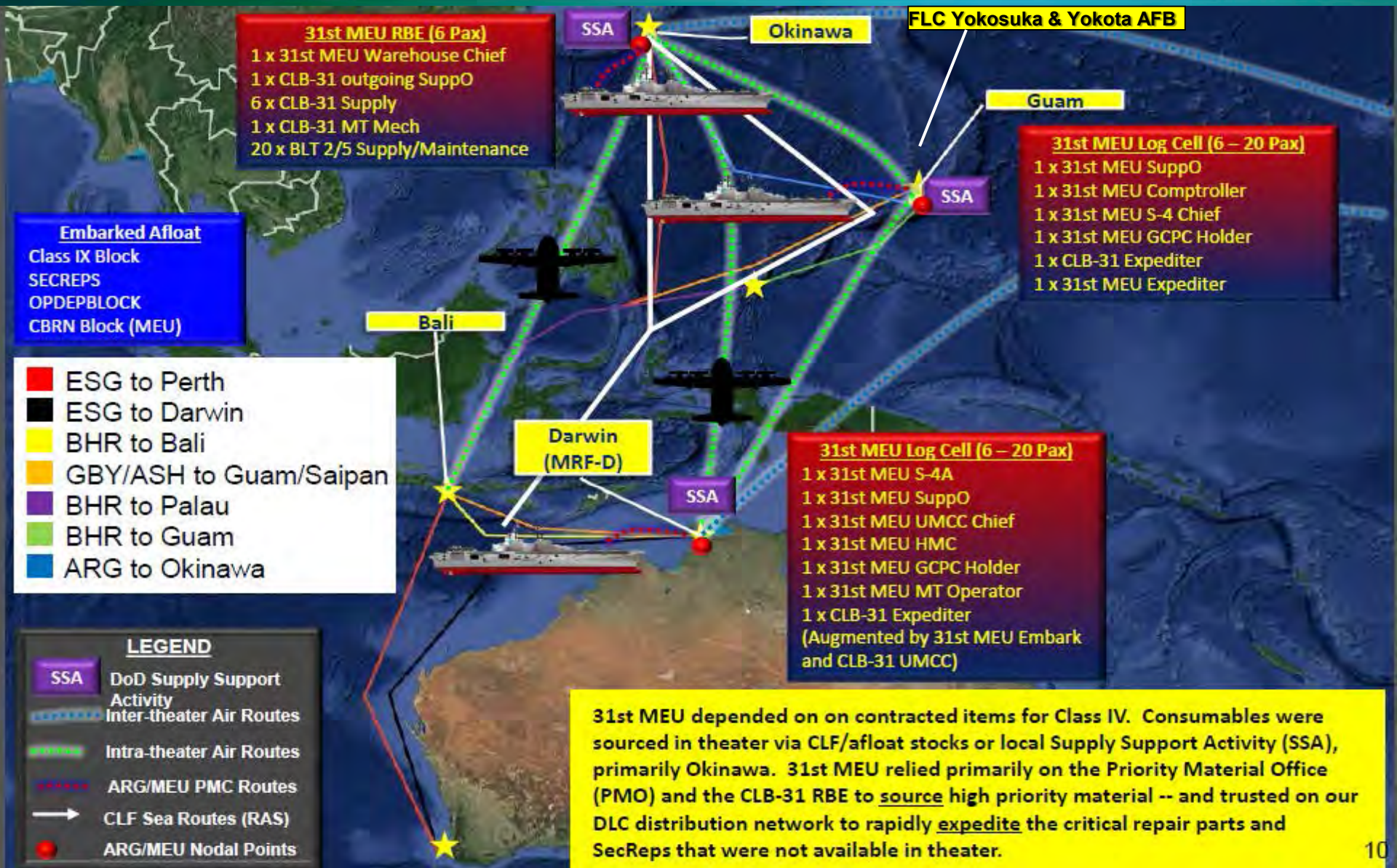
Train:

- Adjusting EXLOG T&E curriculum with MCLOG–based on NCR MAGTF tour feedback and TSC missions
- Established MAGTF pre/post-deployment logistics briefs which provides DC I&L/OPNAV N4 an update on MAGTF logistics operations and challenges
- Expanding MARCORLOGCOM's role as operational-level logistics enabler ISO MAGTFs with SMRR concept
- MARFOR Logistics for Deployed Forces Handbook-theater focused under annual review expanding based on TSC and SPMAGTF feedback

Materiel Distribution in 5th & 6th Fleet AOR – *Execution example*

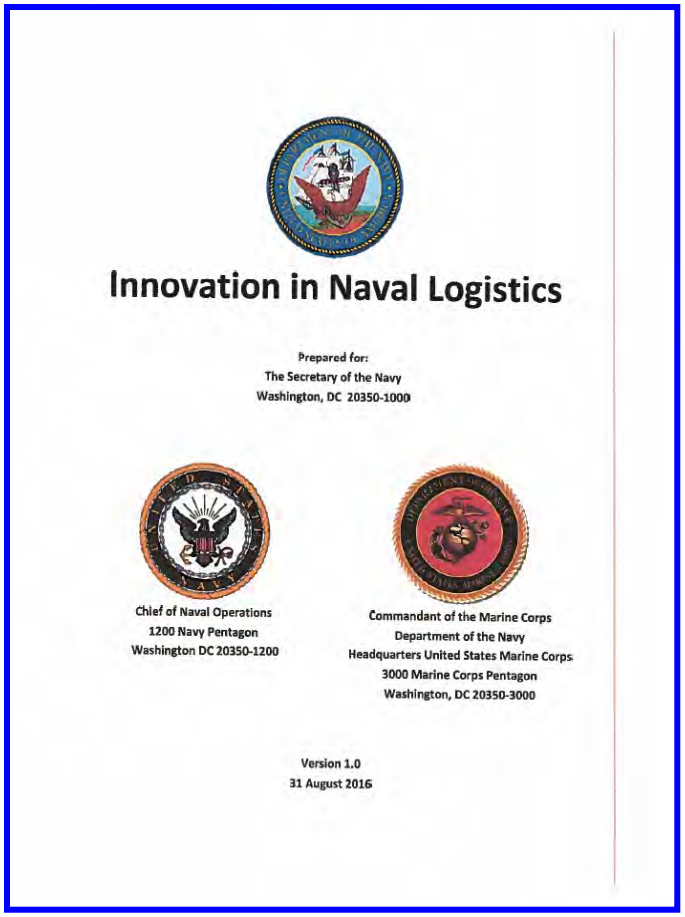


Materiel Distribution Chain in 7th Fleet AOR – *Execution example*



31st MEU depended on on contracted items for Class IV. Consumables were sourced in theater via CLF/afloat stocks or local Supply Support Activity (SSA), primarily Okinawa. 31st MEU relied primarily on the Priority Material Office (PMO) and the CLB-31 RBE to source high priority material -- and trusted on our DLC distribution network to rapidly expedite the critical repair parts and SecReps that were not available in theater.

NLI-Tomorrow



Innovation in Naval Logistics

Prepared for:
The Secretary of the Navy
Washington, DC 20350-1000

Chief of Naval Operations
1200 Navy Pentagon
Washington DC 20350-1200

Commandant of the Marine Corps
Department of the Navy
Headquarters United States Marine Corps
3000 Marine Corps Pentagon
Washington, DC 20350-3000

Version 1.0
31 August 2016

This document provides a conceptual framework for how we will support our naval expeditionary units of 2025 – and beyond. We are focusing our efforts on emerging logistics technologies and innovative concepts that increase or improve force maneuverability, sustainability, lethality, and survivability in the future five domain battlespace.

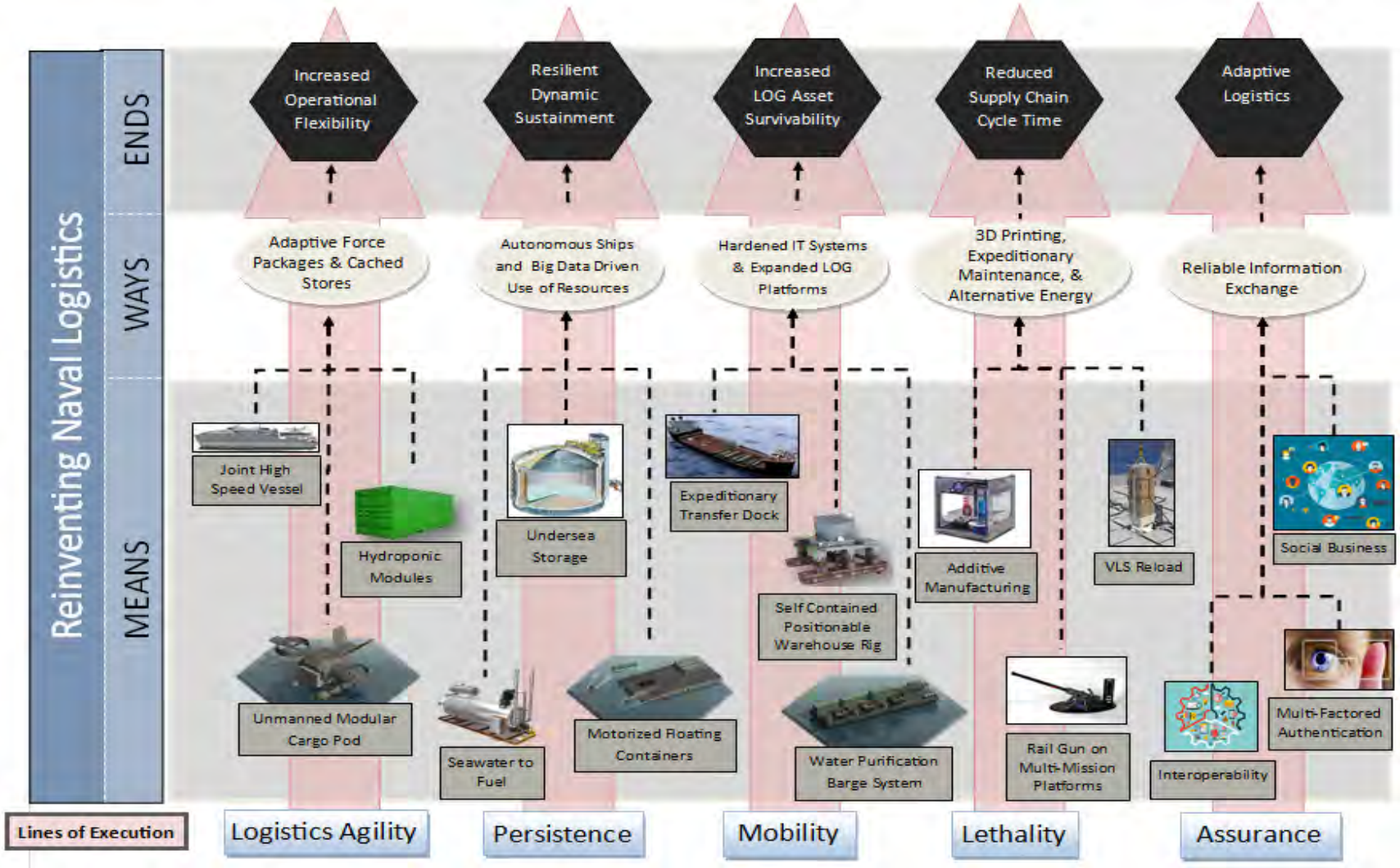
We are less concerned with solving current tactical problems and issues and more focused on fostering improved logistics concepts and enduring solutions. The goal is to identify and incorporate groundbreaking products, processes, or policies to transform advanced, innovative logistics concepts into agile, scalable capabilities. This document is intended to provide a strategic, umbrella framework for leveraging logistics innovation to provide flexible options to operational commanders across the range of future military operations.

Our Naval Expeditionary Logistics focus will give the Navy/Marine Corps team the ability to rapidly develop the responsive and agile architecture necessary to support and sustain operations in austere environments or in those lacking in robust infrastructure, frequently on short notice, and where operational requirements may dictate the dispersal of forces across a large geographic area.

The NLI concept and its complementary and mutually supporting methodologies and processes have provided a functional paradigm that has facilitated a fundamental change in how naval logistics is being conducted today. The NLI concept will continue providing a governance framework to guide new specific initiatives that will continue to focus on integrated logistics capabilities throughout the Navy and Marine Corps.

***Future Naval Logistics**: Our logisticians must integrate mature and new technologies and processes – to reduce reliance on the "pipeline" and deliver precision logistics to units or all sizes from battle groups afloat to squads ashore in future operating environments.*

What Change Looks Like



Threat axes cross planes of maneuver --- we must bend the curve faster!

Proposed Solution Set

Supply / Maintenance

- Additive Manufacturing
- Condition Based Maintenance
- Water Purification
- Renewable Energy
- T-AVB MAGTF Maintenance
- Pipefish Fuel Storage
- Seabased Logistics

Deployment and Distribution

- Autonomous Subsurface Craft
- Autonomous Surface Craft
- Cargo Unmanned Aerial Vehicles
- Autonomous Ground Vehicles
- JMICs
- Exoskeleton
- Drones
- UHAC vehicle

Command and Control

- Digital Interoperability
- Data Cleansing
- Decision Support Tools
- Common Operating Picture
- Assured Data Exchange

Other

- Expeditionary Health Services
- Energy Weapons
- Improved Fuel Efficiency
- Non-Kinetic Adaptive Force Packages
- Company Landing Teams

Unmanned Logistics Systems – Air Vision and Goals (Group 3-5)

- **Vision**: *ULS provide highly automated and synchronous logistics capabilities in support of expeditionary MAGTF operations that offer increased flexibility and speed to Marines by means of seamless, end to-end logistics chain management and execution.*

- ULS optimize the efficiency of Marine logistics functions. **Goals include**:
  - **FLEXIBILITY –** Providing options and alternatives for logistics functions
  - **LIGHTEN the LOAD!** - Focus on reducing loads carried by Marines (*not 3 days of supply, but supply 3 times a day!*)
  - **VELOCITY / TEMPO-** Increase speed and responsiveness of logistics functional support. (*resupply in days to resupply in minutes)*
  - **EFFICIENCY and EFFECTIVENESS –** Automate repeatable processes to increase human effectiveness over longer durations
  - **OPTIMIZE-** Reduce human *touch points*, in virtual (cyber) and physical domains to streamline distribution process

- **All With**:
  - **SIMPLICITY** – Any Marine can utilize ULS with limited or no instruction
  - **RELIABILITY** – Systems function and operate with minimal maintenance
  - **VISIBILITY** – Integrate C2 capabilities for in transit awareness and asset tracking

Unmanned Logistics Systems – Air
Lines of Efforts (Group 3-5)

- **Means** (Two distinct lines of effort):
  1. **Large Scale Group 4/5 UAS** capable of delivering loads 2000-6000 lbs out to company level from the Seabase.
     - Interim Experimentation and Tactics Techniques and Procedures Development (AACUS UH-1)
     - MUX Group 4/5 Program of Record Development (long term solution)
       - TERN
       - ARES
       - V247
       - Karem KVU-5
       - Sikorsky RBW





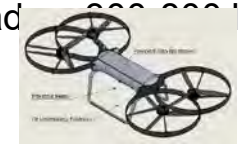


  2. **Organic (to LCE/GCE) Unmanned Logistics Systems (Group 3)** UAS capable of distributed loads out to squad level (targeting 20-800 lbs loads)
     - A smaller ULS (payloads ~ 50-250 lbs)
       - TRV-50
       - Other experimental platforms TBD



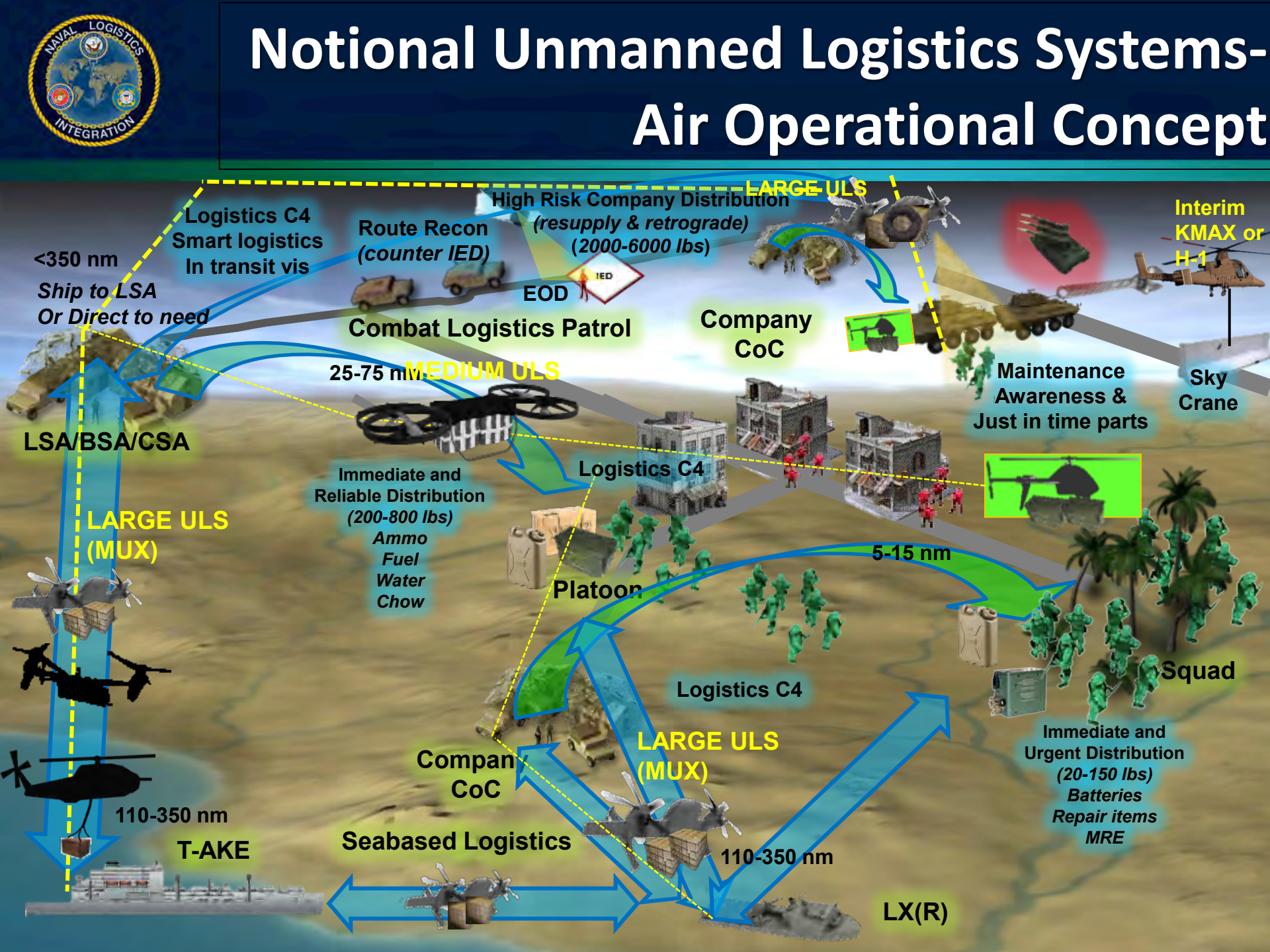


     - A medium ULS (payload [illegible] lbs. JTAARS CDD in development with Army)
       - Hover Bike
       - SkyFalcon
       - DP-14
       - GRIFF, Other?



