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15th ANNUAL EXPEDITIONARY WARFARE CONFERENCE

“Expeditionary Operations – What’s Next?”

Panama City, FL

4 - 7 October 2010

Agenda

Monday, 4 October, 2010

The Resource Sponsor Perspective: Current and Future Support for EW MCM

- Captain Mark Rios, USN, Branch Head, N852 Mine Warfare

Tuesday, 5 October, 2010

Keynote Speaker:

- Major General Timothy C. Hanifen, USMC, Director, Expeditionary Warfare Division, OPNAV N85

Keynote Speaker:

- The Honorable Robert O. Work, Under Secretary of the Navy, Office of the Secretary of the Navy

Operations and Training - What Works, What Doesn't, What Do We Need?

- Brigadier General Lawrence D. Nicholson, USMC, Senior Military Assistant to Deputy Secretary of Defense
- Brigadier General John Bullard, USMC, Director, Joint Capabilities Assessment and Integration Directorate, MCCDC

Allied and Coalition Views of Future Expeditionary Warfare

- Commodore Simon T. Cullen, RAN, Australian Chief of Defence Liaison Officer to the U.S. Joint Chiefs of Staff
- Mr. Bradley Weiss, Director of Sales and Marketing and Corporate Counsel, Kongsberg Protech Systems

Wednesday, 6 October, 2010

Resourcing Expeditionary Warfare in a Decade of Shrinking Budgets

- Rear Admiral David L. “Deke” Philman, USN, Director, Warfare Integration/Senior National Representative 9OPNAV N85)
- Major General Timothy C. Hanifen, USMC, Director, Expeditionary Warfare Division, OPNAV N85
- Rear Admiral Mark Handley, CEC, USN, Commander, First Naval Construction Division/Commander, Naval Construction Forces Command

Sustainment/Maintenance

Keynote Speaker: Major General James A. Kessler, USMC, Commander, Marine Corps Logistics Command

- Colonel Len Blasiol, USMC (Ret), Director, MAGTF Integration Division, MCCDC

Thursday, 7 October, 2010

Balancing Resources in Support of Expeditionary Warfare

- Captain Dan Colman, USN, Branch Head, N857 Naval Expeditionary Combat Command/Non-Lethal Weapons & CREW
- Captain Evin Thompson, USN, Branch Head, N852 Mine Warfare
- Captain Walt Towns, USN, Branch Head, N853 Amphibious Warfare
- Colonel James Strock, USMC (Ret), Director, Seabasing Integration Division, Capabilities Development Directorate, MCCDC

15th Annual EXPEDITIONARY WARFARE CONFERENCE



“Expeditionary Operations -What’s Next?”



OCTOBER 4 - 7, 2010
WWW.NDIA.ORG/MEETINGS/1700
BAY POINT MARRIOTT HOTEL, PANAMA CITY, FL

EVENT #1700

MONDAY, OCTOBER 4, 2010

7:45 AM - 1:00 PM

Golf Tournament & Awards Lunch
Nicklaus Golf Course & Club House

12:00 PM - 7:00 PM

Conference Registration
St. Andrews Foyer

3:00 PM - 5:00 PM

Mine Warfare Capabilities Essential for Expeditionary Warfare
Salon 1 (limited to first 120 registrants)

Session Focus: This unclassified session will present and discuss MIW topics from the perspectives of the Fleet, the Resource Sponsor, the Acquisition Manager, and the NSWC PCD Technical Management.

3:00 PM - 3:05 PM

Session Chairman: Rear Admiral Chuck Horne, III, USN (Ret)
NDIA Expeditionary Warfare Division Board Member

3:05 PM - 3:20 PM

Introductory Remarks
-**Major General Timothy C. Hanifen, USMC**
Director, Expeditionary Warfare Division, OPNAV N85
-**Ms. E. Anne Sandel**
Program Executive Officer, Littoral and Mine Warfare

3:20 PM - 3:45 PM

The Fleet Perspective: Mine Warfare - An NMAWC Perspective
Rear Admiral (sel) Phillip Sawyer, USN
Vice Commander, Naval Mine and ASW Command

3:45 PM - 4:10 PM

The Resource Sponsor Perspective: Current and Future Support for EW MCM
Captain Mark Rios, USN
Branch Head, N852 Mine Warfare

4:10 PM - 4:35 PM

The Acquisition Manager Perspective: Future EW MCM Program Requirements
Ms. Donna Carson-Jelley
Program Manager, Mine Warfare Programs, PMS-495

4:35 PM - 5:00 PM

Engineering - NSWC PCD Technical Leader Technical Issues Specific to EW MCM
Mr. Walter N. Rankin
Program Manager, Naval Surface Warfare Center, Panama City Division

6:00 PM - 7:00 PM

Networking Reception (Hosted Beer and Wine Bar; Liquor for Purchase)
St. Andrews and Grand Lagoon Foyers

7:00 PM - 9:00 PM

Opening Night Dinner
Grand Lagoon Ballroom

Guest Speaker: Admiral John C. Harvey, Jr., USN
Commander, U.S. Fleet Forces Command

TUESDAY, OCTOBER 5, 2010

6:45 AM - 4:30 PM

Conference Registration
St. Andrews Foyer

6:45 AM - 7:30 AM

Continental Breakfast
St. Andrews and Grand Lagoon Foyers



AGENDA

PANAMA CITY, FL
OCTOBER 4 - 7, 2010
WWW.NDIA.ORG/MEETINGS/1700

7:30 AM - 8:00 AM

Welcome and Opening Remarks

-Captain Duane Covert, USN (Ret)

Site Manager, Northrop Grumman Corporation;
NDIA Expeditionary Warfare Division Conference Chairman

-Captain Thomas Brovarone, USN

Commanding Officer, Naval Surface Warfare Center, Panama City Division

-Rear Admiral Mike Nowakowski, USN (Ret)

Vice President, Colonna's Shipyard, Inc.;
NDIA Expeditionary Warfare Division Chairman
St. Andrews Ballroom

8:00 AM - 9:00 AM

Keynote Speaker: Major General Timothy C. Hanifen, USMC

Director, Expeditionary Warfare Division, OPNAV N85

9:00 AM - 9:45 AM

Keynote Speaker: The Honorable Robert O. Work

Under Secretary of the Navy, Office of the Secretary of the Navy
St. Andrews Ballroom

9:45 AM - 10:15 AM

Networking Break

St. Andrews and Grand Lagoon Foyers

10:15 AM - 12:00 PM

Operations and Training - What Works, What Doesn't, What Do We Need?

St. Andrews Ballroom

Session Focus: As it has been in all wars, equipment, training, concepts and plans change as the war progresses. Some of the prior or current concepts, plans and equipment work and some do not. The panel will discuss the training concepts, techniques and equipment systems employed in preparing units and individuals for our current and future conflicts, as well as the result of those as demonstrated in the actual operational environment. In addition to the training, through the experience of recent Commanders in the field and other leaders, the current state of equipment and capability in supporting operations will be addressed. What concepts of operations work, what specific systems or equipment effectively support current concepts, what capabilities are effective, which capabilities or systems are not effective, and what capabilities or capability improvements do the operating units need that they do not have today. Current leaders in Operations, Training and Capability Development will be invited to speak on these issues from either their recent experience in preparing units to deploy, in operations, or in capability development.

Session Chairman: Mr. Dewey Mauldin

Director of Business Development, The Boeing Company

-Brigadier General Lawrence D. Nicholson, USMC

Senior Military Assistant to Deputy Secretary of Defense

-Brigadier General John Bullard, USMC

Director, Joint Capabilities Assessment and Integration Directorate,
MCCDC

-Captain Paul McElroy, USN

Commodore, Maritime Expeditionary Security Group TWO

12:00 PM - 1:30 PM

Networking Buffet Lunch

Grand Lagoon Ballroom





1:30 PM - 2:30 PM

Looking at the Defense Industry from Wall Street *St. Andrews Ballroom*

Session Focus: The Industry Session traditionally focuses on providing views and perspectives on the Defense Sector from an Industry point of view. This session will feature one of the leading Wall Street Analysts to comment on the financial outlooks for the Defense Sector and the motivations that drive business (both small and large) as it relates to shareholders.

Session Chairman: Mr. Terry O'Brien

Corporate Director, Navy Amphibious Ship Programs, Northrop Grumman Corporation

Session Chairman: Mr. Steve Lehr

Director of Special Programs, Gryphon Technologies

Ms. Heidi Wood

Managing Director of Research, Morgan Stanley

2:30 PM - 3:00 PM

Networking Break

St. Andrews and Grand Lagoon Foyers

3:00 PM - 4:30 PM

Allied and Coalition Views of Future Expeditionary Warfare

St. Andrews Ballroom

Session Focus: Expeditionary warfare of the future will likely be conducted with coalitions or international partners. This is a premise of the USN/USMC/USCG Cooperative Strategy for 21st Century Seapower. Additionally, a number of American allies have a long history of conducting expeditionary operations, maintaining expeditionary warfare capabilities, and conducting such operations without or with limited U.S. support—Australian operations in East Timor, as an example. Allies and other partners continue to invest in expeditionary/amphibious platforms, often as their largest warships. Administratively independent Marine Corps may not be the norm (although several Allies do maintain an independent Marine Corps), but all consider expeditionary operations to be a primary and joint mission. International businesses headquartered in allied nations produce and supply systems and material to coalition and joint expeditionary forces.

The purpose of the session is to elicit the views of key Allies as to the future of their expeditionary operations capabilities and their current plans for their expeditionary operations forces. Knowledge of these views is critical for industry as well as the U.S. military to determine how best to support Allied and coalition expeditionary operations. In addition to having panelists from different nations, the presentations will be divided into three separate, but supporting categories: policy, operations, and industrial views.

Session Chairman: Dr. Sam J. Tangredi

Director, San Diego Operations, Strategic Insight, Ltd.

-Commodore Simon T. Cullen, RAN

Australian Chief of Defence Liaison Officer to the U.S. Joint Chiefs of Staff

-Lieutenant Colonel Giles Timms, PARA

United Kingdom Liaison Officer, CENTCOM

-Mr. Bradley Weiss

Director of Sales and Marketing and Corporate Counsel, Kongsberg Protech Systems

4:30 PM

Adjourn for the Day

AGENDA

PANAMA CITY, FL
OCTOBER 4 - 7, 2010
WWW.NDIA.ORG/MEETINGS/1700

WEDNESDAY, OCTOBER 6, 2010

6:45 AM - 4:30 PM

Conference Registration
St. Andrews Foyer

6:45 AM - 7:30 AM

Continental Breakfast
St. Andrews and Grand Lagoon Foyers

7:30 AM - 7:45 AM

Opening Remarks
Captain Duane Covert, USN (Ret)
Site Manager, Northrop Grumman Corporation;
NDIA Expeditionary Warfare Division Conference Chairman
St. Andrews Ballroom

7:45 AM - 8:30 AM

Vice Admiral William Burke, USN
Deputy Chief of Naval Operations for Fleet Readiness and Logistics, OPNAV N4
St. Andrews Ballroom

8:30 AM - 12:00 PM

Resourcing Expeditionary Warfare in a Decade of Shrinking Budgets
St. Andrews Ballroom

Session Focus: The guidance is clear from the Secretary of Defense, from some Congressional leaders and much of the press: the appetite of the Defense Establishment is likely to be put on a diet throughout this decade, certainly across this FYDP. How much does the Department of the Navy expect to have to tighten its belt? How will the Sea Services position themselves to define and to champion the future requirements of Expeditionary Warfare under any such constraints? More importantly, how will the most important of those requirements be prioritized and funded in an atmosphere of reduced expectations? These are questions that will need to be addressed. This session brings together several knowledgeable officers who struggle with these questions daily in the Pentagon, who will try to help us find some answers.

8:30 AM - 9:00 AM

Rear Admiral David L. "Deke" Philman, USN
Director, Warfare Integration/Senior National Representative 9OPNAV N85)
St. Andrews Ballroom

9:00 AM - 9:30 AM

Networking Break
St. Andrews and Grand Lagoon Foyers

9:30 AM - 12:00 PM

Session Continues
St. Andrews Ballroom

Session Chairman: Vice Admiral Jim Amerault, USN (Ret)
CEO, Oto Melara North America

-Rear Admiral Frank Pandolfe, USN
Director, Surface Warfare Division, OPNAV N86

-Major General Timothy C. Hanifen, USMC
Director, Expeditionary Warfare Division, OPNAV N85

-Rear Admiral Mark Handley, CEC, USN
Commander, First Naval Construction Division/Commander, Naval Construction Forces Command

-Brigadier General David H. Berger, USMC
Director, Operations Division, HQMC, PP&O

-Captain Gail Kulisch, USCG
Commander, Deployable Operations Group

12:00 PM - 1:45 PM

Luncheon with Keynote Speaker: General James T. Conway, USMC
Commandant of the Marine Corps
Grand Lagoon Ballroom





LOCATION

Bay Point Marriott Hotel
4200 Marriott Drive
Panama City Beach, FL 32408
(800) 644-2650

CONFERENCE ATTIRE

Appropriate dress for the conference is business casual for civilians and Class B uniform or uniform of the day for military personnel.

PIG ROAST

Appropriate attire for the pig roast held at the NSWC PCD Base is casual dress. Please note that the event is held in an open air facility and the temperature can be cold. To attend the pig roast, you must have a Pig Roast Badge that you would have received at registration. If you do not have a Pig Roast Badge, please see the NSWC PCD registration area. Please bring a valid ID and your Pig Roast Badge to board the bus bound for NSWC PCD.

ID BADGES

During conference registration and check-in, each attendee will be issued an identification badge. Please be prepared to present a valid picture ID. Badges must be worn at all conference functions.

PROCEEDINGS

Conference proceedings will be available online approximately two weeks after the event. You will receive an e-mail notification once the proceedings are available for viewing.



1:45 PM - 4:30 PM

Sustainment/Maintenance

St. Andrews Ballroom

Session Focus: Since the beginning of OEF, the Marine Corps (and the U.S. Army) have been continually engaged in large scale operations in the Mideast. While not amphibious, they have certainly been expeditionary operations by the Nation's premier expeditionary force. Nevertheless, the continued high-tempo operations by a large portion of our Marine Corps in the continually harsh environments of Iraq and Afghanistan have accelerated the wear and tear on Marine Corps equipment. Coupled with the need to address the excessive wear and tear, the Marine Corps has identified the need to significantly increase Tables of Equipment for radios, ground vehicles and other major end items of equipment. As the Iraq drawdown completes and the Afghanistan operations continue, the Marine Corps' concern over readiness and reset of equipment, modernization of the force and preparation for the future have placed unprecedented demands on the USMC budget. The cost is significant; \$8B over the FYDP with \$3B requested in the FY11 Overseas Contingency Operations Request with \$5B for reset following termination of the conflict and \$5B for restructuring of USMC TE in FY 12-15. How the Marine Corps undertakes this reset and modernization effort, including engagement early on with industry, may directly impact the level of success.

Session Chairman: Mr. John Pross

Director, Marine Corps Programs, SRA International, Inc.

1:45 PM - 2:30 PM

Keynote Speaker: Major General James A. Kessler, USMC

Commander, Marine Corps Logistics Command

2:30 PM - 3:00 PM

Networking Break

St. Andrews and Grand Lagoon Foyers

3:00 PM - 4:30 PM

Session Continues

St. Andrews Ballroom

-Colonel Len Blasiol, USMC (Ret)

Director, MAGTF Integration Division, MCCDC

-Major Jesse Kemp, USMC

Section Head, Reset Integration Office LPO-5, Installations and Logistics, HQMC

-Colonel Ed Mays, USMC

Product Support Assessment Team Lead, Marine Corps Systems Command

-Major Dan Atkinson, USMC

Prepositioning Analyst, Expeditionary Policies Branch, PP&O, HQMC

4:30 PM - 10:00 PM

Revolving Bus Transportation

Transportation will be provided to and from the Naval Surface Warfare Center, Panama City Division (NSWC PCD)

TO BOARD THE BUS FOR THE PIG ROAST DINNER, YOU MUST HAVE A PIG ROAST BADGE AND VALID ID
Bay Point Marriott Front Drive

5:00 PM - 6:30 PM

NSWC PCD Open House and Networking Reception (Hosted Bar)

Featuring Warfare Center exhibits from NSWC Panama City, NSWC Crane, NSWC Carderock, NSWC Philadelphia and NSWC Dahlgren, with the theme of "Expeditionary Operations - Here's What's Next!"

Offsite Outdoor Location: NSWC PCD Base

6:30 PM - 10:00 PM

Pig Roast Dinner (Hosted Bar)

Offsite Outdoor Location: NSWC PCD Base

THURSDAY, OCTOBER 7, 2010

6:45 AM - 12:20 PM

Conference Registration
St. Andrews Foyer

6:45 AM - 7:45 AM

Continental Breakfast
St. Andrews and Grand Lagoon Foyer

7:45 AM - 8:00 AM

Opening Remarks
Captain Duane Covert, USN (Ret)
Site Manager, Northrop Grumman Corporation;
NDIA Expeditionary Warfare Division Conference Chairman
St. Andrews Ballroom

8:00 AM - 12:15 PM

Balancing Resources in Support of Expeditionary Warfare
St. Andrews Ballroom

Session Focus: Secretary of Defense Gates' 2010 Defense Budget recommendation focused on balancing valuable resources among programs that support the full range of military operations. While that is the overarching focus for the expeditionary warfare community, an area of particular interest has become bridging the gap between conventional and irregular warfare in a complex Joint Operating Environment. This session will provide insight into the Navy and Marine Corps' resource allocations in order to meet the Secretary's intent within the scope of expeditionary warfare. The panel members are the resource sponsors who provide the funding for these programs of record.

Session Chairman: Mr. Skip Gaskill
Director, Government Affairs, Textron Corporation

8:00 AM - 8:30 AM

Major General Timothy C. Hanifen, USMC
Director, Expeditionary Warfare Division, OPNAV N85

8:30 AM - 9:45 AM

Moderator: Major General Thomas "Beans" Benes, USMC (Ret)
Vice President, Expeditionary Warfare, Alion Science & Technology
-Colonel Roger Garay, USMC
Chief of Staff, Capabilities Integration Division, MCCDC
-Captain Dan Colman, USN
Branch Head, N857 Naval Expeditionary Combat Command/Non-Lethal Weapons & CREW
-Captain Evin Thompson, USN
Branch Head, N852 Mine Warfare
-Captain Walt Towns, USN
Branch Head, N853 Amphibious Warfare
-Colonel James Strock, USMC (Ret)
Director, Seabasing Integration Division, Capabilities Development Directorate, MCCDC
-Captain Mark Rios, USN
Branch Head, N852 Mine Warfare

9:45 AM - 10:15 AM

Networking Break
St. Andrews and Grand Lagoon Foyers

10:15 AM - 12:15 PM

Session Continues
St. Andrews Ballroom

12:15 PM - 12:20 PM

Closing Remarks & Conference Adjourns
Rear Admiral Mike Nowakowski, USN (Ret)
Vice President, Colonna's Shipyard, Inc.;
NDIA Expeditionary Warfare Division Chairman
St. Andrews Ballroom

12:20 PM

Boxed Lunch
Grand Lagoon Ballroom



CONFERENCE CONTACTS

Rear Admiral Michael Nowakowski, USN (Ret)
Expeditionary Warfare Division Chairman
VP, Defense Contracting Group
Colonna's Shipyard, Inc.
mnowakowski@colonnaship.com

Colonel Reed Bolick, USMC (Ret)
Expeditionary Warfare Division Vice Chairman
Director, Marine Corps Programs
Cypress International
rbolick@cypressintl.com

Captain Duane Covert, USN (Ret)
Expeditionary Warfare Division Conference Chairman
Site Manager, Northrop Grumman Corporation
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(703) 247-2586

Ms. Mary Anna Christiansen
Meeting Planner, NDIA
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(703) 247-2596

SAVE THE DATE

16th Annual Expeditionary Warfare Conference
Bay Point Marriott Hotel, Panama City, FL
October 24 - 27, 2011
Event #2700
[HTTP://WWW.NDIA.ORG/MEETINGS/2700](http://WWW.NDIA.ORG/MEETINGS/2700)



USMC Ground Equipping Strategy

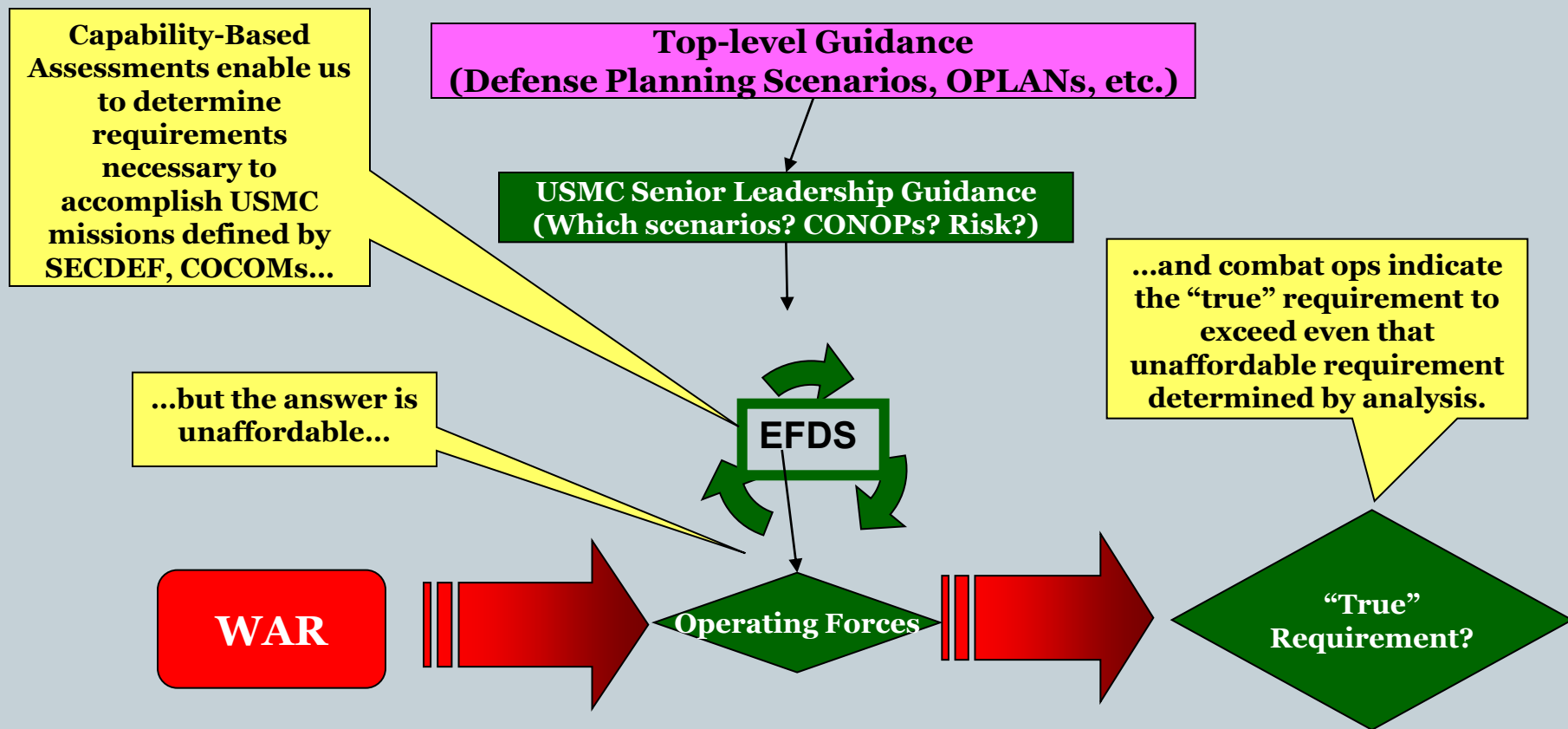


ALTERNATIVE MODELS





What's the “right” requirement?





Why an alternate equipping model?



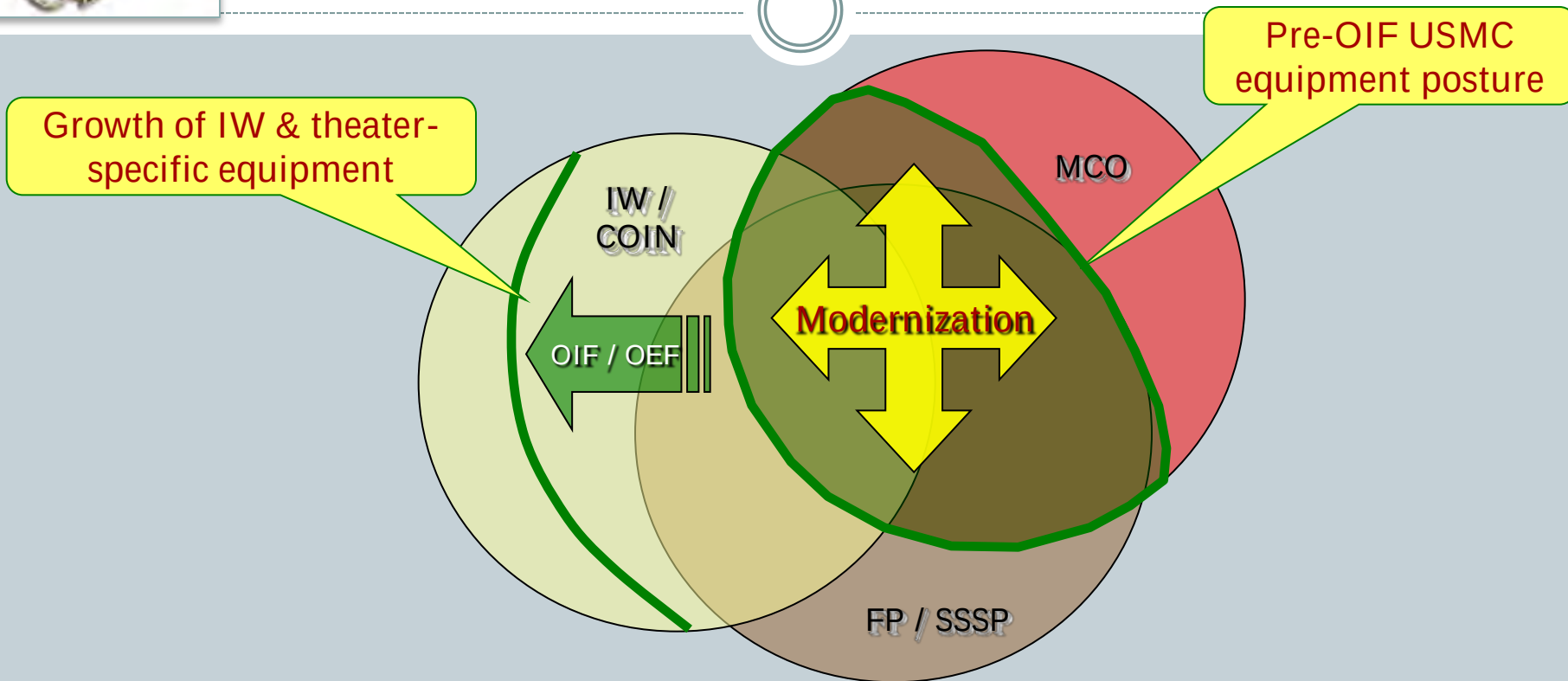
- **Reduce costs**
- **Increase readiness**
- **Maintain operational flexibility**



Most ready when the Nation is least ready...



Current State



Reducing current readiness & jeopardizing future capabilities
- to respond “across the ROMO”



METT-T Tailored/Scaled

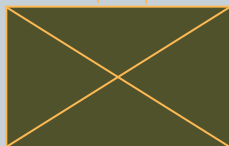


Equipped for a
Core mission set
& **Scaled for ?? Op
Concept**

Augmented/Re-
equipped for ops at
one "point" on the
ROMO

In a specific
clime &
place

Mission
#1



+

Augment
Equipment
Package

+

Cold Wx
Mountain
Package

Mission
#2



+

Augment
Equipment
Package

+

OPLAN 1234
Package

Core T/E (constrained) + METT-T T/E (Additive & Adaptable)



Issues



- Training?
- Readiness reporting?
- Accountability?
- ***Strategic Decisions***
 - Core missions?
 - Other missions? Capacity?





Seabasing Training, Exercises, Experimentation



BGen John W. Bullard, USMC
Director, Joint Capabilities Integration and Assessment
HQMC Combat Development & Integration
Comm: 703-614-8610
john.bullard@usmc.mil



Seabasing Experimentation and Exercises



EW 10 Recommendations



- Identify key issues that specifically require seabasing experimentation and exercises to validate

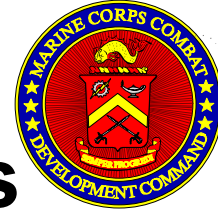
- ✓ Test and demonstrate technologies providing multiplatform interface capabilities
- ✓ Assess the need for additional MPS staff workspace, berthing, network support, and log/maint capabilities
- ✓ Continue ship-to-ship and ship-to-surface connector interface tests and demonstrations
- ✓ Develop and validate amphib & MPS load plans for most likely scenarios

Moving Seabasing forward requires today's programs and technologies coupled with future investments

EXPEDITIONARY WARRIOR 10

FOUO

U.S. Marine Corps²⁰



Seabasing

Experimentation and Exercise Goals

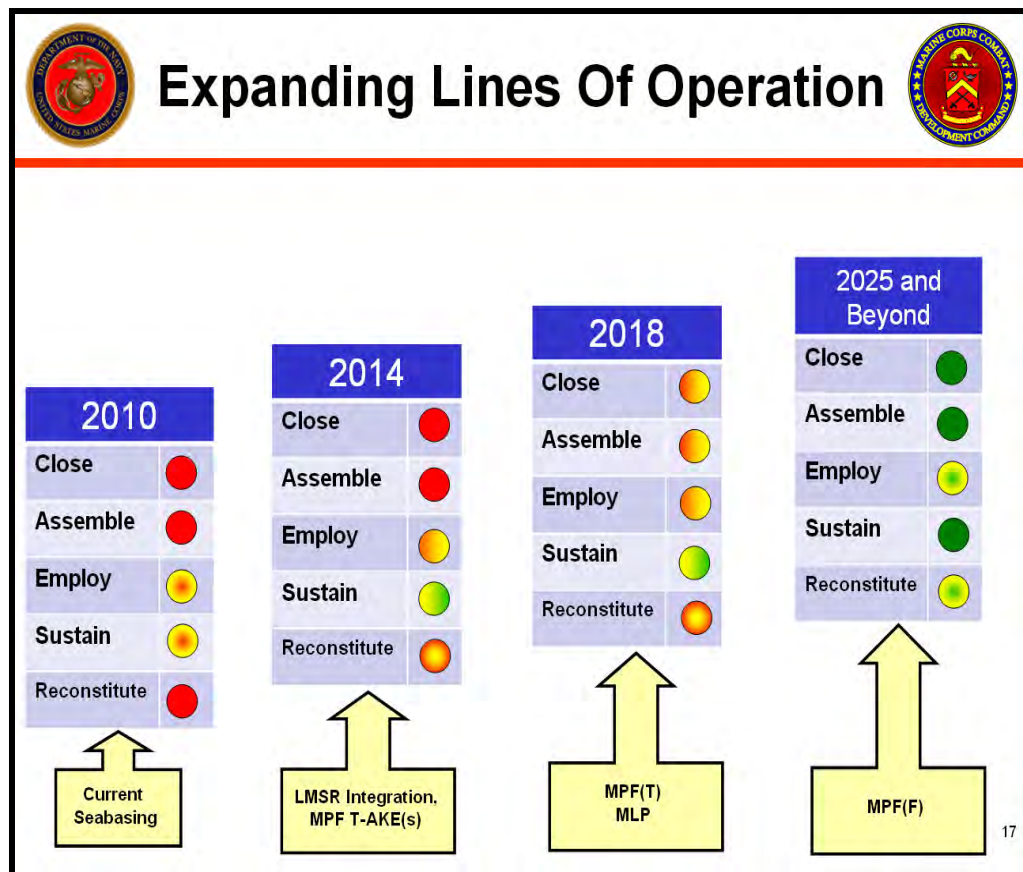
Scope:

- “...identify specific enhancements that provide for increased battle force engagement, irregular warfare and security force assistance capabilities as well as improved selective offload and in-stream offloading options in austere locations...”

1 July 2009 Memorandum from Under Secretary of the Navy The Honorable Mr. Robert O. Work

Goals:

- **Transition seabasing enabling concepts into doctrine**
- **Optimize existing seabasing capabilities, identify gaps, inform future requirements**
- **Document, report, inform and incorporate Lessons Learned into Tactics, Techniques and Procedures (TTP)**
- **Facilitate Maritime Expeditionary interoperability and Naval Integration of new and emerging Combat Capabilities**



“...I am especially interested in enhancements... that would give the legacy MPS squadrons additional capabilities... and to illuminate capabilities that would guide the development of MPF(F)...” The Honorable Robert O. Work Under Secretary of the Navy



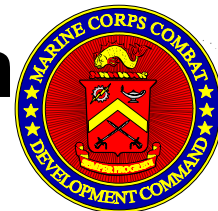
Seabasing Experimentation and Exercise Objectives



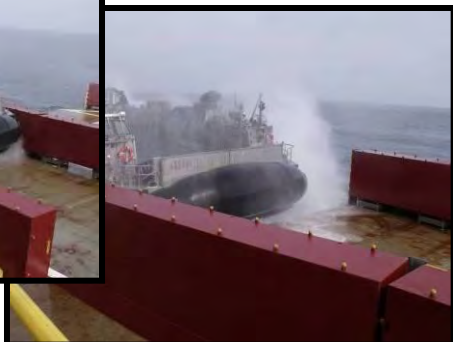
- Establish and document baseline MPF (2012) Seabasing capabilities and challenges.
- Preposition, Deploy, Employ, Sustain and Reconstitute a (Rein) Mech Infantry Rifle Company with DS CSS (~425 Marines) ISO Enhanced MAGTF Operations (EMO) conducting Mid to Low Intensity Operations from a Sea base consisting of an MPF LMSR, T-AKE and MLP.
- Conduct sea based Selective Onload/Offload and at-sea transfer of personnel and prepositioned equipment and supplies
- Incorporate naval integration testing of new and emerging equipment across sea basing platforms and connectors



Experimentation and Demonstration Completed Events



- FY05-FY06 skin to skin transfer
- FY08- (WATC) vehicle and cargo transfer RRDF and JHSV
- FY09- Loyal Midas (EUCOM)
- FY10- vehicle transfer at sea (CONUS)
 - LCAC-MLP interoperability (CONUS)



Transitioning Seabasing From a Concept To Doctrine (Legacy Integration to Future Capability)



Experimentation and Demonstration Planned Events



- **FY10**
Native Fury (CENTCOM)
- **FY11**
Freedom Banner (PACOM)
Pacific Horizon (CONUS) (West Coast)
- **FY12**
Shared Accord (AFRICOM)
Sea Vision (CONUS) (East Coast)
Immediate Response (EUCOM)
- **FY13**
Freedom Banner (PACOM)
Pacific Horizon (CONUS) (West Coast)
- **FY14**
Freedom Banner (PACOM)
Sea Vision (CONUS) (East Coast)





Way Ahead



- ✓ Assign experimentation objectives/Tasks to exercises identified within the 5 year Exercise Plan.
- ❑ Establish business rules (Policy) for the conduct of Sea Basing experiments, recording, reporting and tracking of actions derived from the experiments.
- ✓ Develop Marine Corps Task to Conduct Prepositioning (Seabased) Operations
- ❑ Coordinate Universal Naval Tasks Lists IRT Conduct Prepositioning (Seabased) Operations
- ❑ Develop Tasks-Conditions and Standards for each experimentation objective during exercise planning conferences
- ❑ MARFOR/MEF/SE Create Prepositioning Mission Essential Task List
- ❑ Annually review and update Experimentation Scope-Goals and Objectives



N857

NAVY EXPEDITIONARY COMBAT BRANCH

Captain Dan Colman, Branch Head

Expeditionary Combat Operations – What's Next?