- **End State**:
- *In the future, Marine Corps Logistics support surges in speed, flexibility, assurance, efficiency, and effectiveness with the use of unmanned logistics systems in air, ground and surface environments.*

Notional Unmanned Logistics Systems-Air Operational Concept

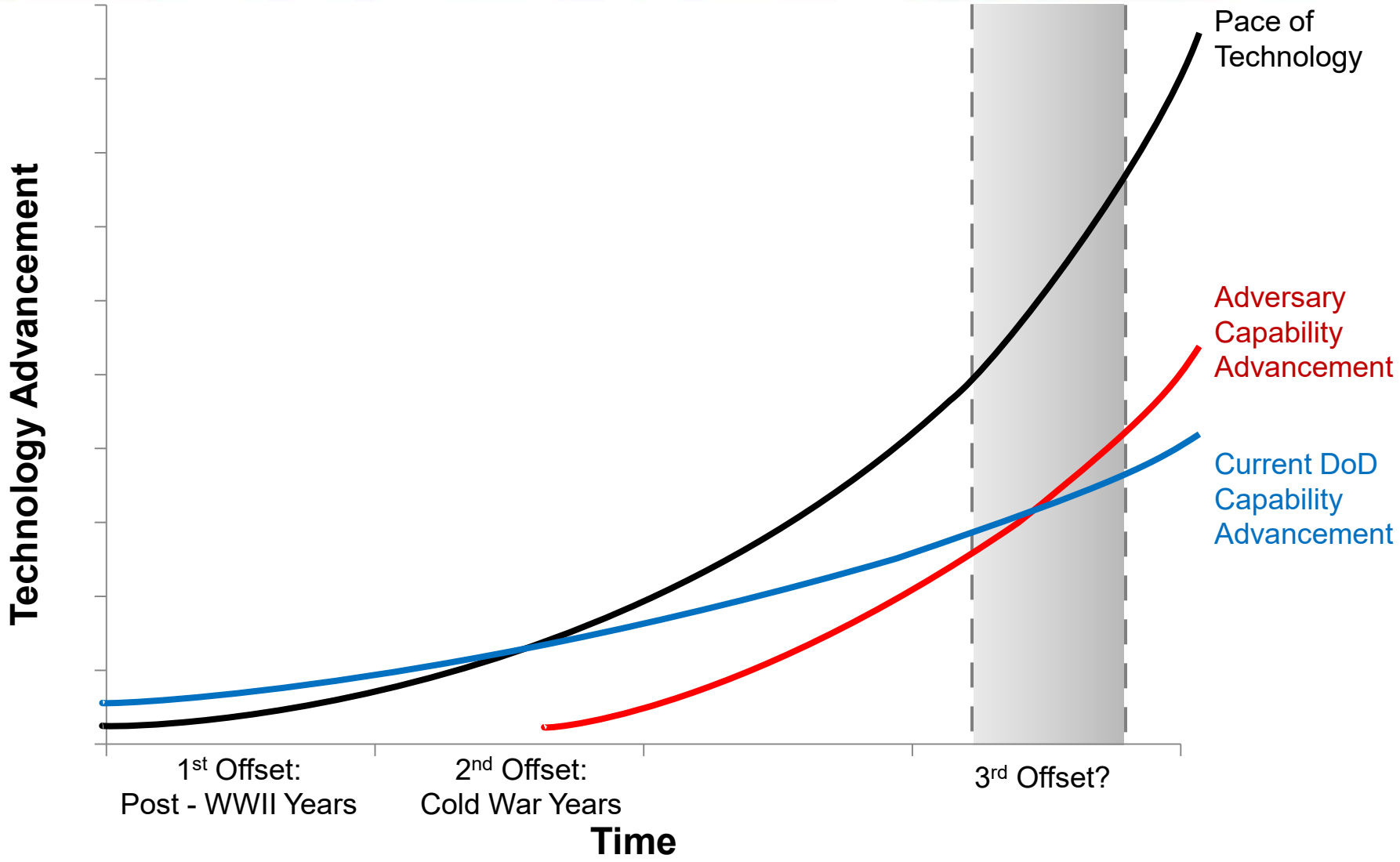


Additive Manufacturing Update

CAPT Jason Bridges, USN
OPNAV N41
Col Howard Marotto, USMC
DC I&L (LPV3) HQMC

Why Innovate?
A Technology Imperative

Timeline of Defense Department Rate of Advancement



Why Innovate?
An Offset Imperative

Timeline of Defense Department Strategic Offsets

First Offset

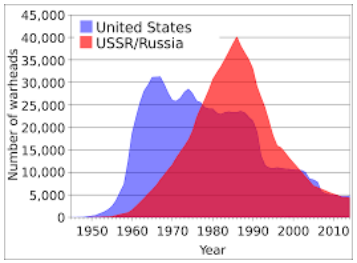
Nuclear Weapons

Purpose: Deter the Soviets
What: Support reduction in overall defense spending

1950s







Second Offset

Stealth & Precision Guided Weapons

Purpose: Strike Anywhere, Anytime
What: Stealth, GPS, Laser-guided weapons with unmatched accuracy and standoff

1970s

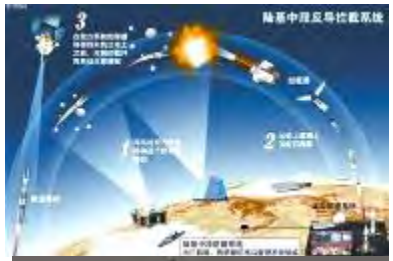




Third Offset

Manned-Unmanned Teams
Purpose: Seize emergent tech domains
What: **Sustainment,** Effectors, Sensors, C3I (Robotics, UxS, Autonomy, Big Data, Additive Manufacturing)

2015+











AM Warfighting Benefits

Warfighting Benefits	How
More effective & lethal platforms	Lattice structures Multi-functional materials Embedded sensors and components
Tailored solutions for the mission and warfighter	Armor Weapons/Munitions Medical implants and surgical tools Unmanned systems Platform components
New era of supply chain independence	Improved field fabrication “Good enough” parts Environment-independent printers
Reduced sustainment costs & increased responsiveness	Consolidated assemblies Rapid reverse-engineering Support of depot and maintenanc operations
Accelerated capability development	Rapid prototyping Urgent need response Warfighter prototyping



AM is a critical enabling capability that has potential to revolutionize the supply chain and support technologies that will comprise our future Offset

Naval AM Vision

Expeditionary Goals: Reduce stockpile of spares, leverage critical nodes in Supply Chain, decrease Supply Chain complexity

Revolutionary New Capabilities



5. Advanced Additive-Enabled Systems

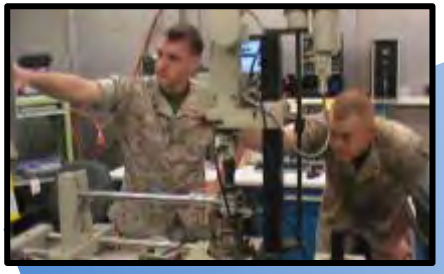
Printing the "Iron Mountain"



3. Supply Chain Reduction

4. Expeditionary Manufacturing & Repair





1. In-Field Fabrication

2. Obsolescent Manufacture & Repair



Evolutionary Improvements In Equipment Readiness

Enduring Themes:

- Digital Infrastructure
- Qualification/Certification
- Dept of Defense Policy
- Industry Business Model
- Workforce Training



NDIA Briefing: Expeditionary Medicine

25 October 2017

Dr. Patrick Mason, SES
Department Head, Warfighter Performance

DISTRIBUTION STATEMENT A. Approved for public release. ONR Case: 43-3309-17

Research Areas of Interest

Blast Effects



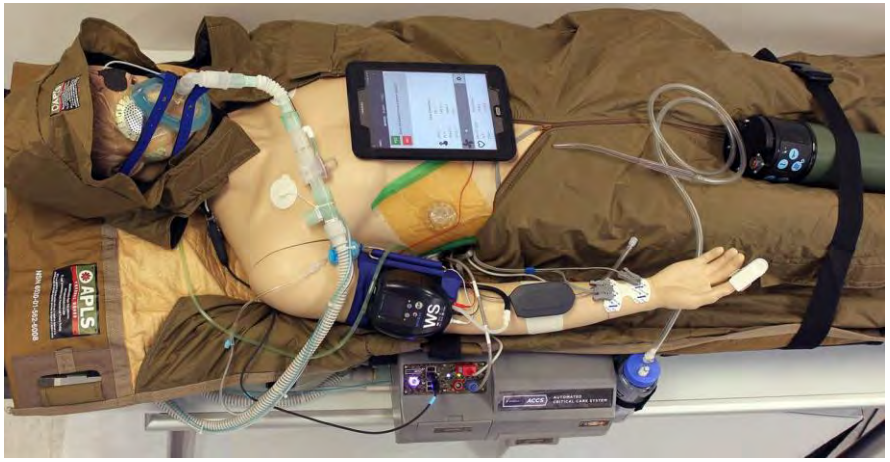
Treatment



Patient Movement



Medical Devices

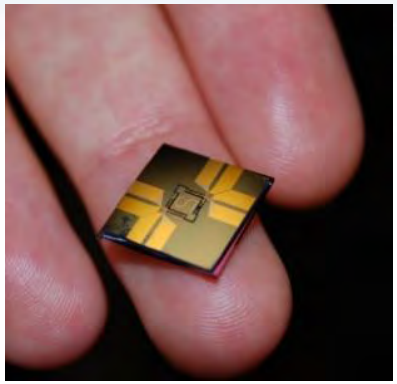


DISTRIBUTION STATEMENT A. Approved for public release.

Medical Devices in Development by ONR

Blast Load Assessment: Sense and Test (BLAST)

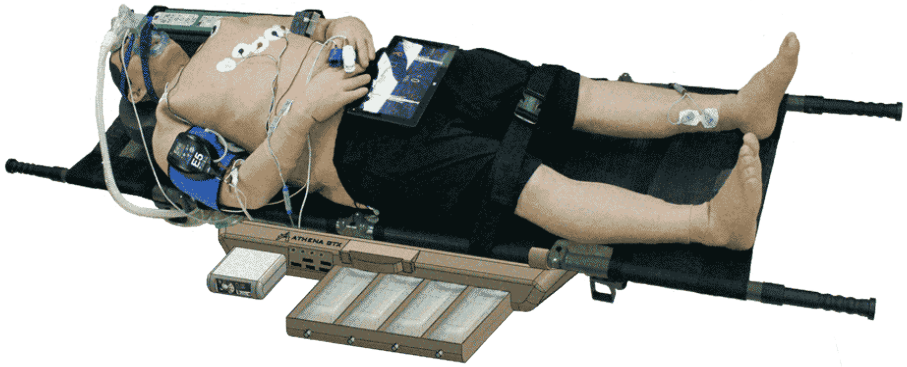




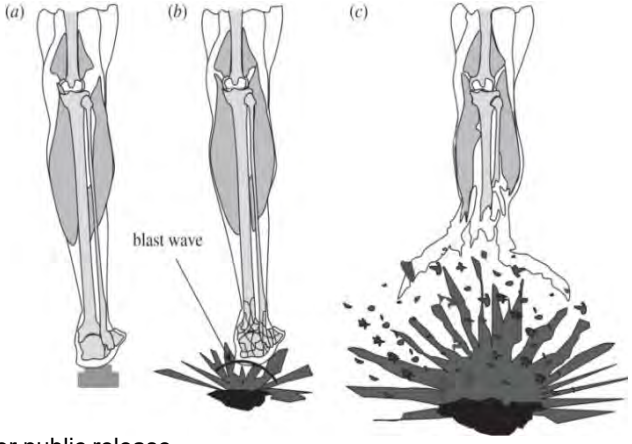
Saving lives with Emergency Perfluoro- carbons in the Field (Land)



Automated Critical Care System (ACCS)



Acute Care Cover for Severely Injured Limbs (ACCSIL)



DISTRIBUTION STATEMENT A. Approved for public release.

Medical Response Capabilities Involved in CASEVAC



DISTRIBUTION STATEMENT A. Approved for public release.

Opportunities

BAA

Broad Agency Announcements

- This is the primary mechanism for proposal submission
- The Long Range BAA : FY18 Long Range Broad Agency Announcement (BAA) for Navy and Marine Corps Science and Technology N00014-18-S-B001
http://www.onr.navy.mil/en/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx

RFI
RFP
RFQ

Request for Information/Proposal/Quote

- RFI – A request soliciting information on a given topic
- RFP – A request soliciting proposals on a given topic
- RFQ – A request soliciting quotes (e.g. pricing estimates) for a given topic
- Special Notices – Provide information about Industry Days or other events that may be relevant to a given opportunity

https://www.onr.navy.mil/en/Contracts-Grants/Funding-Opportunities

SBIR
STTR

Small Business Innovative Research

- Early stage R&D funding direct to small technology companies

Small Business Technology Transfer

- Early stage R&D funding direct to small technology companies working cooperatively with Universities

http://www.navysbir.com

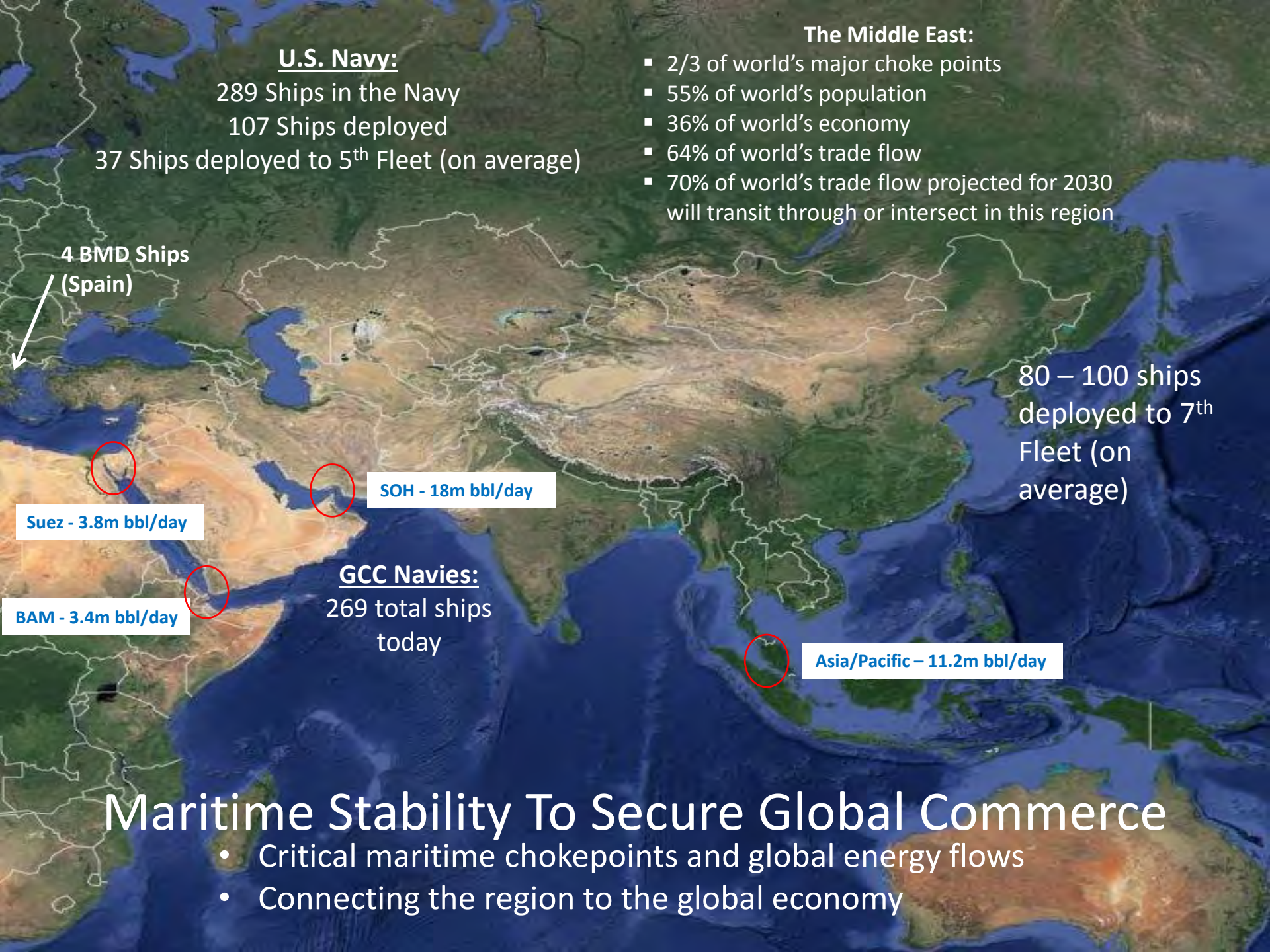
DISTRIBUTION STATEMENT A. Approved for public release.

Mine Warfare in a Contested Environment

VADM John W. “Fozzie” Miller, USN (Ret)

THE FOZZIE MILLER GROUP


Iran's "Stacked Threat"
Strategic sites
Iranian naval base
Tanker terminal
Ballistic Missiles: Continued improvements and increasing range
Cruise Missiles: Expanding inventory of advanced indigenous mobile missiles
Combat Aircraft / Air Defense: Active patrols, FIR claims out into Gulf
Fast Attack Craft: Patrol Boats, Anti-ship Missiles
Fast Inshore Attack Craft: Thousands, small boats RPGs / machine guns
Submarines: Multiple types, domestic
Mines: 5,000 advanced, domestic
IRAQ
Abadan
Bander-e Mahshahar
Bander-e Khomeini
KUWAIT
Al Jahra
Kuwait
Al Ahmadi
Kharg Island
Bushehr
IRAN
INTERSTATE 95
75-mile missile range
180-mile missile range
US 5th Fleet headquarters
Manama
BAHRAIN
QATAR
Doha
SAUDI ARABIA
Abu Dhab
0
100
MILES
Washington Post


U.S. Navy:
289 Ships in the Navy
107 Ships deployed
37 Ships deployed to 5th Fleet (on average)
The Middle East:
2/3 of world's major choke points
55% of world's population
36% of world's economy
64% of world's trade flow
70% of world's trade flow projected for 2030 will transit through or intersect in this region
4 BMD Ships (Spain)
80 – 100 ships deployed to 7th Fleet (on average)
SOH - 18m bbl/day
Suez - 3.8m bbl/day
BAM - 3.4m bbl/day
GCC Navies:
269 total ships today
Asia/Pacific – 11.2m bbl/day
Maritime Stability To Secure Global Commerce
Critical maritime chokepoints and global energy flows
Connecting the region to the global economy

Distributed Expeditionary Operations in a Contracted Environment

- Distributed logistics and support
- Lack of traditional safe havens
- Redundancy to ensure operational success
- Consideration of the “Electronic/Cyber environments”

- Total Force Planning and Ops
- Kinetic/non-kinetic elements of power
- Coalitions/partners; unity of effort
- Protection of the support/sustainment enterprise, cyber / business reform



Mine Countermeasures Update

October 2017

RADM John Neagley
Program Executive Officer
Littoral Combat Ships



PEO LCS Portfolio



In-Service Support (Ships & Mission Packages)





LCS 1



LCS 2

Saudi Naval Expansion Program (SNEP)





LCS Training

PMS 501

PMS 525

PMS 505

PMS 406

PMS 515

PMS 420

PMS 495

PROGRAM EXECUTIVE OFFICE PEO LCS ASSURED ACCESS LITTORAL COMBAT SHIPS

Frigate (FFG(X))



ASW Mission Pkg



Comms



SUW Mission Pkg



Software



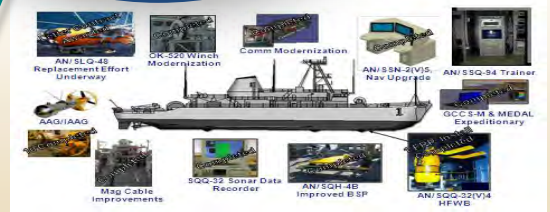
Fire Scout



MH-60 Helo



MCM Mission Pkg



LEGACY MCM SYSTEMS



XLUUV / AUP

XLUUV



AQS-20



LDUUV



KNIFEFISH



MHUs



MCM USV



UISS



MEDAL



AMNS



ALMDS

PEO LCS SUMMARY

- 2 – ACAT I
- 3 – ACAT II
- 3 – ACAT III
- 1 – ACAT IV
- 6 – Pre-ACAT
- 10 – Non ACAT

- Barracuda
- Clandestine Delivered Mine
- COBRA
- NAVITTAR
- Quickstrike

Airborne Laser Mine Detection System (ALMDS)



Distribution Statement A: Approved for Public Release; Distribution Unlimited.