PRESENTED TO:



**15TH ANNUAL EXPEDITIONARY
WARFARE CONFERENCE**
Panama City, FL
4-7 Oct 10

Navy Expeditionary Combat

NECC World Wide Force Participation Since 2007



NORTHCOM

JTFEXS
PATRIOT PARTNER
GOLDEN CARGO
CONTINUING PROMISE (USNS COMFORT)
JLOTS
UNITAS GOLD
TRIDENT ARCH
JAVELIN THRUST
CITADEL GALE
DELMAR

EUCOM

OPERATIONS:
CTF-68-
NCF/MESF/EOD/NEIC/
MDSU
SOCEUR CIF - EOD
JTF EAST - NCF

ENGAGEMENTS/EXERCISES:
SEA BREEZE
UKRAINE MARITIME
SECURITY
BLACK SEA
PARTNERSHIP
LOYAL MARINER
BRILLIANT MARINER
BRILLIANT MIDAS
JOINT WARRIOR
TUNISIA

PACOM

OPERATIONS:
PACFLT/C7F SUPPORT -
NCF/MESF/EOD/MDSU
JSOTF-P - MESF/MCAG/NCF

ENGAGEMENT/EXERCISES:
CARAT
PACIFIC PARTNERSHIP
STATION
COBRA GOLD
KEY RESOLVE
TALON VISION
CONTINUING PROMISE
PACIFIC (USNS MERCY)
PROJECT FRIENDSHIP
FOAL EAGLE
ULCHI FOCUS LENS
FREEDOM GUARDIAN
DEEP FREEZE
MIATA
IWOJIMA MINEX
DUGONG MINEX
BALIKATAN
HONG KONG EODEX
SPITTING COBRA
EOD SMEE
TALISMAN SABER

CENTCOM

OPERATIONS:
MNF-W:
RIVERINE/EOD/NCF/
MESF/NAVELSG/NEIC/
MCAG
CJSOTF: NCF/EOD/
COMCAM/ MCAG
NAVCENT/C5F:
MESF/NEIC/EOD/
NAVELSG

ENGAGEMENT/EXERCISES:
NATIVE FURY
EGYPT EOD CIED
JORDAN EOD CIED
BEIRUT EOD CIED
SAUDI ARABIA CIED

SOUTHCOM

OPERATIONS:
JTF GTMO - NCF/COMCAM
NAVSOUTH - PANAMA CANAL
TRANSITS - MESF

ENGAGEMENTS/ EXERCISES:
PANAMEX
JLOTS
CONTINUING PROMISE (USNS COMFORT)
BEYOND THE HORIZON
PROJECT FRIENDSHIP
SOUTHERN PARTNERSHIP
STATION

AFRICOM

OPERATIONS:
JTF-HOA -
NCF/MCAG/NEIC/EOD
11
ENGAGEMENT/EXERCISES:
JTF HOA
FLINTLOCK
WATC
AFRICAN PARTNERSHIP
STATION
GULF OF GUINEA
CAMEROON
SEYCHELLES



Responsibilities



RESOURCE / WARFARE SPONSOR

- Advocate and source requirements
- Close coordination within OPNAV and with NECC, acquisition community and S&T community
- Balance operating needs with future capabilities

FOCUSED ON

- Navy Expeditionary Combat Command
- Joint Programs For Explosive Ordnance Disposal (EOD)
- Joint Non Lethal Weapons
- Energy Efficiency

DEFINING NEEDS ~ PRIORITIZING INVESTMENTS

Navy Expeditionary Combat

A Vision for the Future



- A fully integrated littoral combat force

- Forces that link the maritime and land domains, effectively enabling the support of Joint operations ashore from the global maritime commons

- Units that are globally engaged providing training, advice, and assistance to partners at the individual level

- "Dual use" general purpose forces, equally suited to meet both conventional and irregular challenges

- Forces that are deployed in predictable and sustainable rotations



Force Evolution



Current Expeditionary Combat Force COLLECTION OF INDIVIDUAL COMPONENTS

- Maritime Expeditionary Security
- Explosive Ordnance Disposal
- Expeditionary Construction
- Expeditionary Logistics
- Maritime Civil Affairs & Expeditionary Training
- Riverine
- Combat Camera
- Expeditionary Intelligence

Robust C4ISR
Force Commonality
Improved Self Defense
Enhanced Logistics Tracking
Improved Undersea Warfare Capability
Adaptive Force Packaging

Future Expeditionary Combat Force INTEGRATED FORCES



Capability Implications

What we need from you to help us get there



Flexible and Responsive C2

Common architecture that allows for “plug and play” compatibility for unique C2 requirements & robust “reachback” capability.



Pre-Positioning

Deployable equipment and stock configured for immediate deployment at fleet mobilization sites.



Modularity

Platform and equipment commonality and standardization.



Force Agility, Interoperability, Adaptability to Achieve Global Engagement

Capability Implications

What we need from you to help us get there



Improved Sensors

- To detect & track underwater threats in shallow/very shallow water
- Interoperable with overarching C4 infrastructure



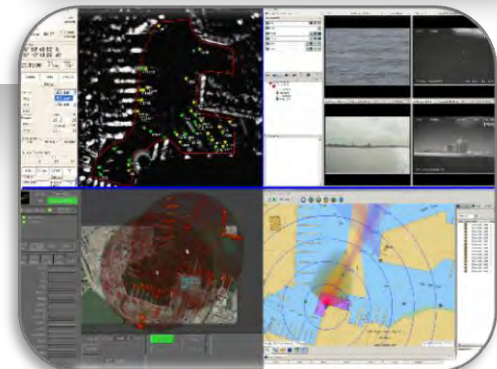
Unmanned Systems

- Incorporation of open architecture to permit cost effective upgrades
- Systems capable of accomplishing mission critical tasks beyond simple surveillance



Adaptive, Deployable Networks

- To enable persistent awareness
- Able to integrate sensor data & enhance COP



Capability Implications

What we need from you to help us get there



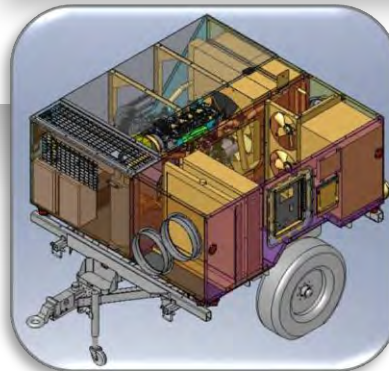
Non-Lethal Effects

- Stand off vessel/vehicle stopping
- Reduced size, weight, and cost of directed energy systems
- Increased range of fielded systems



Energy Efficiency

- Improved Environmental Control Units
- Hybrid CESE
- Alternate energy sources for expeditionary tent camps



Leverage COTS/GOTS

- Must maximize return on investment of S&T development funding
- In many cases, industry, other services, & OGAs may already have what we need



Engaging N857



Force/Commodity Managers

ELSG/Sub-surface Defense	CDR John Rivers	john.rivers@navy.mil
MESF	LCDR Nakia Cooper	nakia.cooper@navy.mil
EOD/JEOD	LCDR AJ Kyle Ed Ebinger John Stansbury	anthony.kyle@navy.mil edwin.ebinger.ctr@navy.mil john.stansbury.ctr@navy.mil
Non-lethal Weapons	Corey Noel	corey.noel@navy.mil
MCAS/ECRC/ETC/NEIC	Mike Polidoro	michael.polidoro@navy.mil
NCF/Tactical Vehicles	George Wenchel	george.wenchel.ctr@navy.mil

Capability Area Managers (CAMs)

Afloat	Steve Gorin	steven.gorin@navy.mil
Ground	Harry Guthmuller	harry.guthmuller@navy.mil
C5I	Matthew O'Connor	matthew.oconnor@navy.mil

Partnering with Industry to Support the Force



Your technological efforts to assist our needed capability advancements directly support Expeditionary Warfare's Resource Strategy for Programs!

**HELP US
HELP YOU !**



Backups

Capability Implications



- **Enabling non-lethal effects**
- **On surface and subsurface contacts of interest**
- **Aid in determining contact intent**
- **Enabling stand-off explosive detection, classification, and neutralization**
- **Enabling expeditionary energy enhancements**
- **Alternative power sources**
- **Water purification**
- **More efficient environmental control units (ECUs)**
- **NECC 15 Year Energy Strategy**

Capability Implications

NECC Vision 2024



- **Enabling the Reception, Staging, Onward movement, and Integration (RSOI) of Joint/Combined/Multinational forces:**
 - ☐ Austere port and airfield operations
 - ☐ JLOTS
 - ☐ Warehousing and distribution
 - ☐ Expeditionary base operations
 - ☐ By conducting rapid repair of ports and airfields
 - ☐ By building expeditionary facilities both on land and underwater
- **Enabling combat engineering capabilities that:**
 - ☐ Establish expeditionary facilities and utilities
 - ☐ Repair or protect critical infrastructure and utilities

Naval Construction (Seabees)



Maritime Expeditionary Security



Expeditionary Logistics



- Investments in high-demand/low density SFA-capable forces
- Common, upgraded C4I infrastructure
- Small boat standardization
- Continued EOD technology development
- Robust non-lethal capabilities



NECC forces LINK the maritime and land domains across the challenging littoral battlespace.

Where does NECC need your help?



- **Sensor Technology**

- ☐ **Unmanned Systems (UAV/USV/UUV)**

- ❖ More capability in a smaller package in more varied operational environments
- ❖ User friendly design to capture the skills of technology generation
- ❖ Inter-operable; enhancing common operating picture and knowledge
- ❖ Energy efficiency

- ☐ **Standoff Detection**

- ❖ Persistent ISR applications
- ❖ Fixed-site, Force Protection, Proliferation Security Initiative, EOD
- ❖ Counter IED and Chemical, Nuclear, Biological

- ☐ **Enhanced Situational Awareness**



- **Integrated Armor and Lightweight Personal Protection**

- ☐ Layered and adaptive protection across spectrum to defeat multiple threats without significant increase to personnel and platform footprint
- ☐ Ground vehicles, green water-borne platforms, work sites
- ☐ Plug and play, able to shed armor when not needed



- **Adaptive, Deployable Networks**

- ☐ Incorporate wireless technology for the battlefield
- ☐ Optimize logistic footprint
- ☐ Interoperability with the Intra-Agency, local governments, NGO's

- **Enhanced Cultural Awareness and Language Translation**

- ☐ CBTs and field-employable multi-language translation tool
- ☐ Training enablers to facilitate Security Force Assistance in multiple operating areas

Where does EOD need your help?



- **Unmanned Systems**
 - ❑ UUV/UAV/Ground Robotics communications enhancement
 - ❑ Underwater vehicle sensor and neutralization technology
 - ❑ Energy Efficiency
 - ❑ Ground Robotics advancements
 - ❖ Reduce time-on-target
 - ❖ Light weight systems for agile, dismounted ops without capability loss
 - ❖ Enhance manipulation capability
 - ❖ Extend operation life with advancements in power generation/supply
- **Personnel Protection**
 - ❑ Ultra light and agile body armor
 - ❑ Next generation bomb suit technology
- **Standoff Detection and Disruption**
 - ❑ Determine the threat before going into harms way
 - ❑ Enhance survivability
 - ❑ Defeat the Network*
 - ❑ Spectrum of Effects: Non-kinetic, low-order, high-order neutralization
- **Forensics**
 - ❑ Radiographic systems
 - ❑ Post Blast investigation
 - ❑ Wireless transmission/reception*



Where does CREW need your help?



- **Antennas and Amplifiers**
 - ❑ **Environmental efficiency**
 - ❑ **Size and weight**
 - ❖ Dismounted applications
 - ❖ Future combat vehicle families
 - ❖ Fixed site applications
 - ❑ **Energy efficiency**
- **Receivers/Processing/Modulators/Integration**
 - ❑ Open architecture to enable continuous system enhancement
- **Common Timing And Electromagnetic Compatibility**
 - ❑ Interoperability across DoD Electronic Warfare systems
 - ❑ Develop systems permitting span of C5ISR capabilities
- **Additional Technology, Information, Recommendations**

BAAs:

- <http://www.onr.navy.mil/02/BAA>
- <https://bids.acqcenter.com/jieddo/>

CREW is transitioning to N2/N6

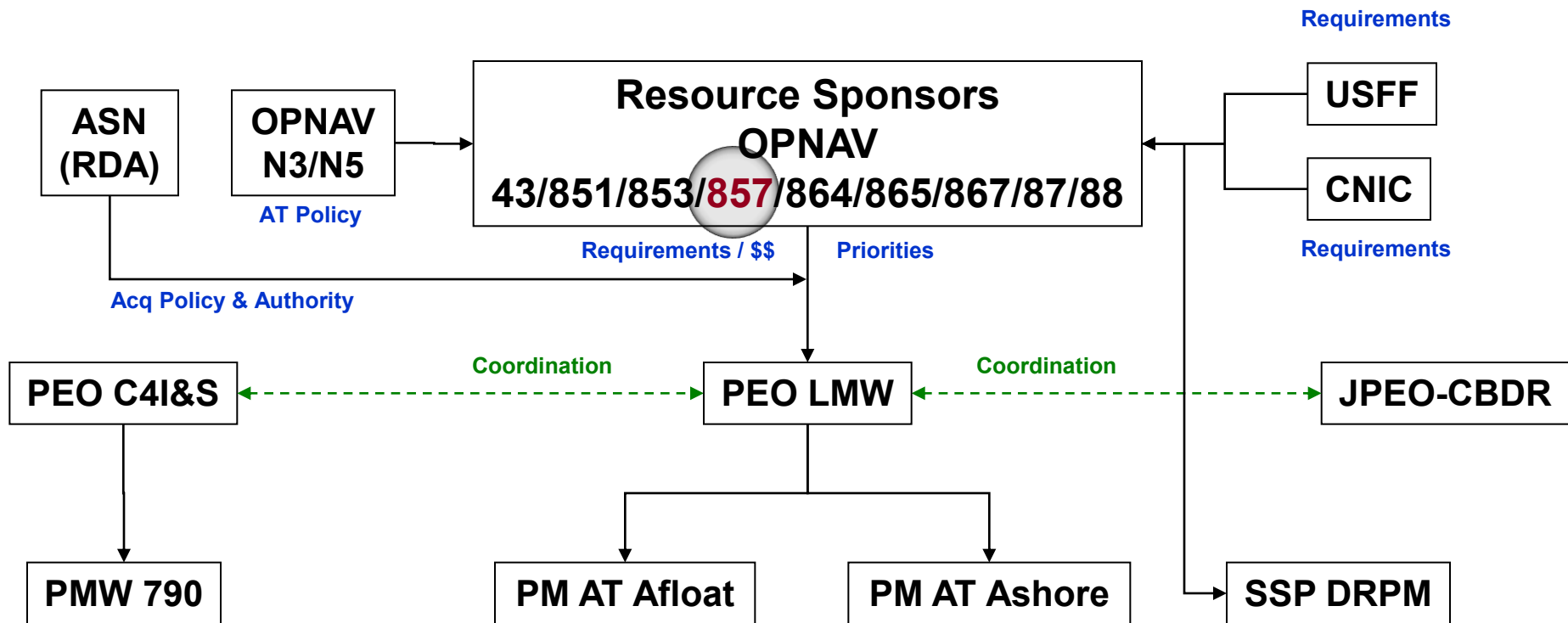
Where does Navy NLW need your help?



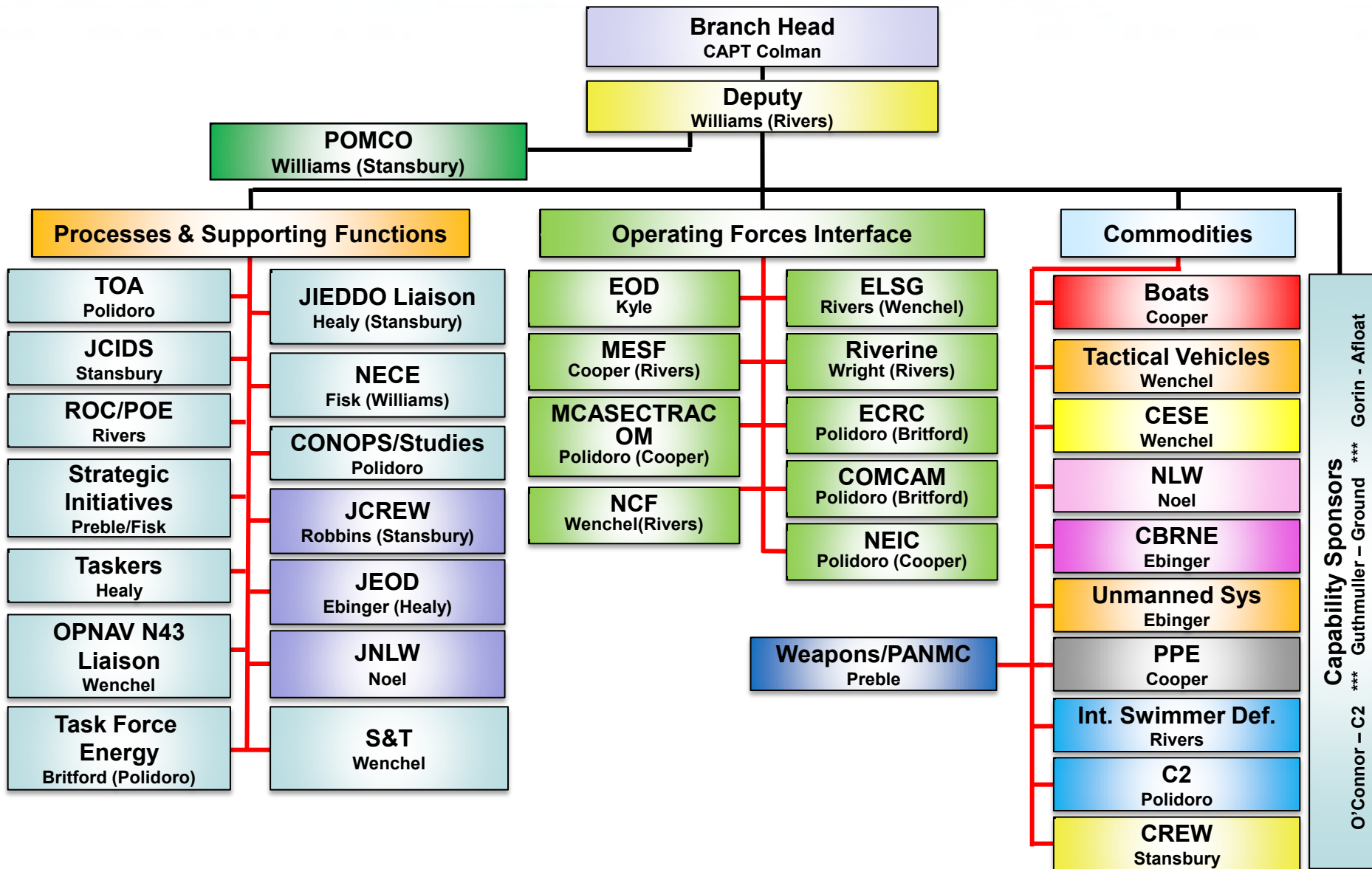
- Stand off vessel stopping
- Stand off vehicle stopping
- Reducing the size and weight and cost of directed energy systems
- Integration of directed energy systems into shipboard platforms as part of their self defense systems
- Determining contact intent



Where is N857?



N857 Organization





NDIA Expeditionary Warfare Conference

JP2048 Update

CANBERRA Class Amphibious Assault Ships

CDRE Simon Cullen RAN



Current RAN Amphibious Capability

2 LPAs (ex USN Newport Class LST)



LSH & LCHs



LSH – HMAS TOBRUK



Landing Force Concepts

- **Amphibious Ready Group (ARG)**

- Based on an Army Combined Arms Battle Group

- **Amphibious Ready Element (ARE)**

- Short Notice contingency based on a Company Group level for Humanitarian Aid , Disaster Relief and Non-combatant Evacuation Operations



JP2048/ADAS Program

Phase 4A/B – LHD - ISD 2014



Phase 3 – LHD Ship to Shore Connector – LCM1E– ISD 2014



Phase 4C – Amphibious Support Ship

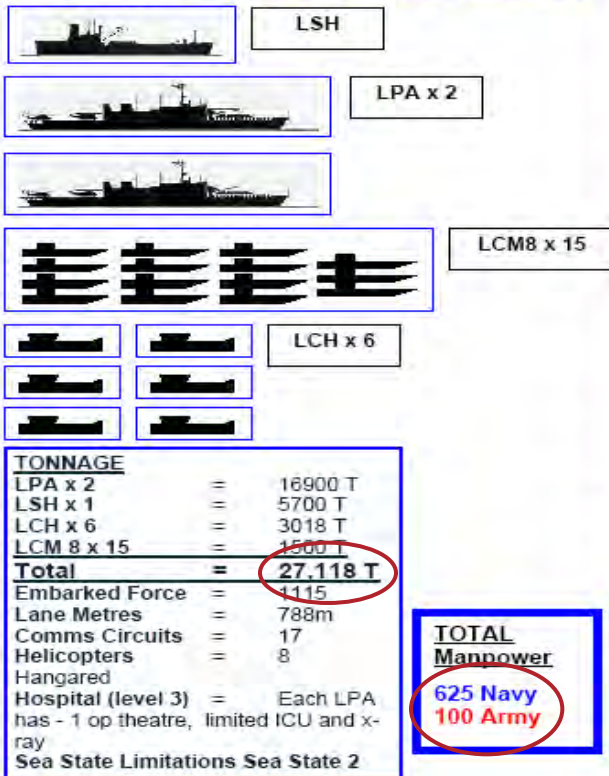


Phase 5 – LCH Replacement

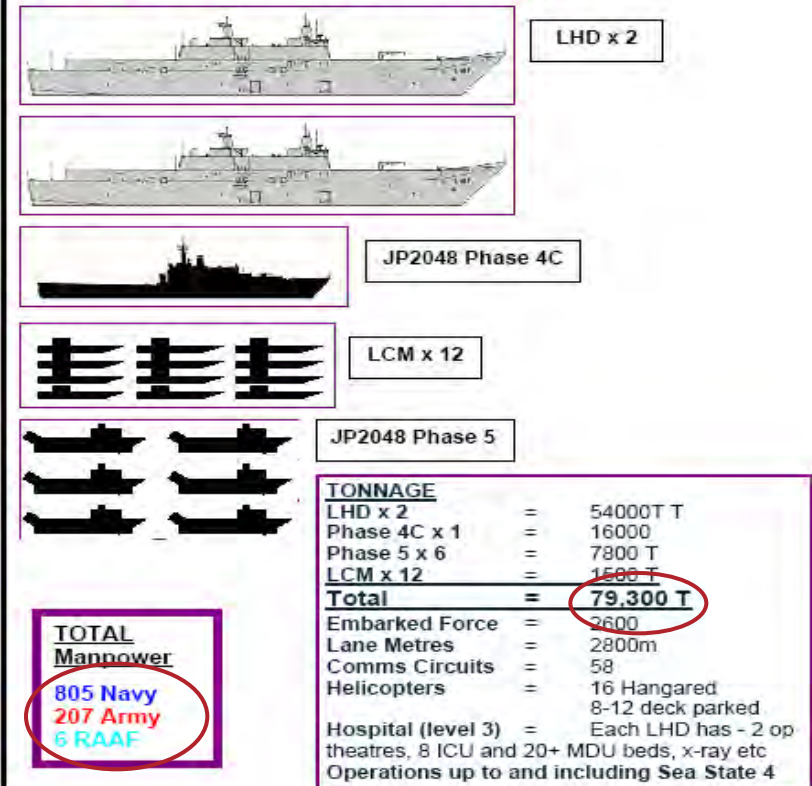


Capability Growth

CURRENT AMPHIBIOUS CAPABILITY



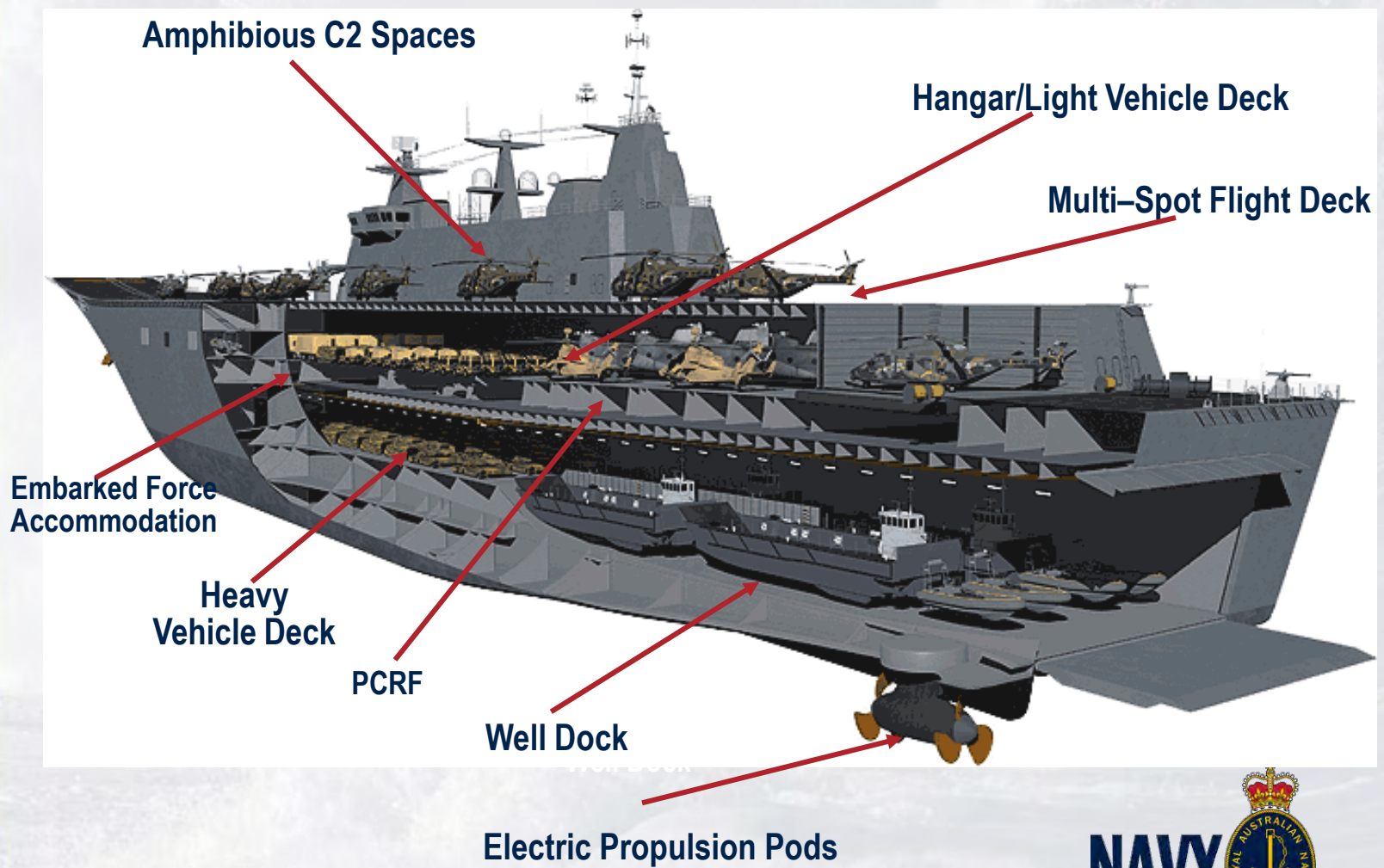
FUTURE AMPHIBIOUS CAPABILITY



LHD Delivery Timeline

Event	Dates
LHD #1 Launch	April 2011
LHD #1 Arrival in Australia (Williamstown)	July 2012
LHD #2 Launch	October 2012
LHD #1 Harbour Acceptance Trials	August 2013
LHD #1 Sea Acceptance Trials	November 2013
LHD #2 Arrival in Australia (Williamstown)	February 2014
LHD #1 Initial Operational Release	March 2014
LHD #1 Initial Operating Capability	December 2014
LHD #2 Harbour Acceptance Trials completion	March 2015
LHD #2 Sea Acceptance Trials completion	June 2015
LHD #2 Initial Operational Release	October 2015
LHD #2 Initial Operating Capability	June 2016
ADAS Full Operating Capability	October 2017

CANBERRA Class Capabilities



Challenges & Opportunities

- **Force generation**
 - Ongoing operations
 - Single service training
 - Collective training
- **Landing Force - Cross leveling the Army or specialist organisation**
- **Force capabilities – ARE & ARG**
- **Understanding the cost**
 - COMAUSATG – 8 personnel (5 Navy, 3 Army)
 - HQJAAF – 66 Personnel (no offsets yet identified)
 - Readiness and Preparedness
- **Personnel**
 - Minimum manning concept
 - Building new skills – AVN Category, HV Propulsion, Well Dock/Landing Craft

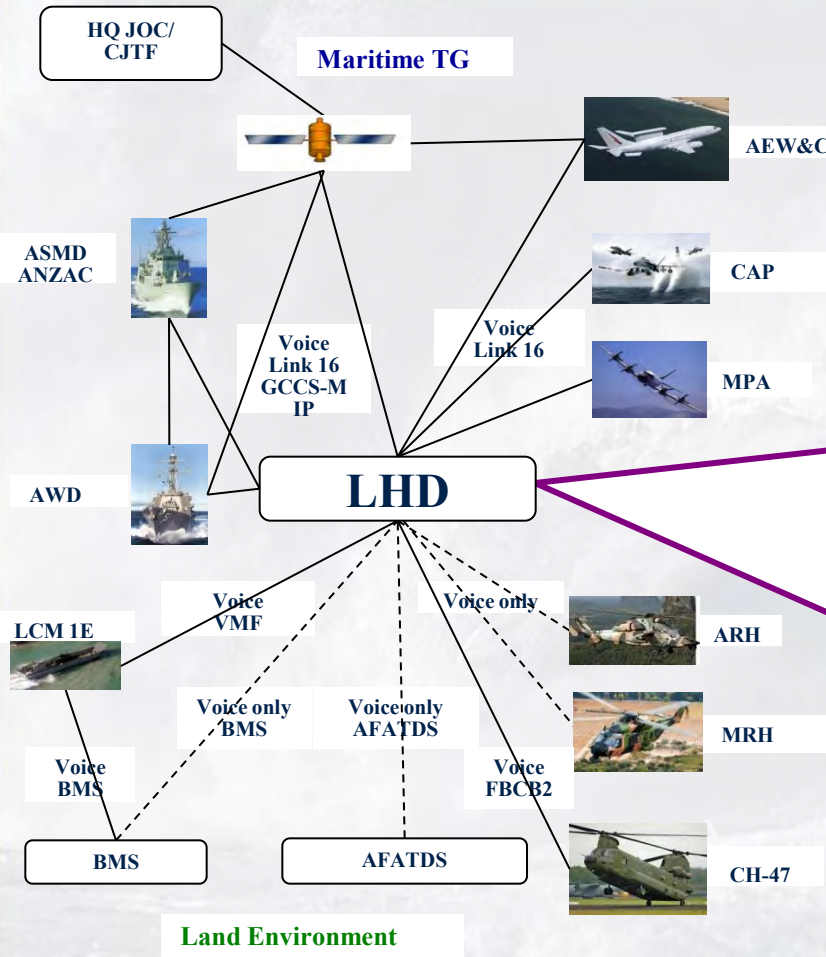


Challenges & Opportunities

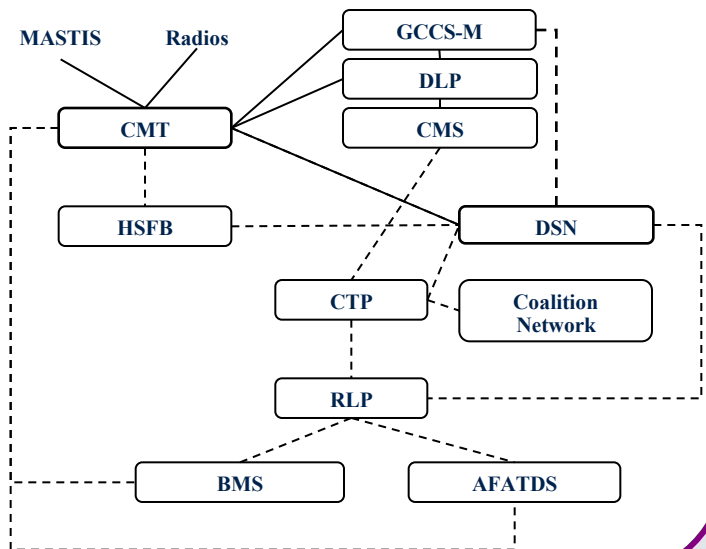
- **Support System**
 - Building an affordable Support System
- **Fleet Renewal 2014-2017**
 - AWD, LHD, FFH ASMD and FNACS arriving in same period
- **Hardened Networked Army**
- **System integration – Communications/Data Links**



Amphibious/LHD C4I Network Existing and Required Links



INTERNAL LHD OPS ROOM/JOR COMMUNICATION REQUIREMENTS



LEGEND

Existing Links ———

Required Links - - - - -



US/ADF Amphibious Engagement

- **Engagement through EWWG and CRSG**
 - Forward Work Plan
 - Future level of interoperability
- **EX ANCHOR SUN**
- **EWTGPAC San Diego**
 - International Senior Officer Amphibious Planning Course (ISOAPC). RAN has had 2 students on this course.
- **Amphibious Warfare Indoctrination (AWI)**
 - We have placed 4-5 students on the last two iterations of AWI and are panelling for the Apr 11 students.
- **Expeditionary Warfare Staff Planning (EWSP)**
 - Run in conjunction with the AWI. As per comments above, this is a two week package and we are continuing to exploit.