Airborne Mine Neutralization System (AMNS)



Coastal Battlefield Reconnaissance and Analysis (COBRA)



MCM Unmanned Surface Vehicle (Hunting / Sweeping)



Knifefish Unmanned Undersea Vehicle



MHU Operations from USS Puller



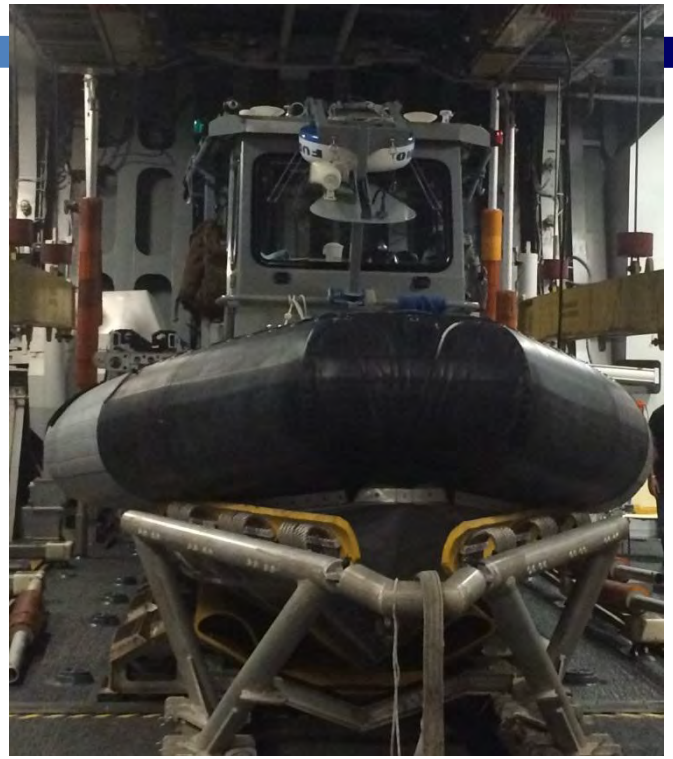






LCS 1 with ExMCM – RIMPAC 2016







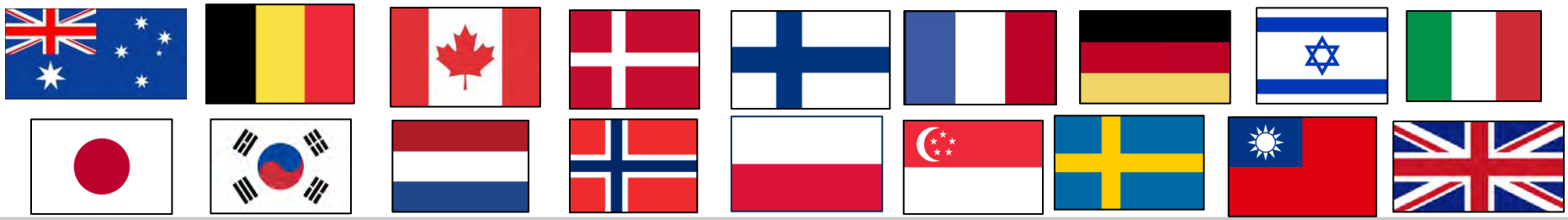


AVENGER-Class MCM



International MCM Cooperation





Questions?



Expeditionary Maneuver Warfare Department
ONR Code 30

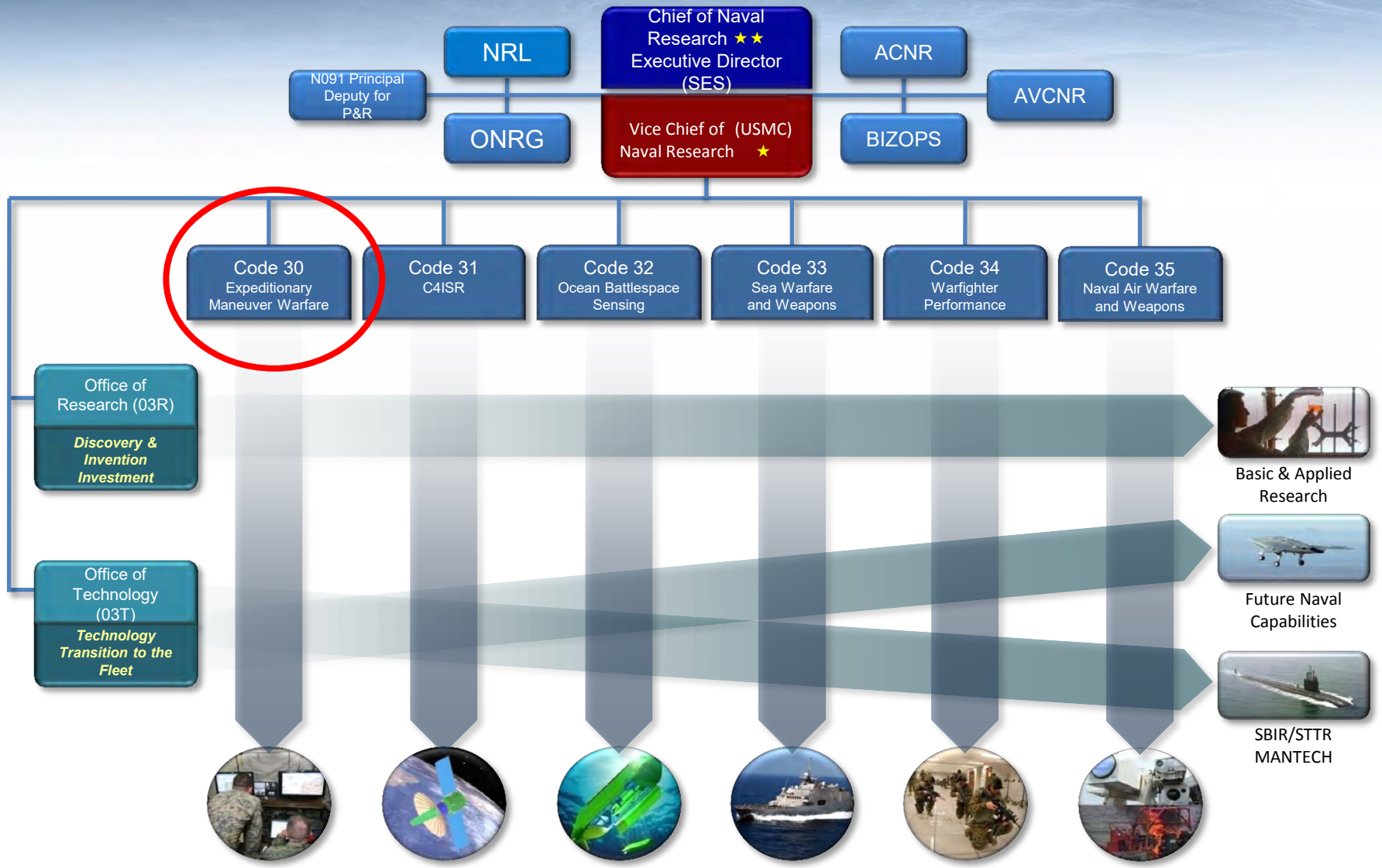
Dr. John Pazik
Department Head

Distribution Statement A: Approved for public release. Distribution is unlimited. DCN #: 43-2882-17



Distribution Statement A: Approved for public release

ONR 30: Expeditionary Maneuver Warfare



Distribution Statement A: Approved for public release. Distribution is unlimited.

USMC Components of Naval S&T

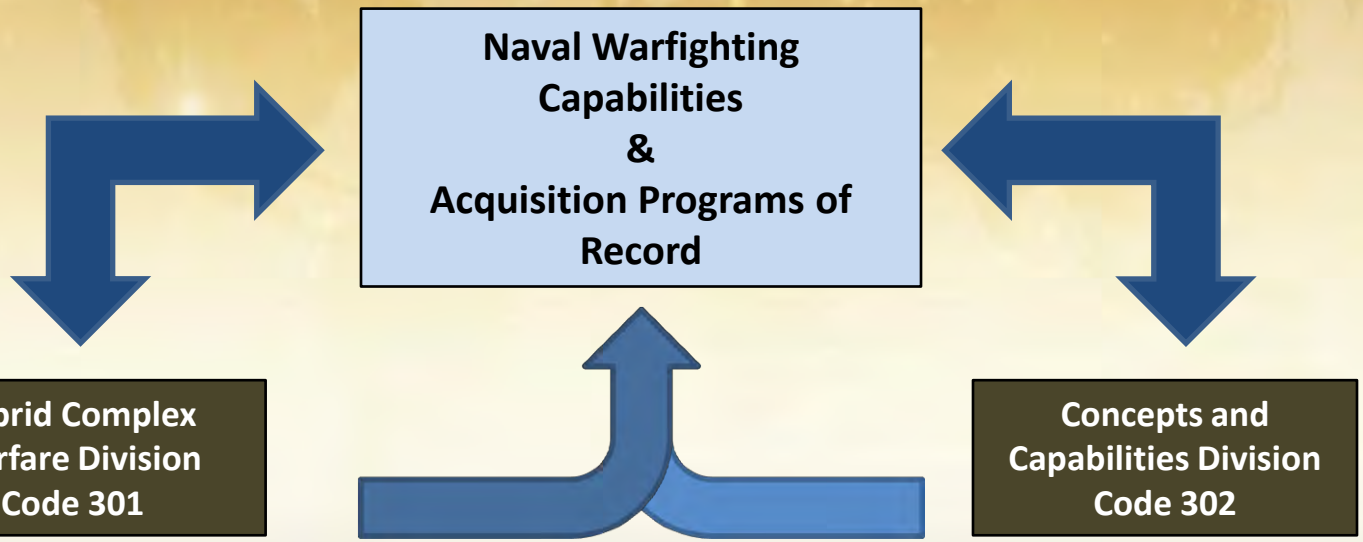
Office of Naval Research Code 30 – Manages and executes scientific research and technology development for Marine Corps to discover, develop and deliver decisive naval warfighting capabilities, by investing in a balanced portfolio of breakthrough scientific research, innovative technology and world-class people.

MCWL/FD – Identifies plausible future security environments and develops and explores warfighting concepts and CONOPS. It does this in order to identify potential future capability gaps and opportunities in order to inform future force development.

Joint Non-lethal Weapons Directorate – Leverages DoD processes consistent with the Commandant's designation as Executive Agent for the DoD NLW Program. Manages the development and maturation of technologies to produce NLW capabilities which address jointly-prioritized capability gaps for all the services.

Distribution Statement A: Approved for public release. Distribution is unlimited.

ONR 30 Expeditionary Maneuver Warfare Department



- Mechatronics
- Amphibious Hydromechanics, Counter Detection, and Protection Materials
- Advanced Electronic, Photonic, and Hybrid Sensing
- Decision Support, AI, Machine Learning, and Graph Analysis
- C4, Electronic Warfare, and Electromagnetics
- Applied and Non-linear Physics
- Manufacturing, Maintenance, and Logistics
- Energetics, GNC, Targeting, and Fire Control Technologies
- Human Performance Training and Education
- Robotics and Autonomy
- Cyber Physical Systems
- System of Systems Engineering, Modeling, and Simulation

- Logistics
- Fires
- Force Protection
- Maneuver
- Human Performance
- C4/ISR
- Expeditionary Cyber

Distribution Statement A: Approved for public release. Distribution is unlimited.

ONR 30
Expeditionary Maneuver Warfare Department

Special Programs
Lee Mastroianni

ONR 30 Department Head
Dr. John Pazik (SES)

ONR 30 MILDEP
Col William Bentley

Business & Finance Manager
Sri Prithvi

Administrative Officer
Demetrice McKoy

Hybrid Complex Warfare Division
Dr. Paul Zablocky (SES)

Expeditionary Cyber	– Dr. Waleed Barnawi
Mechatronics	– Jeff Bradel
Amphibious Hydromechanics, Counter Detection, and Protection Materials	– Troy Hendricks
Advanced Electronic, Photonic, and Hybrid Sensing	– Dr. Joong Kim
Decision Support, AI, Machine Learning, and Graph Analysis	– Martin Kruger
C4, Electronic Warfare, and Electromagnetics	– Dr. Dan Purdy
Robotics and Autonomy	– Dr. Michael Qin
Applied and Non-linear Physics	– Dr. Mike Shlesinger
Manufacturing, Maintenance and Logistics	– Billy Short
Energetics, GNC, Targeting, and Fire Control Technologies	– Dan Simons
Human Performance Training and Education	– Dr. Peter Squire

Concepts and Capabilities Division
Col William Bentley

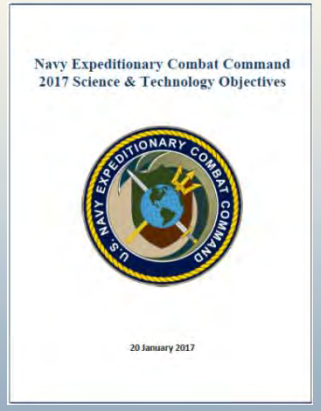
Logistics	– LtCol Robert Lingler
Fires	
Force Protection	
Maneuver	– Maj Travis Carlson
Human Performance	
C4/ISR	– Maj Thomas Haakensen
Expeditionary Cyber	

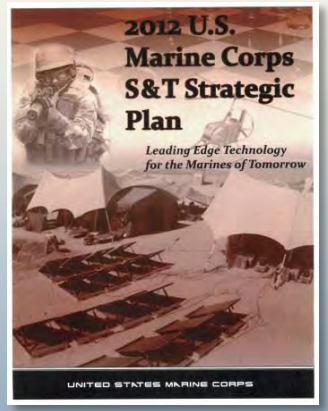
Distribution Statement A: Approved for public release. Distribution is unlimited.

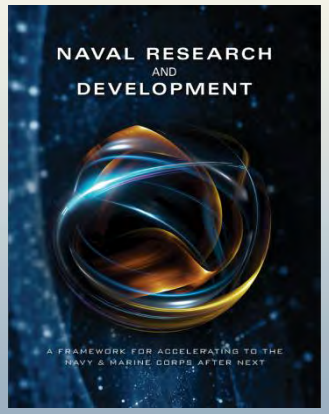
What ONR Code 30 Does and Why

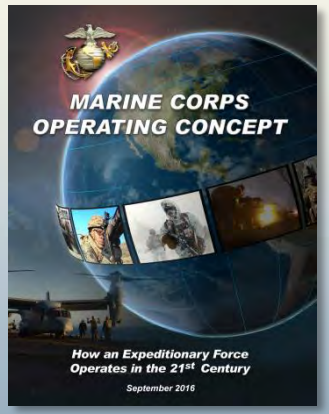
Plan, execute, and manage an integrated (6.1-6.3) portfolio of scientific research and technology development in Expeditionary Maneuver Warfare in order to provide advanced warfighting capabilities for the future Marine Corps, NSW and NECC.

- ✓ Advance state-of-the-art technology and scientific knowledge
- ✓ Expand warfighting capabilities through development and transfer of mission relevant S&T and scientific knowledge
- ✓ Inform both new operational concepts and requirements development









Distribution Statement A: Approved for public release. Distribution is unlimited.

A Guiding Vision

ALIGN

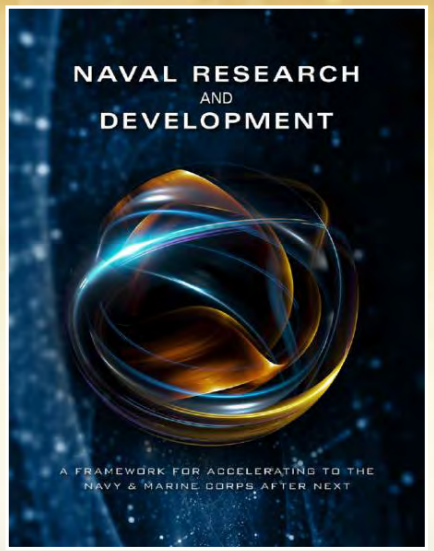
To Shared R&D Priorities

ALLOCATE

Resources to Speed Results

ACCELERATE

Technology-Enabled Capabilities





Framework Priorities

- Augmented Warfighter
- Integrated & Distributed Forces
- Operational Endurance
- Sensing & Sense-Making
- Scalable Lethality

Integrated Research Portfolios

- Amphibious Expeditionary Maneuver
- Information, Cyber, and Spectrum Superiority
- Mission Capable, Persistent, & Survivable Sea Platforms
- Aviation, Force Projection, & Integrated Defense
- Undersea Battlespace & Maritime Domain Access
- Warfighter Supremacy

We must be "First to Field Decisive Capabilities"

Distribution Statement A: Approved for public release. Distribution is unlimited.

Contested Urban Environment

Area Description

Complex terrains:

- Crowded and cluttered physical, human, communication, and informational environment
- Physical compartmentalization and additional dimensions
- Proliferation of observation and fires technologies
- Threat obscuration

Technical Approach

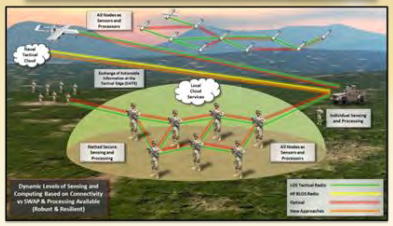
- Urban fires and weapons
- Urban mobility
- Urban communication
- Threat sensing, detection, and prevention
- Urban survivability



Distribution Statement A: Approved for public release. Distribution is unlimited.

ONR 30 – Emphasis Areas

Expeditionary Communications and Cyber

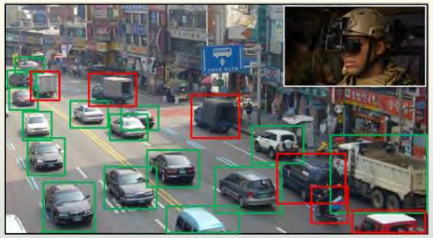




Contested Urban Environment

Cooperative Autonomy





Cognitive Advantage and Artificial Intelligence



Flexible and Scalable Effects



Amphibious Maneuver Enablers

Marine Corps Operating Concept

Design For Maintaining Naval Superiority

Next Warfighter Revolution

Information Warfare	Complex Terrain	Peer & Near-Peer Threat	Manned Unmanned Teaming	21st Century Amphibious Maneuver	Next Gen Combined Arms	Warfighter Sensing and Decision Adv.	Technology Proliferation

Distribution Statement A: Approved for public release. Distribution is unlimited.

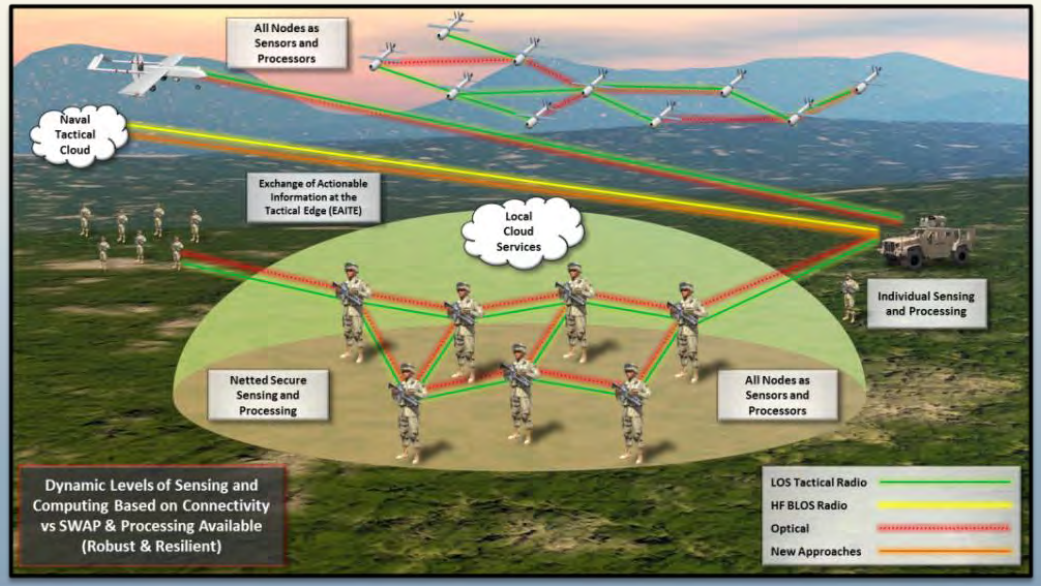
Expeditionary Communications and Cyber

Area Description

- Resilient, robust, and secure communications
- Cyber and information warfare capability
- Electromagnetic signature control and influence
- Rapidly changing network conditions amidst battle of signatures and physical movement
- Exploits close physical proximity while mitigating connectivity shortfalls

Technical Approach

- Networked and local computational availability
- Non-GPS precision, navigation, timing
- Antennas and propagation
- Communications and information theory
- Communications signal processing



Distribution Statement A: Approved for public release. Distribution is unlimited.