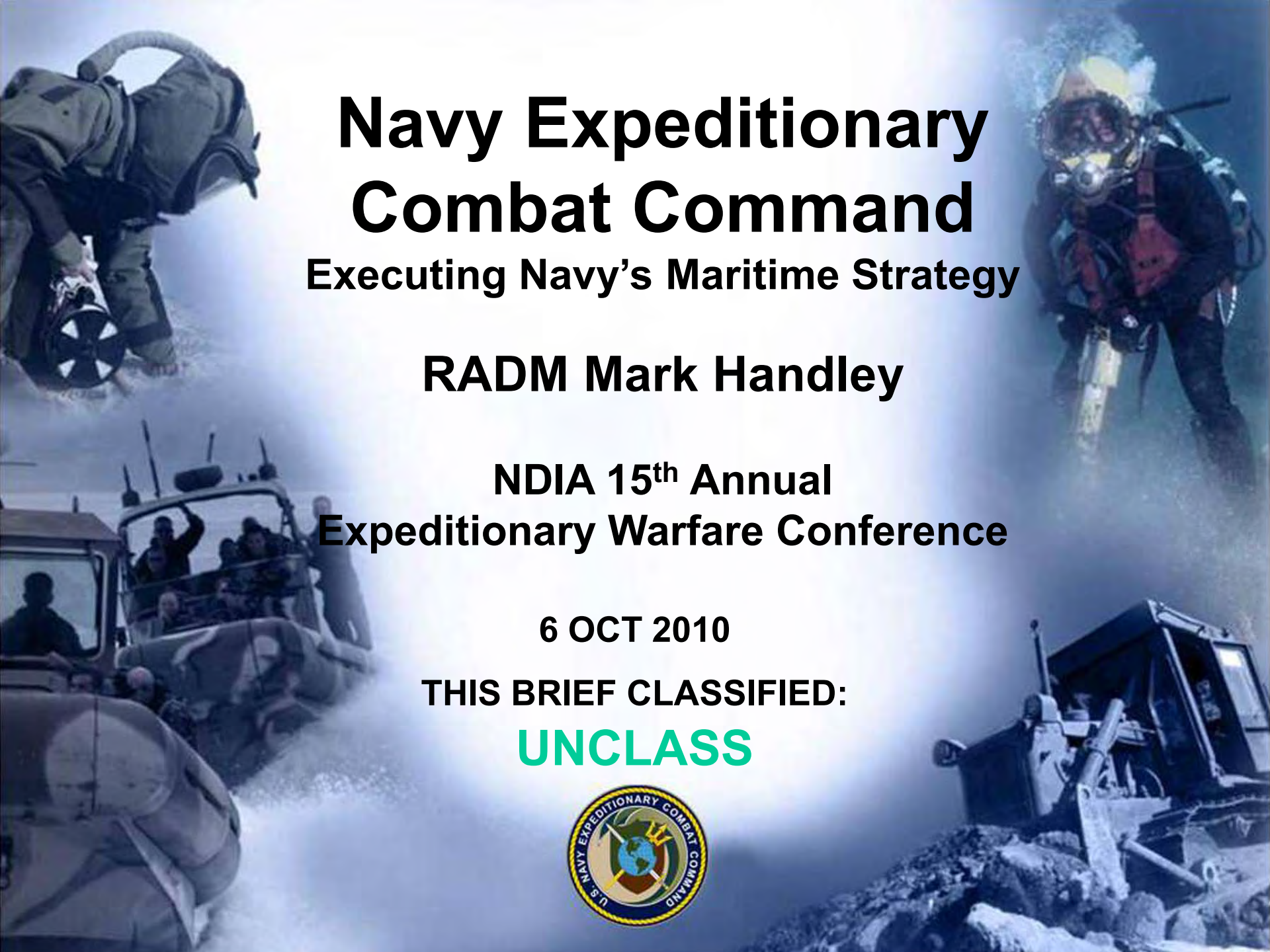
US/ADF Amphibious Engagement

- **US NAVY - Athens Georgia - Introduction to Expeditionary Logistics**
 - One Navy and one Army logistician in Apr 10.
- **USMC - Quantico - Expeditionary Warfare School - Distance Education Program**
 - We have 6 Army students enrolled for the course commences in Oct 10.
- **Possible future requests**
 - EWTGPAC - Joint Fires Primer
 - NAB Coronado - Experiential interaction with ACU-1 Landing Craft Command to gain LC competencies and dock operations experience.
 - Short secondments and sea riding for those areas where ADF currently has not resident expertise; dock operations, multi-spot flight deck operations.







The background is a collage of four images: top left shows a soldier in a helmet and gear; top right shows a diver in full scuba gear underwater; bottom left shows an amphibious vehicle with soldiers on board; bottom right shows a bulldozer working on a rocky shore.

Navy Expeditionary Combat Command

Executing Navy's Maritime Strategy

RADM Mark Handley

**NDIA 15th Annual
Expeditionary Warfare Conference**

6 OCT 2010

THIS BRIEF CLASSIFIED:

UNCLASS





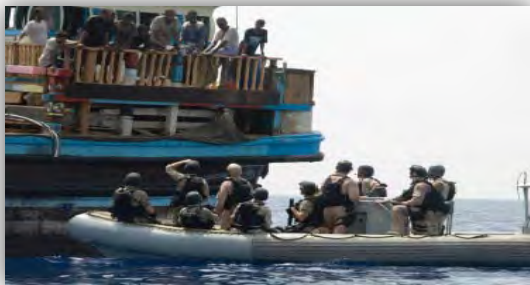
Overview



Riverine



Maritime Civil Affairs/
Security Force Assistance Training



NEIC Boarding

- NECC Directed Establishment as TYCOM 2005
 - CNO directs
 - “...actions to expand the Navy’s capabilities to prosecute the GWOT.”
DNS Memorandum 12 JUL 05
 - Subsequent QDRs Recommend Adding Capacity/Capability
 - “...future operating environments also suggests.”
increasing capacity for maritime operations in coastal and riverine environments would be appropriate.”
QDR 2010

NECC’s Tie to Maritime Strategy



NECC Capabilities



Security Force
Assistance to
Offensive Combat
Missions



Experts in
explosives,
diving and
parachuting



Protecting our
most valuable
maritime assets
and infrastructure



Deployable
Engineer Force
around since
World War II



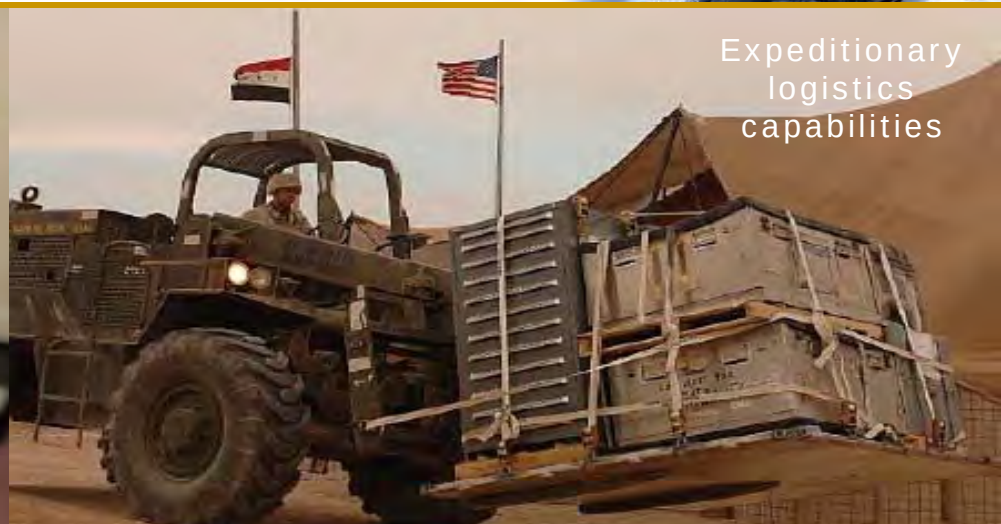
Enduring Force – Core Capabilities



NECC Capabilities



Multi-intelligence,
surveillance and
reconnaissance
capabilities



Expeditionary
logistics
capabilities



Security Force
Assistance and Civil
Affairs



Oversees the execution of
mission readiness, training
curriculum and Sailor support

Enduring Force – New Capabilities

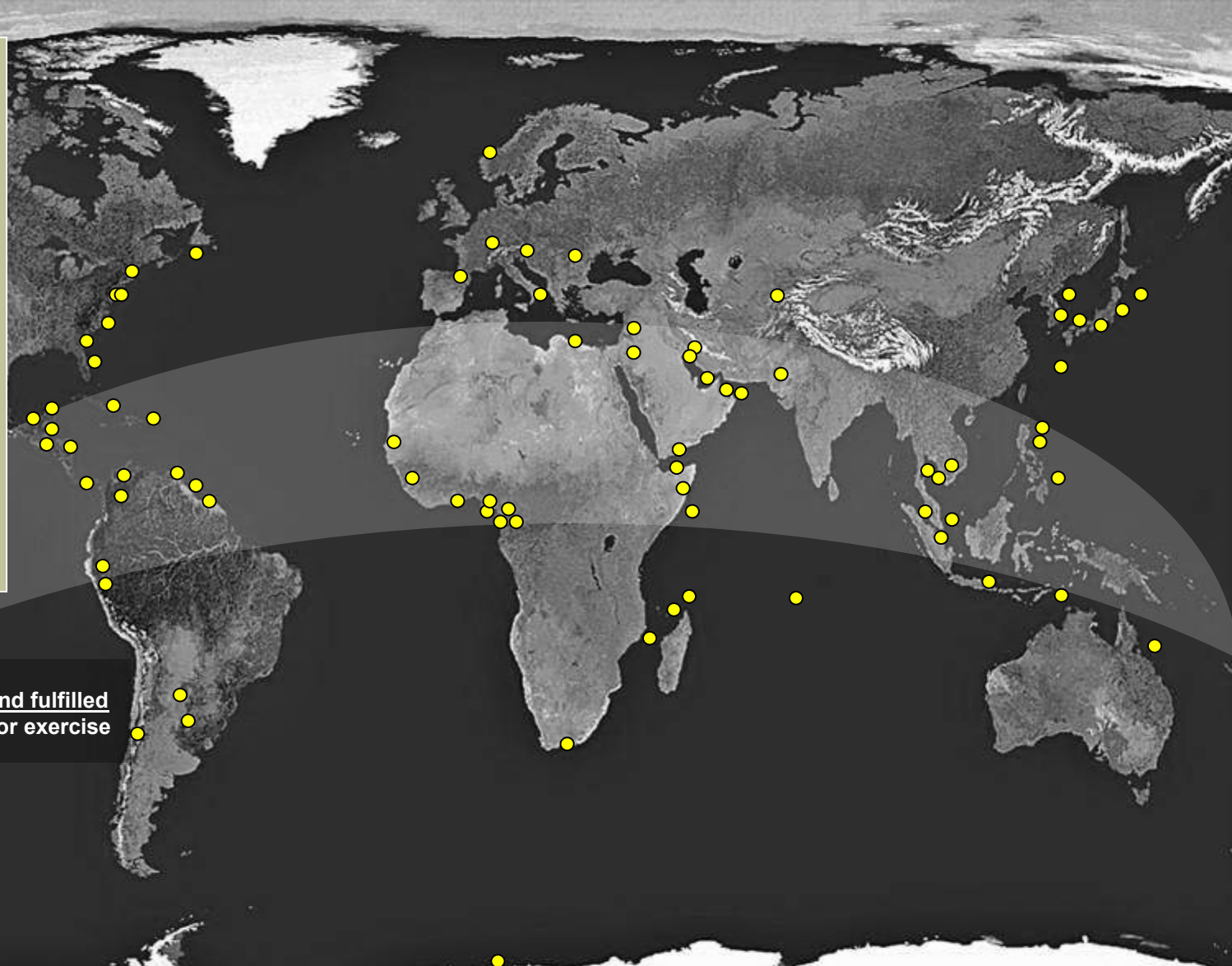


Remaining forward and engaged Where we are currently & recent past



Rotational Forces

- Assure partners through planned and predictable presence
- Prevent aggressors from capitalizing on presence gaps
- Prompt and credible response capability in areas of interest
- Enable rapid response to influence, contain or deter unexpected crises



Combatant Commander's demand fulfilled
● Individual Unit on mission or exercise

**NECC capabilities on mission meeting most critical
Combatant Commander's demands**



Resources to Capabilities



Today

Man

- Expeditionary Communities
- Expeditionary Tours
- Career Progression Developing

**Multiple Communities
Varied Interests
Common Goals**

Train

- Fleet Response Training Plans
- Expeditionary Combat Skills
- Basic use of Simulators

Equip

- Large, Diverse Table of Allowance
- Commonality for new items (MRAP)
- Adapting old TOAs for new Missions
- Drives Readiness



Resources to Capabilities



Future

Man

- Increasing Demand on Smaller Force
- “New” Community Management

**Multiple Communities
Varied Interests
Common Goals**

Train

Equip

- Exercise Engagement (Fleet, Joint, Interagency)
- New Training Requirements (e.g. Language)
- Increased Synthetic Training

- Sustain – Class Maintenance Plans
- New Mission Requirements
- New Technologies
- Drives Readiness



Conclusion



- Ready

- NECC provides units ready for tasking to operational commanders in all theaters across a wide range of joint- and service-specific expeditionary missions. NECC's globally deployed, mission-tailored forces accomplish missions that combat terrorism, prevent crises and promote stability.

- Relevant

- NECC's more than 30,000 active and reserve Sailors link the land and maritime domains, extending the Navy's influence from blue to green to brown water in direct support of all six phases of Joint operations.

- NECC delivers cost effective capability and capacity at less than 1.5 percent of the Navy's budget.

- Forward Leaning

- NECC provides forces to all seven continents to counter insurgent threats and enable peace through partnerships.



Questions?



Naval Construction Force (NCF)



- Naval Construction (Seabees)
 - 16,600 Personnel: 7,600 Active and 9,000 Reserve
- Provide a wide variety of military construction and humanitarian efforts in times of peace or war:
 - Repairing runways
 - Building detention facilities
 - Constructing aircraft runways and parking aprons
 - Erecting bridges and constructing roads
 - Renovating schools and municipal facilities
 - Constructing munitions storage areas and large scale camp sites
 - Repairing piers and wharves
 - Providing border outposts, expeditionary camps, community outreach centers, medical clinics, community clean-up

We Build, We Fight



Maritime Expeditionary Security Force (MESF)



- MESF Personnel: 2,442 Active and 4,158 Reserve
- Primary mission is force protection.
- Scalable and sustainable security teams capable of defending mission-critical assets worldwide near-coast, in-shore and embarked environments.
- Primary mission is force protection.
 - Anti-terrorism Force/Protection: harbor and homeland defense, coastal surveillance and special missions.
 - Units conduct force protection of strategic shipping and naval vessels operating in the inshore and coastal areas, anchorages and harbors, from bare beach to sophisticated port facilities.



Maritime Security Professionals



Explosive Ordnance Disposal (EOD)



- EOD Personnel: 1,916 Active and 307 Reserve
- Highly trained, skilled technicians who are experts in explosives, diving and parachuting
 - Only maritime expeditionary EOD and Mobile Diving Salvage (MDS) capability within Department of Defense
 - Render safe all types of ordnance: conventional, improvised, chemical, biological, nuclear
 - Conduct demolition of hazardous munitions, pyrotechnics, and retrograde explosives
 - Support military and civilian law enforcement agencies
 - Work with U.S. Secret Service and U.S. State Department
 - Support U.S. Department of Homeland Security, U.S. Customs Office, and FBI

Enabling Safe and Secure Access



Riverine



- Combat Arms Force
 - 740 Active Personnel
- Establishes and maintains control of rivers and waterways for military and civil purposes.
- Enables continuance of legitimate trade.
- Combats sea-based terrorism and other illegal activities:
 - Transporting weapons of mass destruction
 - Hijacking
 - Piracy
 - Human trafficking



Maritime Security in the Brown Water



Navy Expeditionary Intelligence Command (NEIC)



- NEIC Personnel: 192 Active and 67 Reserve
- Provides flexible, capable and ready maritime expeditionary intelligence forces.
 - Tactical Ground Human Intelligence (HUMINT)
 - Tactical Maritime HUMINT and Intelligence Exploitation
 - Expeditionary Intelligence Analysis
 - Tactical Electronic Warfare/Information Operations



Providing Intelligence Support in the Joint Battle Space on Land and Sea



Navy Expeditionary Logistics Support Group (NAVELSG)



- NAVELSG Personnel: 406 Active and 3,242 Reserve
- Operational Reserve Command
- Offer the only break-bulk cargo capability in the DoD.
- Delivers logistics capabilities with active and mobilization-ready Navy Reserve Force Sailors and equipment to theater commanders in support of the military strategy.
- Provides support for:
 - Port and air cargo handling missions
 - Custom inspections
 - Contingency contracting
 - Fuels distribution
 - Freight terminal and warehouse operations
 - Postal services
 - Ordnance reporting and handling
 - Expeditionary communications

Bringing the Fight to the Fight



Maritime Civil Affairs and Security Training (MCAST) Command



UNCLASS

- MCAST Personnel: 172 Active and 127 Reserve
- Maritime Civil Affairs Capabilities:
 - Port Operations
 - Harbor & Channel Maintenance/Construction
 - Maritime & Fisheries Resources and Management
 - International Law/Law of the Sea
 - Public Health
- Security Force Assistance (SFA) Mobile Training Teams:
 - Courses of Instructions:
 - Small Boat Operations and Tactics, Maritime Combat Operations, Weapon Handling, Marine Engine Maintenance, Anti-Terrorism/Force Protection, Expeditionary Security, and Professional Development.



Security, Partnership, Stability “People Are Our Platform”



Expeditionary Combat Readiness Center (ECRC)



- ECRC Personnel: 72 Active and 103 Reserve
- Train, equip, certify, deploy and redeploy IA, In-Lieu-Of and Ad Hoc forces
- Provide administrative oversight and reach-back functions
- Conduit of information for family members
- Provide support network
- Ensure critical and appropriate training
- Warrior Transition



Taking Care of Our Sailors and Their Families



Expeditionary Warfare

OPNAV N85



MajGen Timothy Hanifen

OPNAV N85

NDIA

5 Oct 2010





Guidance...Title 10 USC



- TITLE 10 - ARMED FORCES Subtitle C - Navy and Marine Corps PART I - ORGANIZATION CHAPTER 503 - DEPARTMENT OF THE NAVY
- CHAPTER 505 - OFFICE OF THE CHIEF OF NAVAL OPERATIONS
 - Sec. 5038. Director for Expeditionary Warfare
 - (c) The principal duty of the Director for Expeditionary Warfare shall be to supervise the performance of all staff responsibilities of the Chief of Naval Operations regarding expeditionary warfare, including responsibilities regarding amphibious lift, mine warfare, naval fire support, and other missions essential to supporting expeditionary warfare.

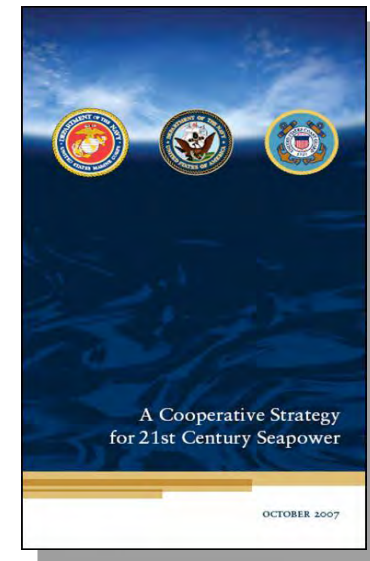


...Maritime Strategic Concept



Strategic Imperatives:

- **Regionally Concentrated, Credible Combat Power**
 - Limit regional conflict with forward deployed, decisive maritime power.
 - Deter Major power war.
 - Win our Nation's wars.
- **Globally Distributed, Mission-Tailored Maritime Forces**
 - Contribute to homeland defense in depth.
 - Foster and sustain cooperative relationships with more international partners.
 - Prevent or contain local disruptions before they impact the global system





...Naval Operational Concept 2010



Implementing the Strategy:

➤ **Forward Presence**

- OIF/OEF – Counter insurgency, Infrastructure Protection, Riverine Operations.
- CSG's & ARG/MEU

➤ **Deterrence**

- Opposed Transit, Anti-Access, Area Denial

➤ **Sea Control**

- Combined Arms Approach- Surface, Subsurface, Air, Ground, Space, Cyber

➤ **Power Projection**

- OIF/OEF- Task Force 58

➤ **Maritime Security**

- Counter Piracy / MIO
- African Partnership Station

➤ **Humanitarian Assistance and Disaster Response**

- Caribbean / New Orleans





...Marine Corps Operational Concepts



Aligning with the Marine Corps Operating Concepts:

Enhanced MAGTF Operations: conduct operations across a larger area, to conduct operations with a higher tempo, to be able to perform multiple simultaneous operations

Engagement: forward deployed and present in partner nations around the world with the goal to improve relationships, improve security and assure access when needed

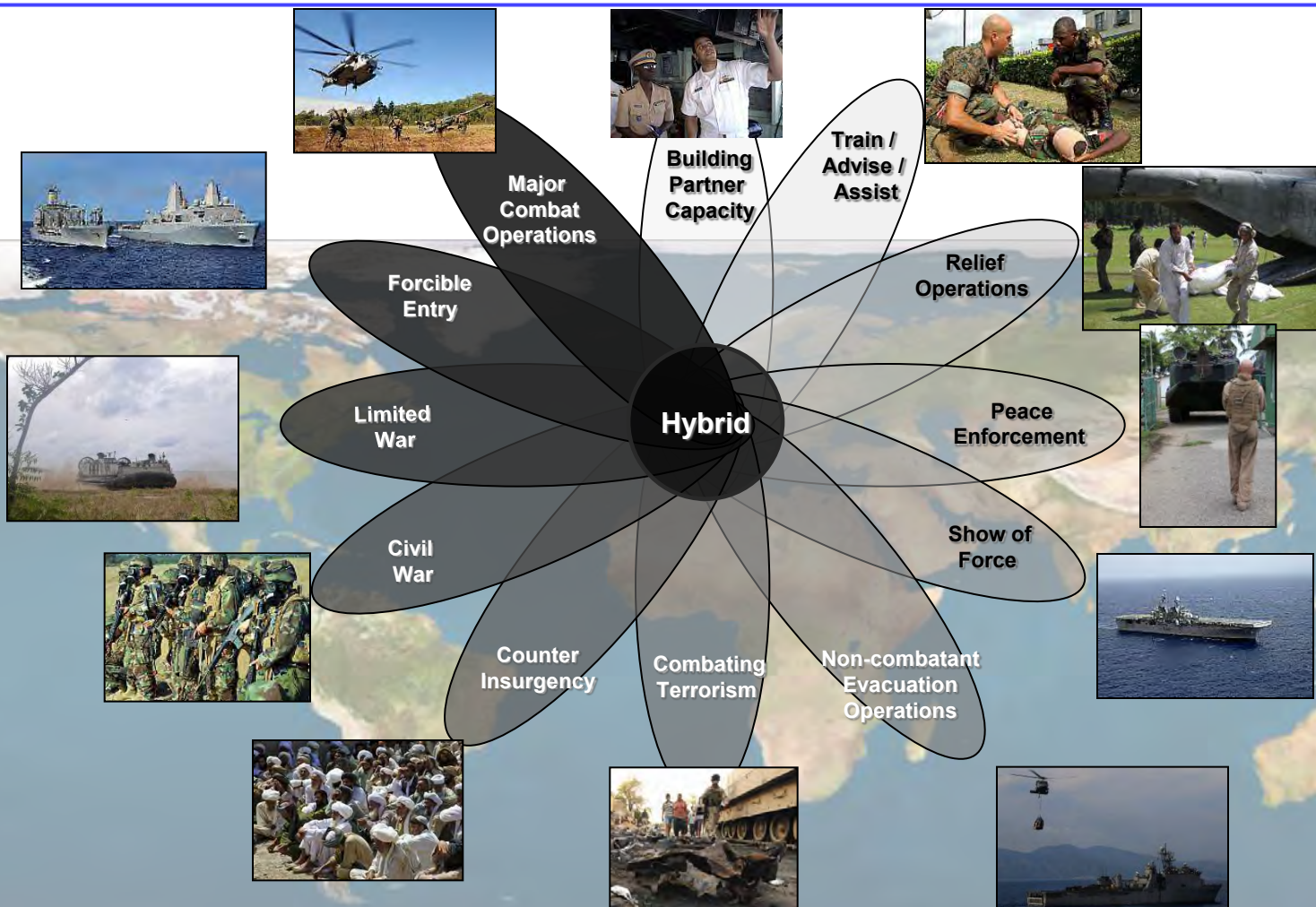
Crisis Response: forward-deployed and sea-based presence, high readiness, prepositioned equipment, and task-organized forces are keys to ensure rapid crisis response.

Power Projection: Seaborne forces are the most useful means to project large amounts of military power and the ability to operate from the sea is crucial to the Nation's power projection





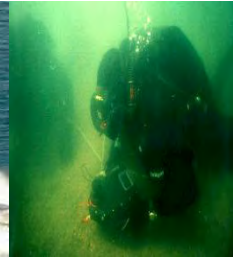
The Navy and Marine Corps Team ...thriving in an uncertain world



A Flexible, Balanced Expeditionary Force to meet Operational Demands



A Balanced Strategy



“My fundamental concern is that there is not commensurate institutional support - including in the Pentagon – for the capabilities needed to win today’s wars and some of their likely successors.”

“We must not be so preoccupied with preparing for future conventional and strategic conflicts that we neglect to provide all the capabilities necessary to fight and win conflicts such as those the U.S. is in today.”

“DoD’s conventional modernization programs seek a 99% solution over a period of years. Stability and counterinsurgency missions require 75% solutions over a period of months.”

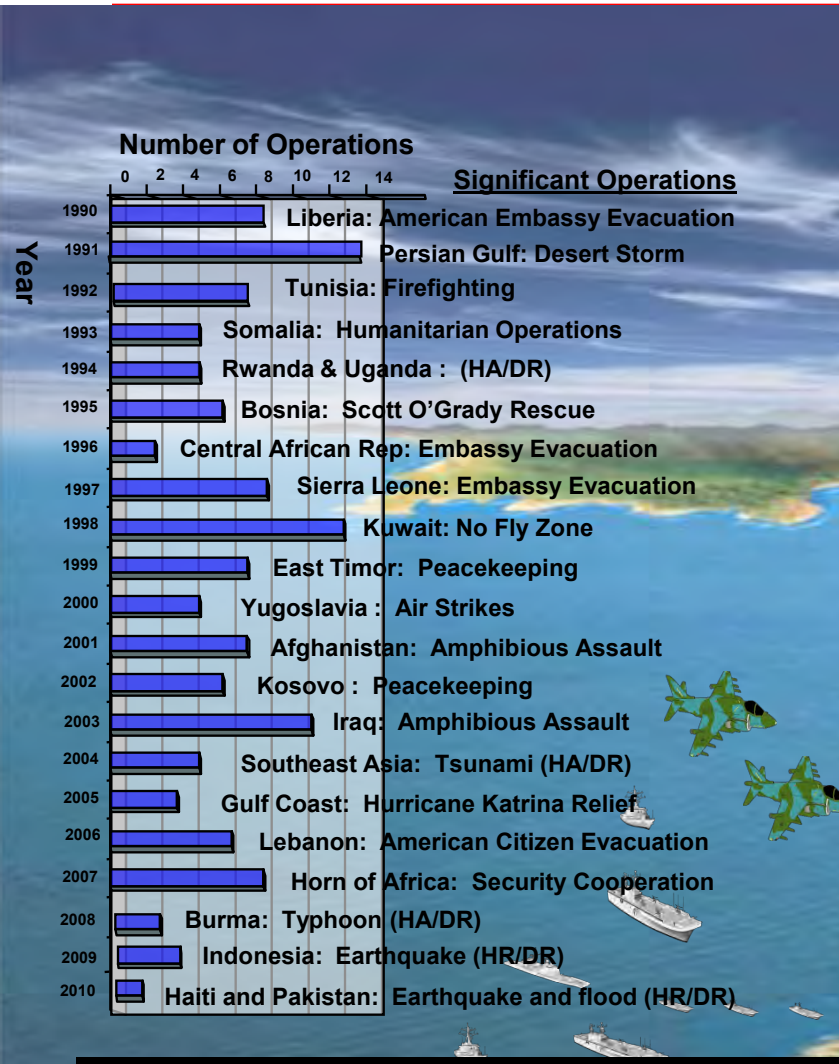


Robert M. Gates, *A Balanced Strategy: Reprogramming the Pentagon for a New Age*, Foreign Affairs, Jan/Feb 2009

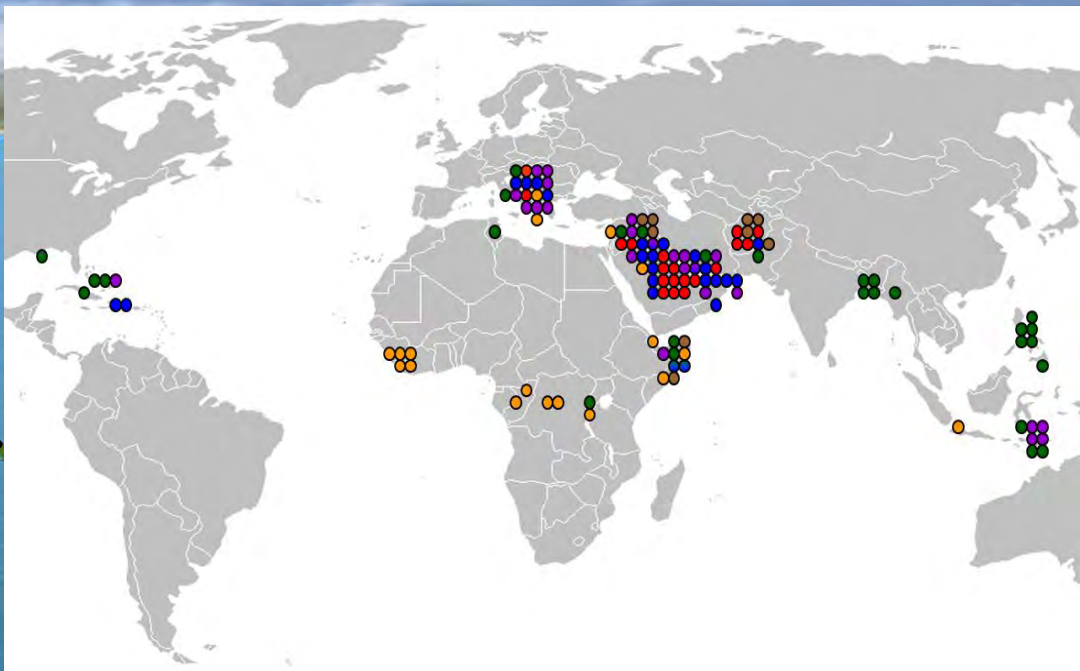


Amphibious Operations

108 Operations Since 1990



33 HA/DR
24 Peace Operations/Nation Assist
23 Other (No Fly/Show of Force, Ect)
18 NEO/Embassy Spt
18 Amphib: Asslt, Raid, Strike & Demo
9 CT/COIN
122 Missions



Conducting over 122 missions across the ROMO

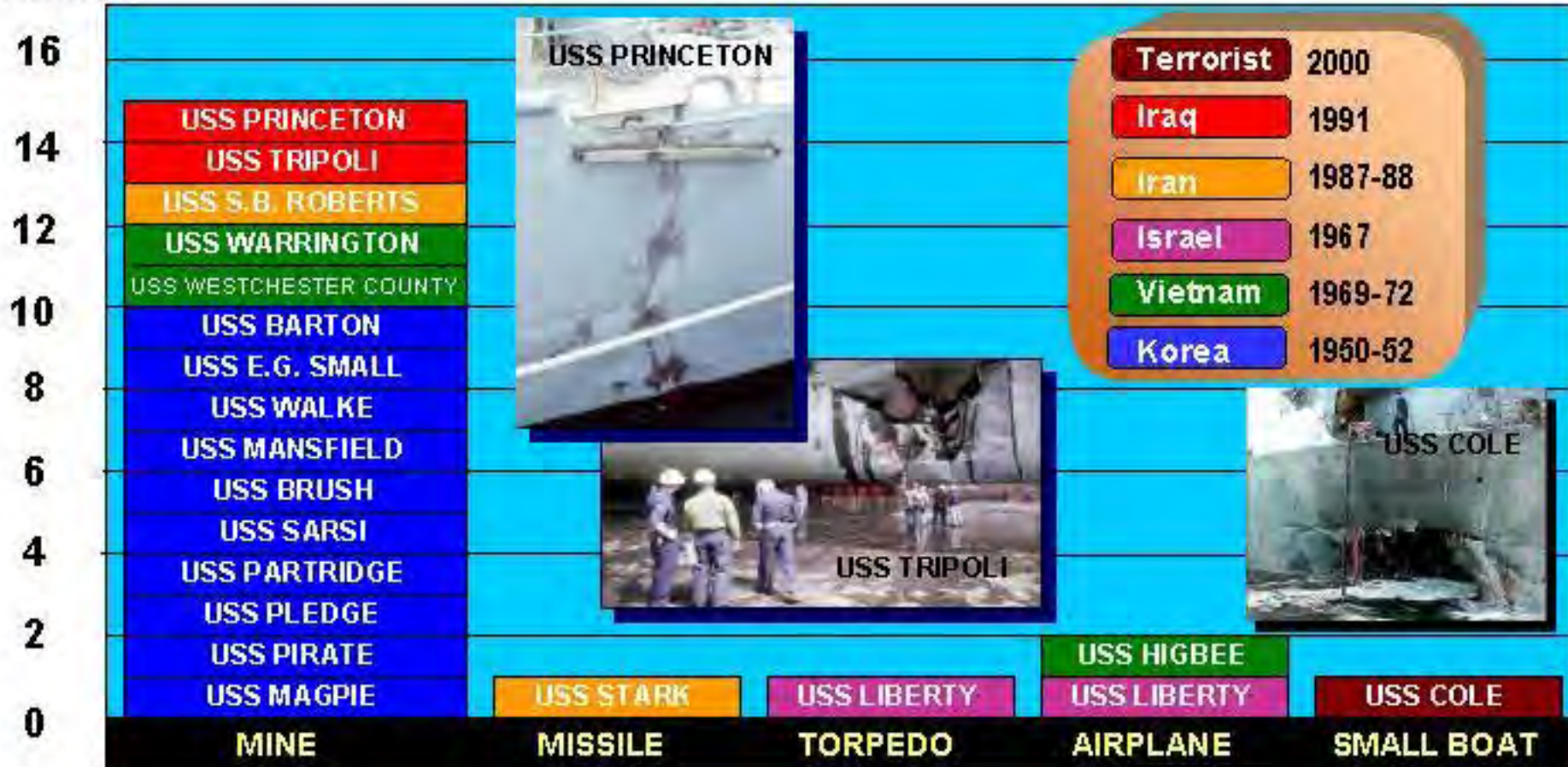


Importance of Mine Countermeasures



Ship Attacks since 1950

of Attacks



Mines far more of a threat than Missile, Torpedo, Aerial, & Small Boat Attack



Navy Expeditionary Combat

NECC World Wide Force Participation Since 2007

NORTHCOM

JTFEXS
PATRIOT PARTNER
GOLDEN CARGO
CONTINUING PROMISE (USNS COMFORT)
JLOTS
UNITAS GOLD
TRIDENT ARCH
JAVELIN THRUST
CITADEL GALE
DELMAR



SOUTHCOM

OPERATIONS:
JTF GTMO – NCF/COMCAM
NAVSOUTH – PANAMA CANAL
TRANSITS – MESF

ENGAGEMENTS/ EXERCISES:
PANAMEX
JLOTS
CONTINUING PROMISE (USNS COMFORT)
BEYOND THE HORIZON
PROJECT FRIENDSHIP
SOUTHERN PARTNERSHIP
STATION



EUCOM

OPERATIONS:
CTF-68-
NCF/MESF/EOD/NEIC/
MDSU
SOCEUR CIF – EOD
JTF EAST - NCF

ENGAGEMENTS/EXERCISES:

SEA BREEZE
UKRAINE MARITIME
SECURITY
BLACK SEA
PARTNERSHIP
LOYAL MARINER
BRILLIANT MARINER
BRILLIANT MIDAS
JOINT WARRIOR
TUNISIA

AFRICOM

OPERATIONS:
JTF-HOA –
NCF/MCAG/NEIC/EOD
11

ENGAGEMENT/EXERCISES:

JTF HOA
FLINTLOCK
WATC
AFRICAN PARTNERSHIP
STATION
GULF OF GUINEA
CAMEROON
SEYCHELLES



CENTCOM

OPERATIONS:

MNF-W:
RIVERINE/EOD/NCF/
MESF/NAVELSG/NEIC/
MCAG
CJSOTF: NCF/EOD/
COMCAM/ MCAG
NAVCENT/C5F:
MESF/NEIC/EOD/
NAVELSG

ENGAGEMENT/EXERCISES:

NATIVE FURY
EGYPT EOD CIED
JORDAN EOD CIED
BEIRUT EOD CIED
SAUDI ARABIA CIED



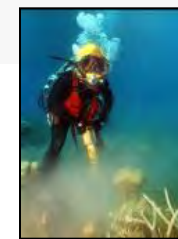
PACOM

OPERATIONS:

PACFLT/C7F SUPPORT -
NCF/MESF/EOD/MDSU
JSOTF-P – MESF/MCAG/NCF

ENGAGEMENT/EXERCISES:

CARAT
PACIFIC PARTNERSHIP
STATION
COBRA GOLD
KEY RESOLVE
TALON VISION
CONTINUING PROMISE
PACIFIC (USNS MERCY)
PROJECT FRIENDSHIP
FOAL EAGLE
ULCHI FOCUS LENS
FREEDOM GUARDIAN
DEEP FREEZE
MIATA
IWOJIMA MINEX
DUGONG MINEX
BALIKATAN
HONG KONG EODEX
SPITTING COBRA
EOD SMEE
TALISMAN SABER





Riverine Force

OIF Activities from March 2007



<i>River/Lake Security Patrols</i>	923
<i>Quick Response Force missions</i>	100
<i>Riverine Convoy missions</i>	689
<i>Shoreline sweeps</i>	354
<i>Joint operations conducted</i>	240
<i>Iraq Security Force Patrols</i>	245
<i>Detainees screened</i>	389
<i>Boats impounded</i>	76
<i>Weapons caches found</i>	142
<i>Combined operations conducted</i>	156
<i>Unmanned aircraft hours flown</i>	667
<i>Aircraft control hours</i>	268
<i>Iraqi River Police trained</i>	217
<i>Partnership training (Mandays)</i>	3501
<i>Key Leader engagements</i>	165
<i>Allocations of micro grants (\$K)</i>	111





Over-Arching Challenges



- **Shipbuilding/Modernization**
- **Evolving and improving MCM Capabilities**
- **Integration of Expeditionary Forces across the Range of Military Operations (ROMO)**
- **Synchronization of Special Warfare Capabilities**
- **Employment and Sustainment from the sea**
- **Energy Conservation**
- **Seabasing**

All of these challenges require...

Innovative Thinking

Acquisition Agility

Rapid Science & Technology Integration

Requirements Development



Amphibious Warfare

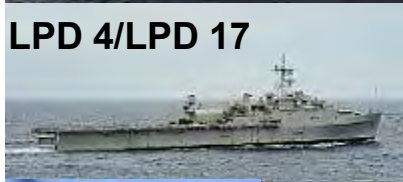
Amphibious Fleet Transformation

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- Supports Larger/Heavier USMC Footprint
- Full Service Life Ship Modernization
- Supports Joint Strike Fighter Ops
- Supports MV-22 Osprey Ops
- Improved Command & Control
- Improved Self-Defense
- Increased Survivability

LHA/LHD



LPD 4/LPD 17



CH 46 AV-8B



MV 22



LCU



AAV



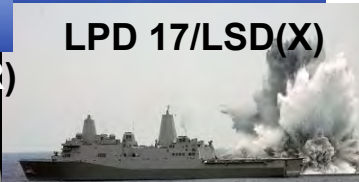
LHA 6



LHA(R) Flt 1



LPD 17/LSD(X)



LCU(R)



AVIATION INTEGRATION



JSF



MV 22



JHSV



EFV



Operations from 1- 5 miles off beach...Sea-Based Operations from 25+ miles



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- Interoperability of Enhanced MSPRON capabilities with commercial national/international and allied shipping



Mine Warfare

Removing the Sailor from the Minefield To Increase Clearance Rates

- Innovative Combination of COTS Technology for Mining and MCM
- Distributed and Netted
- Unmanned Operations
- Cooperative Behavior
- Computer Aided Detect/Classify
- Common Operational Picture
- Sea Warrior Transformation
- Closing the Technology Gaps

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Field a Common Set of Unmanned, Modular MCM Systems Employable from a Variety of Host Platforms or Shore Sites that can Quickly Counter the Spectrum of Mines to Enable Assured Access with Minimum Risk from Mines

- Slow
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LCS Mine Countermeasures Concept

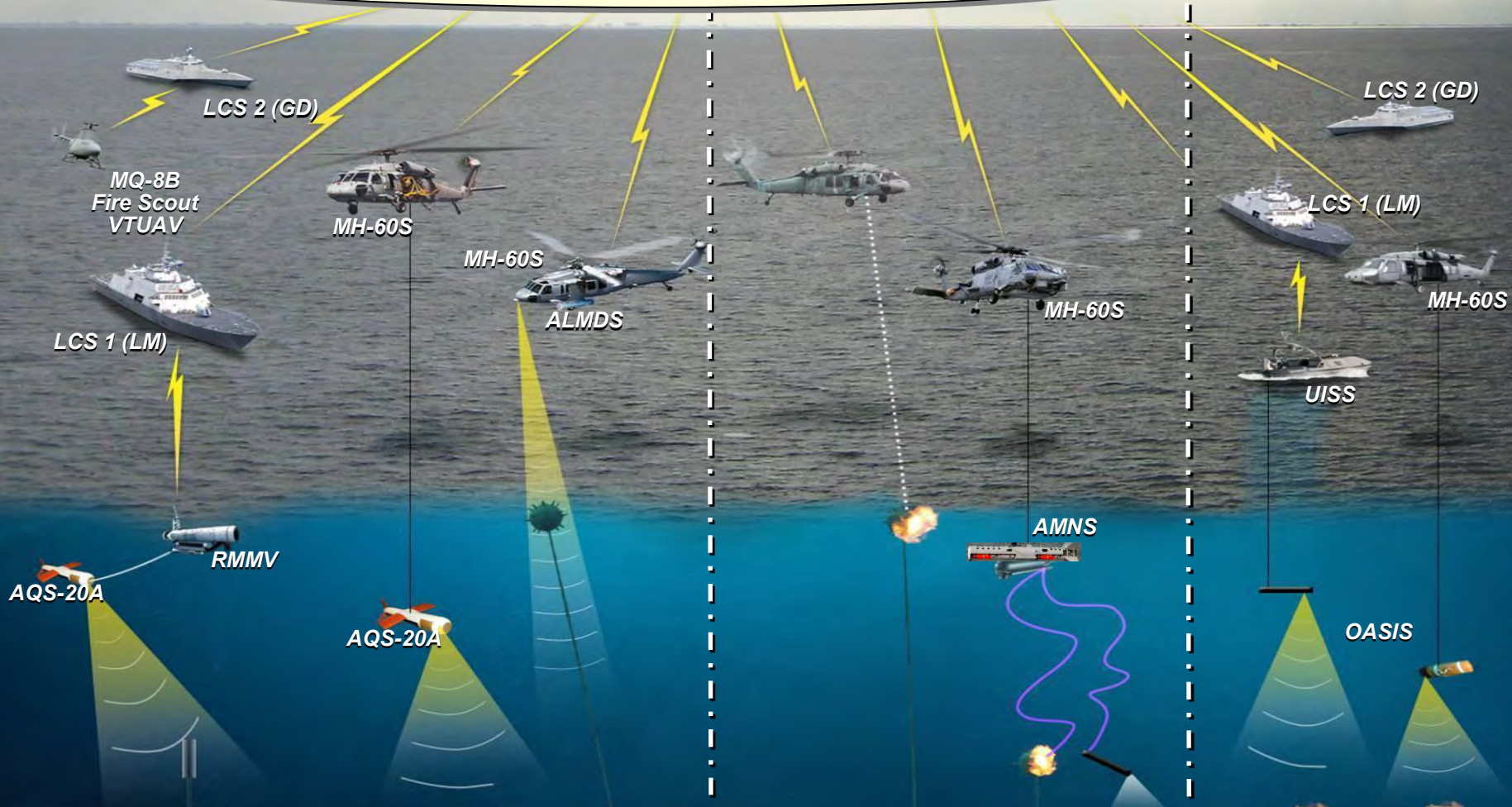


Detect, Classify & Identify

Engage (Neutralize)

Engage (Sweep)

Link 16



OASIS: Organic Airborne and Surface Influence Sweep / **AMNS:** Airborne Mine Neutralization System

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**Low Cost Field Expedient/COTS Solutions
for High Capacity Mining and Clearance**



Expeditionary Combat Challenges



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Naval Special Warfare



Sustained/Improved Service-Common Support

SCAN EAGLE UAS



LEGACY TACTICAL COMMS



LEGACY COMBATANT CRAFT



INLAND OPERATIONS



SMALL TACTICAL UAS



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- Support NSW movement towards SFA
- Ensure NSW compatibility with Fleet assets
- Exploit Navy-SOF system commonality
- Improve tactical ISR capabilities
- Improve Command & Control

OIF/OEF Centric

Post-OIF/OEF Engagement



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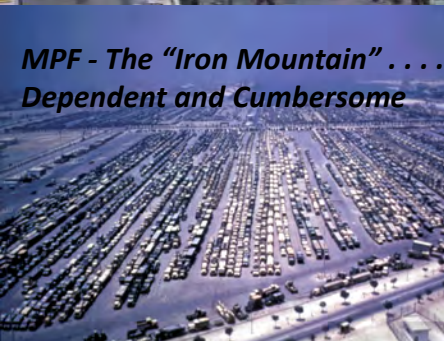
Seabasing via Enhanced MPSRON



Current Practices



Vehicle transfer ashore



*MPF - The "Iron Mountain"
Dependent and Cumbersome*

- Delivery of equipment and supplies through restricted access environments (arrival and assembly ashore)
- Rapid employment of forces from OTH
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*Enhanced MPF – Operate from OTH...
Increased access through restricted areas*



LCAC MLP INTEROPERABILITY

Flexibility To Influence Events Ashore Or At Sea, Particularly When Denied Access Or A Small Footprint Ashore Desired



Seabasing/Enhanced MPSRON Challenges



- Station Keeping Systems/Technologies
 - Advanced Mooring Systems, Dynamic Positioning
- Equipment and Cargo Handling/movement
 - Automated Warehousing, Robotic Technologies
- Modular Causeway Enhancements
 - Interfaces, Increased Interoperability with other system/platforms
- Interface Ramp Technologies
 - Enhanced Sea-State Capabilities
- Environmental and Ship Motion Forecasting Technologies



Expeditionary Energy Initiatives



- Actively leveraging promising energy technologies and innovative practices.
- Developing a Expeditionary Power Management and Distribution System.
- Integrated Propulsion Power plants and hybrid electric drive.
- Integration of bio-fuel into ships and aircraft



"In order to lower our reliance on fossil fuels, we need to improve the efficiencies of systems and develop platforms that operate as a system of systems, are integrated together, and reduce our tactical vulnerability."

SECNAV Mabus, Naval Energy Forum, 14 Oct 2009



Expeditionary Energy Challenges



- Integrated Power Systems (IPS) for Expeditionary Boats
- Alternative Power Generation and Management Systems for Expeditionary Field Applications
 - Technology not fully mature in USN
 - Cost growth and investment
 - Commercial design conversions
- Ship Design
 - Cost of design change for hull form
 - Timely incorporation of IPS into the design
 - Risk trade-offs; power dense generation vs magnetic signature
- Tactical Vehicles and Equipment
 - No accurate means to assess contingency fuel use
 - Most procurement are joint or commercial
 - Fuel efficient version has a higher initial investment and unit cost
- Bio-Fuel
 - Choices of biofuel; Algae vs Camelina & derivatives
 - Production challenges; crop yield vs cost
 - Qualification process



How To Reach Us

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- LtCol M. Greeno

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Col C. Arantz

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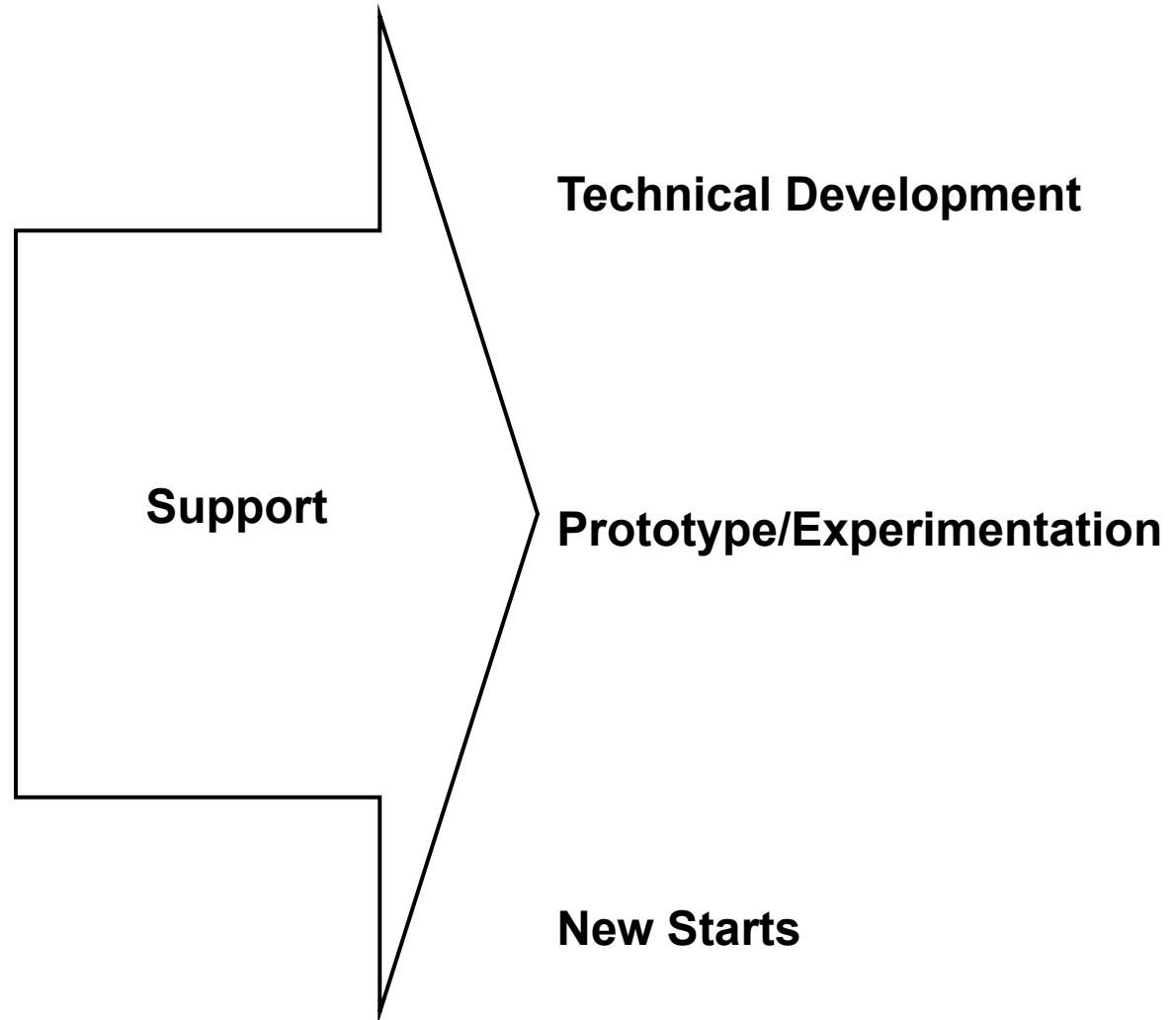
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N857

Mr. W. Williams

wellington.williams@navy.mil

(703) 692-1511





Discussion





Expeditionary Warfare

OPNAV N85



MajGen Timothy Hanifen

OPNAV N85

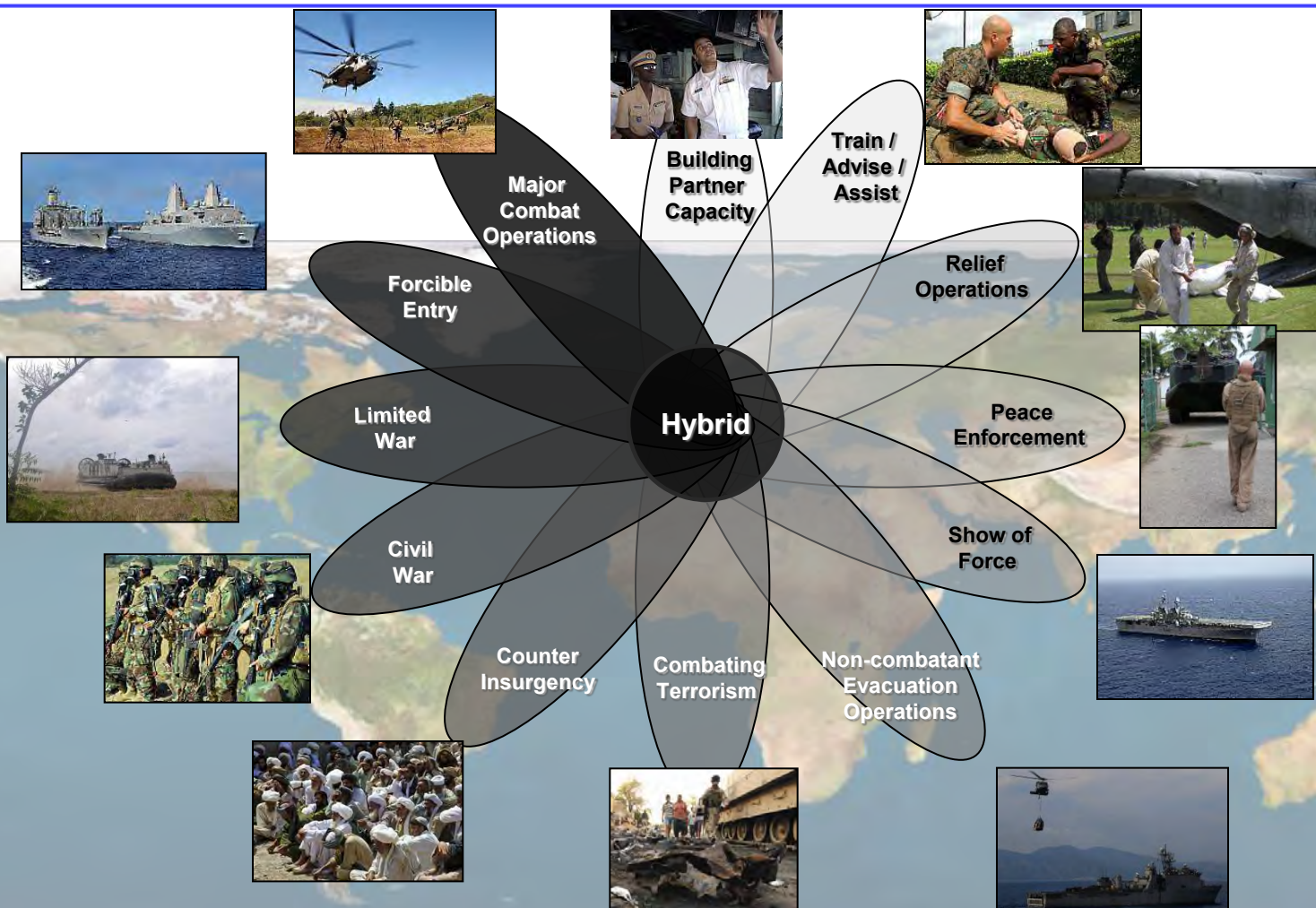
NDIA

6 Oct 2010





The Navy and Marine Corps Team ...thriving in an uncertain world



A Flexible, Balanced Expeditionary Force to meet Operational Demands



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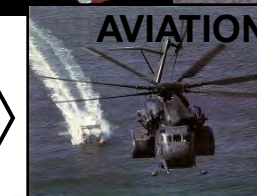
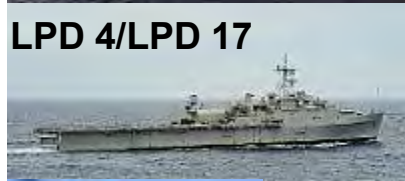
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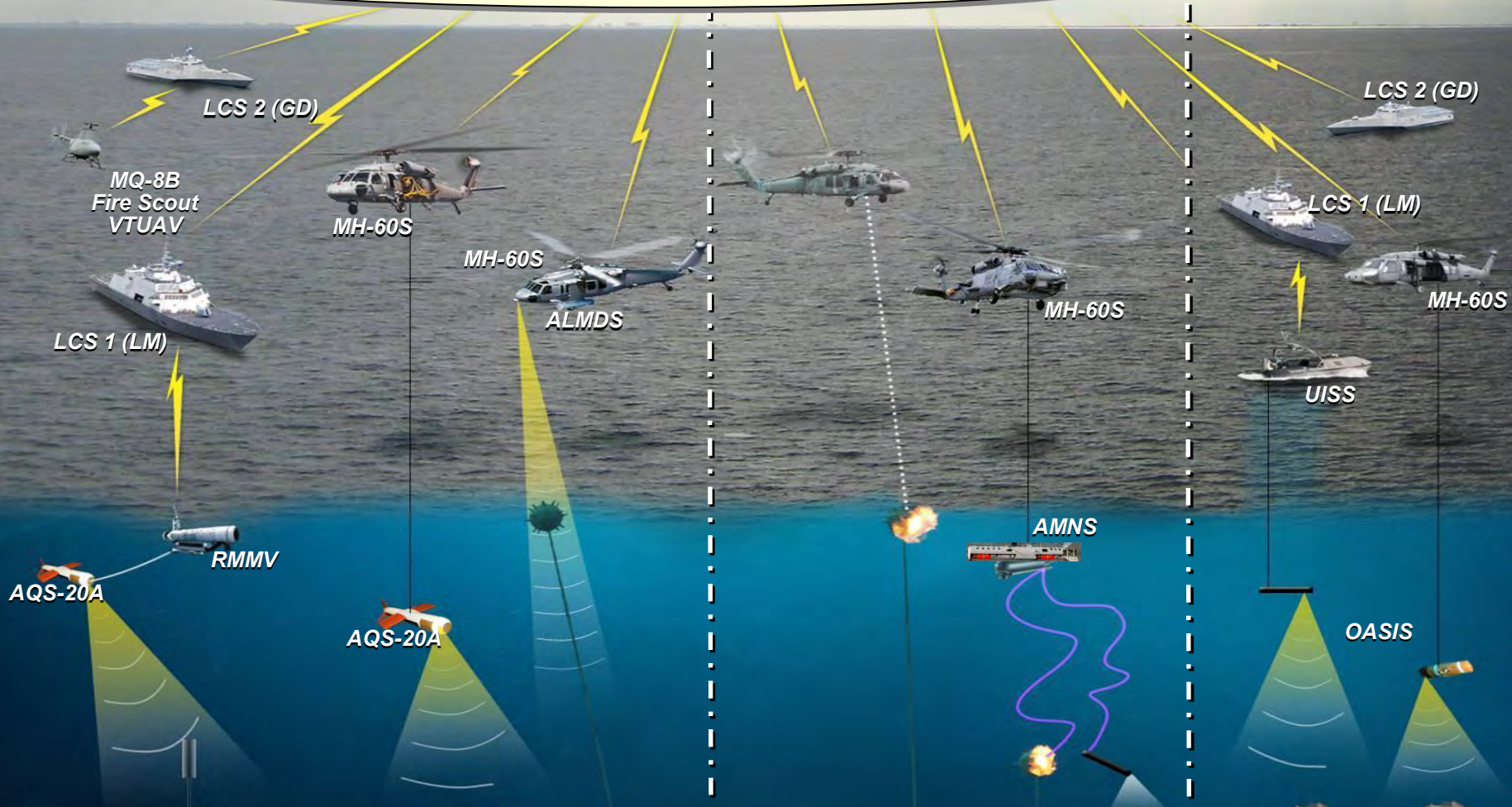


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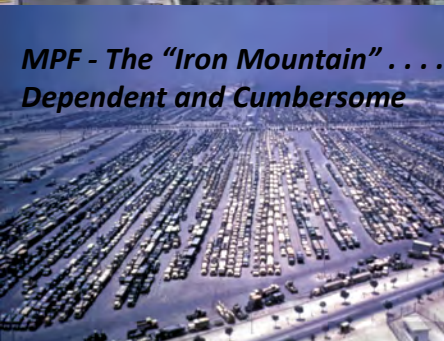
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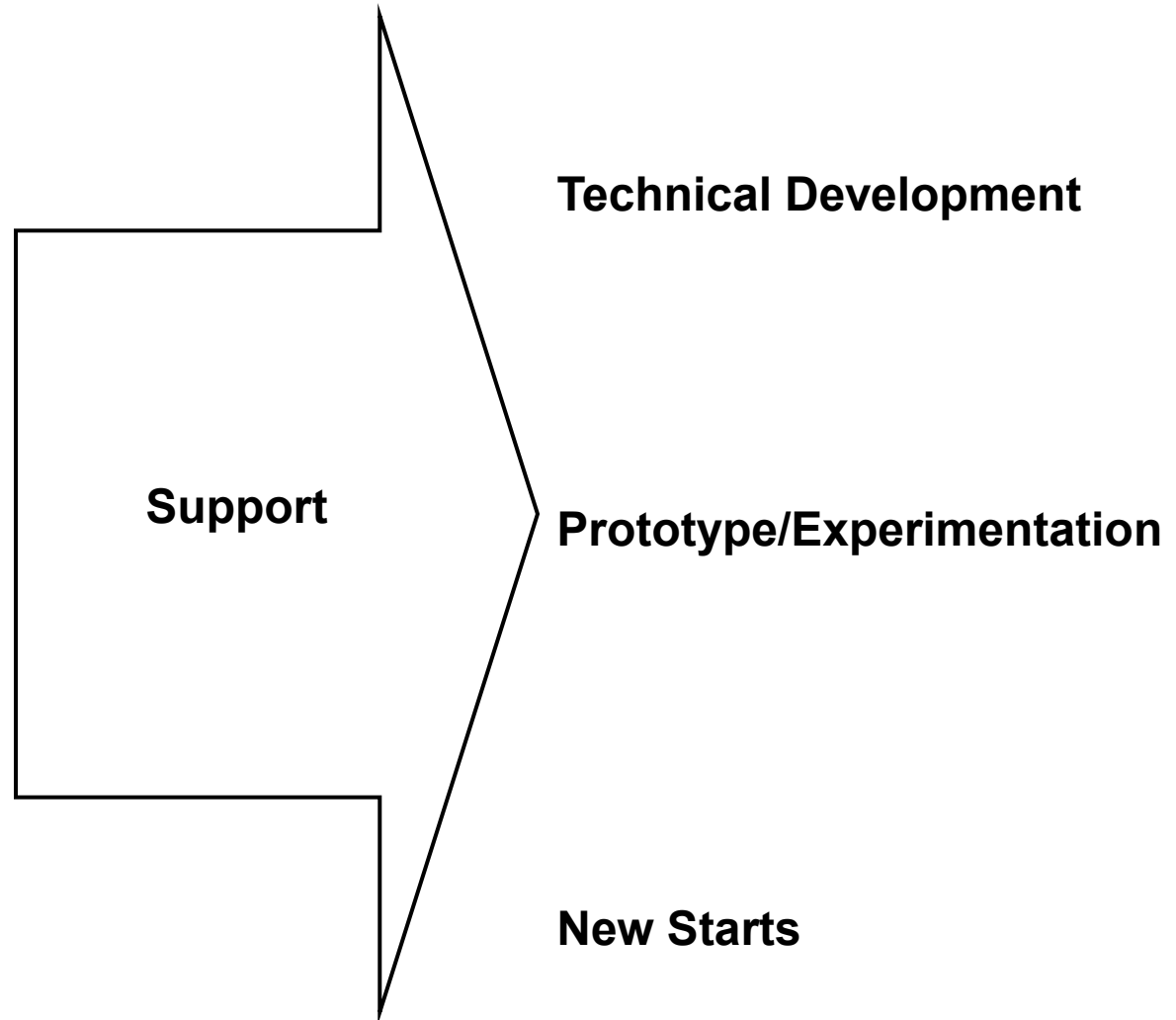
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N857

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Discussion



A full-length photograph of a Marine in dress uniform. The Marine is wearing a dark blue uniform with red piping, gold buttons, and a white belt. He is wearing a white dress cap with a gold emblem. He is holding a red ribbon with both hands in front of him. In the background, the stars and stripes of the American flag are visible.

Sustaining the Nation's Force in Readiness

**Major General James Kessler, USMC
Commanding General
Marine Corps Logistics Command**



Marine Corps Operating Concept: Sustaining the Force in the Expeditionary Environment

**The return to our expeditionary nature
requires our Corps to become:**

- **Lighter**
- **Forward**
- **Integrated**





Marine Corps Recent Operational Experience: Heavy Sustainment for a Heavy Force

The Marine Corps has grown heavier and bigger in Iraq and Afghanistan

- **Larger sustainment footprint, forward and rear**
- **Increased infrastructure and contracted support**
- **Bigger mix of legacy and new equipment**





Marine Corps Reset Operations: Equipping a Balanced Force

There are challenges and opportunities to resetting the Marine Corps:

- **Sustain the readiness of the equipment in Afghanistan now**
- **Fix and buy for the future**
- **Surge and adjust**





Expeditionary Sustainment Challenges: How Do We Allocate Our Capabilities

“Light and lethal” comes at a price

- **Sustainment for a “non-expeditionary” mission**
- **Forward deployability**
- **Austerity of the operating environment**





Expeditionary Sustainment Challenges: Where Do We Put Our Investment?

“Light and lethal” comes at a price

- **Technology insertion**
- **Additional skill set development**
- **“Infrastructure” for expeditionary operations**





Marine Corps Sustainment Tomorrow: Enabling the Nation's Force in Readiness

Balancing sustainment strategies and expeditionary imperatives

- **Keeping pace with Marine Corps strategic concepts**
- **Partnering with industry and acquisitions to develop maintenance concepts early**
- **Innovate, innovate, innovate**





Sustaining the Nation's Force in Readiness

Major General James Kessler, USMC
Commanding General
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2d Marine Expeditionary Brigade



Operation Enduring Freedom
Afghanistan
May 2009 – April 2010

Task Force Leatherneck

Agenda

- Introduction
- The Battlefield
- The Problem
- The Campaign
- What We Learned
- The Future
- Discussion



The “In-Extremis” MAGTF*

- “Suitcase” Commander
- “2d MEB” didn’t exist: no staff, no troops
- No equipment
- II MEF had just sourced Iraq’s Marine staff
- Almost no USMC corporate understanding of Afghanistan; Iraq-focused since early 2004
- Silver-lining...SPMAGTF-A in place at Kandahar Airfield

* *Marine Air-Ground Task Force*



What does 10,672 Marines get you?



LCE: CLR-2
2232 Personnel



CE: 2D MEB
2102 Personnel



ACE: MAG-40
18 AH-1W/ 9 UH-1Y/ 12 CH-53-E/ 10 CH-53D/
4 C-130 / 10 AV-8B
2170 Personnel



GCE: RCT-7
3 Inf Bn + LAR
4168 Personnel

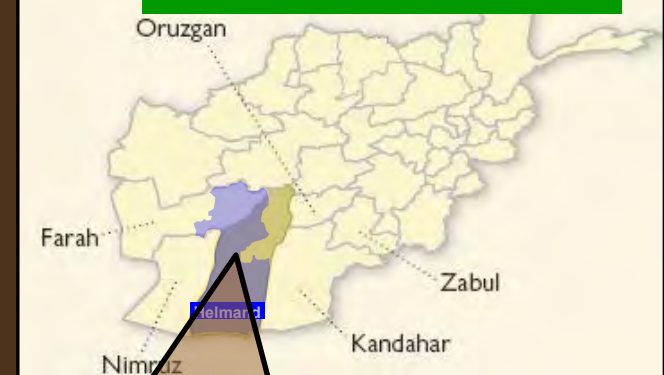


Send in the Marines...to where?

CENTCOM AO



AFGHANISTAN PROVINCES



- 1.1 million people
- 92 percent Pashtun
- 9 people per household
- 22,619 sq miles...9 percent of Afghanistan
- 45% of GLOBAL opium production
- Literacy rates: Men...8 percent
Women...1 percent
- 1 in 5 children dies by age 5



COMBINED AREA OF OPERATIONS SEA DRAGON

3 Provinces:

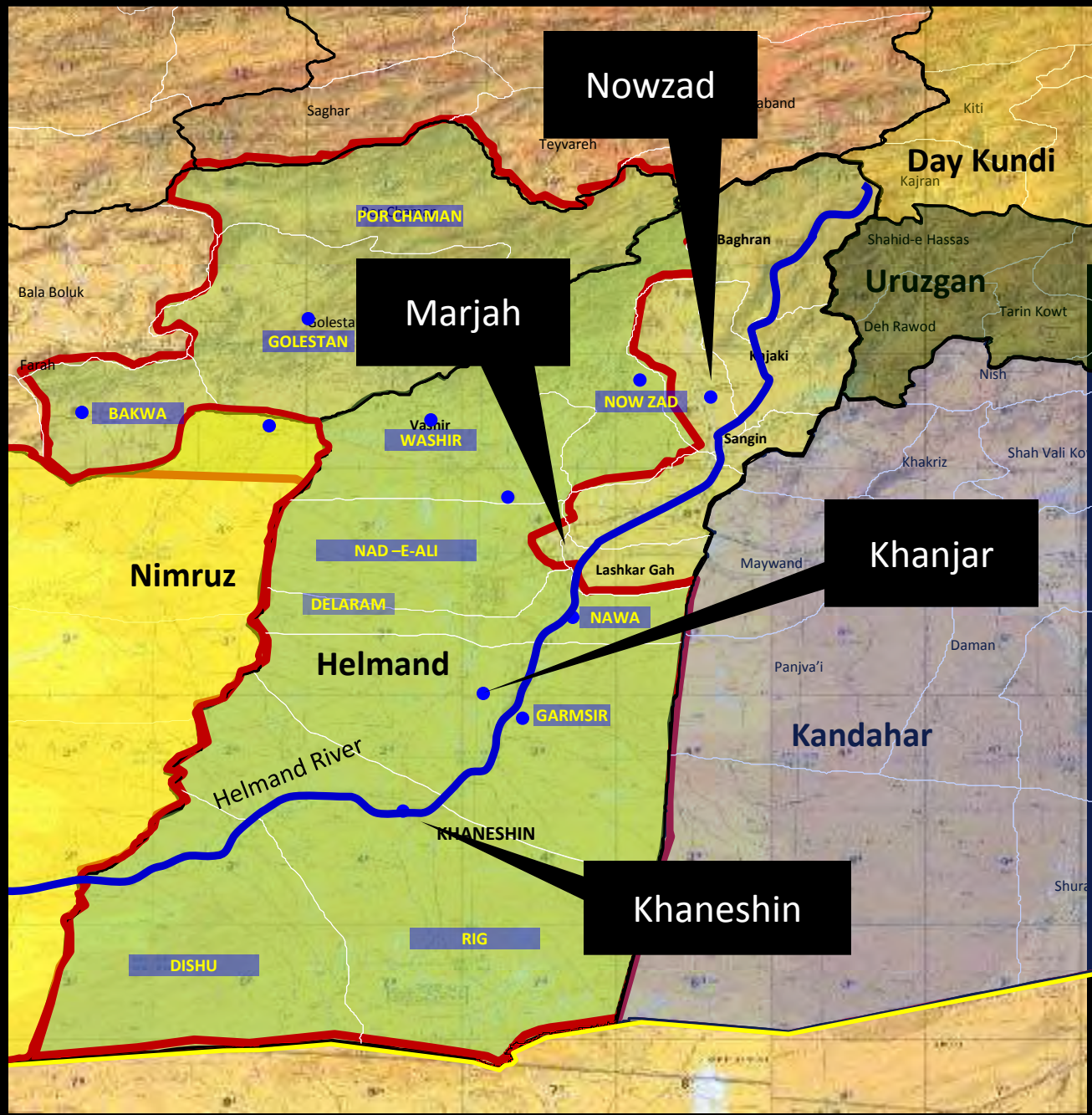
- Helmand
- Farah
- Nimruz

2 Regional Commands:

- South
- West

11 Districts

- PorChaman
- Golestan
- Bakwa
- Nowzad
- Washir
- Nad-i-Ali
- Nawa
- Garmsir
- Rig
- Dishu
- Delaram



The Insurgency

The “Lunch Bucket”
Insurgent



The “Committed” Insurgent



Decentralized Senior Leaders



A Tale of Two PRTs

PRT Farah

- 97 Military, 3 Civilian
- Military Commander (O-5)
- Focuses on supporting development

“Provincial Stabilization Team”

Helmand PRT

- 114 Civilian, 3 Military
- UK Diplomatic Mission
- Civilian “SES” (2-star equivalent)

“Provincial Development Team”

Campaign Design

FULL SPECTRUM COIN

COMMUNICATE Visual, Tangible and Understandable Progress
DEMONSTRATE to Afghan People GIROA is Gaining Capability, Capacity, Effectiveness
CONVINCE Population that Insurgents are Losing, Will Lose, and Should Lose

"A SENSE OF INEVITABILITY"

***Protect the Populace
By, With and Through
ANSF***

***Support ANSF
Development through
Partnership and
Mentoring***

***Connect GIROA to
Population thru Sub-
National Governance***

***Support R & D Initiatives
and improve Afghan
quality of life***

One synchronized effort to reinforce GIROA legitimacy at all levels:
***Coherence across governance, security, ANSF development and reconstruction and
development Lines of Operations***

- Focus on: District Centers and GLOCs
- Partnership Across ANSF
- Defeat by Applying Pressure Across Enemy Networks
- Maintain Operational Agility
- Disrupt Enemy Sanctuary

SECURITY

- Establish partnered relationship with ANP, ANA
- Recruit, train, and mentor ANA and ANP
- ICW ARSICs develop ANSF logistics capacity ISO ANP
- Establish US/ANA Combined HQ

ANSF DEVELOPMENT

- Identify and Understand National / Sub-National Governance Programs
- Partner with SNG Leaders to Educate and Mentor Them thru the Process
- Facilitate Rapid and Efficient Implementation

GOVERNANCE

- Nest Development Initiatives with ANDS and USG Guidance
- CERP Funding Supports Operational Priorities
- PRTs Enable Sustainable Capacity; Reduce Reliance
- Increase Focus on Education and Training Programs

DEVELOPMENT

MEB-A Mission

MEB-A conducts Counter-Insurgency (COIN) operations in *partnership* with **ANSF** to defeat enemy in zone; prepares **ANSF** to assume security responsibilities by improving **ANSF** capacity and capability through training, mentoring and partnering; and establishes the conditions for successful introduction of follow-on forces in zone IOT support the expansion of *stability and legitimate governance*.