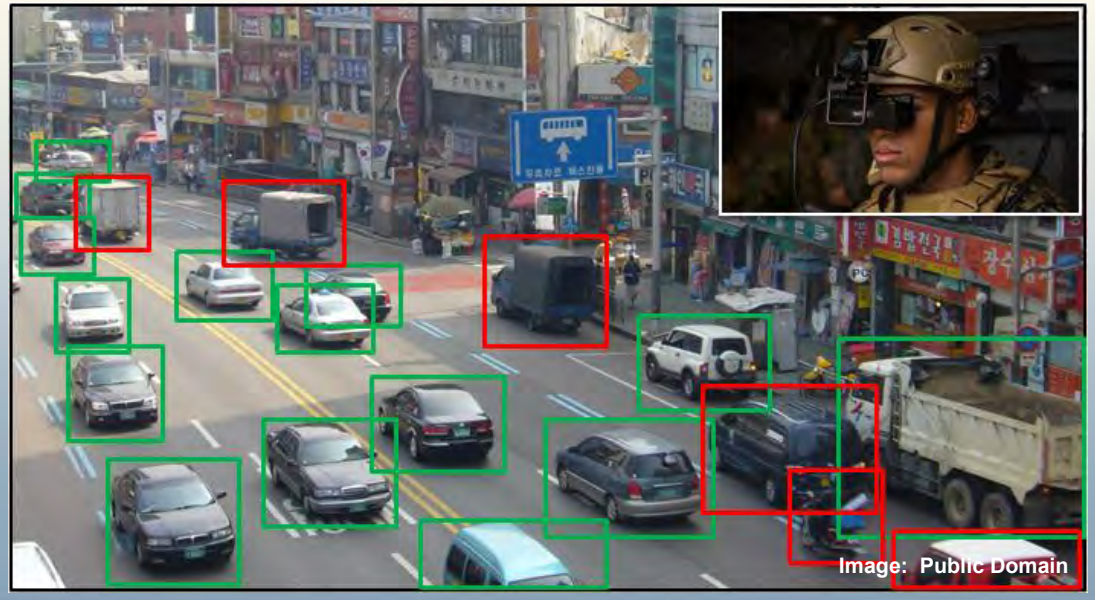
Cognitive Advantage and Artificial Intelligence

Area Description

- Meld machine intelligence and human decision making Ground warrior advanced decision support
- Enhance warfighter sensing, cognitive speed, and decision superiority
- True, rapid, all-source data fusion
- Knowledge products delivered to the warfighter with real world context

Technical Approach

- Data science and analytics
- Image classification
- On-board processing
- Augmented Reality
- Visual attention models



Distribution Statement A: Approved for public release. Distribution is unlimited.

Flexible and Scalable Effects

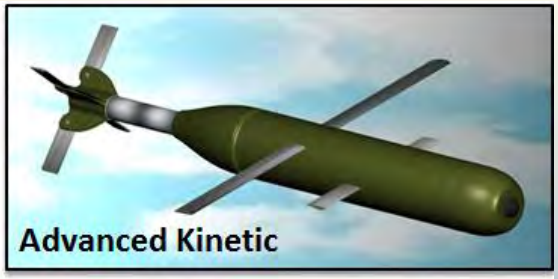
Area Description

- Combined arms warfare against peer states in complex denied and degraded environments
- Increase precision, range, lethality, and magazine capacity against advanced threats
- Retaining mobility and tempo
- Leverage information warfare to enhance combined arms and weapons targeting, guidance, and effects

Technical Approach

- Long range precision
- Directed energy
- Guidance and controls
- Weapons energetics
- Low signature weapons
- Electronic warfare







Distribution Statement A: Approved for public release. Distribution is unlimited.

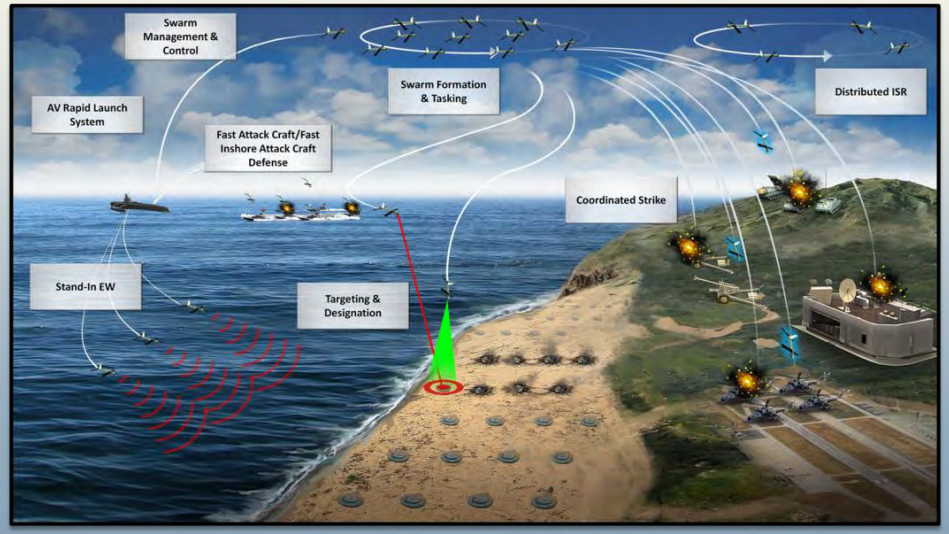
Cooperative Autonomy

Area Description

- Extend reach, increase mass and quantity, and augment the capability of expeditionary forces
- Allow penetration of environments too dangerous for manned systems
- Retain capability despite combat losses with automatic and flexible unmanned adjustment
- Disperse capabilities associated with traditional capital assets

Technical Approach

- Low cost ground, air, and amphibious autonomous systems
- Distributed, collaborative, coordinated and cognitive autonomy
- Autonomous sensing, obstacle detection and path planning
- Unmanned C4 and control theory
- Manned-unmanned teaming



Distribution Statement A: Approved for public release. Distribution is unlimited.

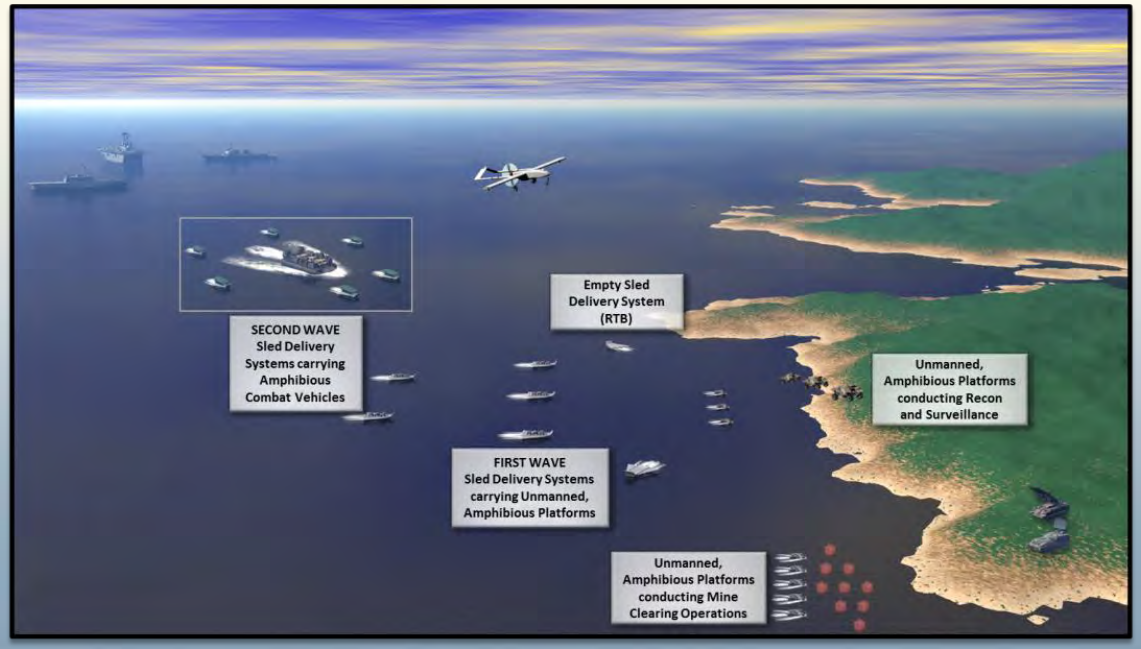
Amphibious Maneuver Enablers

Area Description

- Land forces and material through contested sea-land interfaces
- Address the time, space, force, and information dynamics of amphibious assaults
- Improve individual vehicle capability and expand viable mission scope

Technical Approach

- Novel platform design
- Improved hydrodynamics
- Multi-mission payloads, packages, and sensors
- Passive and active protection
- Signature management



Distribution Statement A: Approved for public release. Distribution is unlimited.

Important…but not a Priority





Area Description

- Human performance
- Sustainment and maintenance
- Power and energy
- Threat detection and defeat

Technical Approach (examples)

- Chemical sensing
- Acoustic detection
- Pre-shot threat detection
- Advanced coatings for vehicles
- Vehicle health and diagnostics
- Warfighter training methodologies
- Injury prediction models
- Hybridization of energy production, storage, and distribution
- Novel photovoltaic technologies

Distribution Statement A: Approved for public release. Distribution is unlimited.

Technology Concept Demonstration & Experimentation

- S&T efforts derived from USMC guidance documents, warfighter perspectives, and opportunity push
- Looking for opportunities to experiment
  - Less mature technologies
  - New concepts with S&T rather than Off-the-shelf
  - Rapid innovation, prototyping, and demonstration
  - Quick tempo teams of warfighters, labs, and industry
- **Planned experimentations for 2017/18**
  - **Expeditionary Communications and Cyber**
  - **Flexible and Scalable Effects**
  - **Cognitive Advantage**

Distribution Statement A: Approved for public release. Distribution is unlimited.

Creating the Future… Delivering Today





ONR Public Website:
https://www.onr.navy.mil/

ONR Public Website, Broad Agency Announcements:
https://www.onr.navy.mil/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx

- 2017 Long-Range Broad Agency Announcement for Navy and Marine Corps Science and Technology is BAA 17-001.

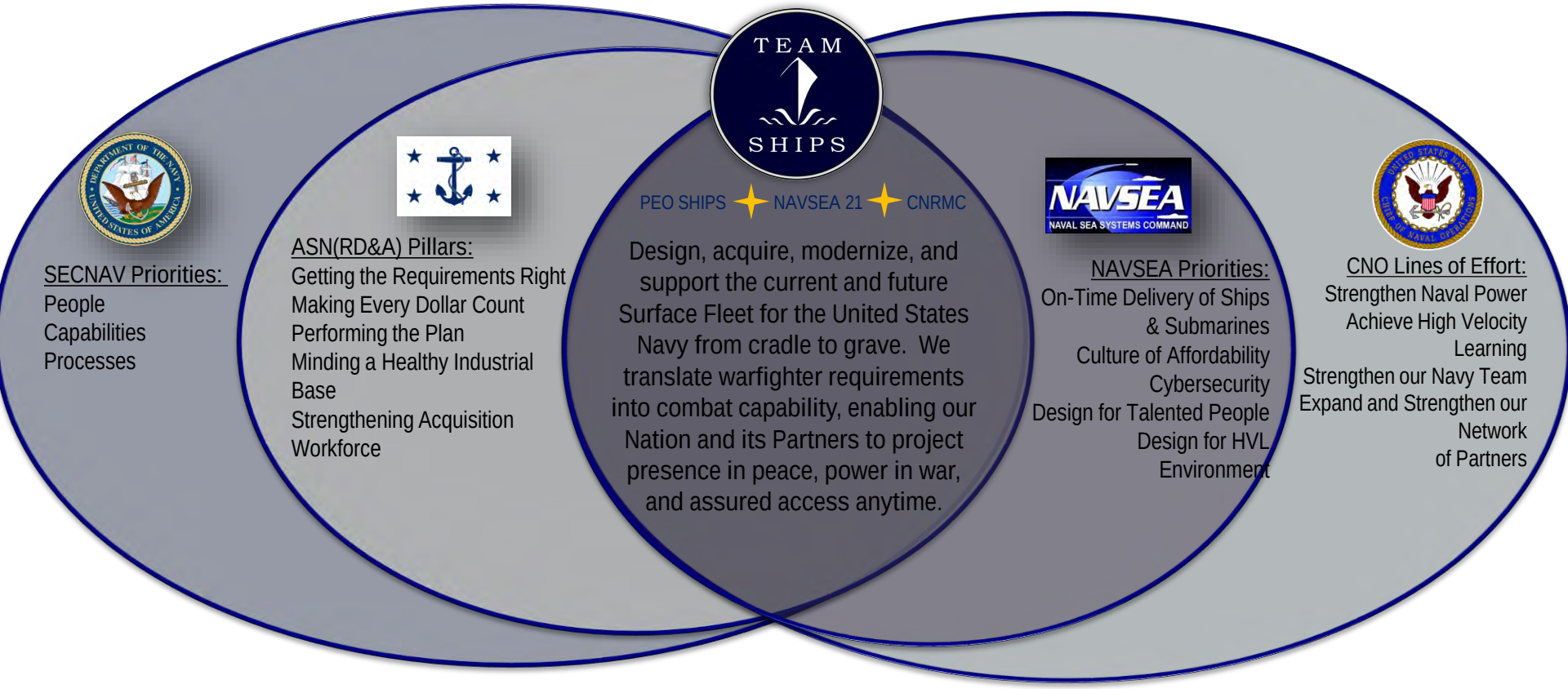
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Expeditionary Warfare Conference

Rear Admiral Bill Galinis
Program Executive Officer, Ships

October 26, 2017

Strategic Alignment



PEO Ships Portfolio

7 ACAT I, 2 ACAT II, 5 ACAT III, 1 ACAT IV, 30 NON-ACAT, FMS
$74B managed through FYDP including backlog





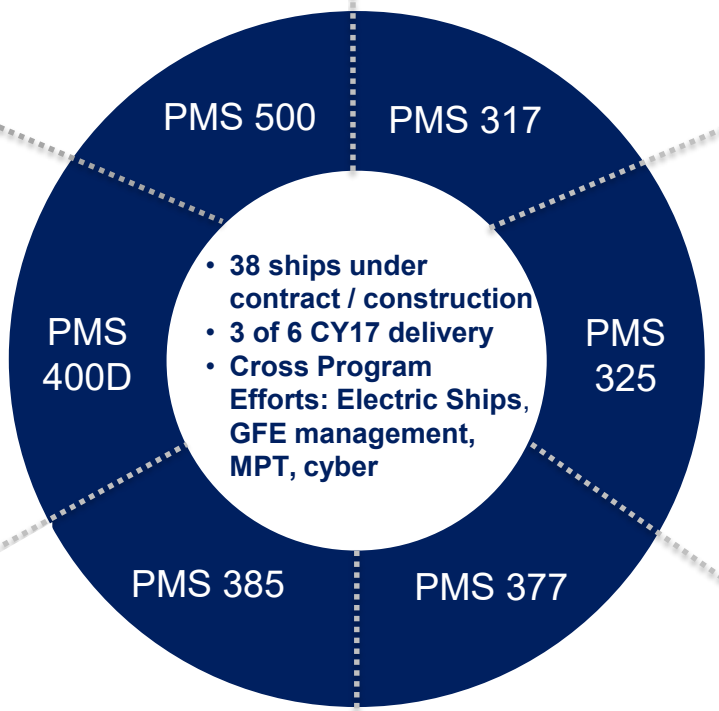

DDG 1000

LPD 17, LX(R)









DDG 51
FLT IIA /
FLT III

T-AO 205,
T-AGS 66,
T-ATS, PB(X)
AGOR, AS
T-AGOS,
APL, Boats,
Craft, FMS

EPF, ESB

LHA(R), SSC,
LCU 1700, LCAC, AADS



Expeditionary Warfare Conference

Colonel Samuel Mowery
United States Marine Corps
Team Ships Senior Advisor

October 26, 2017

Senior Marine Advisor to TEAM SHIPS

- Naval Expeditionary Warfare Engineering Integrated Product Team (NExWE IPT) forum recent topics:
  - Lithium ion battery storage, use, and charging
  - F-35 integration
    - Special Access Program facility
    - Thermal spray nonskid (also an MV-22 issue)
    - Training simulators (also an AV-8B issue)
  - Weapons storage
- Working on the packaging (bundling) of ship alterations and change designs to maximize work completed during avail periods

"Marines must prepare to 'fight to get to the fight.'"
--General Neller at 2017 Modern Day Marine

PMS 385
Strategic and Theater Sealift Program Office

Expeditionary Warfare Conference
October 26, 2017

Mr. Clif Mitchell
Deputy Program Manager

Delivering Ships

Expeditionary Fast Transport - EPF

(formerly JHSV)

Ship Name	Delivery Date
EPF 1	
USNS SPEARHEAD	5 Dec 12
EPF 2	
USNS CHOCTAW COUNTY	6 Jun 13
EPF 3	
USNS MILLNOCKET	21 Mar 14
EPF 4	
USNS FALL RIVER	15 Sep 14
EPF 5	
USNS TRENTON	13 Apr 15
EPF 6	
USNS BRUNSWICK	14 Jan 16
EPF 7	
USNS CARSON CITY	24 Jun 16
EPF 8	
USNS YUMA	21 Apr 17



Expeditionary Transfer Dock - ESD

(formerly MLP)

Ship Name	Delivery Date
ESD 1	
USNS MONTFORD POINT	14 May 13
ESD 2	
USNS JOHN GLENN	12 Mar 14

Expeditionary Sea Base - ESB

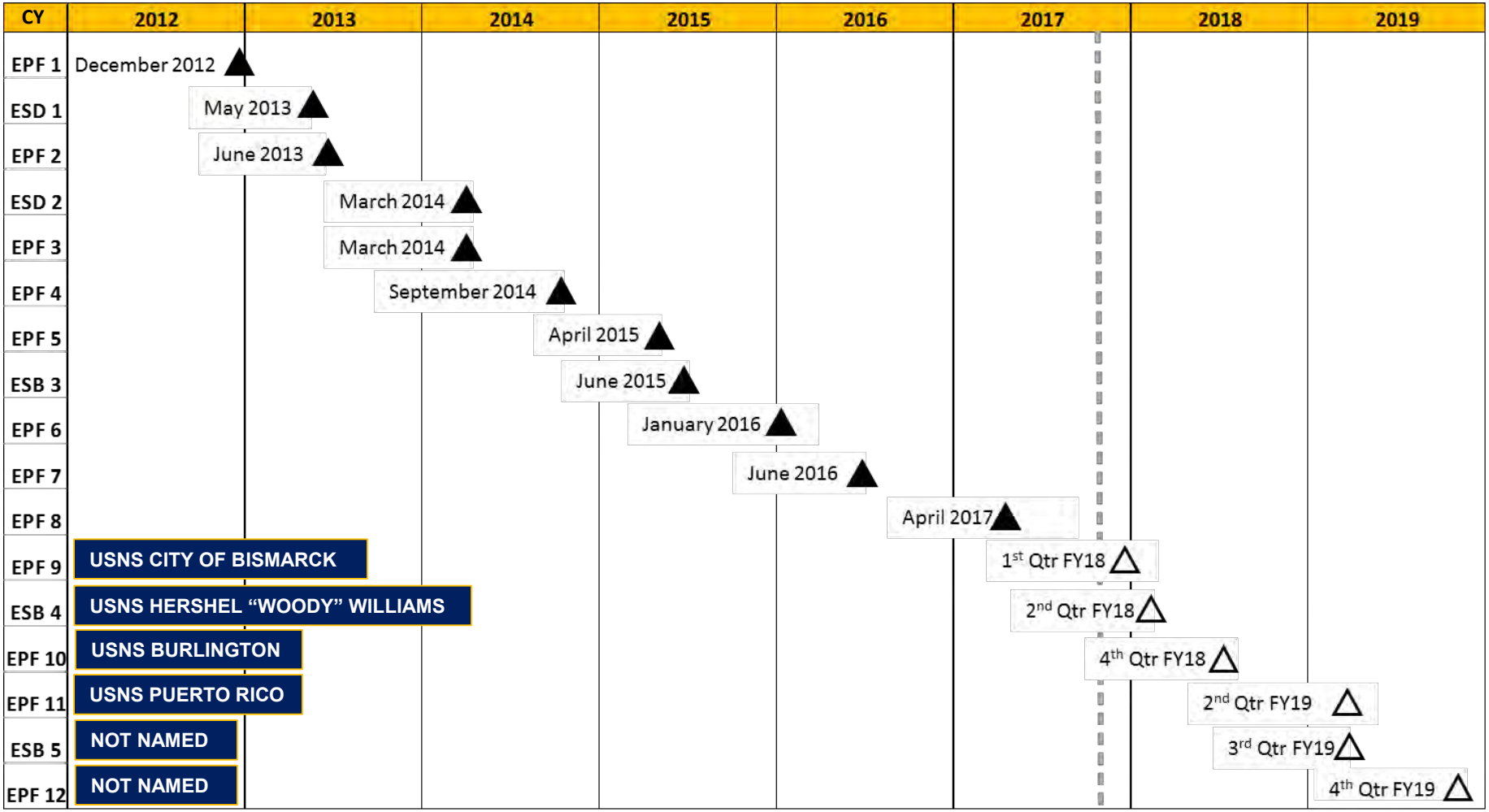
(formerly MLP AFSB)