--CG, 2d MEB, 13 Feb 2009

Commander's Intent

PURPOSE...secure the Afghan people from enemy threat and influence while strengthening their ability to ***function independently*** of our presence.

METHOD... **Partner** with our Afghan Security Force brothers and the local population to vigorously pursue the enemy and destroy his ability and will to fight.

- **Establish** improved economic conditions and legitimate local governance that is responsive to the peoples needs, allowing for the development of increased local popular support in the GIRoA.
- **Conduct** Full Spectrum COIN through the SHAPE, CLEAR, HOLD, BUILD and **TRANSITION** to GIRoA (S-C-H-B-T) phasing model.
- **Train and Mentor** all segments of the ANSF allowing for them to take the lead on all security matters.
- **Implement a comprehensive plan** to support & encourage maximum participation in Fall elections.
- **Provide unstinting support** to the PRTs in their efforts.
- **Aggressively engage** with key leaders and conduct village assessments to open and maintain lanes of dialogue with the local leadership in order to gain trust, legitimacy, and local support for our civil affairs operations.

ENDSTATE: *Enemy:* Tactically defeated on the battlefield, delegitimized in the eyes of the population, and no longer effectively able to mass, hold terrain, or be welcome in populated areas.
Friendly: Broad popular support for ANSF as the legitimate security arm of the GIRoA. Successful elections in 2009. PRT/CMO improvements that quantifiably improve the quality of life for the population.

Now Zad Before



Post Taliban fall 2001 UN installs health clinic and water wells..



By 2007, fighting between Taliban and British, Ghurka and Estonian forces cause 30,000 residents to flee..



Marines from 2/7 replace Brits, followed by 3/8 then 3/4...

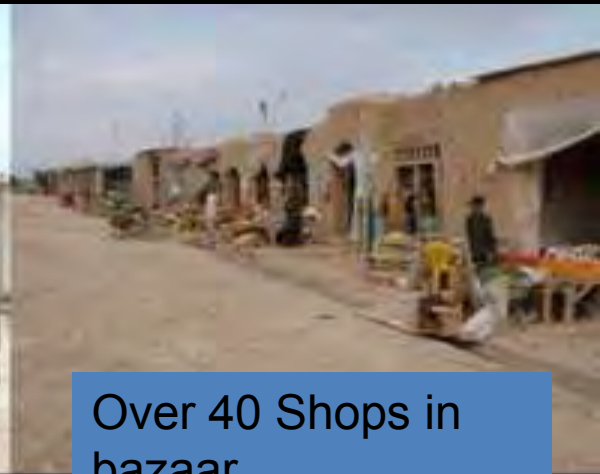


Dec 2009 MEB conducts Operation COBRA's ANGER to clear Taliban..

Now Zad After



DG in office and shuras held...



Over 40 Shops in bazaar...

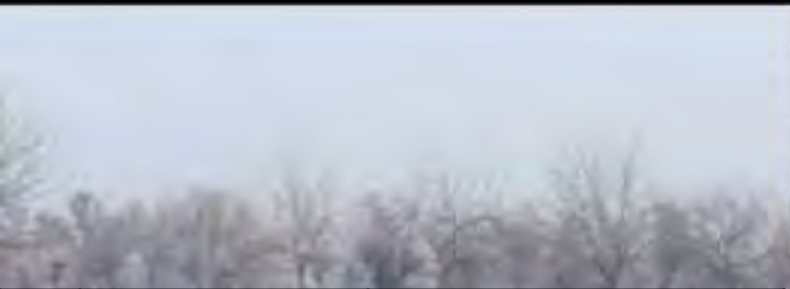


Licensed nurse and midwife offer medical services...



School in session...

Marjah Forces



#	Unit	Number
1	LAR	250 Marines
2	Stryker Kandak	500 Soldiers 250 ANA
3	3/6 Kandak	1000 Marines 250 ANA
4	1/6 3 Rifle COs	1000 Marines 150 ANA
5	MRAP	100 Marines
	Total	3500 Combatants



Leveraging Islam: Mullah Engagement

Target: Mullahs (religious leaders)

What: Systematic engagement

Goal: Persuade mullahs to support GIRoA during weekly sermons, in schools and their ministries

Discussion:

- Mullahs have been largely an untapped source of influence in Afghan society;

- Engagement & education of mullahs is a conduit to influence the population and provides a thermometer to gauge atmospherics

Note: 2d MEB employed US Navy Muslim chaplain as key interlocutor



Providing a Way Out: Reintegration

- Target: Mid- & Low-Level Taliban
- Goal: Provide a non-violent exit
- Means: Social reintegration
- Who: Community leaders (tribal elders, local officials)
- What: Jobs, retraining



Taliban Tattoo

Female Engagement Program

Full Population Engagement Requires Women

- Men (Marines) interacting with local women is a redline
- Requirement for females—accompany patrols, engage local women, provide searchers, assist with CA.
- 150 volunteers, 6 training courses, 70 missions.



Engagement Lessons Learned

- All politics in Afghanistan are local politics.
- “Female engagement” includes engaging both men and women.
- Women are critical but overlooked, demographic.
- Cultural rules are for Pashtun, not Western women.
- Best employed in small numbers.
- Long-term sourcing solution, culture, language training, required.
- Poorly trained or employed engagement teams can be counter-productive.





Mullah Engagement



MJH Tribal Engagement



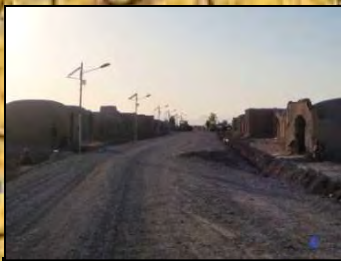
GIRoA Engagement



NZD Demining



NZD Bazaar Clean Up



Rt 515 road project



DLM Deep Water Well

**STABILIZATION,
DEVELOPMENT
& ENGAGEMENT
THROUGHOUT TFL GEO
& POLITICAL AO**



Afghan Business Conferences



Nawa ASOP CC



Nimruz Engagement



KSN -Wheat Distro



KSN - VMO



NWA-GMR AVIPA



Nawa Schools

ANSF Developmental Progress

	<u>Jun</u>		<u>Dec</u>		<u>Apr</u>
ANA Partnered	400	→	750	→	4700
AUP Patrolmen	300	→	600	→	900
AUP Trained	5%	→	50%	→	100%
ABP Disposition	North	→	Split	→	South
JSAS Graduates	Zero	→	52	→	1,400
Pay Assurance	Red	→	Orange	→	Yellow

**The current situation presents a perfect environment to
focus on an ANSF Development Plan**

Joint Security Academy Shorabak (JSAS)



- Only 5% of Police in AO had been formally trained
- MEB-A requested & built a temporary facility while planning development of a permanent facility

5 AUP Classes (8 weeks)
- **450 Police Training**
2 ANCOP Classes (2 weeks)
- **900 Advanced Training**
Legacy Class (2 weeks)
- **60 Police Intel Training**



Common sense applies...

Best counter to IED's: #1 The Afghan people #2 ANSF partners and then metal detectors, Dogs, GBOSS, airplanes, etc. More than

Best counter to IED's: #1 The Afghan people, #2 ANSF partners and then metal detectors, Dogs, GBOSS, airplanes, etc. More than 80% of our IED finds have been the direct result of tips from local nationals because of the respect that you show to the people—and because they've watched you ruthlessly close with and destroy the enemy. Never forget that the best X-IED TTP's = #1 The Afghan people & #2 our ANSF Partners.

***Co F, 2d Bn, 2d Marines
March, 2010***



Full Spectrum COIN

Leverage SOF...ruthlessly remove insurgent leadership from battlefield

ANSF Partnering is the most important thing we do: no Afghan Police or Army unit lives or fights alone.

Consolidate and expand in populated areas

Population-centric, full spectrum COIN is about effects on people, not physical location

RELENTLESSLY AGGRESSIVE ACROSS ALL LINES OF OPERATION!!!!



Discussion Points

1. Presence with the people – Hunting and Helping.
2. Metrics of measurement in a COIN environment.
3. KLE – Daily and at all levels.
4. Leadership – Agility/Innovation/Standards.
5. Poppy and Nexus targets.
6. Command Relationships – OPCON/TACON.
7. ANSF Development - Transition.
8. Government Development - Transition.
9. Detailed Planning – ACE/LCE/PRT/JIATF.
10. Anbar Experience – The people voted
11. IO/PAO – Tell your story...LOUDLY
12. The clock is running and the world is watching!



Discussion...

DoN Capabilities



RADM David L “Deke” Philman
Director of Warfare Integration
OPNAV N8F

6 Oct 2010



Spectrum of Capabilities

UAV



MH-60



MPA



E-2C/D



F/A-18



JSF



JHSV



**SSN/SSBN
SSGN**



LCS/FFG



CG/DDG



LHD/LPD



CVN



HA/DR

**Maritime
Security**

**Power
Projection**

**Sea
Control**

Deterrence

**Forward
Presence**



DISCUSSION



N852

MINE WARFARE BRANCH

CAPT Mark Rios
Branch Head



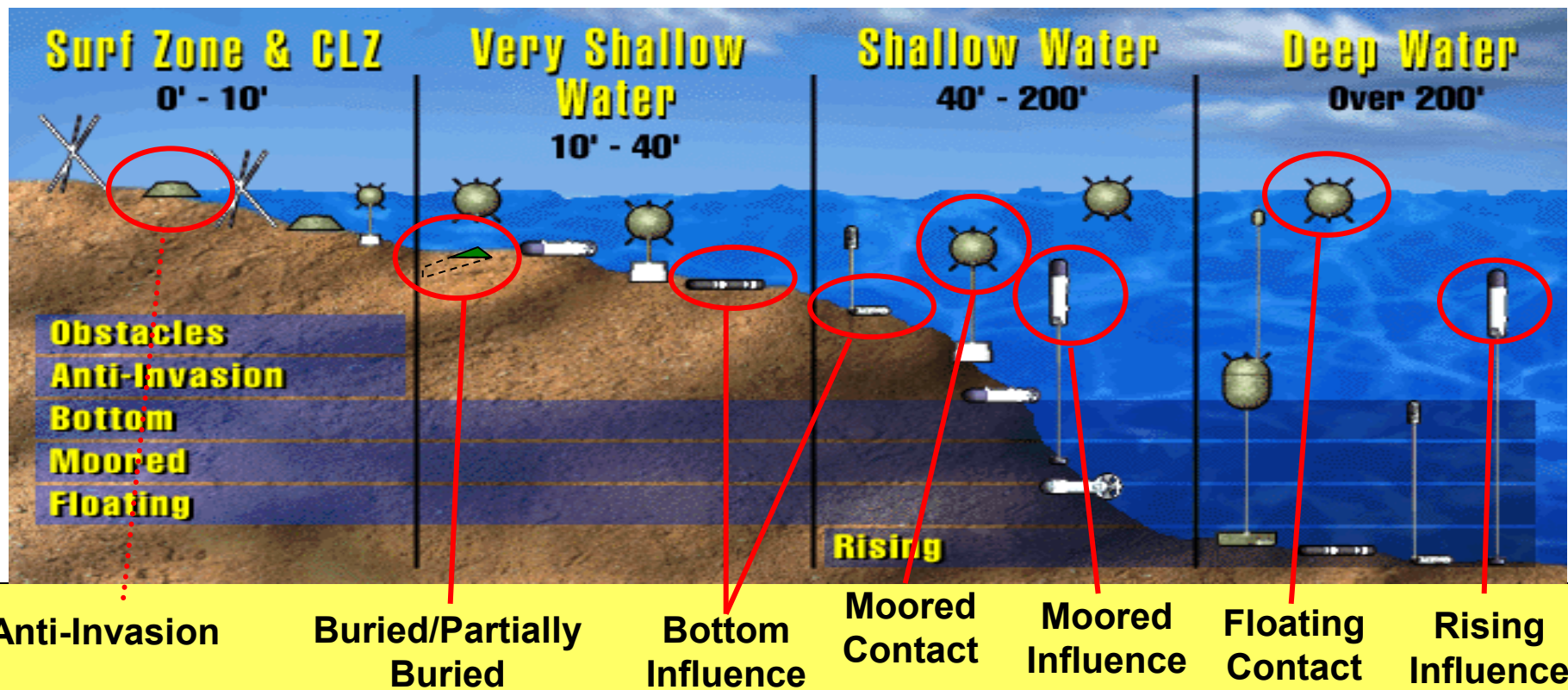
Agenda



- **Mine Threat to Access and Maneuver**
- **The Transition from Dedicated to LCS-based MCM**
- **MCM Mission Package Program Overview**
- **Near Future Challenges**
- **Summary**



The Threat to Assured Access



- The real goal of a minefield is Sea Denial, NOT the damage or destruction of a specific ship.
- The Sea is a maneuver area. Navy goal is to assure Access, support STOM/OMFTS, NOT counter every mine.

- Over 300 Mine Types
- Over 50 Countries Possess
- Low Cost but High effects
- Simple to Deploy
- Asymmetric₃





Surface Mine Countermeasures (SMCM)

TODAY



Current Force:

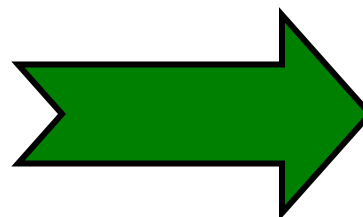
- 14 MCM-1
 - 4 in Manama, Bahrain
 - 4 in Sasebo, Japan*
 - 6 in San Diego, CA
- All MHC-51 decomm'd/FMS
- Single Mission (MCM)



MHC-51

1993

NEAR FUTURE



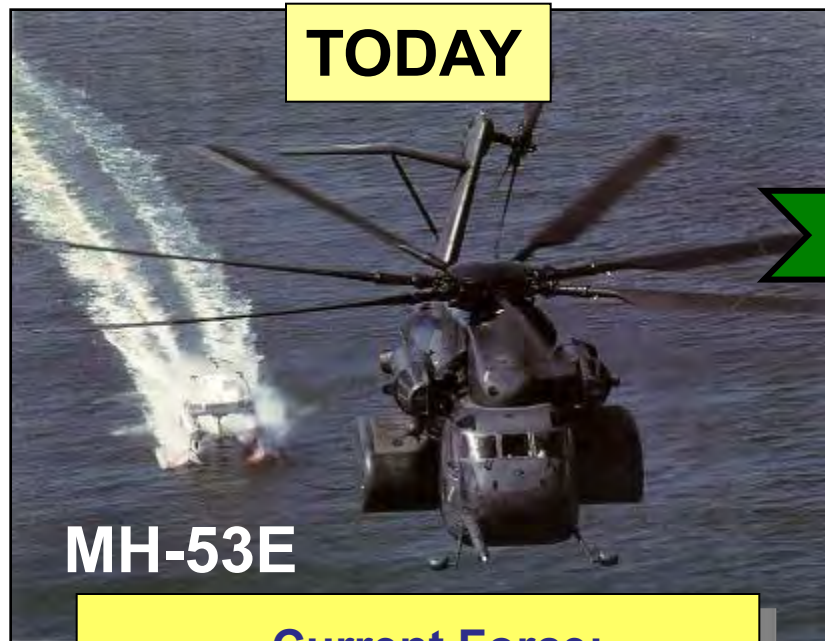
**Littoral Combat Ship
(LCS 1 and LCS 2)
• Multi-Mission
(MCM, ASW, ASUW)**





Airborne Mine Countermeasures (AMCM)

TODAY



MH-53E

Current Force:

- 2 HM Squadrons
 - HM-14 in Norfolk, VA
 - HM-15 in Norfolk, VA
- 28 MH-53E Aircraft
 - 11 in HM-14
 - 2 Korea
 - 10 in HM-15
 - 4 Bahrain
 - 3 in Fleet Readiness Sqdn
 - 4 RDTE / Pipeline

NEAR FUTURE



MH-60S

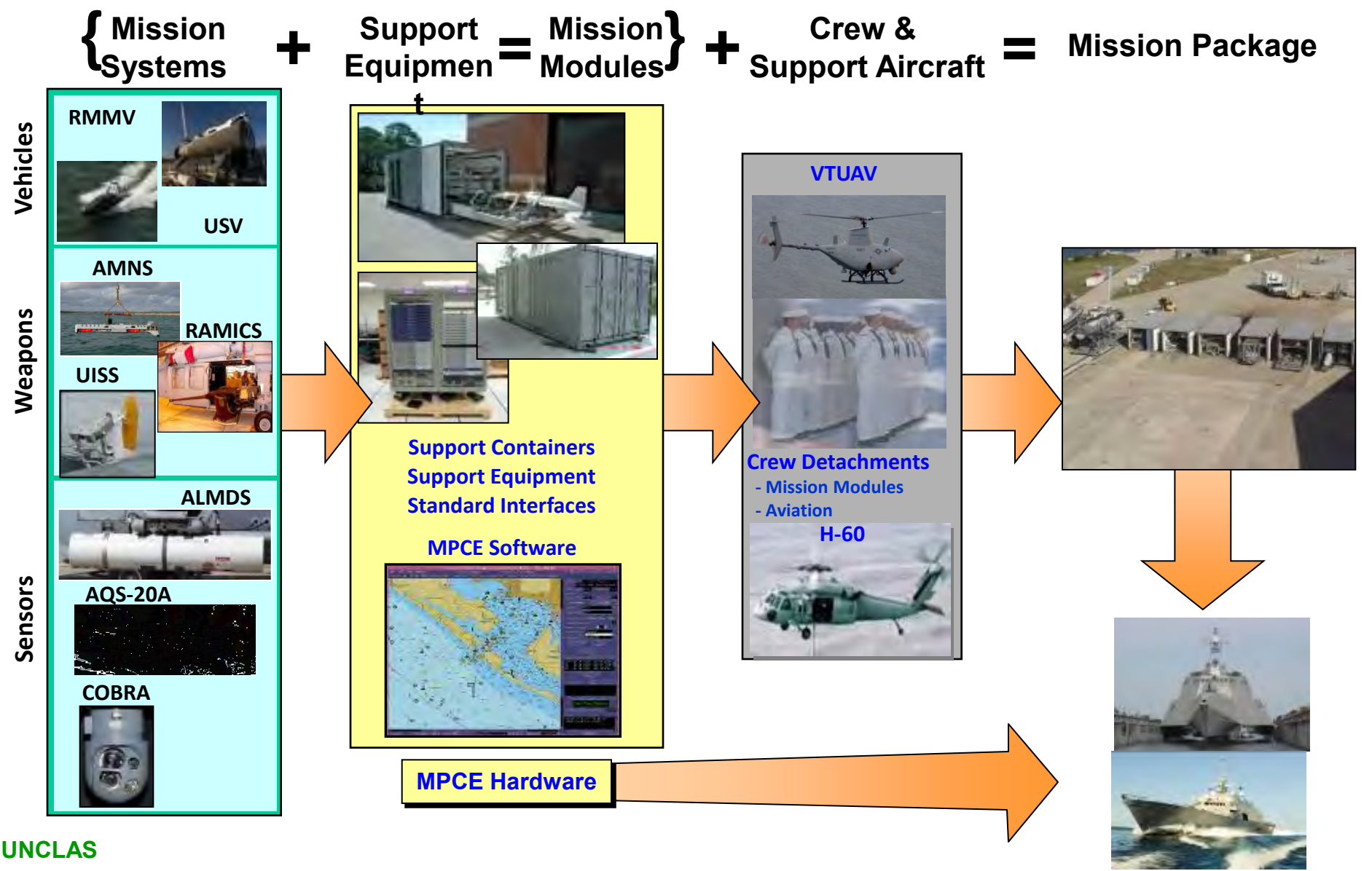


BLOCK 2B

Future Force:

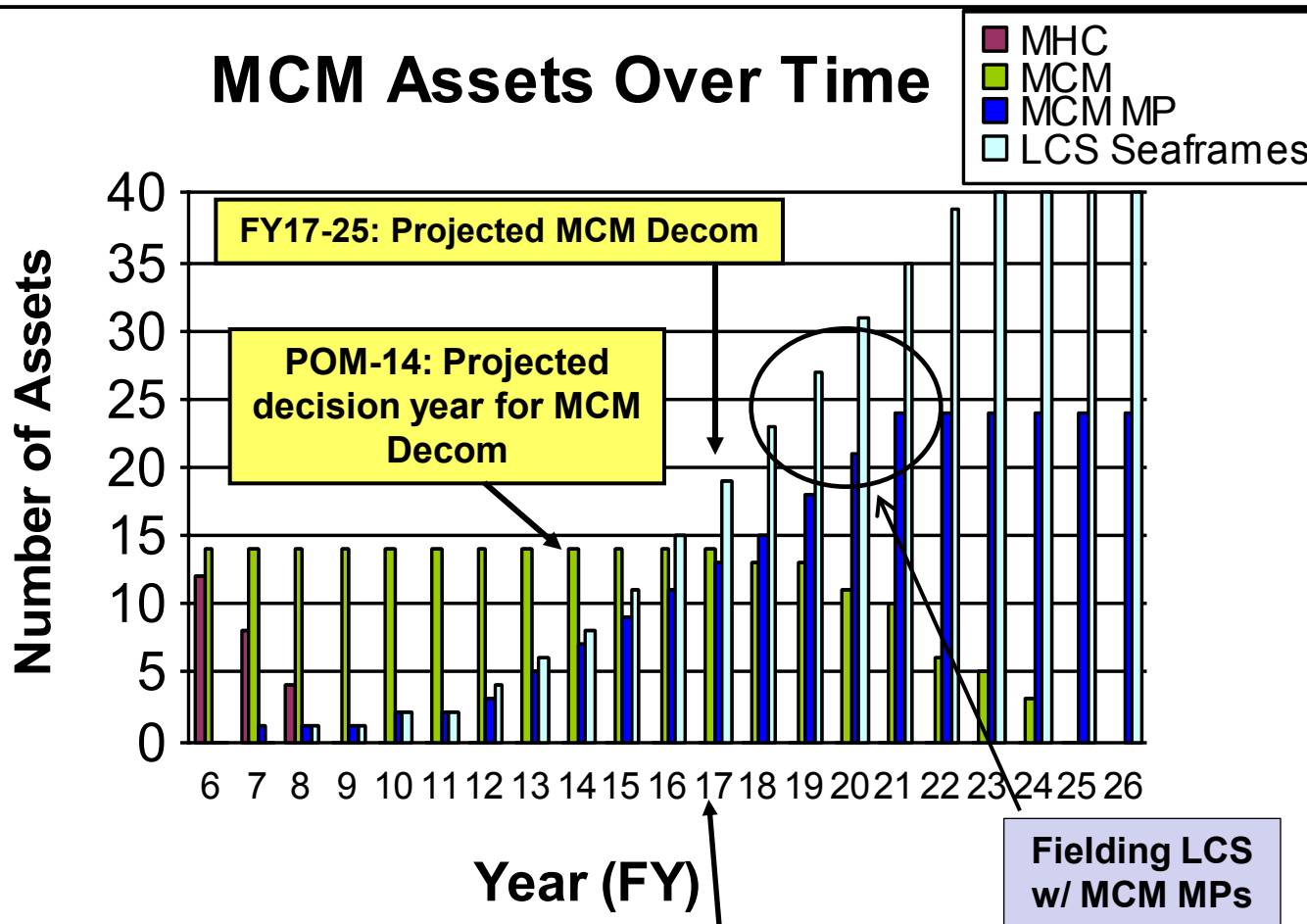
- 6 Expeditionary Sqdns
 - Support ESG/LCS
- 2 USNR Expeditionary Sqdns
- Embarked in LCS

UNCLAS





Transition to LCS-based MCM



FY17-25: Projected MH-53E Sundown



Changes Since Last ExWar Conference

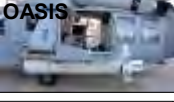
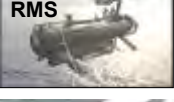
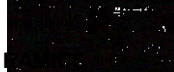


- Remote Minehunting System (RMS) completed Nunn-McCurdy re-certification
 - ❑ Reliability Growth and program re-baseline
- COBRA Blk I Milestone C
 - ❑ Integration with VTUAV begins in Jan '11
- AQS-20A sonar to begin OPEVAL in Dec '10
- ALMDS completed Contractor Testing; now in Developmental Testing
- Expanding capabilities for mine neutralization
 - ❑ AMNS to Surface/Near-Surface portion of the water column
 - ❑ JABS in the Very Shallow Water (VSW) region
- SMCM UUV CDD approved Jul '10
- Women at Sea Modification completed on USS GUARDIAN and ongoing on USS GLADIATOR



MCM Package System Status



MCM Package Program	ACAT	Programmatics	Testing	Contractor	IOC
 AQS-20A	2	In Low Rate Initial Production	✓ TECHEVAL on MH-60S completed • OPEVAL w/ MH-60S Jun 10 – Aug 10	Raytheon	2011
 AMNS	2	In Low Rate Initial Production	✓ MS C Approval Jan 08 • DT Live Fire Ground Testing Jul 09	Raytheon	2011
 ALMDS	2	In Low Rate Initial Production	✓ Commenced WSIT CT on MH-60S Apr 08 • Commenced TECHEVAL 1st Qtr Fy11	Northrop Grumman	2012
 COBRA	3	Milestone C: Jan 09	✓ Started Performance Validation (MH-53E) • Integration flight tests on VTUAV Dec 09	Northrop Grumman	2012
 OASIS	2	Milestone C: 3QFY10	✓ Re-design PDR 12 Jun 08 • MH-53E OA 3rd Qtr FY10	ITT Corp	2013
 RMS	1C	In Low Rate Initial Production	✓ OP assessment completed on DDG-96 Sep 08 • Reliability Growth Program Ongoing	Lockheed Martin	2013
 US3	3	Milestone B: 4QFY11	✓ Sweep Gear integration test on USV Jul 08 • End to End US3/USV/MP test Oct 08	TBD	2015
 UUV LFBB	TBD	Milestone B: 2QFY10	• CDD pending N8 approval	TBD	2015
 CMS	3	Milestone C: FY14 Neutralizer final decision Fy12	✓ SD&D Contract awarded 24 Jul 08 • Preliminary Design Review Oct 2009	Boeing	2017
	2	Milestone C: 4QFY10	✓ MH-60 S Captive Carriage & Jettison Oct 08 • MH-605 Gun fire test 3rd QTR FY10	Northrop Grumman	2017



MCM Coverage in 2018

Minefield Detection and Neutralization



Laser (Hunt)



Super-cavitating Projectiles (Kill)



Assault Breaching System

EOD Mobile Unit ONE

Airborne Laser Mine Detection System

Rapid Airborne Mine Clearance System

Surf Zone & CLZ
0' - 10'

Very Shallow Water
10' - 40'

Shallow Water
40' - 200'

Deep Water
Over 200'

Obstacles
Anti-Invasion
Bottom
Moored
Floating

Rising

Surface MCM UUV and Low Frequency Broadband

Remote Minehunting System & MH-60S AN/AQS20A

Airborne Mine Neutralization System

Unmanned Surface Vehicle / Organic Airborne and Surface Influence Sweep

Buried Mine Detection

Sonar (Hunt)

Propelled explosive charges (Kill)

Magnetic Acoustic Influence Sweep



Near Future MCM Challenges

All of our programs face inherent challenges:

➤ **Sensor and Processing False Alarms**

- ❖ High False Alarms mean longer PMA & higher False Classification by PMA Operator

➤ **LIDAR Performance**

- ❖ Environmental compensations difficult – affected by surface effects and water turbidity



➤ **Computer Aided Detection(CAD)/Classification(CAC) Improvements**

- ❖ Potential for real-time algorithms in the MCM Community
- ❖ Fast and accurate CAD/CAC capability needed for all PMA



➤ **Reliability**

- ❖ System Reliability needs to meet requirements
 - Meet Operational Availability (Ao)
 - Improve Mean Time Between Operational Mission Failure (MTBOMF)

➤ **Plan for Obsolescence**

- ❖ Require modular, open architecture systems that are supportable long term

➤ **Opportunities for Industry:**

- ❖ UUV power generation / endurance
- ❖ Not just Unmanned Systems but...Fully Autonomous Systems
- ❖ Info Sharing and Cueing between Unmanned Systems





MCM + Mining = Mine Warfare



- The Mine Warfare Branch is responsible for both Mine Countermeasures(MCM) and Mining.
- Responsible for maintaining the current maritime mines in the Navy's inventory.



- Actively exploring future offensive mining concepts to use mines in offensive, protective, and defensive roles.

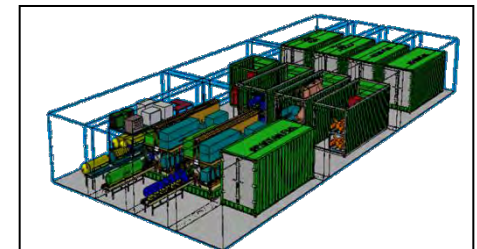




Summary



- Decreasing TOA makes TOTAL OWNERSHIP COST a key driver independent of system suitability and effectiveness
 - Systems must perform--but also be cost-effective!
- Must make wise investments to reduce false alarms, manpower demand, and improve reliability.
- The mine threat is real and not getting easier.
- The transition to LCS-based MCM is challenging...*and revolutionary*.
- MCM Mission Package programs making steady progress and in the hands of Sailors now.

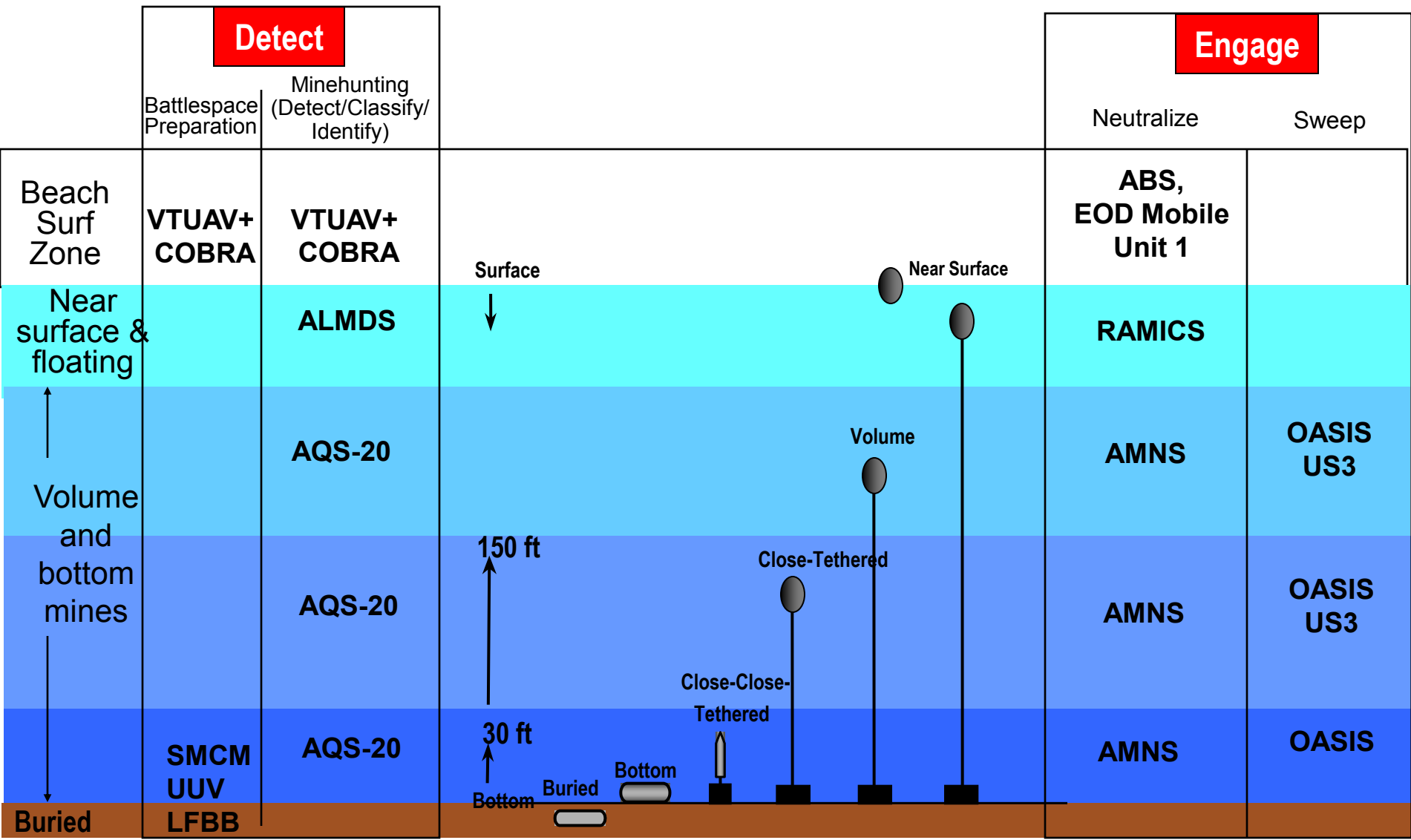


Got a solution?