Ship Name	Delivery Date
ESB 3	
USNS LEWIS B. PULLER	12 Jun 15
Commissioned USS	17 Aug 17

It's All About Ships

PMS 385 has delivered 10 Battle Force ships in less than 4 years

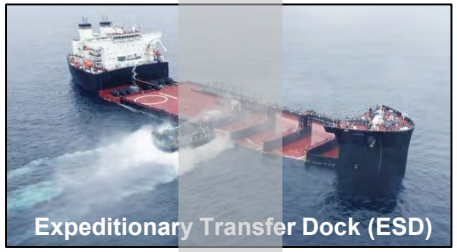
Delivery Schedule

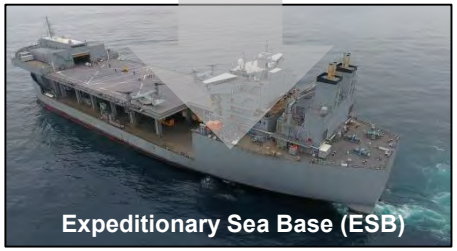


Accelerated Acquisition – USS LEWIS B. PULLER (ESB 3)


British Petroleum Tanker

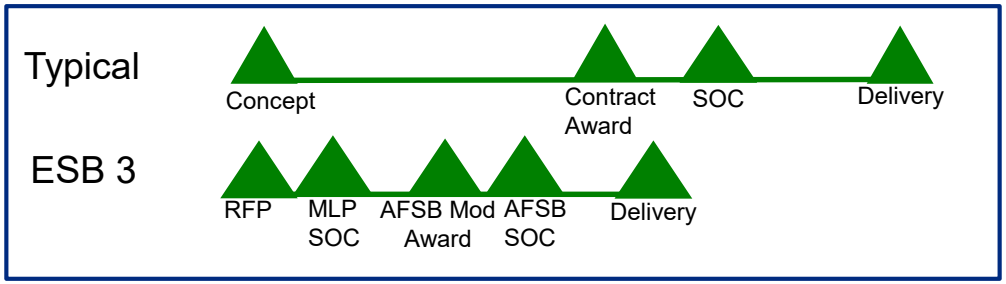

Mobile Landing Platform (MLP)


Expeditionary Transfer Dock (ESD)


Expeditionary Sea Base (ESB)

Fast Tracked Capabilities Implementation

• Awarded MLP 3 DD&C to NASSCO	Feb 2012
• MLP 3 SOC	Feb 2013
• MLP AFSB CDD JROC Approved	Mar 2013
• AFSB Mod Design Award	Jun 2013
• AFSB Mod SOC	Mar 2014
• ESB 3 (MLP AFSB) Delivered	Jun 2015
• SOF Modification Installation Start	Oct 2016
• Post PSA/SOF Backfit Test and Trials	Apr 2017
• ESB 3 Forward Deployed	Jul 2017
• ESB 3 USNS to USS Conversion	Aug 2017

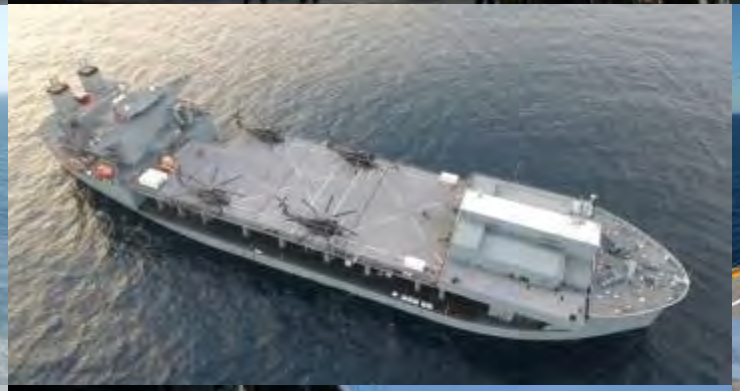


From AFSB Concept Approval to Capability Delivery into the Fleet – 4 years

USS LEWIS B. PULLER (ESB 3)
Ready for Fleet Tasking











USNS LEWIS B. PULLER sailed away 10 July 2017; commissioned USS 17 August 2017

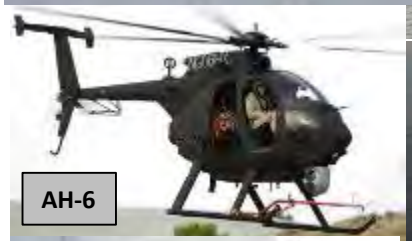
ESB SOF Backfit Capabilities

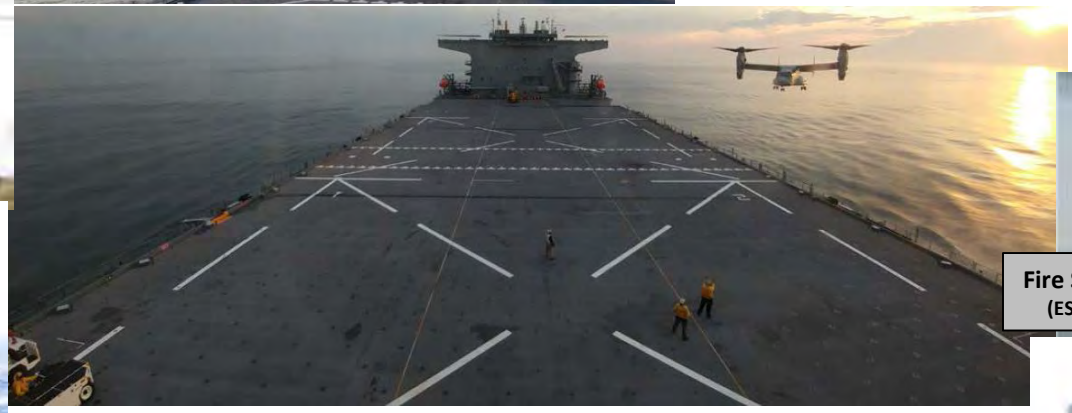

CH-47


MH-60


MV-22


Blackjack

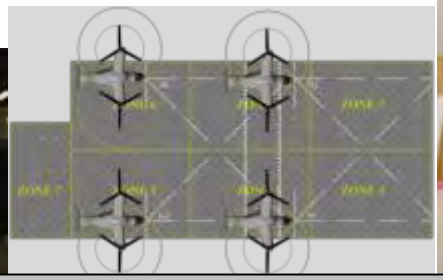

AH-6

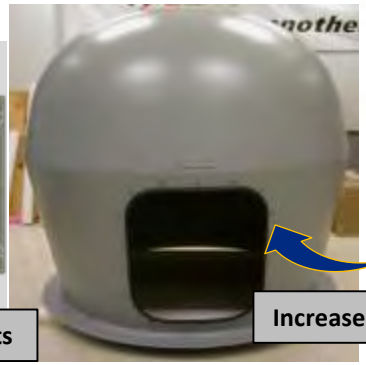



Fire Scout
(ESB 4)


MOGAS


TEU Slots/Services

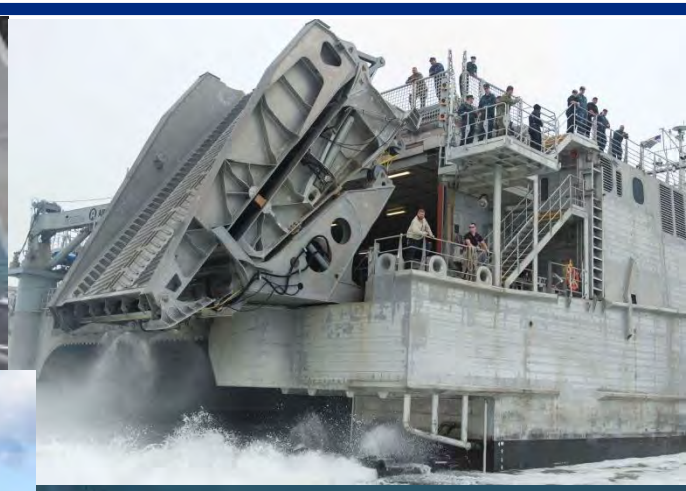

4 - Level 1/Class 2 Aviation Operating Spots



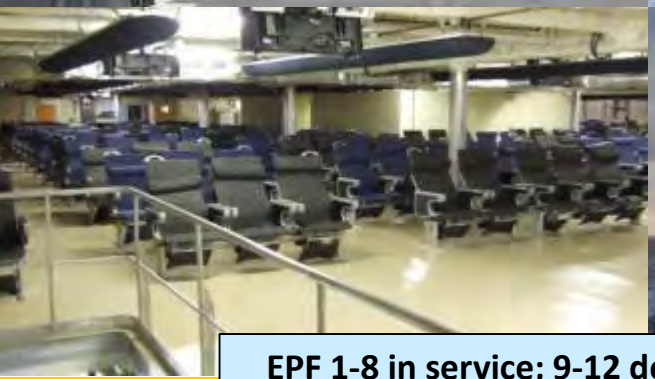

Increased Bandwidth

Expeditionary Fast Transport – EPF in the Fleet







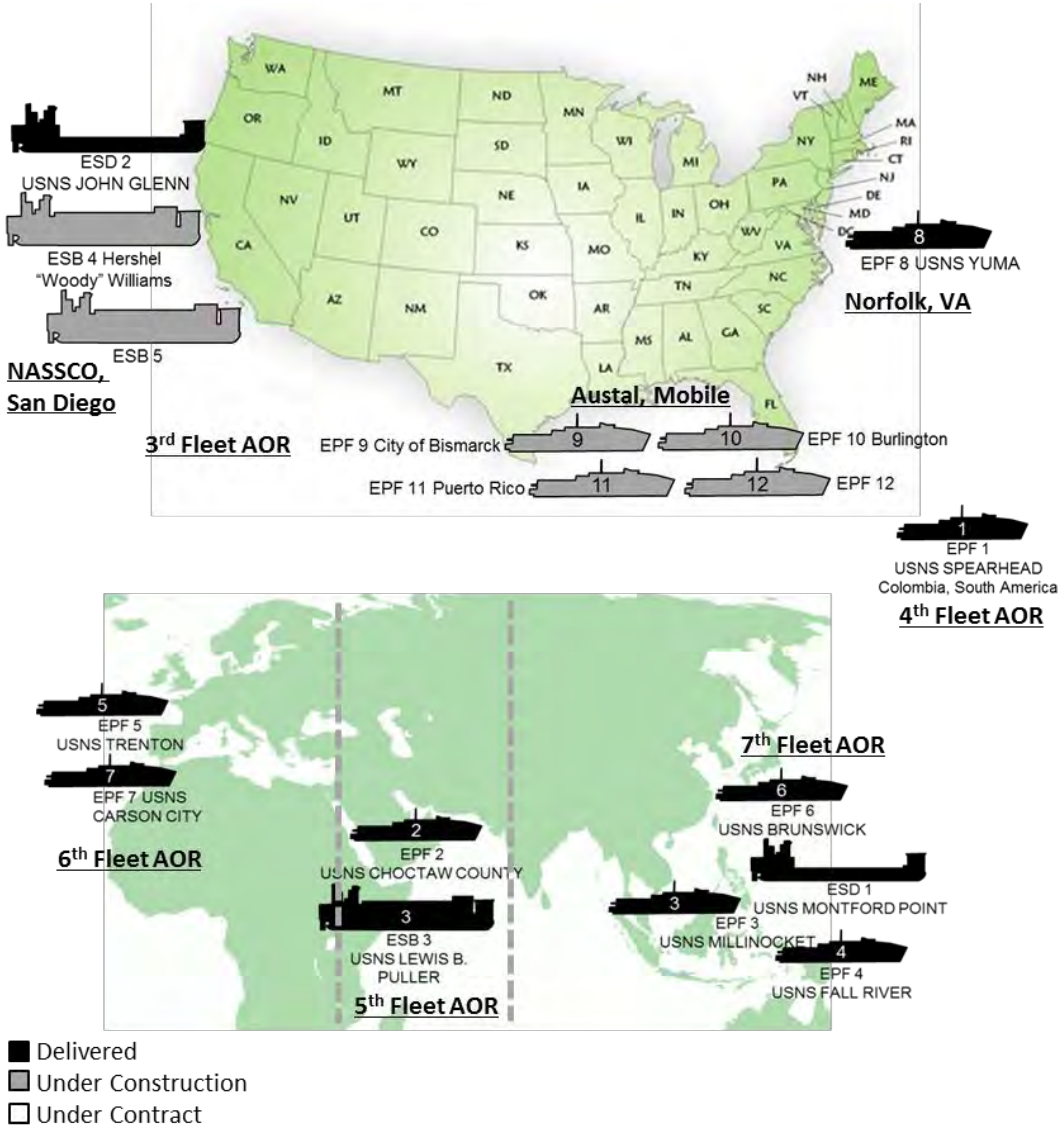




EPF 1-8 in service; 9-12 deliveries planned every 8 months (EPF 11/12 awarded Sept 2016)

DISTRIBUTION STATEMENT A: Approved for Public Release; Distribution is Unlimited

PMS 385 Ships Around the World



Navy Exercising Flexibility in Support of Additional Missions:

- Intelligence, Surveillance and Reconnaissance
- Humanitarian Assistance/Disaster Relief
- Theater Security Cooperation
- SOF Support
- Counter-Piracy Operations
- Mine Countermeasure Ops
- Counter- Illicit Trafficking

… and more

LPD 17 / LX(R) Shipbuilding Programs





October 26, 2017

National Defense Industrial Association

22nd Expeditionary Warfare Conference

Program Manager, PMS 317

CAPT Brian Metcalf

DISTRIBUTION STATEMENT A: Approved for public release

Ship Status

- LPD 26 – USS John P. Murtha
  - Finish PSA/OWLD Feb 2018
  - Deploys 2019
- LPD 27 – Portland
  - Delivered Sep 2017
  - Sailaway to SDGO Dec 2017
  - Commissioning Apr 2018
  - PSA Winter 2018-2019
- LPD 28 – Fort Lauderdale
  - ~8% complete, Keel Ceremony Oct 2017
  - Delivers Sep 2021
- LPD 29 – TBD
  - In negotiations, Award DEC 2017
  - First steel cut, Delivers ~ 2023







DISTRIBUTION STATEMENT A: Approved for public release

Capability Transition

LPD 17-27



LPD 28 & LPD 29 – Comply with LPD ORD



LX(R) – Comply with LXR CDD



DISTRIBUTION STATEMENT A: Approved for public release

HM&E Comparison

Components	LPD 17	LPD 28/29	LX(R)
Main Propulsion Diesel Engines	Traditional Governor MPDE air shutoff Detached MPDE LO Pumps	Common rail fuel injection (29) MPDE air shutoff not required (29) Attached MPDE LO Pumps (29)	
Aviation and Well Deck Cranes	Folding Boom crane (flight deck) Well Deck Bridge crane (well deck)	Mobile crane (flight deck) Mobile crane (well deck)	
Small Boats	Legacy Arrangement Crane not CCA capable Rescue Boat Pocket Calley Davit	Larger Boat Valley Crane not CCA capable Rescue Boat Pocket Calley Davit	Relocated / higher capacity crane with longer outreach – CCA capable No Rescue Boat Pocket Navy Standard Davit
MOGAS rack	Legacy Design	Legacy Design	Redesign (fusible link) and relocation
Li-Ion Facility	Not incorporated	Not incorporated	Incorporated
Troop + Surge	699 + 101	650 + 0	552 + 78
Well Deck	None implemented	Ramp modification for SSC New line up markings Removed 400 Hz LCAC Power Connection	

DISTRIBUTION STATEMENT A: Approved for public release

HM&E Comparison

Components	LPD 17	LPD 28/29	LX(R)
SSDGs	5	4	
AC Plants	LPD 17-25: 7x 200 Ton LPD 26-27: 3x 200 Ton 2x 375 Ton (HES-C)	3x 375 Ton (HES-C)	
RO	3	2	
DBAC	3	2	
Stern Gate Actuation	Hydraulic	Electric	
Vehicle Square	24,600 sq ft	20,900 sq ft	
Cargo Cube	34,000 cu ft	28,000 cu ft	
JP-5 Capacity	310,000 gal	360,000 gal	310,000 gal

DISTRIBUTION STATEMENT A: Approved for public release

Combat System Comparison

Components	LPD 17	LPD 28/29	LX(R)
Command, Control, Decision	SSDS MK2 MOD 2B BFTT	SSDS MK2 MOD 2E ATD	
Weapons, EW, & Decoys	SLQ-32B(v)2 NULKA w/CHAFF S & Wt. Reservation (VLS)	SLQ-32(v)6 SEWIP Delete CHAFF Delete VLS S&W Reservation	
Radars	SPS-48G	EASR (29)	

DISTRIBUTION STATEMENT A: Approved for public release

C4I Comparison

Components	LPD 17	LPD 28/29	LX(R)
Command & Control	MOS CDLMS	MOS Mod C2PS Tech Refresh	
Networks	SWAN CENTRIX CVIS NAVSSI	CANES (Unclass, GENSER) CANES (Secret REL) CVDS/VIDS/VCR GPNTS	
Comms	HF DAG (4 DMR) DMR (9 - UHF SATCOM, UHF LOS, VHF LOS)	HF DAG (2 DMR) DMR (7 - UHF SATCOM, UHF LOS, VHF LOS) Antenna Reservation (EMUT)	Reservations (Iridium, BFT, Blackjack, ICOP)
ISR	SCI Networks SINCGARS	CANES (SCI) SINCGARS (via DMR)	
Support	TV-DTS	Antenna Reservation (TV-DTS)	

DISTRIBUTION STATEMENT A: Approved for public release

Survivability Features

Components	LPD 17	LPD 28/29	LX(R)
Counter Measure Wash Down System	Hard Piped CMWD system	Hose-clip style system utilizing existing fire main/ hose stations	
Radar Cross Section (RCS)	Full RCS features.	Stick mast. Deleted upper stern gate. Deleted Boat deck enclosures and RAM tiles.	
Collective Protection	4 zones	1 zone (safe haven concept)	
Degaussing	Advanced Degaussing System (Copper)	NexGen Advanced Degaussing System (high temp superconducting)	
Smoke Ejection System	Yes	Deleted	

DISTRIBUTION STATEMENT A: Approved for public release

NDIA Expeditionary Warfare:
Distributed Expeditionary Operations in a Contested Environment

Tom Rivers
Program Manager
26 October 2017

22nd Annual Expeditionary Warfare Conference

PMS377 Active Programs

Acquisition Responsibilities

LHA 8 (BOUGAINVILLE)



LHA 7 (TRIPOLI)



LHA 6 (USS AMERICA)



AADS

OJ-731C/KSQ Computer Workstation



Pre-Systems Acquisition ***Systems Acquisition*** ***Sustainment***

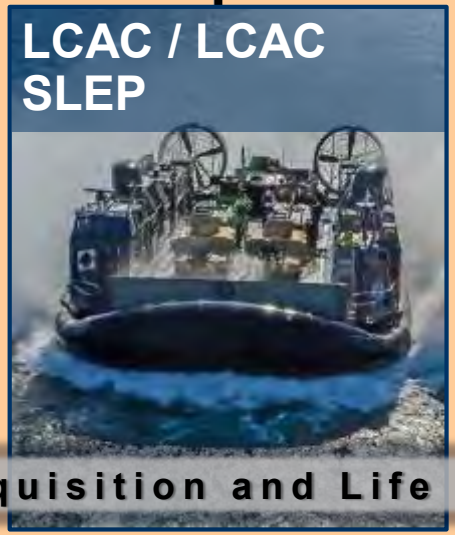
LCU 1700



SSC



LCAC / LCAC SLEP



LCU



Encompassing All Aspects of the Acquisition and Life Cycle Continuum

Distribution Statement A: Approved for Public Release.

Lift









TROOPS

Marines

CUBED

Cargo

SQUARE

Vehicles

Distribution Statement A: Approved for Public Release.

Amphibious Assault Ship

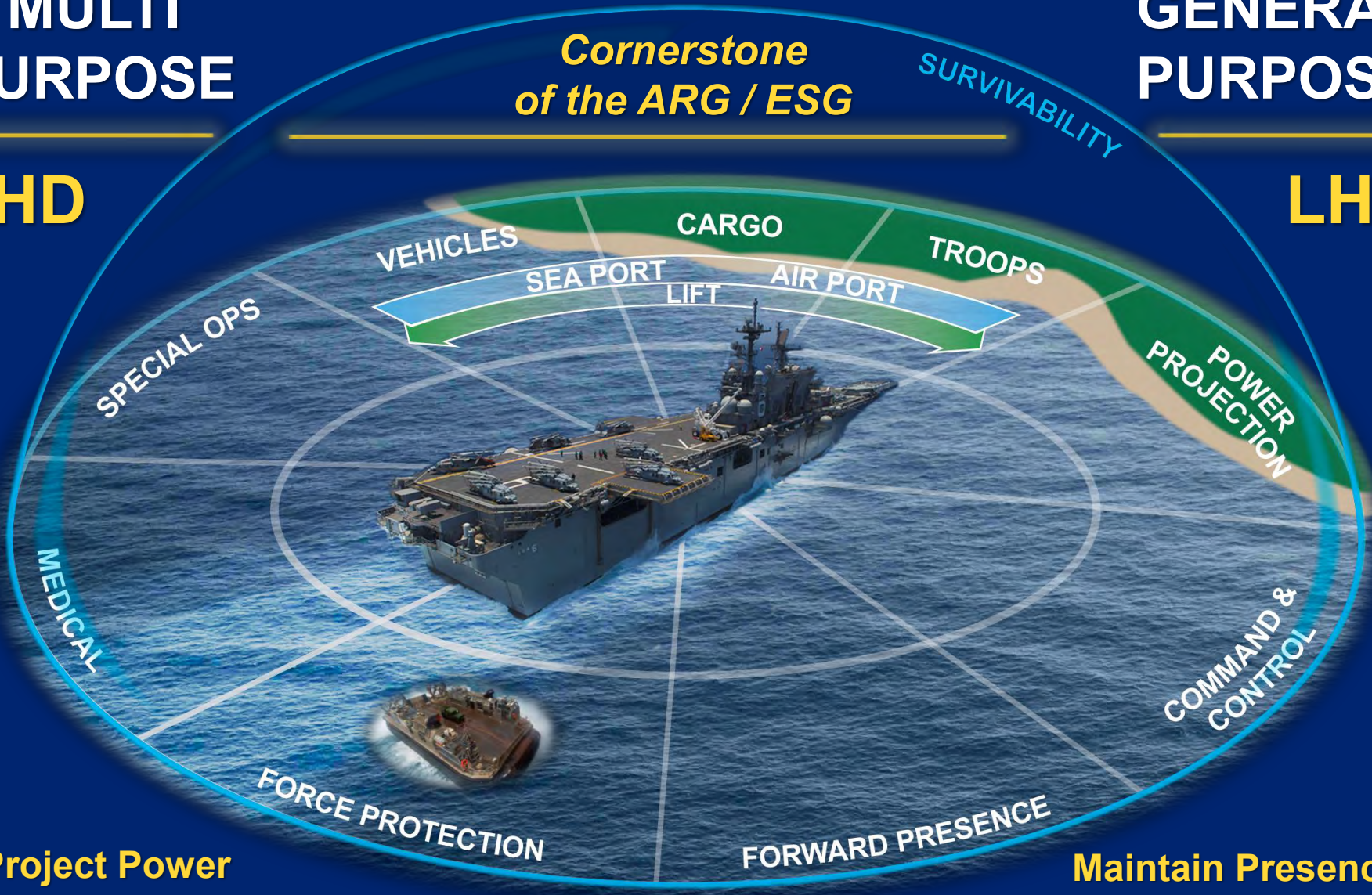
MULTI PURPOSE

GENERAL PURPOSE

Cornerstone of the ARG / ESG

LHD

LHA



Project Power

Maintain Presence

Distribution Statement A: Approved for Public Release.

Force Protection

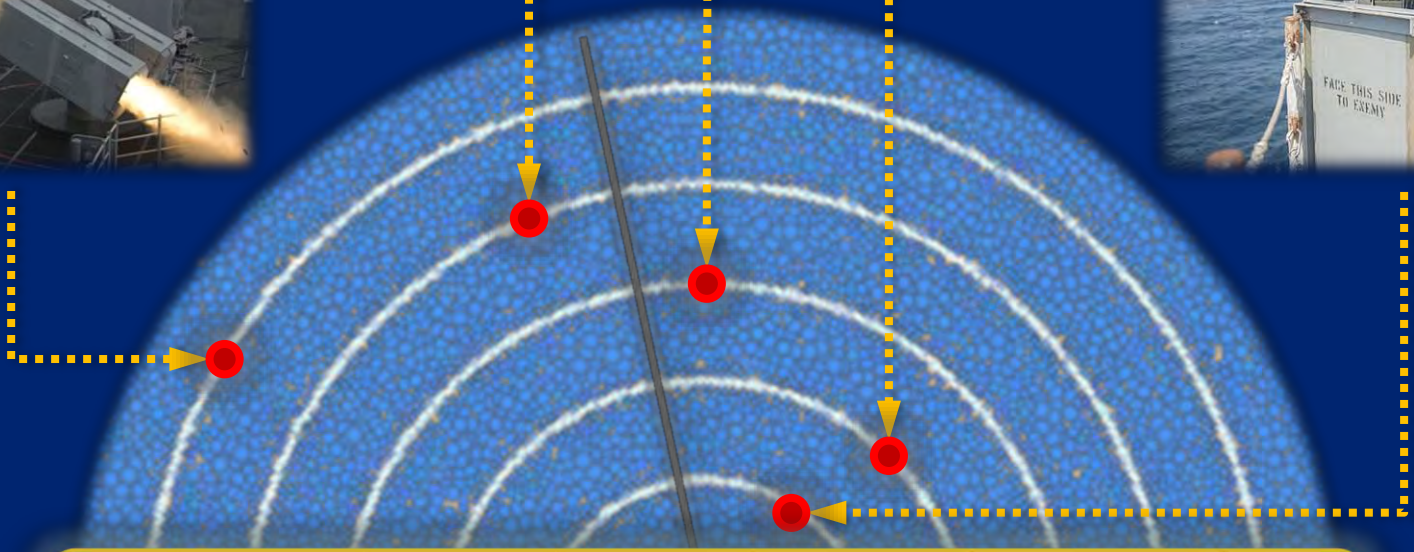












Multi-layered Defense

Distribution Statement A: Approved for Public Release.

Command & Control





Significant C5I Capability
Sea - Air - Land





Medical







	FLT 0	FLT 1
Medical ORs	2	2 (+1)
Dental ORs	4	4
ICU Beds	26	24

LHA FLT 0 to FLT 1

FLT 1 Maintains Full Aviation Capability





FLT 1 Adds Well Deck



LHA FLT 0 to FLT 1

TROOPS





VEHICLES



CARGO





	troops	vehicles	cargo
FLT 0	1,687	11.7K ft^2	160 tons
FLT 1	1,462	16.2K ft^2	132 tons

Distribution Statement A: Approved for Public Release.

TRIPOLI Christened



81% Complete

FLT 1 Beyond LHA 8

Congressional LHA 9 Acceleration Study



LCU 1610 to LCU 1700

TROOPS



VEHICLES



CARGO



	troops	M1A1	cargo weight
LCU 1610	350	1*	140* tons
LCU 1700	350	2	170 tons

LCAC to SSC



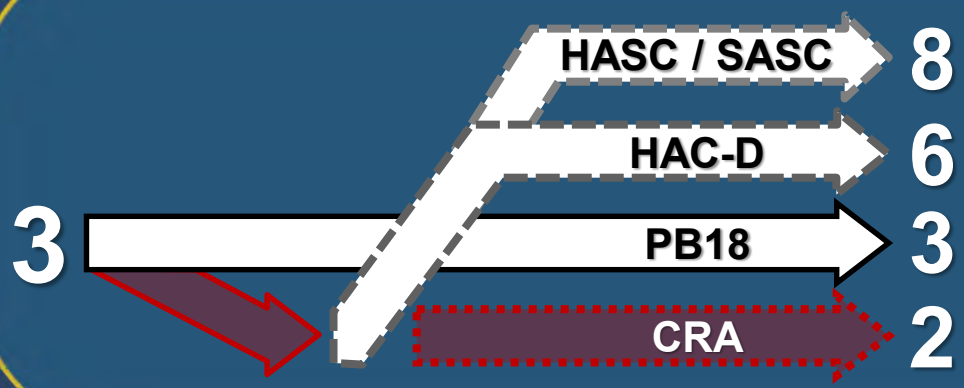




	troops	M1A1	cargo weight
LCAC	15	1*	60 tons
SSC	26	1	74 tons

Landing Craft Procurement

FY16		FY17	FY18	FY19	FY20	FY21	FY22
1	LCU	0	1	2	4	4	4
	SLEP	4*		1			
	SSC	2	3	5	5	5	5



< UPL: 8 craft | #7 USN
#1 USMC (Naval)

< CRA limits FY18 to 2 craft



PEO Ships Q & A Session

Pacific Ocean | 2017

Marine Corps Warfighting Laboratory

25 October 2017
22d Expeditionary Warfare Conference

The overall classification level of this brief is: UNCLASSIFIED

We drive the future of the Marine Corps

Strategic Transition Point

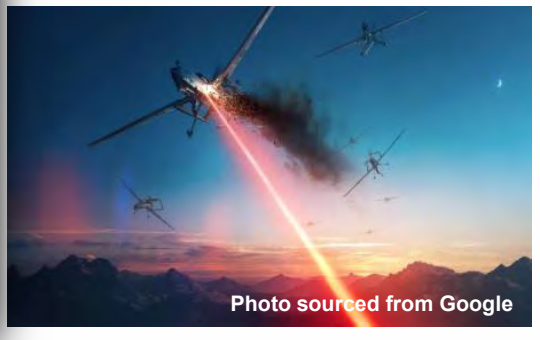
We are turning the corner from over a decade of wars in Iraq and Afghanistan to resetting readiness and modernization balance and focusing on the threats and opportunities that will define the future….











….while our adversaries have been adapting and modernizing for the future operating environment

Marine Corps Force 2025

The Marine Corps is not organized, trained and equipped for the future operating environment.

- **Marine Corps Force 25 is a ten-year effort to ensure the force is postured to address future threats and exploit opportunities**



Illustration provided by MCCDC PAO

- **Sea Dragon 25 will inform MCF25 Decision Points through a phased approach to wargaming and experimentation.**

Integrate Naval Force to Fight At and From the Sea	**Evolve the MAGTF**	**Operate With Resilience in a Contested-Network**	**Enhance Our Ability to Maneuver**	**Exploit the Competence of the Individual Marine**

SEA DRAGON PHASE I EXPERIMENTATION

- **Infantry Battalion established as an experimental force**
  - Organized, manned, trained and equipped according to MCF2025
  - 18 month experimental campaign culminating in operational deployment in support of a COCOM
  - Challenged by an adaptive threat force, replicating future threat capabilities in a free-play environment
  - Feedback loops to rapidly incorporate changes





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SEA DRAGON PHASE I LIVE FORCE EXPERIMENTATION

- **Maneuver**
  - Squad Organization as the base of the GCE
  - Manned – Unmanned Teaming
  - Mobility – as compared to threat
  - Lighten the Load
    - Protection vs. Mobility
    - Displacing the burden
- **Fires**
  - UxS (sensor-shooter)
  - Infantry Service Rifle (Next)
  - Loiter Munitions
- **Logistics**
  - Foraging / Harvesting to reduce demand
  - Energy production
  - Increasing the “Golden Hour”
- **Command and Control**
  - Denied Environment
  - Signature Reduction
  - Signature Masking
  - Resiliency / Federation
  - Deception
- **Force Protection**
  - Counter UxS
  - Deception / Dispersion
- **Intelligence**
  - UxS
  - Rapid PED (production, exploitation and dissemination
- **Information Warfare**
  - EW decentralization
  - IO decentralization

OBSERVED TRENDS

- **The individual Marine – Innovation from the bottom up**
  - As proliferation accelerates, human moral, cognitive and physical abilities provide the main advantage over a materially equivalent adversary
  - Approaching the problem from “the bottom up” offers unique insights not observed, or in direct contrast to a “top down” approach to innovation

- The Future MAGTF increases tempo, adaptability and resiliency with a focus on decentralization to the lowest levels. This has significant DOTMLPF implications for raising the future force

  - Augmented Reality
  - Artificial Intelligence
  - Manned / Unmanned Teaming
  - Offset Loading of functions
  - Scrutinizing Mobility
  - Foraging
  - Federating C2
  - Modular and Scalable


Photo sourced from MCWL

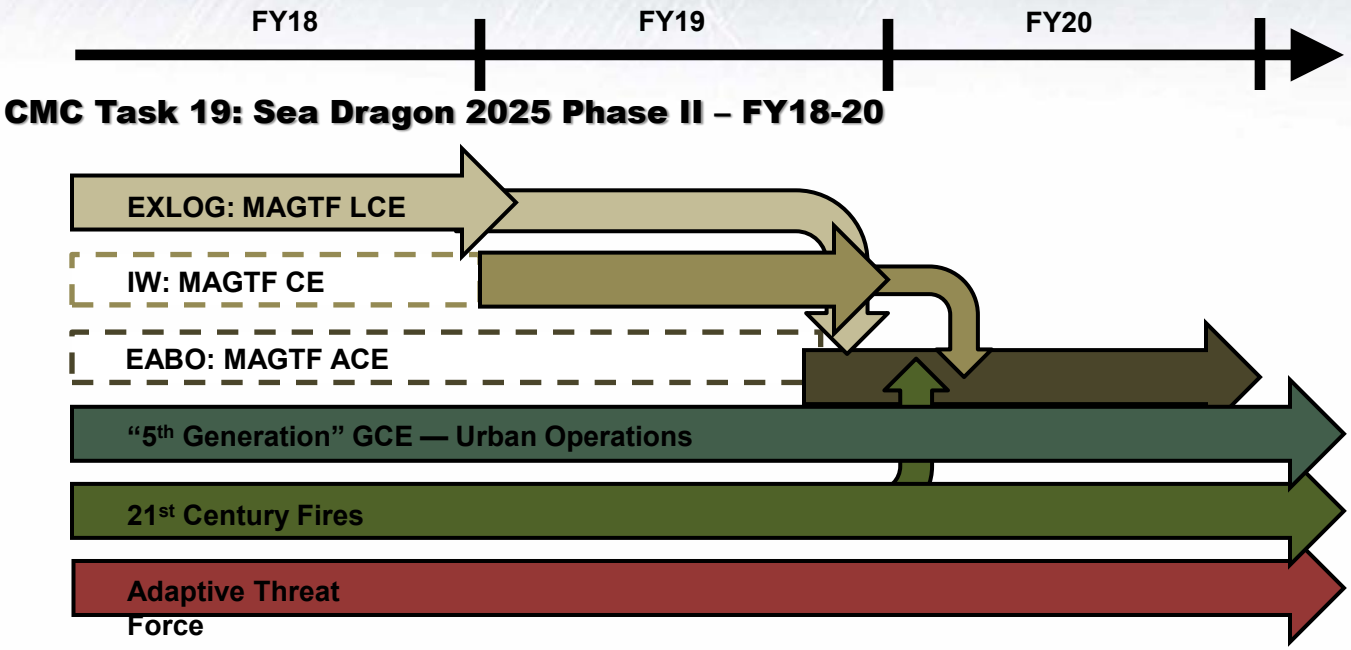
SEA DRAGON PHASE II

- **Focused on a concept for Hybrid Logistics**

- Hypotheses:
  - ULS-A systems result in tailored resupply to a distributed force, and simultaneously mitigates risk to ground-based resupply.
  - AM capabilities reduce repair and maintenance response times, and reduces the quantity and volume of spare parts required to be carried forward by the MAGTF LCE.
  - Smart logistics systems enable greater situational awareness, predict demand requirements to deliver more responsive tailored support to the landing forces
  - The ability of the MAGTF to conduct Hybrid logistics will require structural changes to the MLG.
  - The organic ability of the MAGTF LCE to provide integral force protection when operating in unsecured areas will require additional structure changes

- Major Events:
  - Integrated Training Exercise 3 (ITX-3), MCAGCC May 2018
  - TRIDENT JUNCTURE – 18, Trondheim Norway, Oct – Nov 2018

Experimentation Way Ahead





Shaping the Future Joint Force

National Defense Industrial Association
Expeditionary Warfare Conference
October 2017

KEVIN D. SCOTT
Vice Admiral, U.S. Navy
Directorate for Joint Force Development
The Joint Staff

This briefing is classified
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Operating Environment

Complexity

CONTESTED NORMS & PERSISTANT DISORDER





2017 Contested

Adversaries desired trajectory

2035 Denied

Adversaries Military Modernization & Asymmetric Approaches attempting to erode US advantage

"Winner Take All Environment to Replace Current World Order - 2nd Place is TOTALLY IRRELEVANT"

"The Joint Force must adapt to maintain advantage"

Required Decision Speed

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"How we fight today and tomorrow"

Today
Global Integration

National Military Strategy

& Global Campaign Plans

Joint Military Net Assessment

Chairman Net Assessm

- Global Integration
- Priority Challenges (4+1)
- Expanded Range of Options
- Enhanced Best Military Advice
- Relevant Capabilities
- Balanced Investment Decisions

Services
CCMDs
Others







Future
Globally Integrated Operation

"Shaping the Joint Force" Annex

Joint Force Development

Capability Gap Assessment

Capstone Concept for Joint Operations

"As a nation that thinks and acts globally, the United States does not have the luxury of choosing between a force that can fight nonstate actors, such as the Islamic State of Iraq and Syria (ISIS) and al Qaeda, and one that can deter and defeat adversaries possessing a full array of military capabilities. We also cannot afford to choose between meeting today's operational requirements and making the investments necessary for the future."

JOSEPH F. DUNFORD
General, U.S. Marine Corps
Chairman of the Joint Chiefs of Staff

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Global Integration - Joint Force Able To:

✓ **Operate across regions, domains, and functions**







✓ **Maintain a competitive edge and adapt to the changing character of conflict**









✓ **Provide a full range of flexible and responsive options to decision makers**





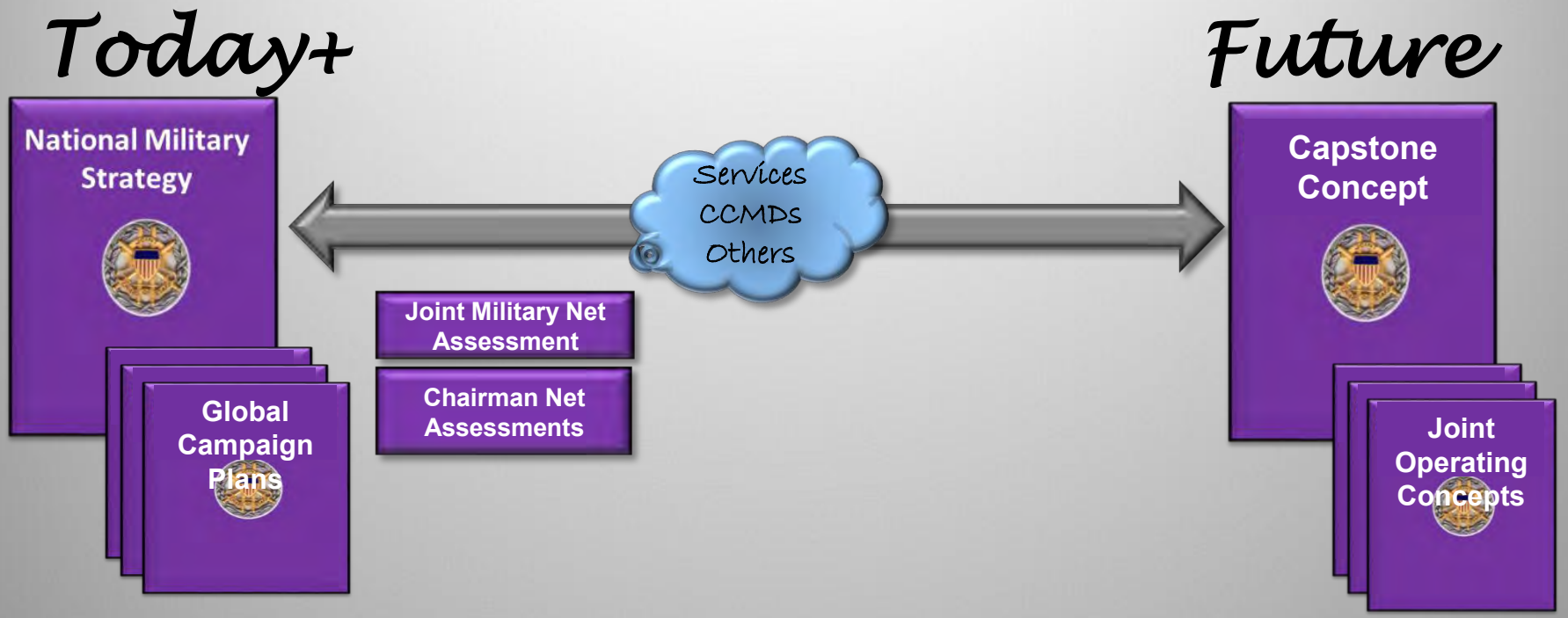


"Problem sets are trans-regional, multi-domain, defy legacy phasing, and require global integration…we must design our future Joint Force and Command and Control to best respond to this new paradigm…considering all our actions will leave global implications."