Contact CAPT Rios at mark.rios@navy.mil or LtCol Greeno at michael.greeno@navy.mil



Questions





How Can Industry Help N852?

- Mine Clearance in the cluttered VSW environment
- Obstacle avoidance of unmanned, autonomous vehicles
- Develop Single Pass Detect-To-Engagement of Mines
- Modular UUV/USV—a smart, common design
- Labor Saving Ideas—to reduce manpower demand
- Innovative ideas on Offensive Maritime Mining

What COTS technologies can we leverage to improve our situation in the next 12 months?



Marine Corps Seabasing Requirements and Strategy

**NDIA
Expeditionary Warfare
Conference**

7 October 2010

Jim Strock
Director, Seabasing Integration Division
Headquarters, U.S. Marine Corps
Combat Development & Integration
Quantico, Virginia 22134
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UNCLASSIFIED



Agenda



- **MPF Enhancements**
- **Naval Integration**
- **Ship & MAGTF Modeling and Simulation**
- **R&D Initiatives**



MPF Enhancement Strategy



- **Roll-on roll-off cargo ships, coupled with mobile landing platforms, provide key enabling capabilities to fully leverage existing MPS capabilities**
 - **Selective offload**
 - **Increased ship stowage capacity allows for reconfigured loads across MPSRON for selective offload**
 - **In-stream offload of Large, Medium Speed RO/RO (LMSR) with Mobile Landing Platform (MLP)**
 - **Increased connector lift capacity with MLP**
 - **Increased ship-to-shore throughput**

MLP-LMSR Interface



T-AKE



LMSR





LHD 2 UPPER VEHICLE STOW





Armor/Protection



- Armored gun mounts
- MTVRs/ECV/HMMWVs w/some type of gun turret/armor
- Additional vehicle height and weight impacts embarkation, e.g. limits areas on ships that these vehicles can transit and be stowed





Armor/Protection



- Depending on which variant of armored gun mount is added (MCTAGS, OGPK, etc.), there is a height increase between 20in – 30in per vehicle



Engineer Equipment



TRAM



- New TAMCN B0063 replaces B2567
- Addition of armor to the cab one key difference



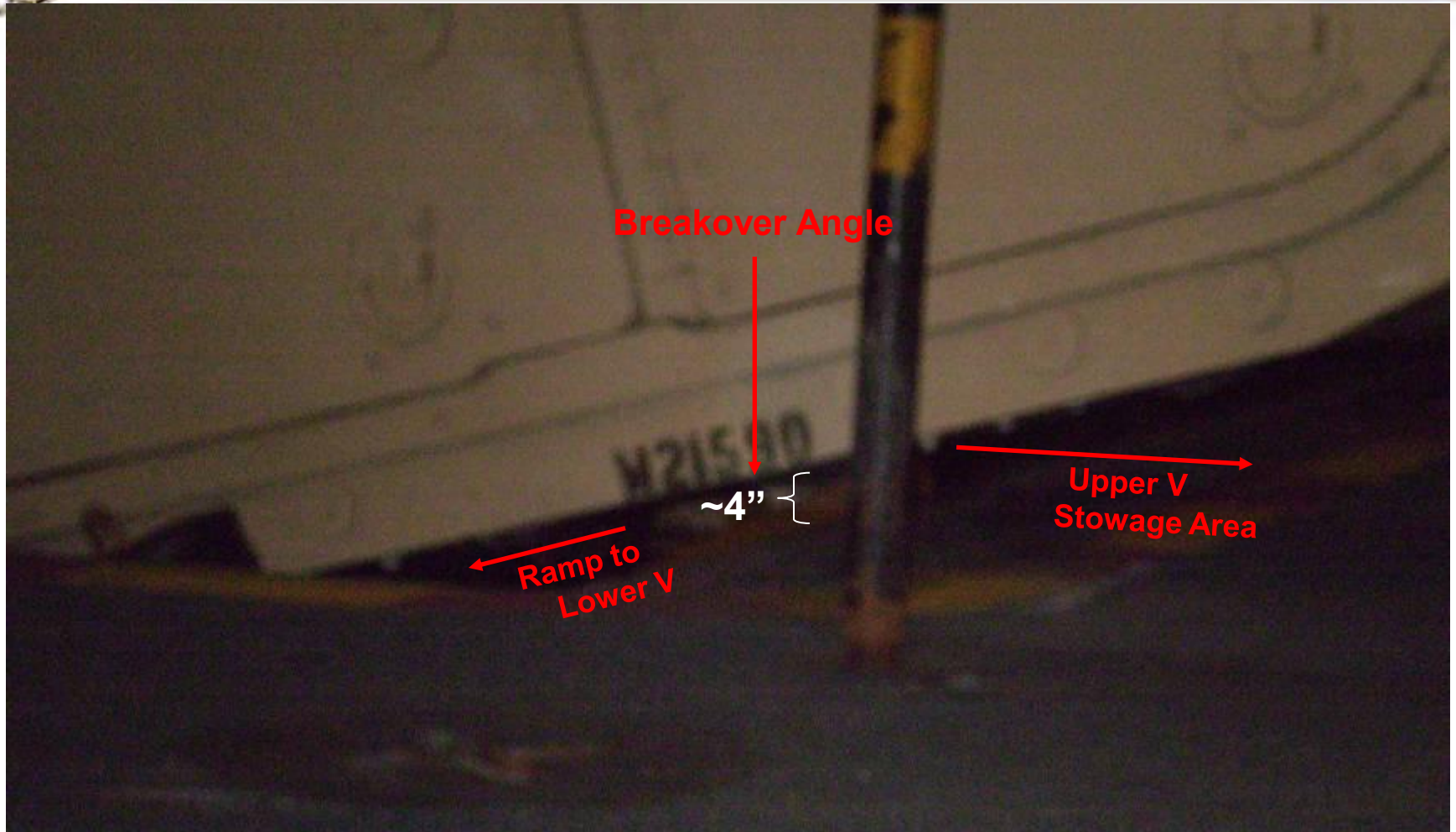
Engineer Equipment



- Various contributors to increases in dimensional data, e.g. spare tire strapped to roof of the TRAM
- Techniques such as this are common practice



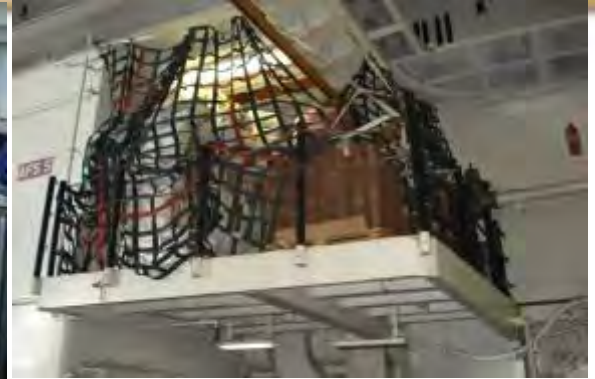
Loading Considerations



- ECV transiting from LPD 15 Upper V to Lower V with approx. 4" of clearance



Aviation



LHD 5 Hangar Bay
All this and four
aircraft



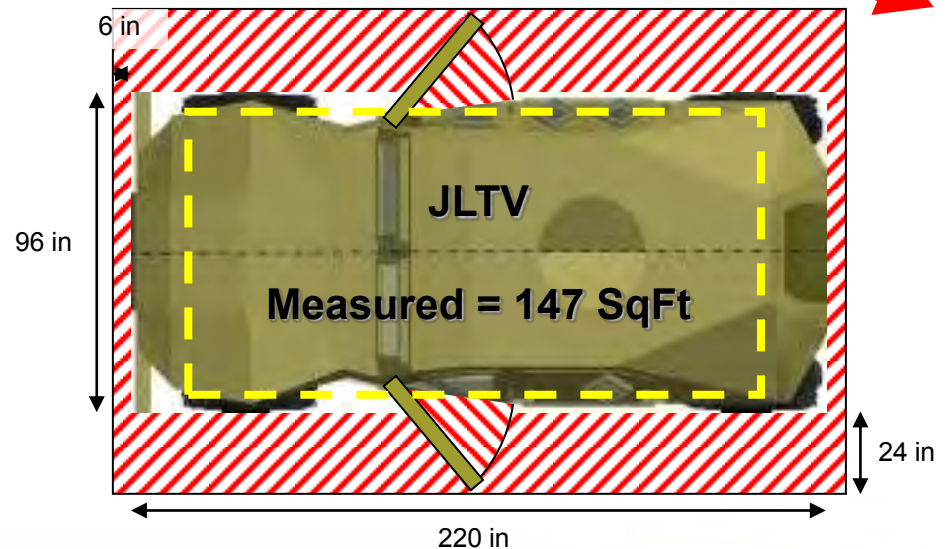
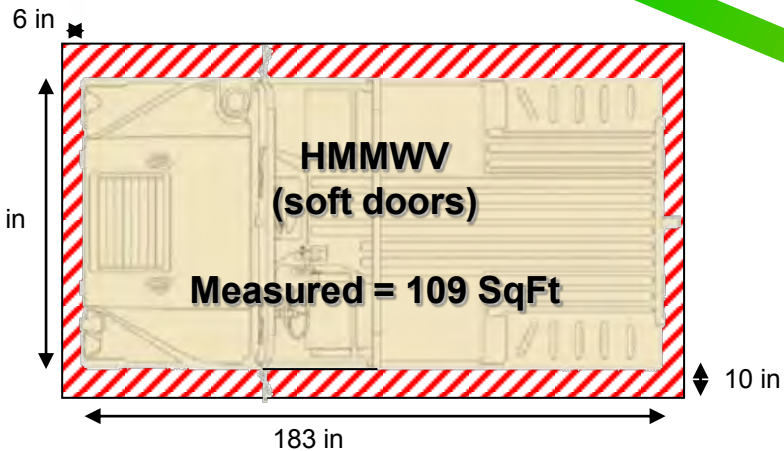


HMMWV To JLTV

70%

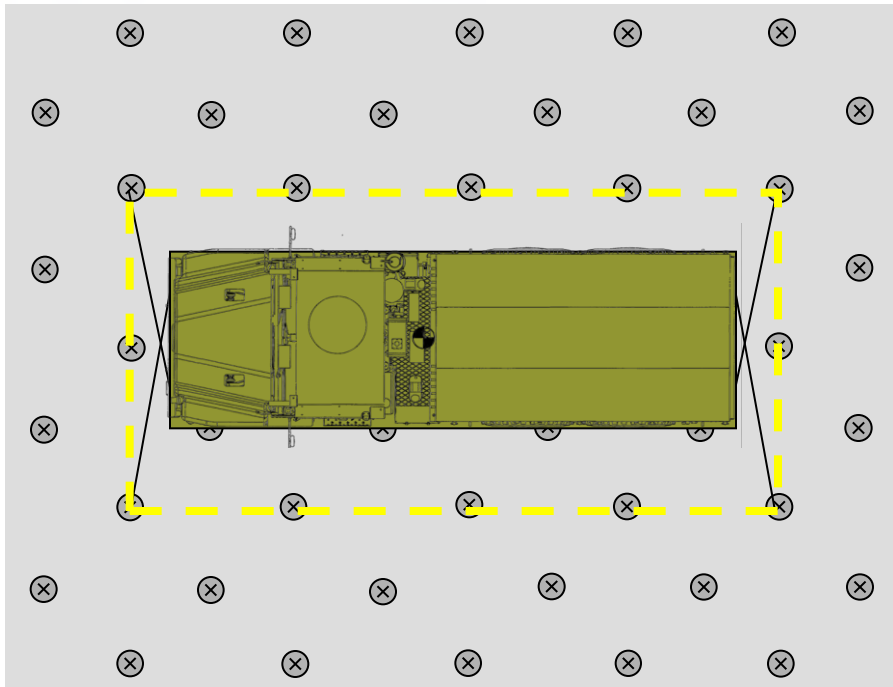
BROKEN STORAGE FACTOR

??%

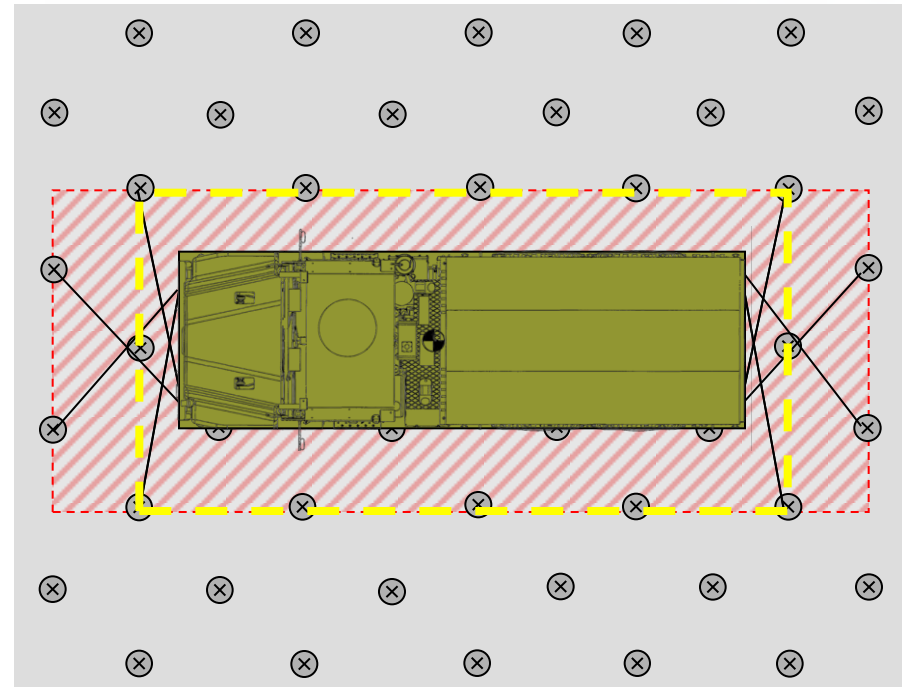




Additional Lashings



MTVR at 39,000 lbs
(unarmored cab with mobile load)
Requires 4 tie-down points



MTVR at 48,000 lbs
(armored cab with mobile load)
Requires 8 tie-down points



MTVR Stowage in LPD 17

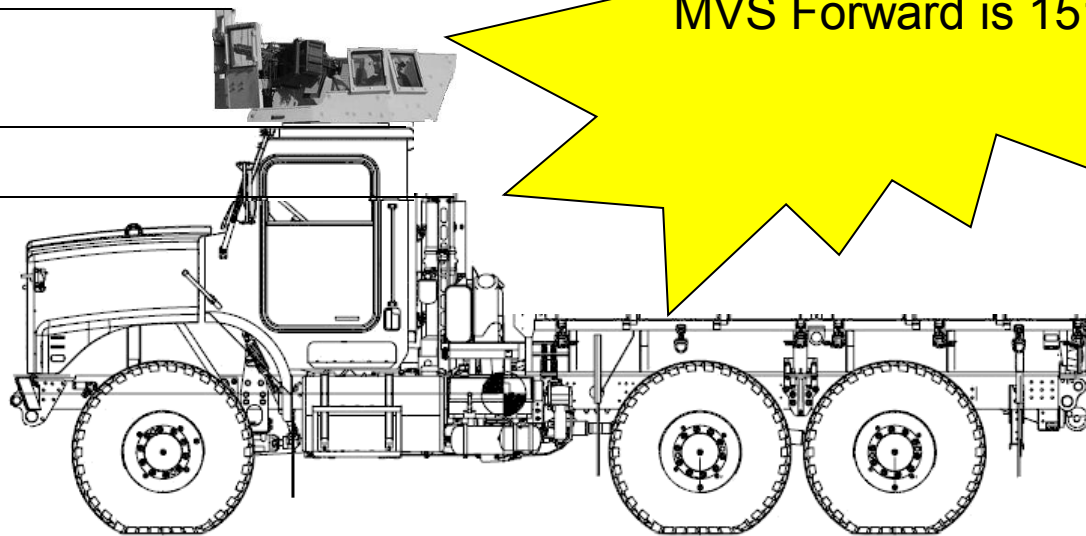
Main Vehicle Stow



164"

127"

101"



Maximum stowage in
MVS Forward is 151"

Holistic View MAGTF Requirements:

DESIGN LOADOUT NEAR TERM (2007-12) NOTIONAL FUTURE* (2012→)

MEU Ground Vehicles and Equipment

M151/trlr
3000 lb (120)

M35 2.5T
12580 lb (40)

M48 MBT
104000 lb (4)

AAV
52000 lb (15)



M998/armr
7653 lb (120)

MTVR w/MAS
49242 lb (40)

M1A1
135200 lb (4)

AAV7A1
51000 lb (15)



JLTV
???????? (120)

MTVR w/MAS
49242 lb (40)

M1A1
140000 lb (4)

EFV
72500 lb (15)

Ground Vehicles and Equipment up to 3x heavier

Air Combat Element (ACE)

CH 46A
13000 lb (12)



MV 22
46990 lb (12)

MV-22 weighs almost 3x CH-46A

AV 8B
24512 lb (6)



AV 8B
24512 lb (6)



JSF
46217 lb (6)

F-35B JSF weighs almost 2x AV-8B Harrier

CH53A
22900 lb (4)



CH53E
48710 lb (4)



CH53K
~55000 lb (4)

Notional Aggregate
(from above list)
embarked MEU

1227 tons



2549 tons



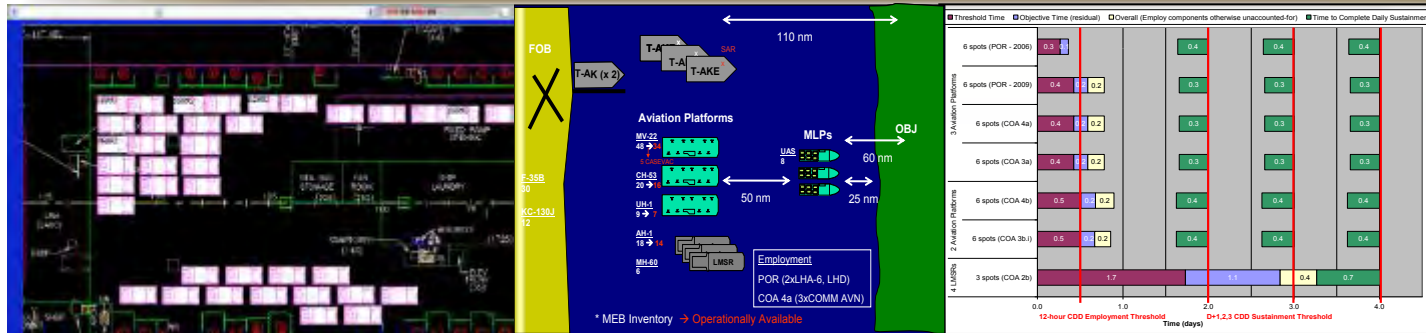
~3697 tons

Increased Weights/Density Impact Deck Strength, Ships Stability...

*MCCDC CD&I SID , POE 50, NAVAIR 1.2 concurs with vehicle weights – ALL VEHICLE COUNTS NOTIONAL (Based on historical data)



Ship & MAGTF Modeling and Simulation





Technical Direction & Organizational Communication

Technical Management & M&S Data Flows





Shipboard Selective Access and Retrieval System (SSARS)



Background

Light Vehicle Solution

Container Solution

- Seabasing Integration Division-led project with Naval Surface Warfare Center – Carderock, Maryland Division
- SSARS is a ship-agnostic solution to the concept of selective access
- SSARS lifts and moves tracked and wheeled vehicles as well as containers
- TRANSCOM awarded SID \$5.8 million Research and Development funding for Fiscal Year 08 to FY10
- Continuing R&D execution in FY11



Selective Positioning Independent Deck-cargo Re-locator (SPIDR)



Container Lift and Maneuvering System (C-LMS)

Heavy Vehicle Solution

Future

Opposed Ramp Lift and Maneuvering (ORLAM) System



An ORLAM System is used to lift and move heavy vehicles

- The SSARS proof-of-concept demonstrators are omni-directional, electric-hydraulic, remotely controlled, and environmentally friendly
- One ORLAM ramp-pair provides the C-LMS tractor-turret drive and battery power source
- Leading, unique battery technology implementation
- Dedicated Ro/Ro C-LMS currently in design stages
- Multiple patents pending on new technology
- Wide applicability for this capability exists; transition interest expected from OPNAV
- PM SSARS seeking partnerships for incremental, additional development
- Mid-year JCTD briefed & planned for OSD consideration Spring FY11



Seabasing Integration Division

Points Of Contact



ROW WELL...AND LIVE!



- **Director**
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 - james.strock@usmc.mil
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- **Deputy Director:**
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 - Comm: 703-432-8144



N851
NAVAL SPECIAL WARFARE
BRANCH

Captain Evin Thompson
Branch Head

Unclassified



N851 – Primary Responsibilities



- **Resource sponsor for:**
 - Naval Special Warfare (NSW) service common requirements. (FY11 ~\$22.5M)
 - Navy Riverine Force. (FY11 ~\$18.2M)
- **Senior NSW advocate/advisor on the staff of the CNO.**
 - NSW Urgent Operational Need (UON)/SOF - related Joint Urgent Operational Need (JUON) advocate.
 - Advisor in support of N81 analyses and studies that include or support NSW/SOF equities.
- **OPNAV coordinator/advocate for Navy programs that support/involve NSW/ExW. Examples include:**
 - Scan Eagle Unmanned Aircraft System (in support of NSW and USCENTCOM).
 - Small Tactical Unmanned Aircraft System (STUAS).
 - Special Operations Force (SOF) support attributes of future Navy ships.
 - Navy policy for Premeditated Personnel Parachuting (P3) operations.
 - “Naval Solution for Visit, Board, Search and Seizure (VBSS).”
 - Common Seaframe for Navy/SOF
- **Represent Commander, NSW Command, as directed, in the National Capital Region.**



N851 - Top Programs



➤ Naval Special Warfare (NSW)

- Provide procurement and sustainment resources for service common capabilities, to include:
 - Small Arms & Weapons Mounts
 - Tactical Communications Equipment
 - Night Vision Equipment
 - Training Support Craft
 - Operational Stocks
 - Planning & Management Support Systems

➤ Riverine Activities Program

- Provide procurement resources for initial outfitting, capability improvements and phased replacement for Riverine Group ONE and component Riverine Squadrons ONE, TWO and THREE.
- Achieve Full Operational Capability (FOC) by FY 2010 (with exceptions).
- Support establishment of a "Fourth Riverine Squadron."

➤ Unmanned Aircraft Systems (STUAS) for L-Class ships, NSW and NECC

- Representing N85 equities (NSW, NECC and L-Class ships) in this N2N6 - resourced program.
- Expeditionary Forces require STUAS Tier II vice STUAS – Lite.

➤ Procurement/sustainment of Scan Eagle Unmanned Aircraft Systems ISO SOF

- Requested by NAVSPECWARCOM, via UONS, and USCENTCOM, via JUONS for OIF and OEF.
- Capabilities provided by the JUON employed under custody of NAVSPECWARCOM.
- N851 coordinates execution with NAVAIR program office, Task Force ISR, Naval Special Warfare Command, Special Operations Command Central and other involved/interested parties.

Unclassified

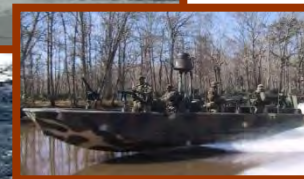


Naval Special Warfare



Capability Description

- **Naval Special Warfare (NSW) forces conduct special operations in support of Joint Force and Navy commanders. Examples include, but aren't limited to:**
 - *Direct Action*
 - *Special Reconnaissance*
 - *Foreign Internal Defense*
 - *Counter-terrorist Operations*
- **NSW Forces have been deployed to OEF since 2001 and OIF since 2003.**
- **Navy is responsible for providing resources to support NSW service common capabilities/sustainment.**
- **Categorization: Navy - only program (SOCOM interest)**
 - *N85 - Principal resource sponsor; responsible for (most) NSW service common procurements/sustainment (OMN, OPN, WPN). [N6F was responsible for resourcing NSW service common portable radios (OPN); resources now in N85.]*
 - *N86 - Responsible for resourcing NSW service common Chemical, Biological, Radiological Decontamination Equipment (CBRDE) and Small Tactical Unmanned Aircraft System (STUAS) capabilities (OMN, OPN, APN).*



USSOCOM - Resource sponsor for all **Special Operations peculiar** capabilities/sustainment, capability improvements and all NSW ammunition.



Riverine Activities



Capability Description

- **Operational Riverine Force components (Riverine Squadrons) are organized, trained and equipped to conduct maritime security operations and theater security cooperation missions along inland waterways. Examples include, but aren't limited to:**
 - *Patrol*
 - *Interdiction/Visit, Board, Search, Seizure*
 - *Troop transport*
 - *Foreign Internal Defense*
- **N851 has been managing initial outfitting resourcing of the Riverine component of NECC since late FY05.**
- **Riverine Squadrons have been deployed to OIF since March 2007.**
- **Categorization: Navy - only program**
 - *N85 - Principal resource sponsor; responsible for procurement resources (OPN, WPN, PANMC, RD TEN)*
 - *N2N6 - Responsible for resourcing portable radios (OPN)*
 - *N43 - Responsible for resourcing readiness funding (OMN)*
 - *N86 - Responsible for resourcing CBRDE (OPN, OMN)*



Unclassified

<i>River/Lake Security Patrols</i>	923
<i>Quick Response Force missions</i>	100
<i>Riverine Convoy missions</i>	689
<i>Shoreline sweeps</i>	354
<i>Joint operations conducted</i>	240
<i>Iraq Security Force Patrols</i>	245
<i>Detainees screened</i>	389
<i>Boats impounded</i>	76
<i>Weapons caches found</i>	142
<i>Combined operations conducted</i>	156
<i>Unmanned aircraft hours flown</i>	667
<i>Aircraft control hours</i>	268
<i>Iraqi River Police trained</i>	217
<i>Partnership training (Mandays)</i>	3501
<i>Key Leader engagements</i>	165
<i>Allocations of micro grants (\$K)</i>	111

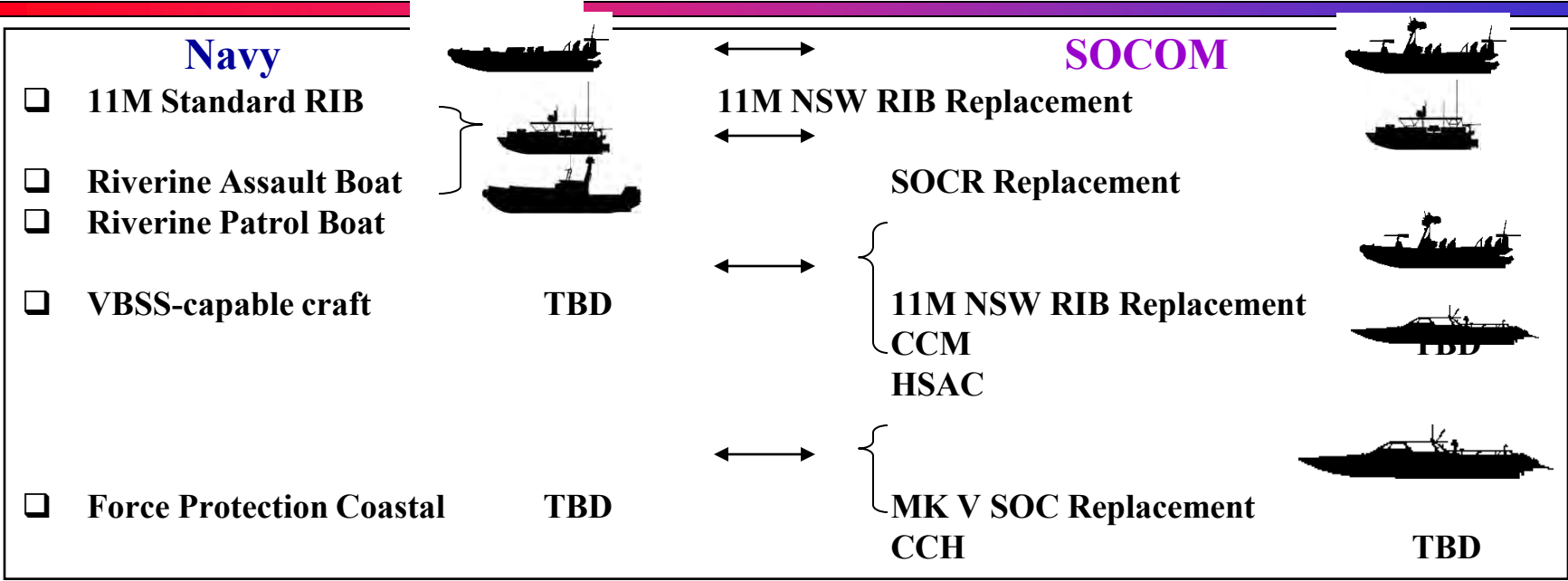


Unclassified

Unclassified



Future Navy - SOCOM Common Combatant Craft Possibilities



Current Navy - SOCOM Combatant Craft Commonalities

- ✓ Navy's Riverine Assault Boat and SOCOM's SOCR (they are the same craft)
- ✓ Small arms, weapons mounts and ammunition
- ✓ Tactical communications equipment
- ✓ On-board sensors (Electro Optic/InfraRed systems)
- ✓ Individual visual augmentation systems
- ✓ Chemical-Bio protective/decontamination equipment
- ✓ (Tier I) Unmanned Aircraft System (Puma All Environment Capable Vehicle)

Key: RIB – Rigid Inflatable Boat	VBSS – Visit, Board, Search & Seizure	HSAC – High Speed Assault Craft
SOCR – Special Operations Craft Riverine	CCM – Combatant Craft Medium	SOC – Special Operations Craft

Unclassified



What N851 Needs from Industry



- Common Combatant Craft
 - Versatility/Modularity
 - Speed
 - Seakeeping
- Modular Armor
 - People
 - Equipment



What N851 Needs from Industry



- Lighter weight body armor
- Lighter weight modular/removable vehicle & boat armor
- Improved anti-corrosive coatings for weapons
- Batteries with higher power densities and lighter weight
- Tools to aid with concealment of people and equipment
- Portable translation devices and even better, ability to manage pools of vetted native speakers that can be tapped into
- (N2N6/CT Support) Data mining tools that can reach across the plethora of databases that can't talk to each other
- Heavy Fuel Engine for shipboard UAS ops



N851 POC: CAPT Bob Wilson, 703-614-2107, robert.c.wilson4@navy.mil



BACKUPS

Unclassified



Expeditionary Basing

- LAND Basing
 - Expeditionary Camp
 - Force Protection
 - Civil Affairs
 - Medical
 - Expeditionary Logistics
- SEA Basing
 - High Speed Vessel
 - Landing Ship Dock (LSD)
 - Landing Platform Dock (LPD)
 - Littoral Combat Ship (LCS)
 - Utility Craft





16 Swedish RCBs landing in the LSD 41 class (USS TORTUGA) well deck

Unclassified

Unclassified



Lessons Learned

(Representative)

- All sailors aren't prepared for „riverine“ duty.
- „You don't know what you don't know.“
- All small craft have payload limitations.
- Need for a robust (non-organic) intelligence collection/ analysis capability.
- Sustained awareness of „burn rate“ of major equipment, based on training usage, environmental factors, etc.
- Timing of personnel assignment with training cycle/deployment rotations.
- Sufficient time to incorporate counter-insurgency/foreign internal defense training into pre-deployment cycle.

Unclassified

Unclassified



USN Riverine Craft



Riverine Assault Boat (RAB)

Riverine Patrol Boat (RPB)



Riverine Command Boat (RCB)

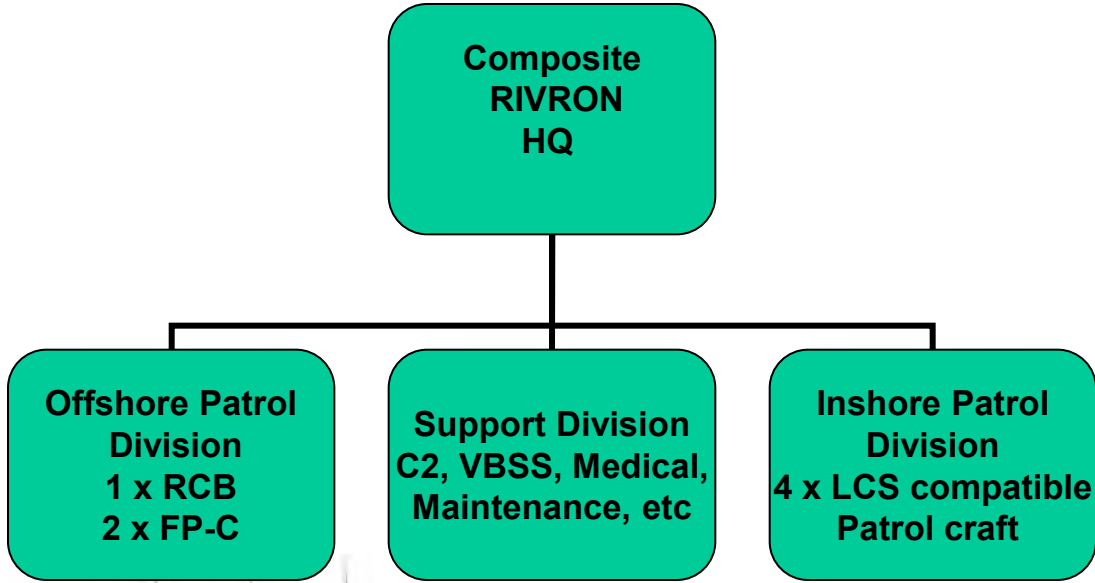
***Combat Rubber Raiding Craft
(CRRC)***



Unclassified



Fourth (Composite) Riverine Squadron (Alternative)



LOA: 15m
(Actual)



RCB

LOA: 20m-22m
(Notional)



FP-C



FP-C

Unclassified



LOA: 11m-12m
(Notional)

Unclassified



Riverine Vehicles



MK 25 MTVR W/ MAS ARMOR KIT



UPARMORED HMMWV



CAT I



CAT II



MRAP (Mine Resistant Ambush Protected)

Unclassified



Weapons



M4



M9



M500



M2HB



GAU-17



MK19



M240G



MK21



MK48

Unclassified



UNCLASSIFIED



NAVAL SPECIAL WARFARE (N851)

Service Common Capabilities

- Pre-positioned operational stocks
- Visual Augmentation Systems
- Training support craft
- Small-arms and weapons mounts
- Tactical Communications Equipment

Irregular Warfare (IW)

- Developing Navy IW portfolio investment strategy
- Provide recommendations for Navy unique, risk-mitigating solutions to Joint IW efforts

Future Capabilities

- Integrate into future Navy capabilities and concept development of unmanned systems
- Provide expertise in development of future Special Warfare service common items



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NSW Scan Eagle UAS



Mission: Procured in response to NSW and Joint SOF Urgent Needs, the Scan Eagle UAS provides Full-motion Video (FMV) intelligence, surveillance, reconnaissance, and targeting support to tactical users.