JOSEPH F. DUNFORD
General, U.S. Marine Corps
Chairman of the Joint Chiefs of Staff

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"How we fight today and tomorrow

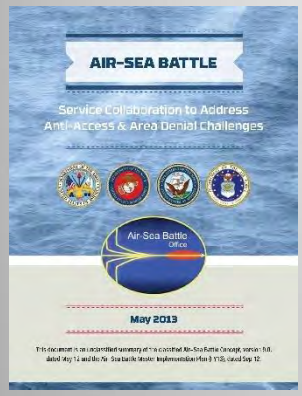


"The family of joint concepts propose new approaches to address operational challenges. Informed by national strategy, joint concepts articulate a vision for deploying, employing, and sustaining the force in the years ahead—in short, they guide how we will fight on tomorrow's battlefields."

JOSEPH F. DUNFORD
General, U.S. Marine Corps
Chairman of the Joint Chiefs of Staff

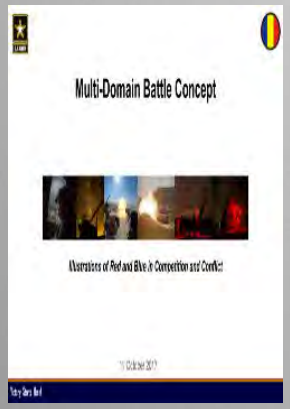
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Service and Joint Concepts



JAMGC

Joint Operational Access Concept



?

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Expeditionary Warfare & Globally Integrated Operations

Leader Development



Assured Space, Cyberspace & Electromagnetic Operations





Global Command & Control



Robotic & Autonomous Systems



Cross Domain Operations



Unleashing the creativity and innovation of Industry to support the Future Joint Force

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Final Thoughts





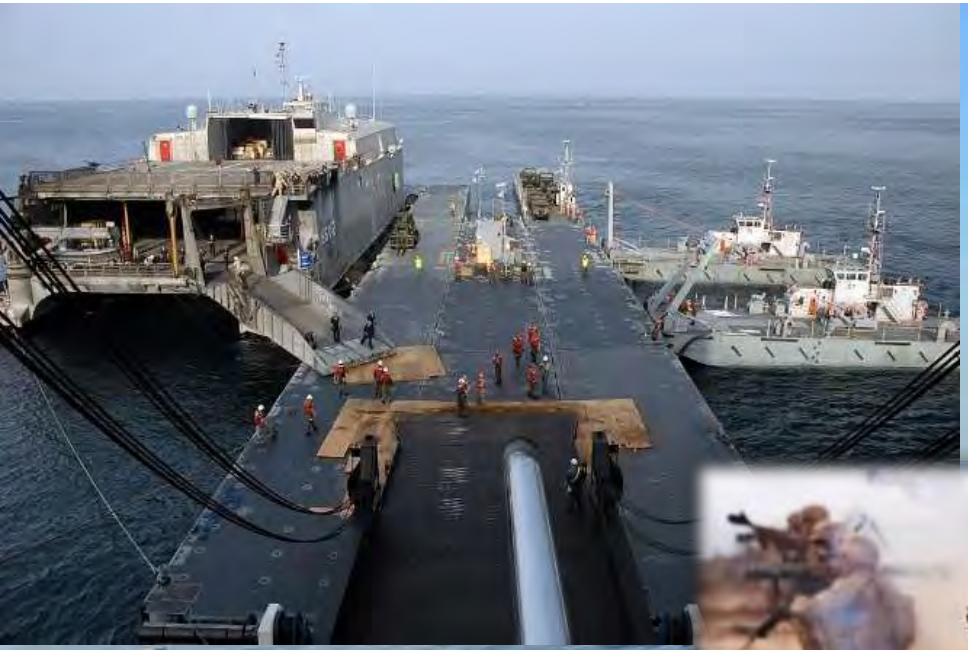






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Maritime Expeditionary Warfare (MExW) Capability Development











Maritime Expeditionary Warfare Integration Division
Headquarters, U.S. Marine Corps
Combat Development & Integration
3300 Russell Road Quantico, VA 22134

MExW Integration Division

Mission

Develop, integrate, and articulate Marine Corps maritime expeditionary warfare capabilities and related doctrine to enable the MAGTF to operate with Naval Forces at and from the sea.

Targets

- Amphibious Warships
- Integrate the 5th Generation MAGTF to Maritime Platforms
- Surface Connectors
- Afloat C4
- Maritime Prepositioning Ships and Strategic Sealift
- Doctrine

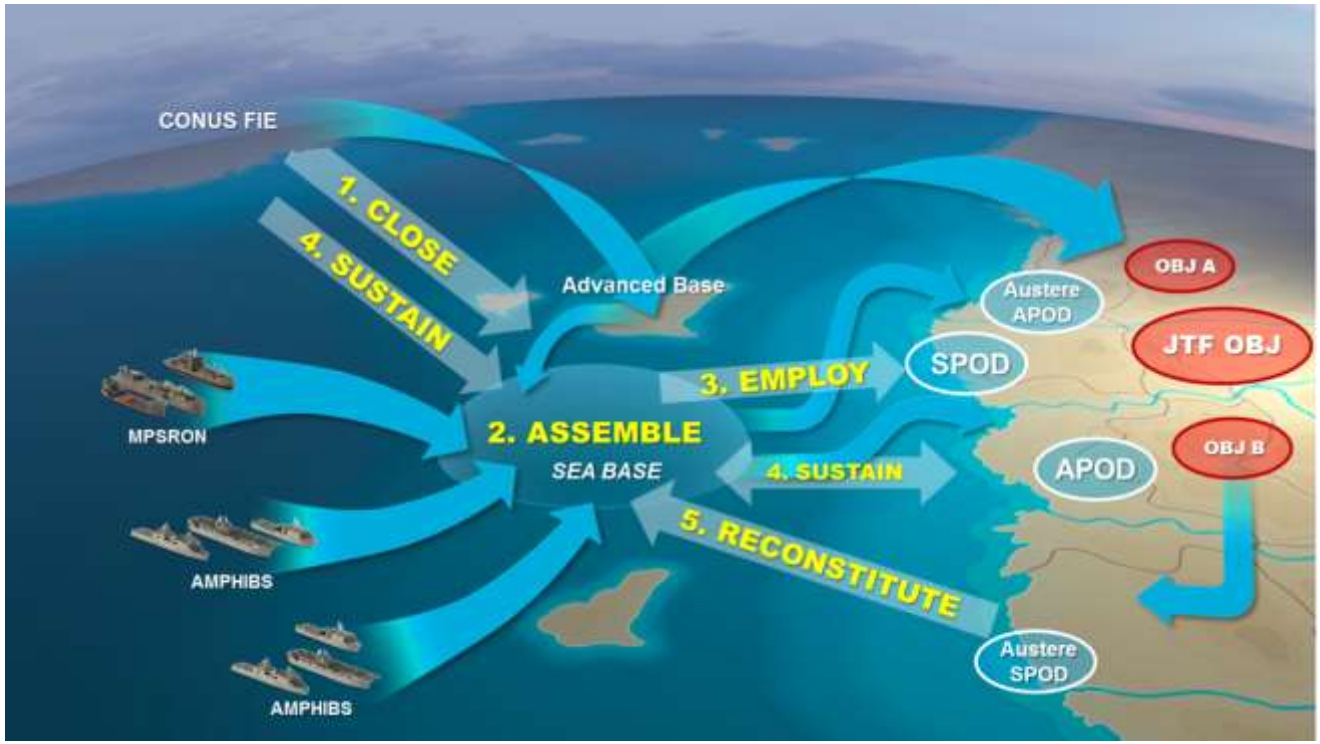
We Develop and Integrate Capabilities
MAGTF to Ship & Ship to MAGTF

MExW Seabasing Lines of Operation

• **Seabasing provides options for scalable power projection** to a JFC through the sequential and concurrent integration of the five primary seabasing lines of operation.

CAESR:

- **C**lose
- **A**ssemble
- **E**mploy
- **S**ustain
- **R**econstitute



MExW Capability Development Principles

1. **We are a Maritime Nation**. Freedom of movement and freedom of access are key to our national security and economic stability.
2. **The littorals contain key global engagement points**. The Navy/ Marine Corps team is uniquely organized, trained, and equipped to assure access and influence in the littorals.
3. The American people and our leaders expect the Navy/ Marine Corps team to **project a credible force anywhere on the globe** at the time and place of our choosing - capable of imposing our will.
4. We continue to design, build, and operate the **best multi-mission amphibious warships** in the history of the world. These ships are not "transports".
5. **Amphibious warfare ships are versatile, interoperable, warfighting platforms** capable of going into harm's way and serving as the cornerstone of America's ability to extend sea-power ashore.



MExW Capability Development Principles



6. **Amphibious warships are part of a naval system** - networked with surface, sub-surface, air, space and cyber-space providing a force projection and force protection capability to the prosecution of a naval campaign.
7. **We strive to improve naval platforms and integrate / enable a 5th generation MAGTF** to operate at full potential and capacity from the seabase.
8. We recognize our current **strategy demands "TMM" forces - T**rans-regional, **M**ulti-domain, and **M**ulti-functional.
9. The **MEU is a TMM force** and must be sized and resourced to conduct 13 x specified MEU missions.
10. The **MEB must be a JTF enabler** - forward deployed, of capable of rapid deployment / employment to deter and defeat peer competitors.

MExW Capability Development Principles

11. **38 amphibious warships** (12 LHD/As and 26 LPD/LXRs) provide seabasing platforms for the TMM force to execute steady state operations supporting the national military strategy and offer the ability to rapidly tailor, deploy, and employ a credible, self-sustained force to respond to crisis.
12. **Surface connectors are critical enablers** and are a vital component of naval expeditionary capability to execute ship-to-objective maneuver.
13. The **MPF** combines the **capacity and endurance of sealift** with the **speed of airlift** to bring a MEB capability to bear on a military problem.
14. The introduction of the T-ESD, T-AKR, and T-AKE provide **enhanced MPF seabasing capabilities**, wider employment options, and improved at-sea selective offload of equipment and supplies.
15. All seabasing platforms, amphibious warships, and maritime prepositioning ships need to modernize for the **future fight**, which **will demand improved digital, vertical and surface interoperability**.



How Industry Can Help

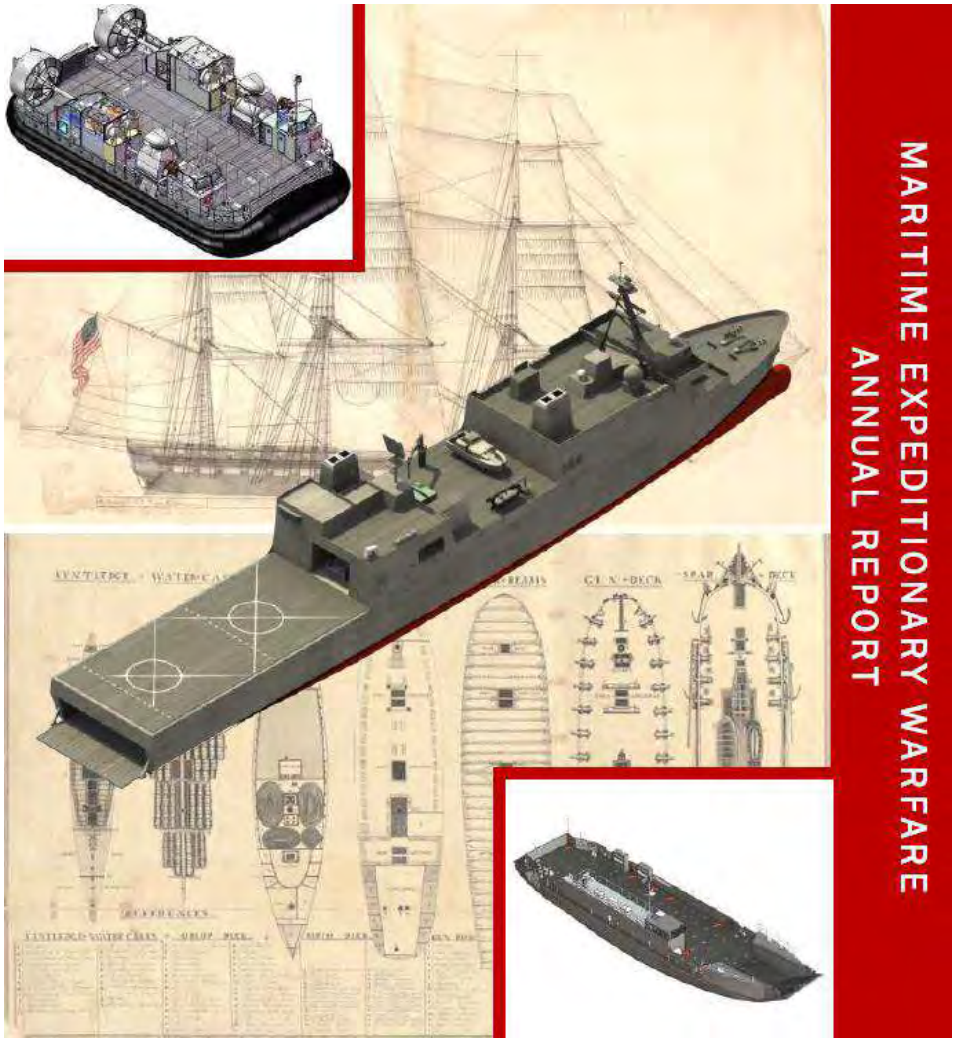
- Best value
  - Cost
  - Schedule
  - Performance
- Interoperability
  - Systems / Platforms
  - Vertical / Surface Interface
- Environmental Controls
  - Increase Operational Window



MExW Annual Report

www.mccdc.marines.mil/units/seabasing.aspx

- **5th year published**
- **Integrated view of seabasing capability objectives**
- **Contents**
  - Seabasing Overview
  - Major Programs
  - Capability Objectives
  - Amphibious Warfare Ships
  - Crafts & Connectors
  - Maritime Prepositioning Force
  - Afloat MAGTF C4
  - Naval Integration
  - Seabasing S&T
- **Seabasing Operational Advisory Group (SOAG) is the primary injection point**
- **DC, CD&I - HQMC Maritime Expeditionary Warfare (Seabasing) Advocate**



Questions



COL CRAIG “SB” STREETER
DIRECTOR, MExWID – CDD/CD&I
O: (703) 784-6094
CRAIG.H.STREETER@USMC.MIL

22nd Annual Expeditionary Warfare Conference

Session: Marine Corps Acquisition

25 October 2017



MR. BILL WILLIFORD
Executive Director,
Marine Corps Systems Command

DISTRIBUTION A. Approved for public release: distribution unlimited.

- The World Today
- Marine Corps Operating Concept (MOC) and the 5th Generation Marine Corps
- Aligning to the MAGTF & New Organization Structure
- Portfolio Review
- Program Executive Officer Land Systems (PEO LS)



Being ready is not what matters.
What matters is winning after you get there.
- LtGen Victor H. Krulak, USMC, April 1965

Our Corps has done two things for this great Nation.
We make Marines, and we win Battles.
- Gen Charles C. Krulak, USMC (CMC), May 1997

Remember, our enemies will never rest. In our business, there's no prize for 2nd Place. That's why we must remain a 'Gold Medal Organization.'
- Gen Robert B. Neller, USMC, February 2017

We are Still a Nation at War

- Marines are forward deployed around the Globe
- High OPTEMPO
- Marines are in harm's way today

What has changed?

- Enemies have developed new capabilities which equal or exceed our own
- We are trading modernization for readiness
- Cyber domain will impact interoperability/distributed Ops



WE MUST:

Integrate the Naval force to fight at and from the sea

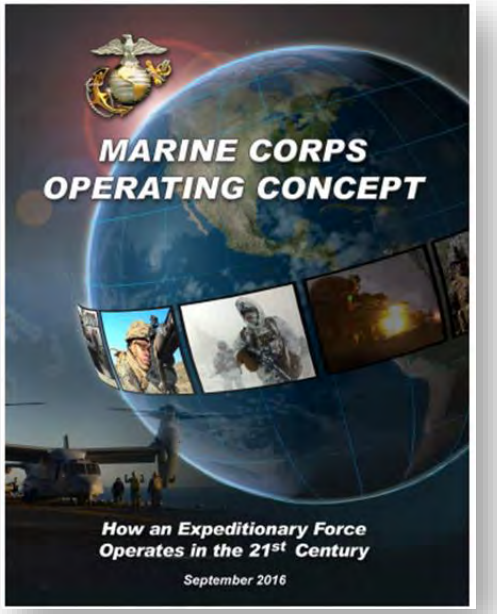
Renew emphasis on fighting for and gaining sea control using sea- and land-based capabilities (Littoral Operations in a Contested Environment)

Evolve the MAGTF

Improve C2 and info integration/sharing, and pursue wargaming/experimentation

Operate with resilience in a contested-network environment

Decentralize decision making, devolve authority and prioritize C2 applications under contested conditions



Enhance our ability to maneuver

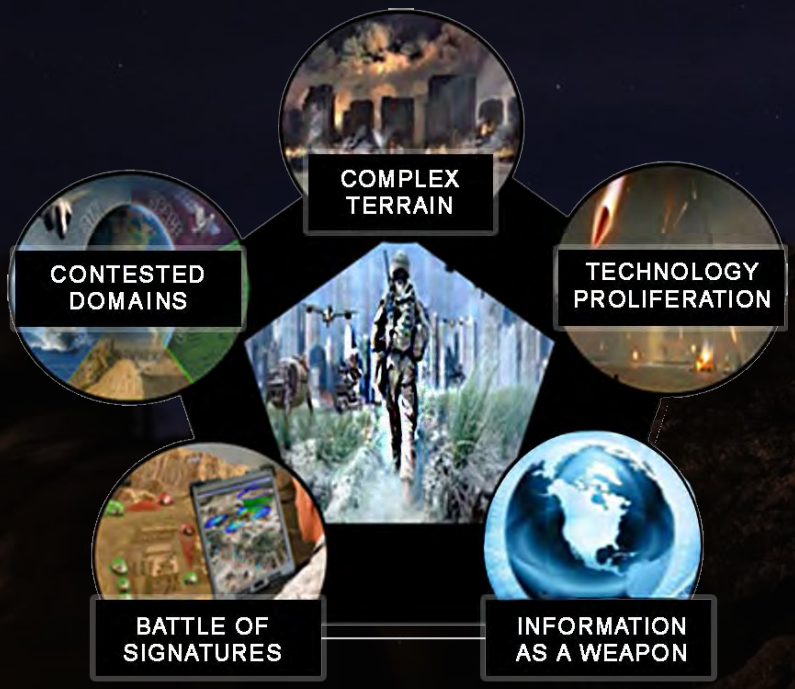
Provide capabilities that enable Marines to maneuver equally well in both physical and cognitive dimensions of conflict

Exploit the competence of the individual Marine

Enable individual Marine to think and act effectively under chaotic, uncertain and adverse conditions (i.e. training for integrated Naval operations, exploit LVC training, enhance decision-making skills when C2/ISR are degraded/denied)

"Fighting and winning against emerging peer competitors will require a 'fifth-generation Marine Corps' capable of competing in technological domains, as well as the traditional air, sea and land kinetic arenas." - General Robert B. Neller , 37th Commandant of the United States Marine Corps

Future "Five Drivers of Change"





Increasing Needs for Capabilities in

- Cyber
- Information warfare
- Electronic warfare
- Unmanned air/ground systems

MAGTF alignment across product lines

"You begin with a deep understanding of the nature of the product you intend to acquire. The form of the program has to follow the function the program will perform: developing and acquiring a specific product. The nature of the product should be the most significant determiner of program structure."