➤ **Operational Employment:**

- 9 Navy-owned systems
 - 6 x Operational, 2 x training, 1 x Op Spare
- Hub & Spoke Operations (300 hrs/month)
 - Spoke (Forward Control Station) ~100km

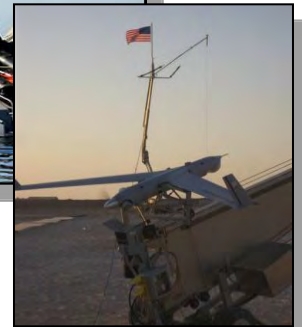
➤ **Equipment:**

- Scan Eagle UAS (12 air vehicles per site)
- Ground Control Stations, Launch/ Recovery, Pack-up & Maintenance kits, Ops/Maintenance Shelters

➤ **Operational Overview**

- IOC: Nov 08 (OIF), Aug 09 (OEF)
- OIF (as of 30 Sep 09):
 - Sorties: 346
 - Total Flight Hrs: 1847 hrs
- OEF (as of 30 Sep 09)
 - Sorties: 58
 - Total Flight Hrs: 450 hrs

➤ **Rapid Development Deployment (RDD) – Special Payload Efforts**

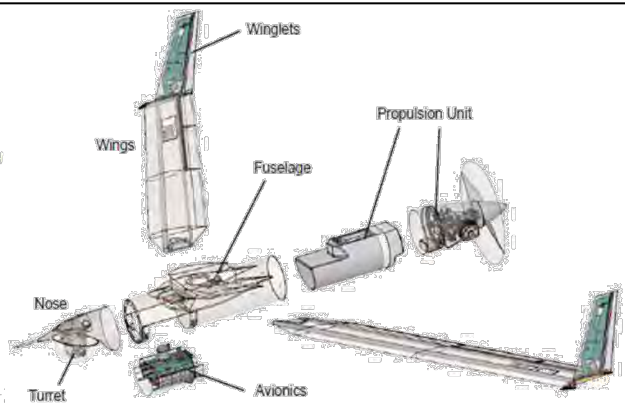


Performance

Max Level Speed	70 knots	36 m/s
Cruise Speed	49 knots	25 m/s
Service Ceiling	16,400 ft	5000 m
Endurance	15 hours	15 hours

Dimensions

Wing Span	10.2 ft	3.1 m
Fuselage Diameter	7.0 in	0.2 m
Length	3.9 ft	1.2 m



Scan Eagle UAS is an interim capability until fielding of STUAS Program of Record ~4Q FY13

Classified

Characteristics	
Hull Type	High-grade Aluminum Rigid
Length	33 ft
Beam	9 ft
Draft	2 ft
Crew	7
Passengers	-
Twin Diesels w/Water Jets	Yes
Top Speed: full load	30 knots - cruise 40 knots - sprint
Range	250 nm
Fuel Capacity	250 gallons
C-130 Transportability	No
Combat Load	20, 500 lbs.
Bow Door/Ramp	No
Weapons Foundations	Multiple



Unclassified

Unclassified



Riverine Patrol Boat (RPB)



Characteristics

Hull Type	High-grade Aluminum Rigid
Length	39 ft
Beam	10 ft – 2 in
Draft	2 ft
Crew	5
Passengers	8
Twin Diesels w/Water Jets	Yes
Top Speed: full load	35 knots - cruise 38 knots - sprint
Range	275 nm
Fuel Capacity	300 gallons
C-130 Transportability	No
Combat Load	22, 800 lbs.
Bow Door/Ramp	Yes
Weapons Foundations	Multiple



Unclassified

Unclassified

Characteristics	
Hull Type	High-grade Aluminum Rigid
Length	49 ft
Beam	12 ft – 5 in
Draft	3 ft
Crew	4
Passengers	26
Twin Diesels w/Water Jets	Yes
Top Speed: full load	40 knots - cruise 45 knots - sprint
Range	>320 nm
Fuel Capacity	300 gallons
C-130 Transportability	No
Combat Load	40, 000 lbs.
Bow Door/Ramp	Yes
Weapons Foundations	Multiple



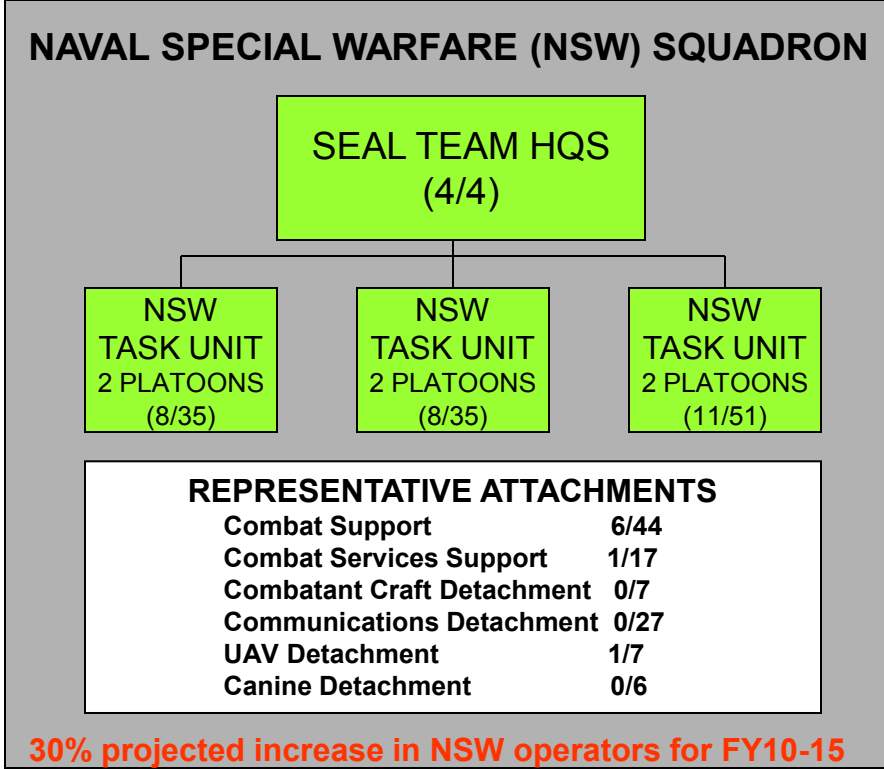
Unclassified

Unclassified



Naval Special Warfare

Navy Service Common Support Rationale



Night Vision Equipment

Current Inv: ~47%

Req: 6500
Inv: 2900

Operational Stocks

Current Inv: ~85%

Req: 5
Inv: 4.5

Comms/Electronics

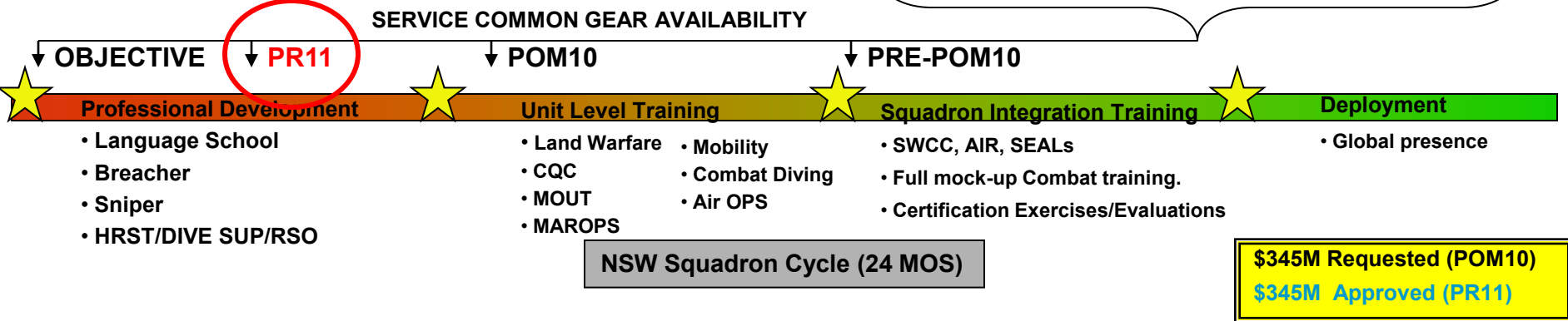
Current Inv: ~25%

Req: 7200
Inv: 1760

Small Arm/Weapons Mounts

Current Inv: ~50%

Req: 8800
Inv: 4500





N85 - Naval Special Warfare Relationship



- **United States Special Operations Command (USSOCOM) has service-like responsibilities to plan, program, budget and execute resources for Special Operations (SO) – peculiar support, services and equipment.**
- **Military Departments have support responsibilities to plan, program, budget and execute resources for service common capabilities for Special Operations Forces (SOF). Principal guidance is provided by:**
 - Title 10, United States Code, Sections 165, 167.
 - DOD Directive 5100.1; Functions of the Department of Defense and Its Major Components.
 - Memorandum of Agreement – Department of the Navy and USSOCOM.
- **N85 is OPNAV's principal advocate and resource sponsor for the Navy component of USSOCOM - Naval Special Warfare (NSW) Command.**
 - Other NSW (resource) sponsors on the OPNAV staff include:
 - N86 – Chem/Bio equipment, Small Tactical Unmanned Aircraft System (STUAS), SOF support attributes on future surface combatants.
 - N88 – Navy helicopter flight hours in support of NSW.
 - N87 – SOF support attributes onboard Navy submarines.
 - N6F – Some service common portable radios and electronics required by NSW (and NECC's Riverine component).
- **During each POM and PR cycle, N85 considers requests submitted by Commander, Naval Special Warfare Command for sustained and/or increased service common resourcing support.**

Unclassified



The Balanced Force

For Complex Joint/Combined Operating Environments



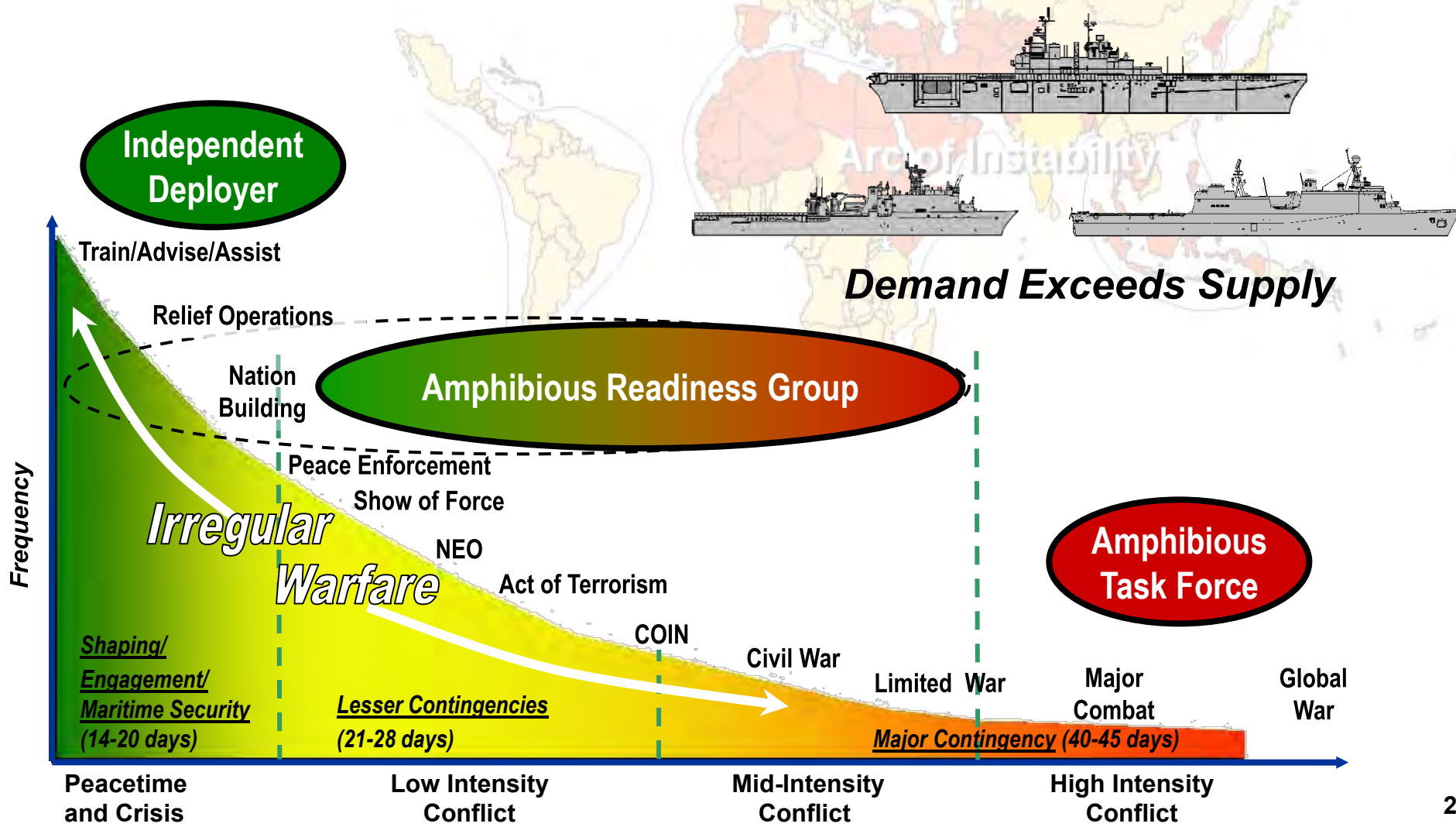
CAPT Walt Towns, USN
Branch Head, Amphibious Warfare

THIS BRIEF IS UNCLASSIFIED



Balanced Capability

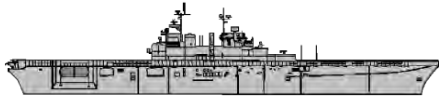
"The future will be more complex, where all conflict will range along a broad spectrum of operations and lethality, where even near-peer competitors will use irregular or asymmetric tactics, and non-state actors may have weapons of mass destruction, mines, or sophisticated missiles." - Secretary of Defense Gates





Amphibious Combatant Fleet Transformation

1990 62 Ships



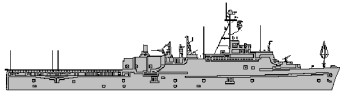
LHD



LHA



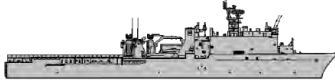
LPH



LPD 4



LSD 36



LSD 41



LST 1179



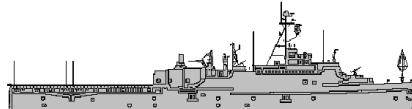
LKA 113

2010 31 Ships

*Requirement for 38 ships, risk
accepted at fiscally constrained
33 ship force structure*



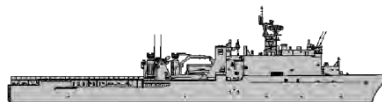
LHA / LHD



LPD 4



LPD 17



LSD 41 / 49

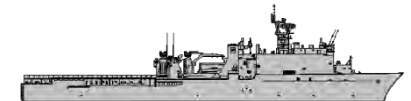
2021 34 Ships



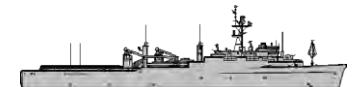
LHD / LHA (R)



LPD 17



LSD 41 / 49



LSD (X)



Amphibious Combatant Recapitalization CBA

- **Capability-Based Assessment (CBA) considered**
 - **LSD and LHA/D recapitalization**
 - **Projected USMC lift requirements (2024s timeframe)**
 - **USMC air/ground vehicles are becoming heavier/larger**
- **CBA studied Replacement options**
 - **For LSD Recap**
 - **LPD 17 design (repeat or modified repeat)**
 - **New design (small--similar to LSD 41/49 size)**
 - **New design (large--carry 100% of lift requirement)**
 - **For LHA/D Recap**
 - **LHA(R) Flight 0 (existing LHA 6 design)**
 - **LHA(R) Flight 1 Min (with well deck)**
 - **LHA(R) Flight 1 Full (expanded beam/reduced island w/ well deck)**
 - **LHD 8 Restart**
 - **New design (carry 100% of lift requirement)**
- ***CBA signed out by N85 and Deputy CG, MCCDC in Sept 2010 and will serve as the basis for:***
 - ***LHA(R) Flight 1 Capabilities Development Document revision***
 - ***Study ongoing to identify FY16 Big Deck ship design***
 - ***LSD(X) Initial Capabilities Document.***

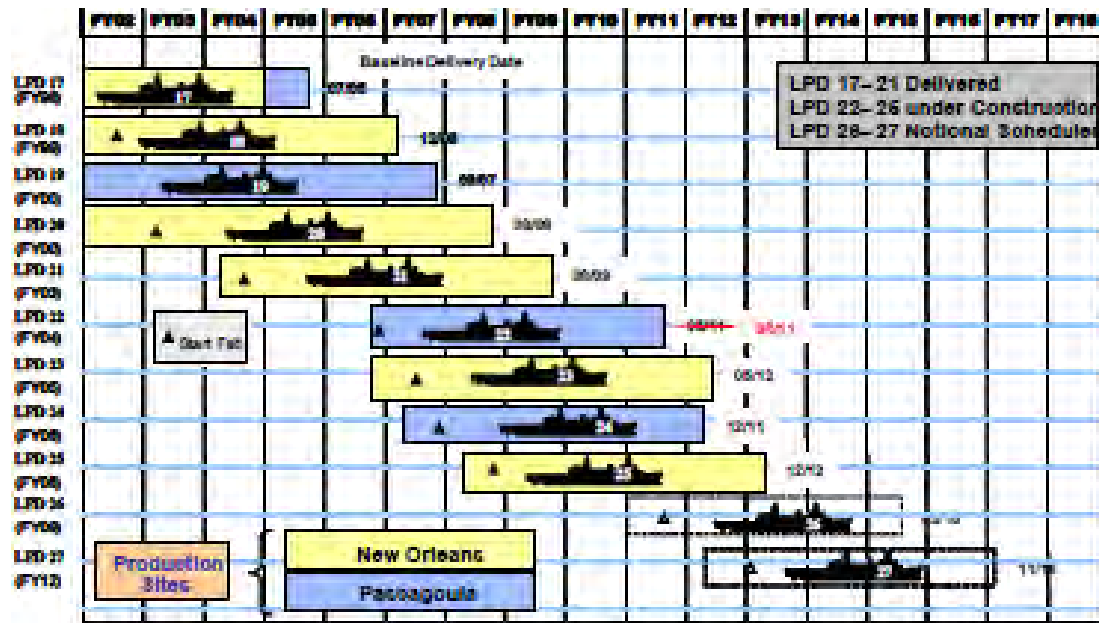
RECAPITALIZING TO PROVIDE MODERN, AFFORDABLE AMPHIB FLEET



Major Program Update



LPD 17



- LPD 17 class are flexible, multi-mission ships
- Functionally replaces LPD 4, LSD 36, LKA 113, and LST 1179 Ship classes
- LPD 17 missions include:
 - Forward Presence,
 - Deterrence,
 - Sea Control,
 - Power Projection,
 - Maritime Security
 - Humanitarian Assistance / Disaster Response





LHA 6



- **LHA 6 provides flexible, multi-mission platforms**
- **LHA 6 is a modified LHD 8 design**
- **Increased aviation capacity to better accommodate JSF/MV-22**
- **Provide adequate weight and stability margins for 40 year service life**



Joint High Speed Vessel (JHSV)

Flexible crew and troop accommodations with lounge, medical and mess facilities



Crew-served weapon mounts fore and aft

Level I, Class 2 for H53/H60 helo operations

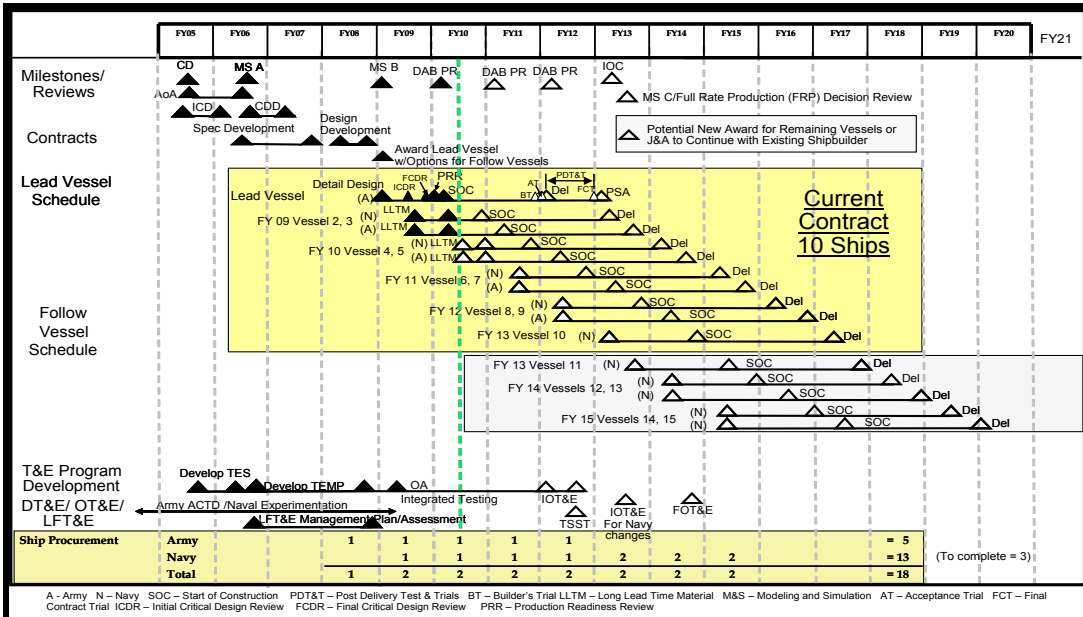
Level I, Class 4 VERTREP Operations



Large Mission Bay for range of military hardware, vehicles and boats

45° slewing articulated quarter ramp for rapid and efficient loading and offloading

- Intra – theater maneuver and littoral lift of cohesive forces or cargo
- Combines speed, range, payload and roll on/off with shallow water/ austere port access
- Bridges the gap between rapid/low volume airlift (C-17/C-130) and slow/high volume sealift (LSV/LMSR/T-AKE)
- Completed keel laying JHSV #1 (Army) Jul 2010, started construction JHSV #2 (Navy) Sep 2010
- PB 11 procures 18 JHSVs (13 Navy / 5 Army)





LCAC SLEP

BUOYANCY BOX

- New buoyancy box thru FY03
- Refurbishment of buoyancy box in FY04 and beyond

ROTATING MACHINERY REFURBISHMENT

- Extends useful life of equipment
- Reduces maintenance

C4N REPLACEMENT

- Introduces Open Architecture
- Introduces modern COTS equipment
- Provides precision navigation
- Provides Common Tactical Picture
- Provides Comm Suite interoperability

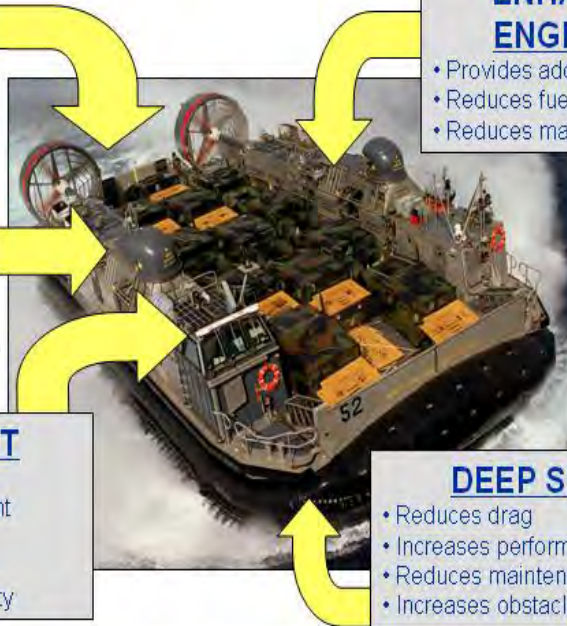
ENHANCED ENGINES

- Provides additional power
- Reduces fuel consumption
- Reduces maintenance

DEEP SKIRT

- Reduces drag
- Increases performance envelope
- Reduces maintenance
- Increases obstacle clearance

FY04 Recipient of the DoD Value Engineering Award



SEP 10: 25 of 72 SLEPs complete

- Preserves amphibious warfare triad (LCAC / EFV/MV-22)
- Allows execution of Operational Maneuver From The Sea (OMFTS) and Ship to Objective Maneuver (STOM)
- Defers requirement to fund next generation LCAC from FY00 to FY10
- **Challenges**
 - COTS obsolescence, Technology Insertion
 - Growth work increasing due to the degraded condition of the craft entering SLEP availabilities



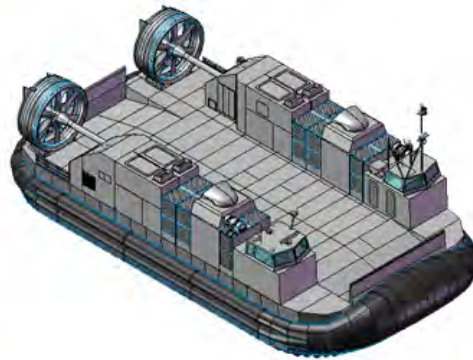
Ship to Shore Connector (SSC) / LCAC 100

Mission: Land Surface Assault
Elements of USMC from ship to shore

Description: Landing Craft Air Cushion (LCAC) replacement

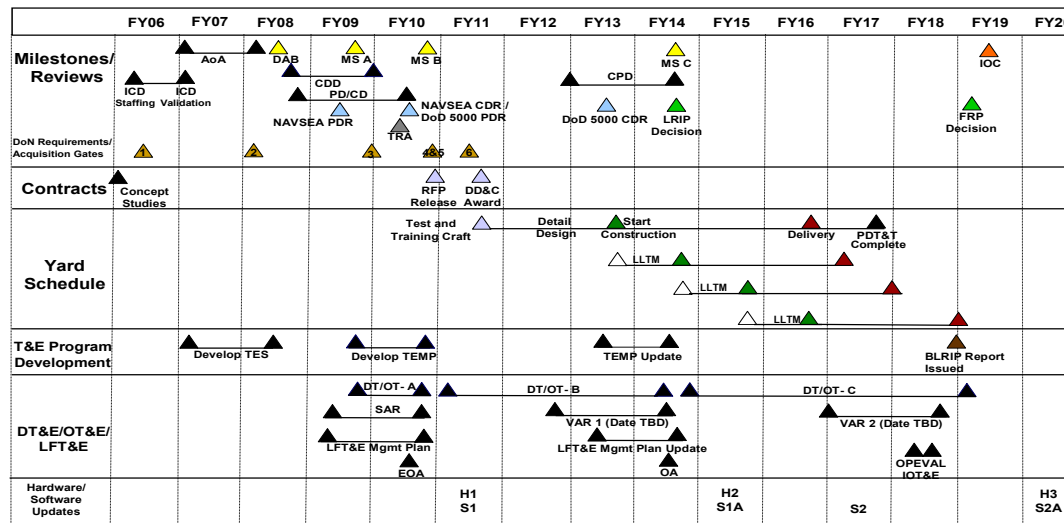
Platforms: Air Cushion Vehicle;
Same footprint as LCAC SLEP

Employment: Ship to shore
surface connector in support of
STOM and MPF(F)



- **Mission:** conduct ship-to-shore movement in support of surface assault elements of the MAGTF
- **LCAC replacement** possesses same footprint as LCAC SLEP
- **Formal Requirements Capability Development Document (CDD)** approved by the Joint Requirements Oversight Council (JROC) in Jun 2010

Notional Schedule



* FY11 Craft is Funded with R&D

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.



LCU (RECAPITALIZATION)



- AMW OAG has ranked this as a top five Fleet need over the last two years
- Current LCU 1600 craft have an average age of 38 years and suffer from obsolescence and increased maintenance costs
- Way Ahead
 - Initial Capability Document (ICD) is required to proceed through Navy staffing
 - Brief to Naval Capabilities Board in JAN 11 for approval to initiate ICD.

"No one craft can do it all."	LCAC (SLEP)	SSC	LCU
High Speed (>25 kts)	●	●	●
Beach landings in Assault Echelon	●	●	●
Access to world beaches	●	●	●
Dry-Well Operations	●	●	●
Heavy-Lift	75 ST*	75 ST*	147 ST
Platform for buoyant hose fuel systems	●	●	●
Beach landings in AFOE	●	●	●
Extended (10 day) Ops (SOF/Riverine)	●	●	●
Independent Operations	●	●	●
Afloat Forward Staging Base (small boats)	●	●	●
Peacetime port operations	●	●	●
Passenger (400 per craft) Ferry	●	●	●

* Limited by temp and sea state



LSD MID LIFE

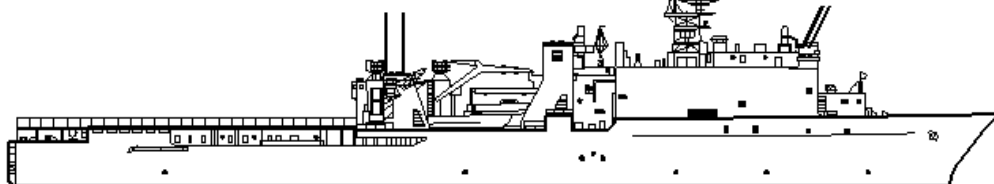
Ensure ships reach expected 40 year service life

Mission

30 Ton Crane (LSD 49 Class)

Survivability

Inclining Experiment



Technology Insertion

Advanced Engineering Control System (AECS)

- LAN
- Machinery Monitoring System (MCS)
- Steering Control System (SCS)
- On Board Trainer (OBT)
- DEXTER
- Electronic Gov Act (Digital Fuel Rack Control)

Hull Mechanical & Electrical

Fuel & Engine Maint Savings Sys (PLMU)

All Electric & Distribution Upgrade

Power Mgmt Platform (PMP)

Additional A/C Plant

CW Distribution Mods

SSDG Lube Oil Polisher

LPAC Replacement (LSD 41 Class)

Canned Lube Oil Pump (CLOP)

- Return ships to capable Fleet Asset status; able to meet amphibious mission requirements through 2038

- Objective is to

- Improve declining material condition and readiness,
- Replace obsolete equipment and
- Reduce total ownership costs through technology insertion

- USS RUSHMORE (LSD 47) EDPMA began in Jul. Fifth LSD Class ship to undergo modernization

USS GERMANTOWN (LSD 42) and USS HARPERS FERRY (LSD 49) will swap homeports (San Diego/Sasebo) between Jan – Jun 2011

Installs Per FY: 2 - 2 - 2 - 2 - 2 - 2 - 1

NAME	HOMEPORT FOR EDPMA	2009				2010				2011				2012				2013				2014				2015														
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3											
GUNSTON HALL	NORFOLK																																							
GERMANTOWN	SAN DIEGO	1/23								5/7																														
WHIDBEY ISLAND	NORFOLK	3/11								3/8																														
FORT McHENRY	NORFOLK					5/10								5/6																										
RUSHMORE	SAN DIEGO					7/21								7/20																										
ASHLAND	NORFOLK									2/1								1/25																						
HARPERS FERRY	SAN DIEGO									7/13								5/30																						
COMSTOCK	SAN DIEGO													1/25								1/23																		
OAK HILL	NORFOLK													3/7								1/23																		
TORTUGA	SAN DIEGO																	1/16								1/15														
CARTER HALL	NORFOLK																					8/7								6/25										
PEARL HARBOR	SAN DIEGO																									1/15								11/19						

= East Coast

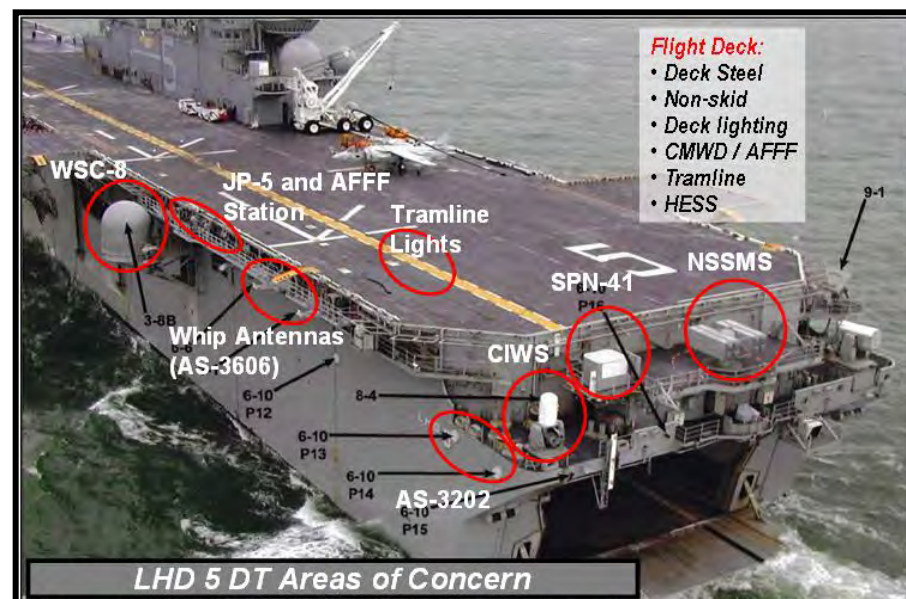
= West Coast



LHD MID LIFE AND JSF INTEGRATION



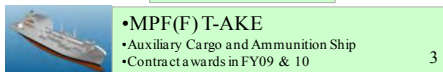
- Essential modernization and mission improvements to reach 40 yr service life
- Nine identified ship changes required for JSF on LHDs funded with fielding plans in place
- Six cornerstone alterations – nine separate SCDs – identified
- Enabler ship alterations
 - MV 22 service and shop mods (hangar and stowage)
 - Fuel Oil Compensation (stability)
- JSF Integration
 - JSF External Environment mitigation pending technical analysis





Maritime Prepositioning Force Future (MPF(F))

Increment One



- MPF(F) T-AKE
- Auxiliary Cargo and Ammunition Ship
- Contract awards in FY09 & 10

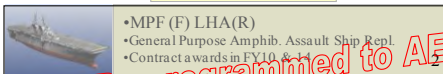
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- MPF(F) MLP
- Contract awards in FY10, 12 & 14

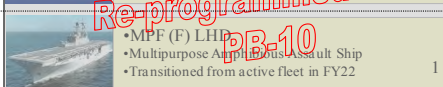
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Increment Two



- MPF(F) LHA(R)
- General Purpose Amphib. Assault Ship Repl.
- Contract awards in FY10, & 14

2



- MPF(F) LHD
- Multipurpose Amphibious Assault Ship
- Transitioned from active fleet in FY22

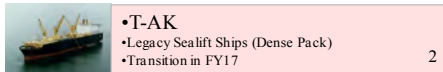
1

Increment Three



- MPF(F) LMSR
- Contract awards in FY13, 15 & 16

3



- T-AK
- Legacy Sealift Ships (Dense Pack)
- Transition in FY17

2

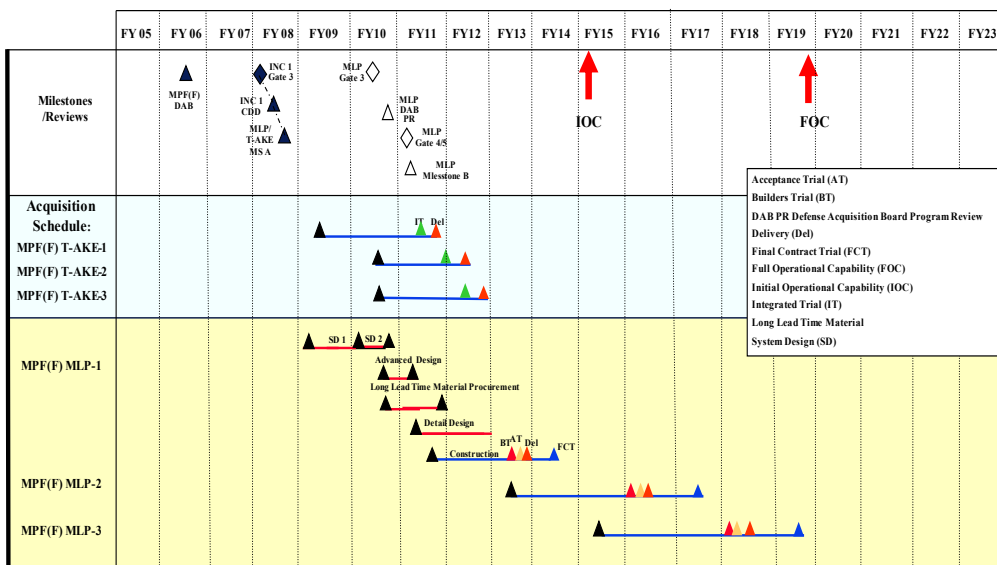
PB10

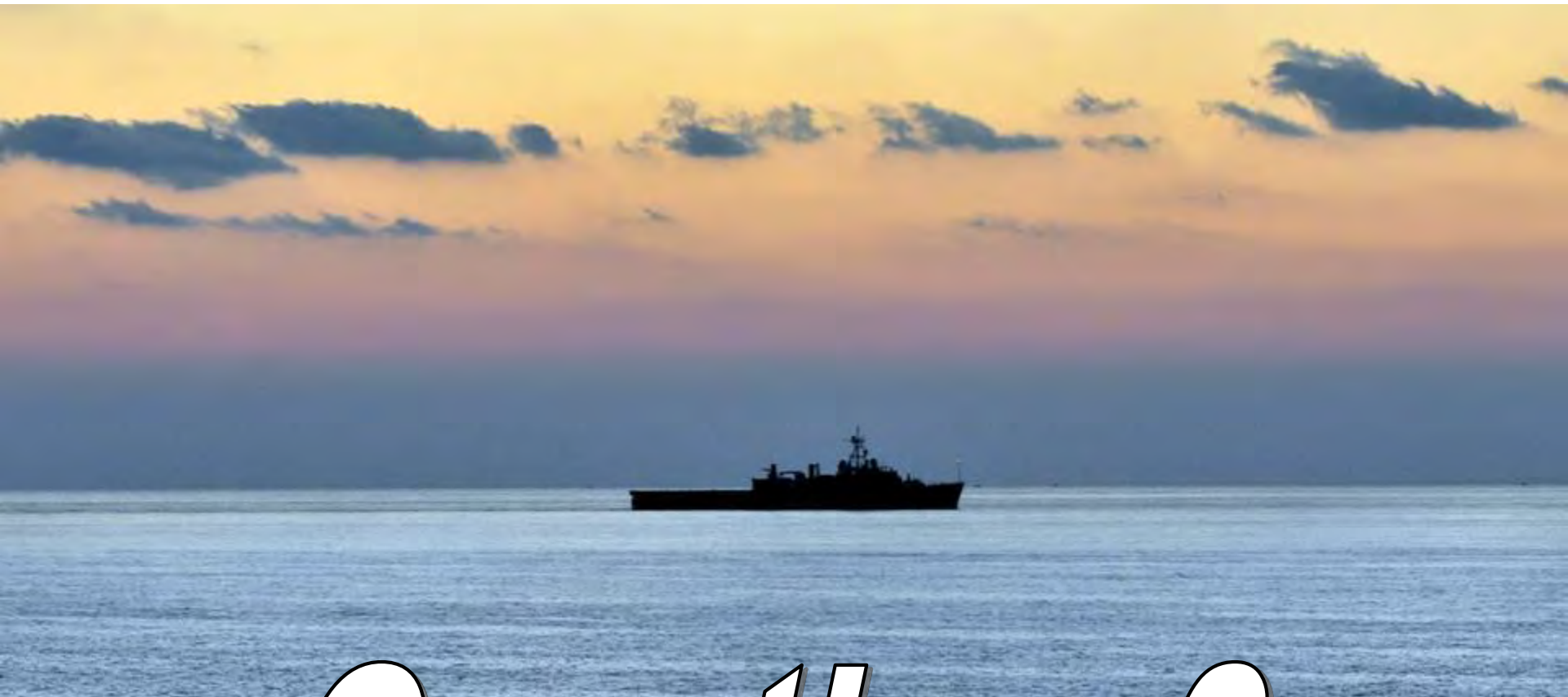
- Restored funding for 2nd & 3rd T-AKEs removed in PB-09
- Re-programmed MPF(F) big decks to meet the Assault Echelon requirement

PR11

- Defers MLP and LMSR until MPSRON Recap in 2020s
- Keeps T-AKEs in acquisition budget
- OSD/DAWG recommends a reduced capability/cost MLP
 - Based on BP Tanker (FLO/FLO) design
 - Core capability set provides MLP like capabilities

- The Navy plans to procure three Mobile Landing Platforms (MLP). The Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for FY 2011 identifies the ships will be purchased in 2011, 2013 and 2015.
- These ships, along with 3 previously appropriated Auxiliary Dry Cargo/ Ammunition Ships (T-AKE) will enhance the capability of the MPF, improving its utility across the range of military operations.
- The enhanced MPF will be able to transfer vehicles and equipment between ships at sea, deliver vehicles and equipment from over the horizon through restricted access environments, and provide persistent sustainment from ship to objective.