The Optimal Program Structure
Frank Kendall
Under Secretary of Defense for Acquisition, Technology and Logistics

We Produce MAGTF Products



MAGTF Capabilities Across the Range of Mil Ops

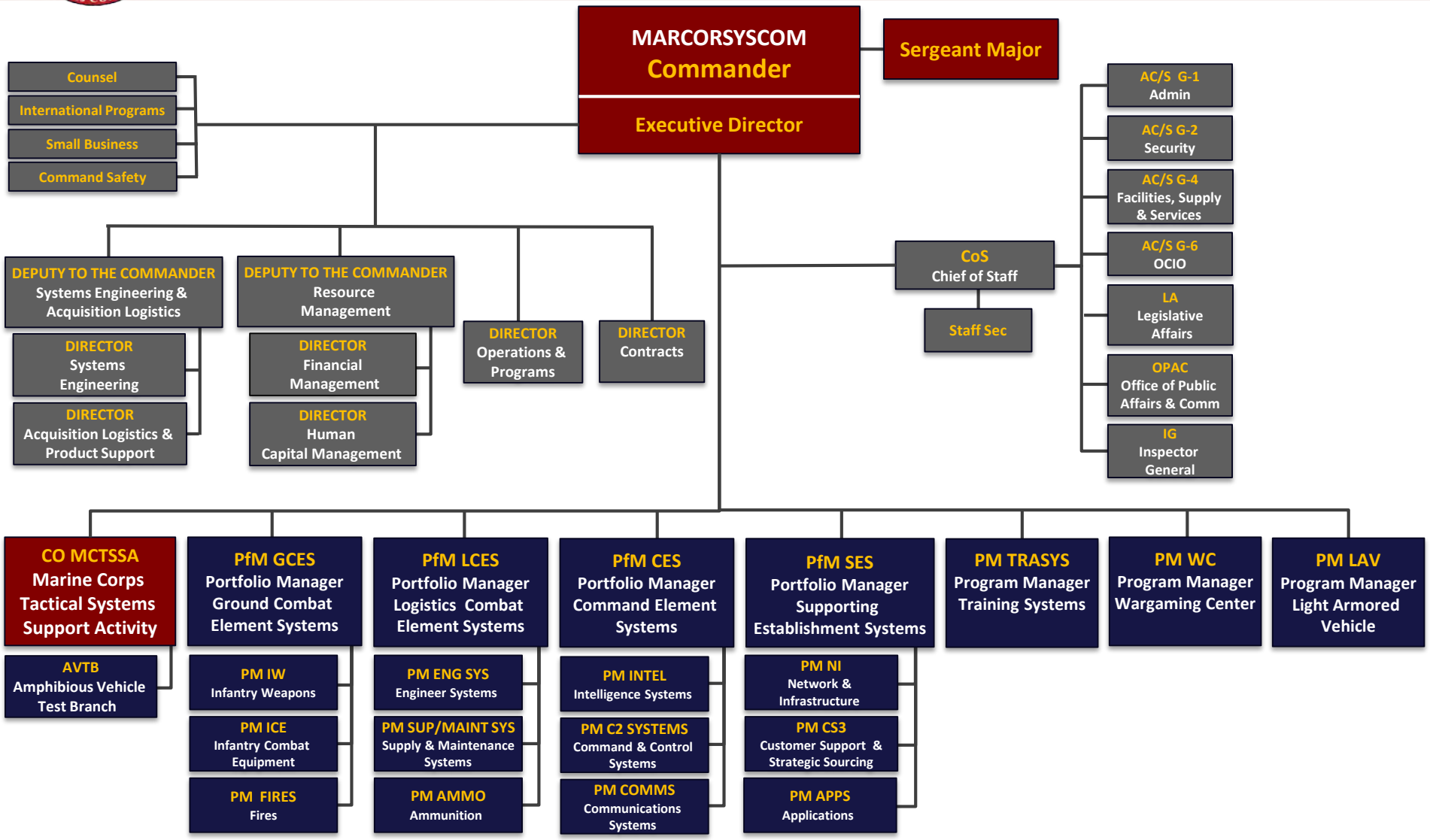
MARINE AIR-GROUND TASK FORCE



MARINE CORPS SYSTEMS COMMAND

HOME OF THE MARINE CORPS ACQUISITION PROFESSIONALS

Organization Chart



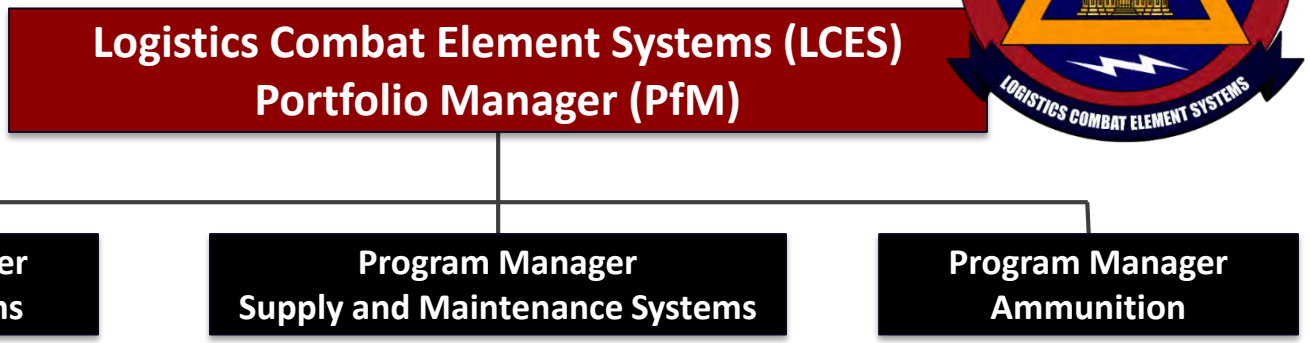


Ground Combat Element Systems (GCES) Portfolio Manager (PfM)

- Program Manager Infantry Weapons
- Program Manager Infantry Combat Equipment
- Program Manager Fires

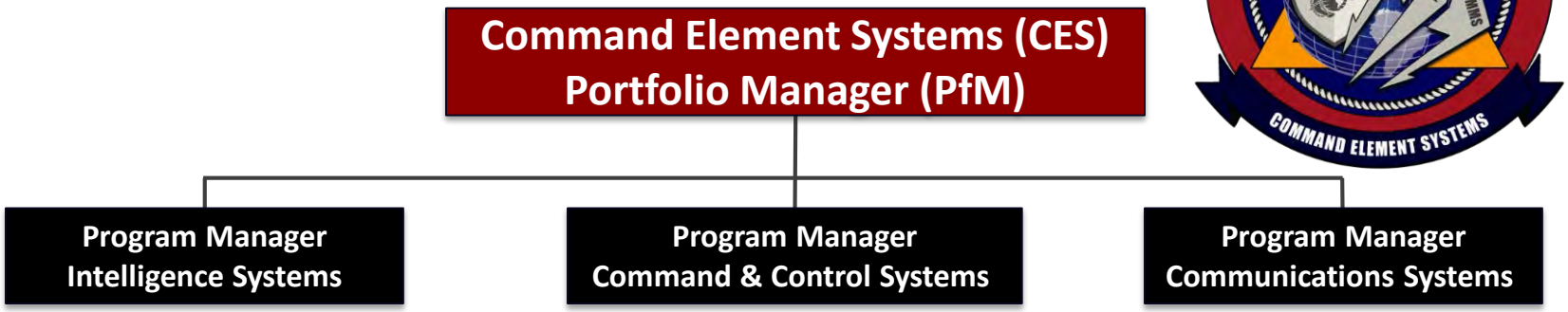
AREAS WHERE INDUSTRY CAN HELP

- Lighter & flexible body armor/plates
- Improved suspension system for helmets
- Flame-resistant fabrics
- Intermediate cold-weather boot (20 degrees to -20 degrees, suitable for skis and snowshoes)
- Hearing protection/enhancement
- Knee and elbow pads



AREAS WHERE INDUSTRY CAN HELP

- Water purification for the platoon level
- Ruggedized common solar panels
- Mobile and hybrid power sources
- Fluid analyzer (oil, transmission, hydraulic & hub differential)
- Handheld microwave communications & radar test set
- Multi-caliber match ammo
- Lightweight ammunition packaging



AREAS WHERE INDUSTRY CAN HELP

- Cyber security
- Reduce size, weight and power required
- Signature management
- Converging capabilities
- Next-generation SATCOM



Supporting Establishment Systems (SES)
Portfolio Manager (PfM)

- Program Manager Network and Infrastructure
- Program Manager Applications
- Program Manager Customer Support and Strategic Sourcing

AREAS WHERE INDUSTRY CAN HELP

- Increasing cyber requirements and fiscal constraints requires delivery of more affordable capabilities in shorter timeframes
- The desired result is an increasingly integrated IT environment
- Major Information Systems & Infrastructure focus areas:
  - Design networks to support from the fighting hole to the flagpole
  - Key drivers and building blocks for seamless MCEN
  - Consolidate application post-deployment support
  - Integrated cloud development and test environment
  - Unification of legacy networks



Training Systems (TRASYS)
Program Manager (PM)

- **Team Lead**
  Individual Training Systems
- **Team Lead**
  Collective Training Systems
- **Team Lead**
  Range Training Systems

AREAS WHERE INDUSTRY CAN HELP

- Attend “Industry Days” to gain information and understand the requirement
- Showcase emerging and mature technologies to demonstrate live, virtual and constructive integration
- Provide feedback and alternatives to resolve obsolete parts for simulators, devices and range targets
- Ask questions early and often throughout the process to clarify issues prior to RFP timeline

Program Manager Wargaming Center

Objective:

- Strategic OPLANS and CONOP review
- Inform capability development, force design and concept refinement

Requirements:

- Support wargames and events, including Joint/Coalition/Interagency
- Provide accurate representation of future operating environments
- Perform rapid, in-depth analysis of game-derived data or insights
- Produce visualizations that enhance wargaming operational environments, execution and aid in understanding wargame outcomes

AREAS WHERE INDUSTRY CAN HELP

- Dynamic M&S at USMC strategic level
- Immersion and visualization for strategic play
- In-stride adjudication capabilities
- Wargame design and analysis

Principal Cyber Advisor

Cyber Leadership, Strategy, Planning

Cyber Advisory Team

- Commandant's Cyber Task Force Executive Off-Site Recommendations
- Emergency and Urgent Cyber Requirements
- Deputy Commandant Information and Marine Corps Forces Cyberspace Command Liaisons
- Cyber/Information Wafare O-6 Representative
- MCEN Unification/Assured Access
- Portfolio Cyber Synchronization Team
- Enterprise Cyber/IT (Win10, JIE, cloud, etc)
- MCEN Planning Yard; Configuration Control
- Cyberspace Workforce Management

Cyber Operations Response Team

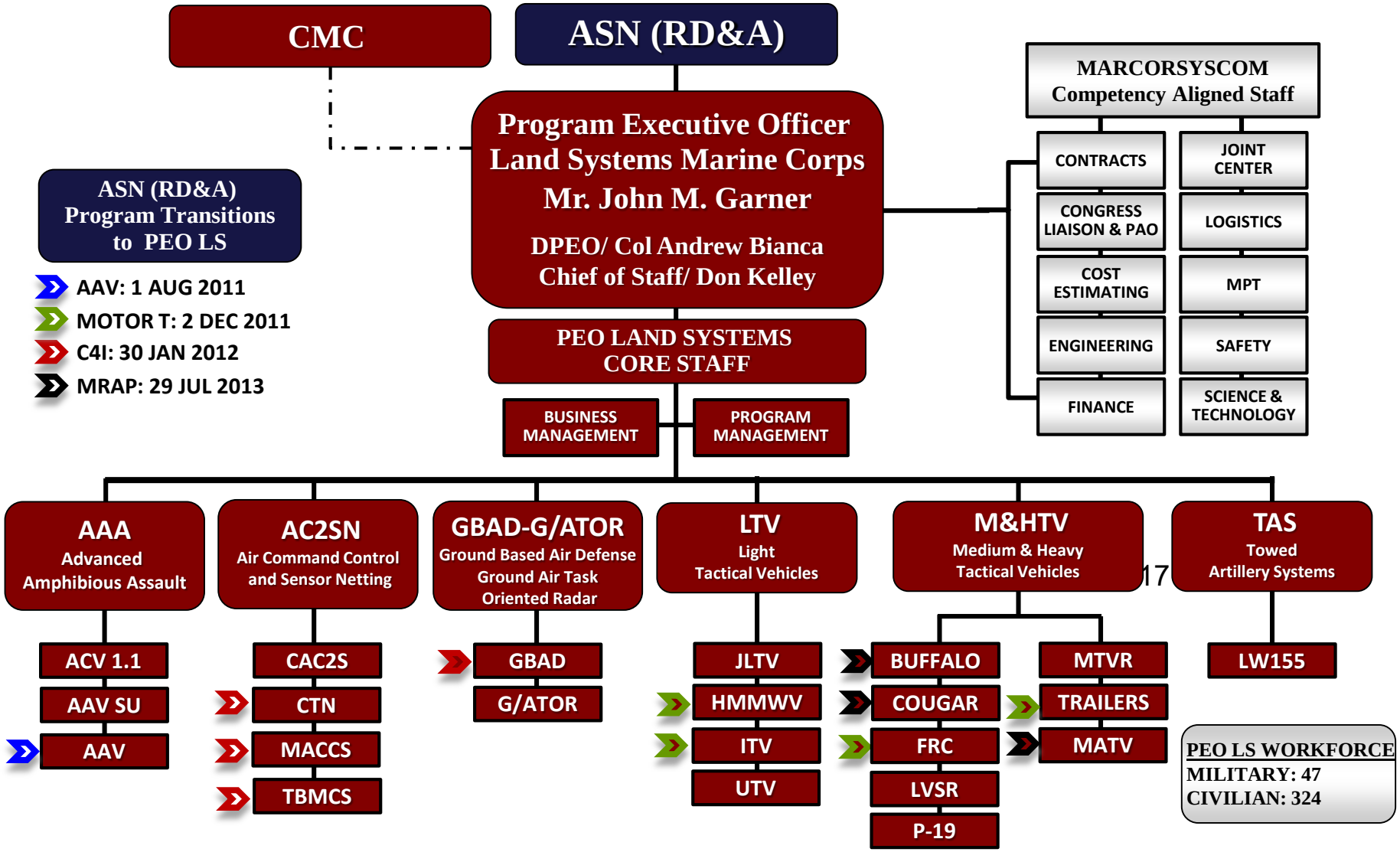
- Named and Non-named Cyber Operations
- Cyber Operations Directives, Tasking Orders, Execute Orders, Messages
- Program of Record (POR) Response Actions, Guidance, and Coordination
- Cyber Commander's Critical and Priority Information Requirements
- Cyber MCATS/DON Tracker Actions
- POR Prioritization
- Cyber Readiness Dashboard
- MCSC Ops Cell synchronization

"Competency" is divided between the Engineering and Program Management Communities of Practice

Background

- PEO LS is the USMC's only PEO and reports directly to the Assistant Secretary of the Navy for Research, Development and Acquisition (ASN (RDA))
- Focal point for Marine Corps major land program acquisition management.
- Oversees Marine Corps weapon systems acquisition, while collaborating with the Marine Corps Systems Command (MARCORSYSCOM), to develop, field and supply life-cycle planning for assigned programs.
- PEO LS's integral relationship with MARCORSYSCOM leverages infrastructure, competencies and technical authority.

Organization Chart



Delivering to the warfighter:



JLTV will begin their multi-service Operational Test and Evaluation next quarter and is scheduled to be in full rate production by this time next year.



The Marine Corps has taken delivery of the first four Ground Air Task Oriented Radar (G/ATOR), and is scheduled to field next February.



ACV 1.1 is deep in competitive testing at several sites across the country and is on a projected path for a down-select to one vendor in June 2018.



The fielding of the new P19-R fire truck has begun with units out west getting their first trucks.



The AAV-SU achieved a successful Milestone C this summer and is currently in low-rate production.

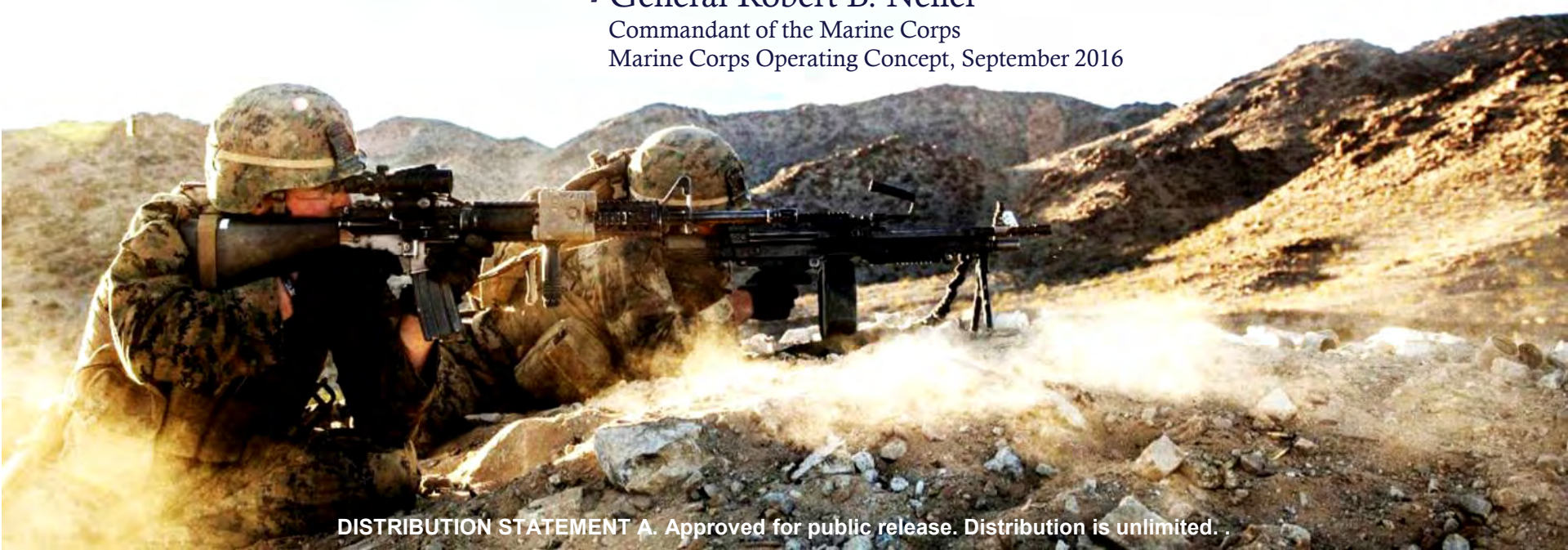


The Common Aviation Command and Control System (CAC2S) is fielding and just awarded a production contract for the remaining 41 Full Deployment Units.

"The profession of arms is unforgiving;
mistakes are paid for in blood and
incompetence can lead to catastrophic defeat.
WHEN WE FIGHT, WE MUST WIN.
THERE IS NO ALTERNATIVE.
The American people expect and
deserve nothing less from their Marine Corps."

- General Robert B. Neller
Commandant of the Marine Corps
Marine Corps Operating Concept, September 2016

QUESTIONS?



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BACK UP

Cyber Organization