Questions?



15th Expeditionary Warfare Conference

The legal effects of doing business within the DoD



KONGSBERG

Kongsberg: Brad Weiss-Director of Sales & Marketing

WORLD CLASS – through people, technology and dedication

Kongsberg history since 1814



KONGSBERG



First International Success - 1892

Krag-Jørgensen

The **Krag-Jørgensen** is a repeating bolt action rifle designed by the Norwegians Ole Herman Johannes Krag and Erik Jørgensen in the late 19th century. It was adopted as a standard arm by Denmark, the United States and Norway.

The Krag-Jorgensen Rifle in Rimmed .30 Army round found use in the Boxer Rebellion, the Spanish-American War and the Philippine-American War.



KPS Locations



KONGSBERG

Number of employees in total May 2010: 625, 72% in Norway and 28% in USA.



PROTECTOR history



KONGSBERG

MC RWS



CROWS II



CROWS II v2



SeaPROTECTOR



Lite



Lite I



Lite II



SuperLite



M151 Stryker



M151 Javelin



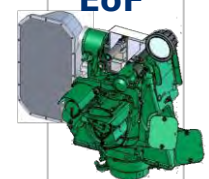
M151 E1 M151 E2



NM221



EoF



Prototype



Kosovo



1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

Kongsberg Defense Corp. Supplier Base



- 85% of CROWS Material Content – US Origin

- 105 US Suppliers in 23 States
 - Significant Multi- Sourcing
 - Main LRUs: 3 Sources

- Local Partnerships.

- Over 2000 direct manufacturing U.S. jobs have been created.

Doing business within the DoD as an foreign owned entity.



KONGSBERG

- Kongsberg plays within the rules as established within the ITAR.
- Kongsberg employs over 100 Technical Assistance Agreements (TAA) and Manufacturing License Agreements (MLA).
- Kongsberg uses Co-operative Research & Development Agreements (CRADA's) to exchange technical data.

ITAR: International Traffic in Arms Regulations

- **“International Traffic in Arms Regulations** (ITAR) is a set of United States government regulations that control the export and import of defense-related articles and services on the United States Munitions List (USML).

[1] These regulations implement the provisions of the Arms Export Control Act (AECA), and are described in Title 22 (Foreign Relations), Chapter I (Department of State), Subchapter M of the Code of Federal Regulations. The Department of State interprets and enforces ITAR. Its goal is to safeguard US national security and further US foreign policy objectives”

http://en.wikipedia.org/wiki/International_Traffic_in_Arms_Regulations

BUSINESS

ITT pays the penalty for ITAR violation

GUY ANDERSON *Jane's Defence Industry Editor*
London

US defence group ITT Corporation has agreed to pay penalties of USD100 million – described by the US Department of Justice (DoJ) as “one of the largest penalties ever paid in a criminal case” – after admitting sending “classified materials overseas”.

The penalties, which relate to ITT Night Vision's compliance with US International Traffic in Arms Regulations (ITAR) and an investigation that began in 2001, include a USD50 million fine and a commitment to invest USD50 million in the research and development (R&D) of night-vision products over the next five years.

The penalty comprises a USD2 million criminal fine, a USD50 million deferred prosecution penalty and the forfeiture of USD28 million to

- ITT Corporation has agreed to pay penalties of USD100 million – “one of the largest penalties ever paid in a criminal case”
- ITT admitted an ITAR violation following an investigation dating back to 2001

the US as “the proceeds of its illegal actions”, the DoJ said.

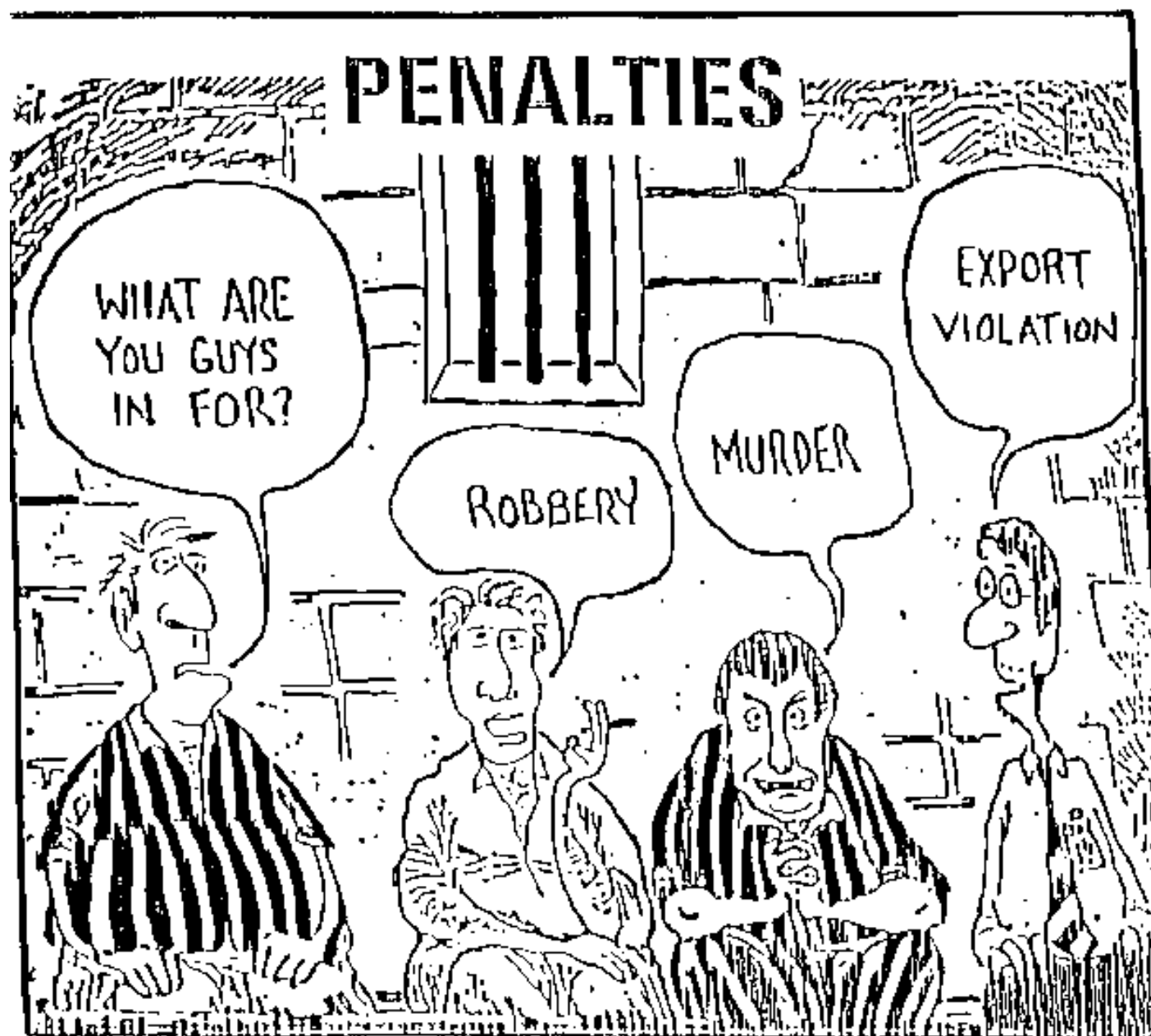
The US government accused ITT of “exporting or [causing] to be exported” defence-related technical data to China, Singapore and the UK “without having first obtained a licence or written authorisation from the US Department of State”. The technical data included information about a countermeasure known as a ‘light interference filter’ for military night-vision systems.

“The sensitive night-vision systems produced by ITT Corporation are critical to US warfighting capability and are sought by our enemies and allies alike,” said Kenneth L Wainstein, assistant attorney general for the

national security division of the US DoJ. Julie Myers, assistant secretary for US Immigration and Customs Enforcement, US Department of Homeland Security, added: “Placing profits ahead of the security of our nation is simply not acceptable for any corporation. Export violations that compromise our technology pose a potentially deadly threat to our military and our nation. As such, these violations are among the most serious of crimes.”

ITT told investors on 27 March that, according to a written plea agreement to be filed in US District Court in Roanoke, Virginia, it will plead guilty to one ITAR violation relating to the improper handling of sensitive documents and one ITAR violation of making misleading statements. It added: “The government had agreed to defer action regarding a third count of ITAR violations pending ITT's implementation of remedial action.” The second count relates to the allegation that, between April 2000 and October 2004, ITT “left out material facts from Arms Exports Required Reports”.

Steven Loranger, chairman, president, and chief executive of ITT, said: “We regret very much that these serious violations occurred. I want to reinforce, however, that the heart of our night-vision goggles – the tube – is secure. No technical information regarding the tube was ever compromised.” ■



EXPORT & RE-EXPORT (1)

Export (§ 120.17):

- Sending or taking a **defense article** out of the United States.
- Disclosing or transferring **technical data** to a foreign person, whether in the United States or abroad.
- Performing a **defense service** on behalf of or for the benefit of a foreign person whether in the United States or abroad.

Reexport or retransfer (§ 120.19):

- Transfer of defense articles or defense services to an end-use, end-user or destination **not previously authorized**.

EXPORT / RE-EXPORT (2)

– Controlled by ITAR? (1)

❖ Defense article (§ 120.6):

- ...means **any item** or **technical data** designated in [US Munitions list].
- ...includes technical data recorded or stored in any physical form, models, mock-ups or other items that reveal technical data directly relating to items...
- It **does not** include basic marketing information on function or purpose or general system descriptions.

❖ Technical Data (§ 120.10):

- **Information required for** the design, development, production, manufacture, assembly, operation, repair, testing, maintenance or modification of defense articles.
- This includes information in the form of blueprints, drawings, photographs, plans, instructions and documentation.

❖ Defense service (§ 120.9):

- **...furnishing of assistance** (including training) to foreign persons...in the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, demilitarization, destruction, processing or use of defense articles.

EXPORT & RE-EXPORT (3)

– Controlled by ITAR? (2)

Defense article (§ 120.6):

- *...means any item or technical data designated in [US Munitions list].*

Category XXI – Miscellaneous Articles (§ 121.1):

- Any article not specifically enumerated...which has substantial military applicability and which has been specifically **designed and modified** for military purposes.



KONGSBERG EMPLOYEES(2)

What Kongsberg does to comply with ITAR.

- ✓ **Technical Assistance Agreement (§ 120.22):**
 - An agreement for the **performance of defense service** or the **disclosure of technical data**...
 - Assembly of defense articles is included...

- ✓ **Distribution Agreement (§ 120.23):**
 - An agreement to establish **a warehouse or distribution point** abroad for defense articles exported from the United States **for subsequent distribution** to entities **in an approved sales territory**.

- ✓ **Manufacturing License Agreement (§ 120.21):**
 - An agreement whereby a US person grants a foreign person an authorization to **manufacture defense articles abroad** and which involves or contemplates:
 1. The **export of** technical data, or defense articles, or the performance of a defense service; or
 2. The **use by the foreign person** of technical data, or defense articles, or defense services previously exported by the US person.



KONGSBERG EMPLOYEES(1)

- Handling of ITAR-controlled article, technical data & services

What is an Agreement (2.1 Guidelines for Preparing Agreements):

- **An agreement** approved by Defense Trade Controls Licensing (DTCL) **is required** for a US person **to provide a defense service or manufacturing know-how to a foreign person, or establish a distribution point abroad** for defense articles of US origin for subsequent distribution to foreign persons.
- The export or temporary import of defense articles (technical data or hardware) may be covered in the scope of the agreement as well, but **the provision of a defense service, transfer of manufacturing know-how, or establishment of a distribution point abroad is what distinguishes an "Agreement" from other forms of authorization issued by DTCL.**



KONGSBERG EMPLOYEES(3)

- Handling of ITAR-controlled article, technical data & services

Reexport or retransfer (§ 120.19):

- Transfer of defense articles or defense services to an end-use, end-user or destination **not previously authorized**.

Country of ultimate destination and approval of reexports or retransfers (§ 123.9):

- The written approval of Directorate of Defense Trade Controls (DDTC) **must be obtained before** reselling, transferring, transshipping, or disposing of a defense article to any end user, end use or destination **other than as stated on the export license**.

Clauses required in both Manufacturing License Agreements and Technical Assistance Agreements (§ 124.8):

- (5) The technical data or defense services exported from the United States in furtherance of this agreement and **any defense articles which may be produced or manufactured from such** technical data or defense service **may not be transferred to a person in a third country or to a national of a third country** except as specifically authorized in this agreement unless the prior written approval of the Department of State has been obtained.



EU



Technical data/services controlled by ITAR
MLA & TAA



NATO



KONGSBERG

ITAR § 124.16

**Give an opening for employees from this list of countries
to access technical controlled ITAR data
without signing an ITAR NDA**



- Austria
- Belgium
- Bulgaria
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- United Kingdom

- Albania
- Belgium
- Bulgaria
- Canada
- Croatia
- Czech Rep
- Denmark
- Estonia
- France
- Germany
- Greece
- Hungary
- Iceland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Turkey
- United Kingdom
- United States



Switzerland



Australia



New Zealand



Japan

ITAR § 124.16

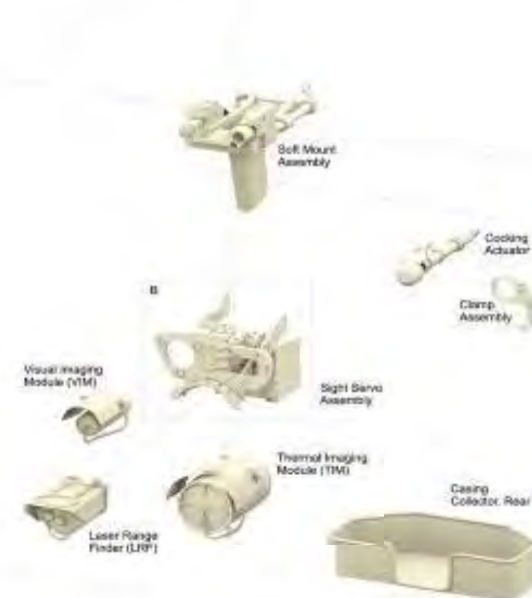
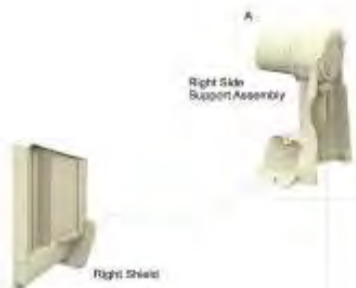
Must be included in the MLA or TAA



KONGSBERG

Kongsberg CROWS II

One of our products.



Premier supplier of high-technology defence systems



KONGSBERG



End User Certificate



Production



Export License



Shipment



Customer



Country list (MoD)



Sublicensees



Defined dual/third nationals

The Best technology worldwide for the US Warfighter

- Rapid deployment: 24hr deployment
- Sustain: 48 hrs- “over the horizon”
- Remote Weapon Station Technology:
 - 1.) Economy of force
 - 2.) Under armor protection
 - 3.) 360 SA
 - 4.) Accuracy- one shot, one kill, minimal collateral damage
 - 5.) Commonality- reduces logistical footprint
 - 6.) Reliability- ORR 99%
 - 7.) Simple integrations- new systems, new weapons

Kongsberg New Product Process



KONGSBERG

PRO-DY-018

About the Process

Procedures

Templates

Definition

System Navigator



KPS

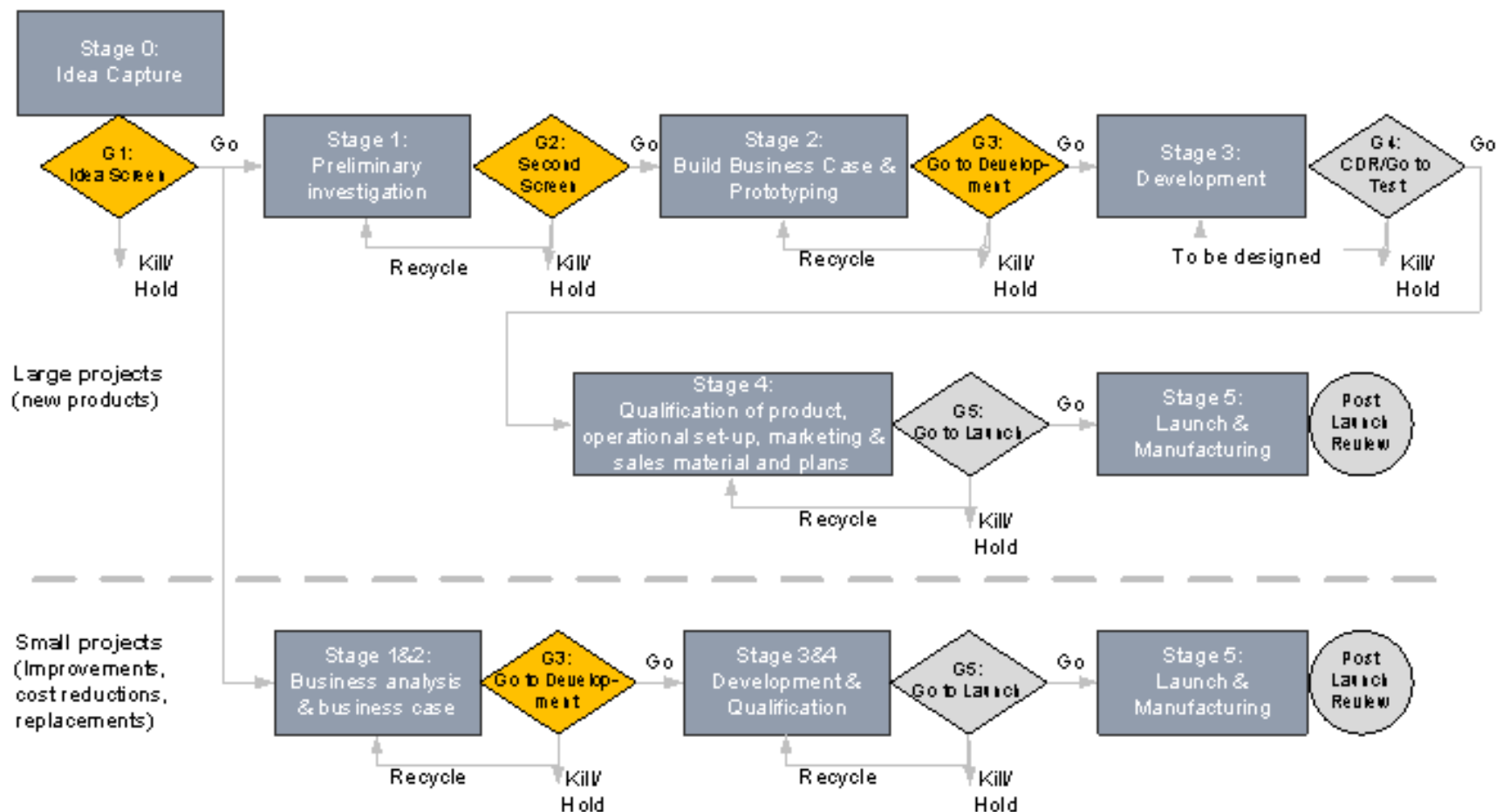


Inside



KONGSBERG

New Product Process



How can Kongsberg support the expeditionary warfighter?



Amphibious Landings in the 21st Century



Mr. Robert O. Work
Under Secretary of the Navy

NDIA Expeditionary Warfare Conference

Panama City, FL

5 Oct 2010



SecDef's Critical Questions



—We have to take a hard look at where it would be necessary or sensible to launch another major amphibious landing again – especially as advances in anti-ship systems keep pushing the potential launch point further from shore. ... **In the 21st century, what kind of amphibious capability do we really need to deal with the most likely scenarios, and then how much?"**

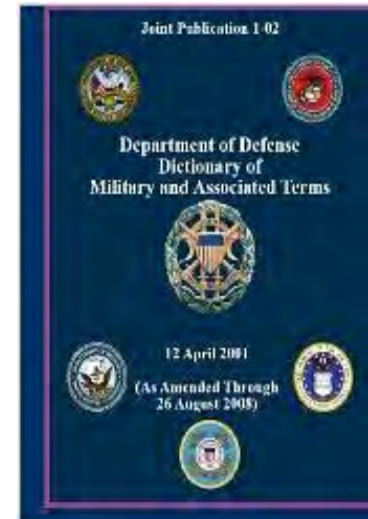
Outline

- Why retain an amphibious assault capability?
 - A question for the entire DoN, not just the Marine Corps
- The future of amphibious assault
 - Rethinking our approach
- How much capacity do we need?
 - How much is enough
- Conclusions—the way ahead



Definitions

- **Amphibious operation:** A military operation launched from the sea by an amphibious force, embarked in ships or craft with the primary purpose of introducing a landing force ashore to accomplish the assigned mission.
- **Amphibious assault:** The principal type of amphibious operation that involves establishing a force on a hostile or potentially hostile shore. See also assault.
- **Assault:** In an amphibious operation, the period of time between the arrival of the major assault forces of the amphibious task force in the objective area and the accomplishment of the amphibious task force mission.



Secretary Gates is posing two straight-forward questions:
What is the future of amphibious assault?
How much capacity do we need?

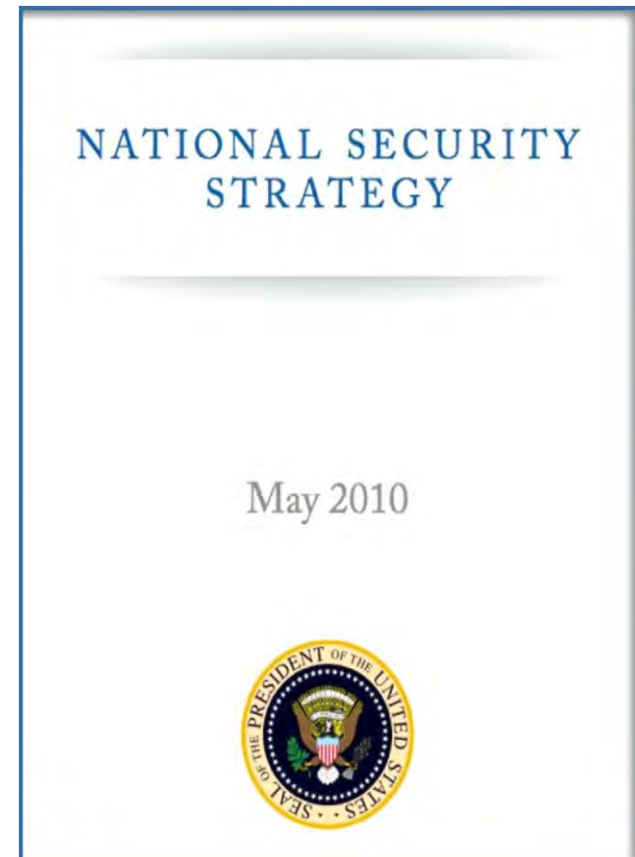
From this....to what?



BLUF: Our amphibious assault capabilities must evolve with changes in the threat and our own doctrine and Joint capabilities and be relevant in a Joint context.

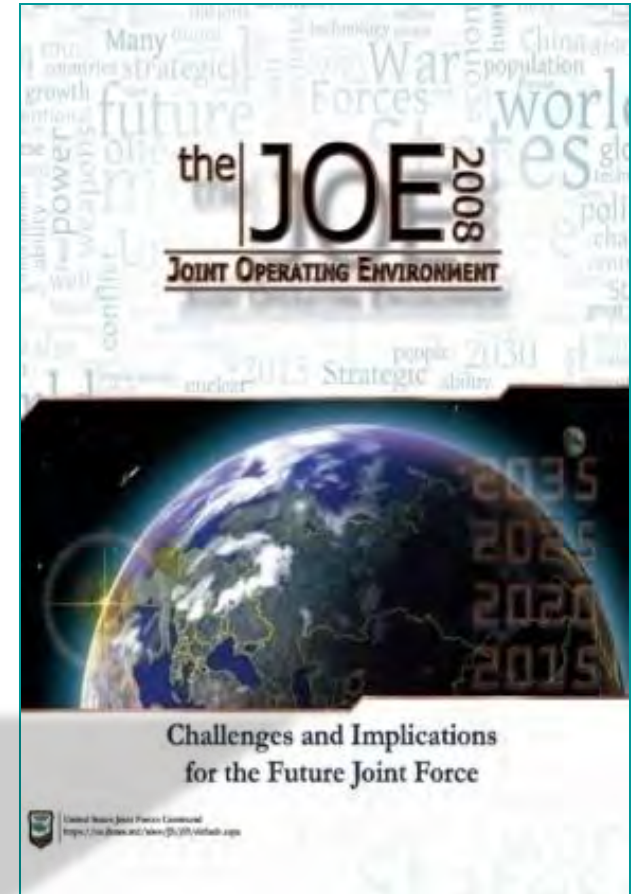
The rationale for a future amphibious assault capability is in our National Security Strategy...

“We will continue to rebalance our military capabilities to excel at counterterrorism, counterinsurgency, stability operations and meeting increasingly sophisticated security threats...This includes preparing for increasingly sophisticated adversaries, deterring and defeating aggression in anti-access environments...”

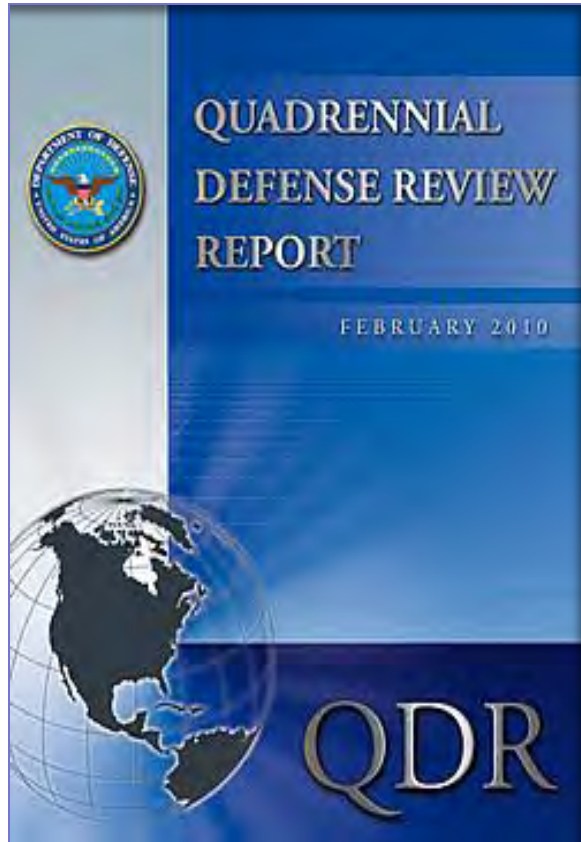


...in the Joint Operating Environment...

*“...the United States may not have uncontested access to bases in the immediate area from which it can project military power..... **The battle for access** may prove not only the most important, but the most difficult.”*



...in and the 2010 QDR



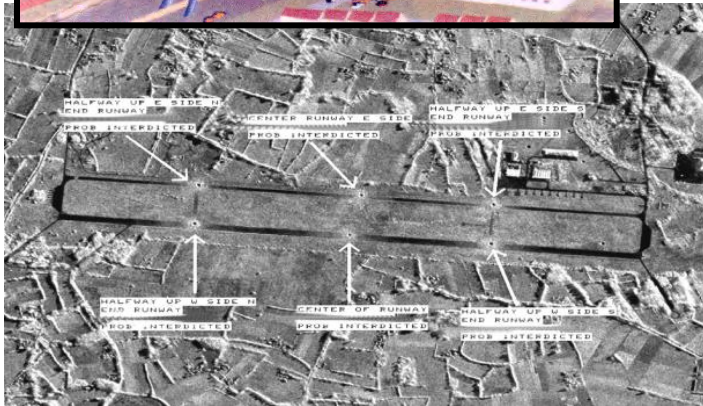
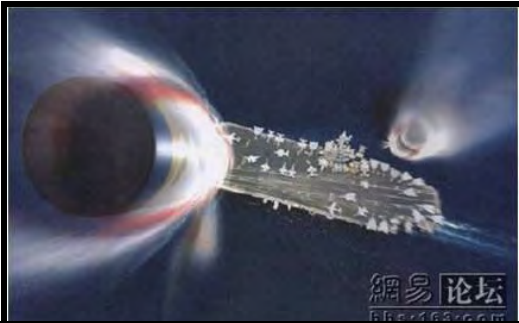
—In the absence of dominant U.S. power projection capabilities, the integrity of U.S. alliances and security partnerships could be called into question, reducing U.S. security and influence and increasing the possibility of conflict.”

Winning the “battle for access” in the 21st century in the face of emerging anti-access challenges is essential to U.S. policy objectives, alliances and global interests.

Operating in an A2/AD environment will demand new ways of thinking about the battle for access

G-RAMM

**Guided
Rockets,
Artillery,
Mortars, and
Missiles**

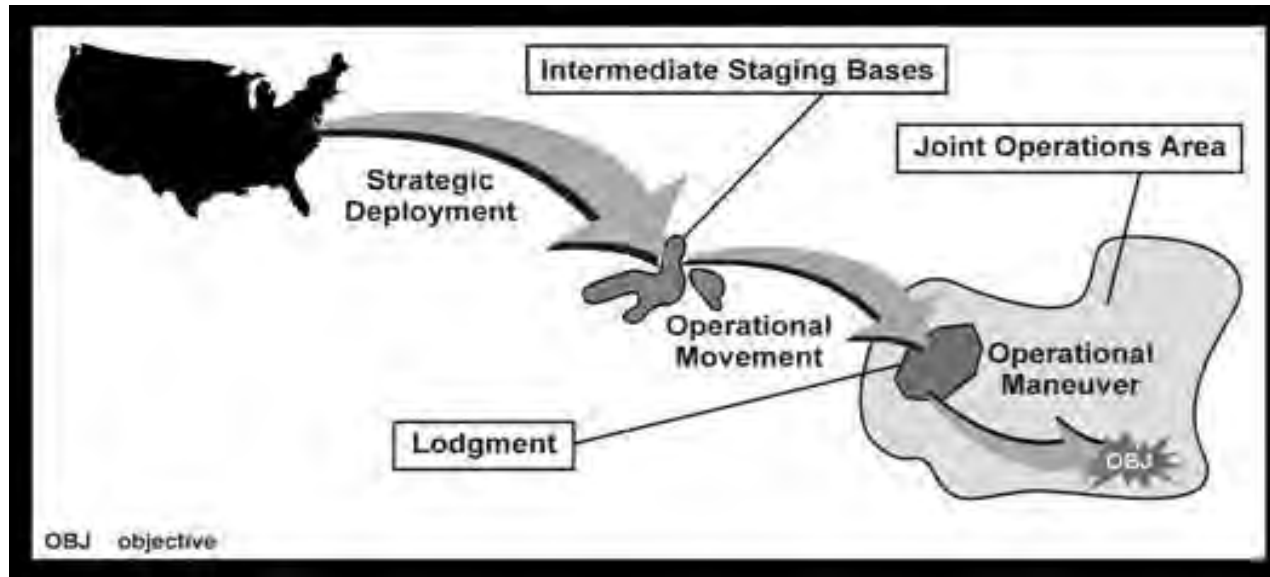


**Anti-access: prevent
operational freedom of action**



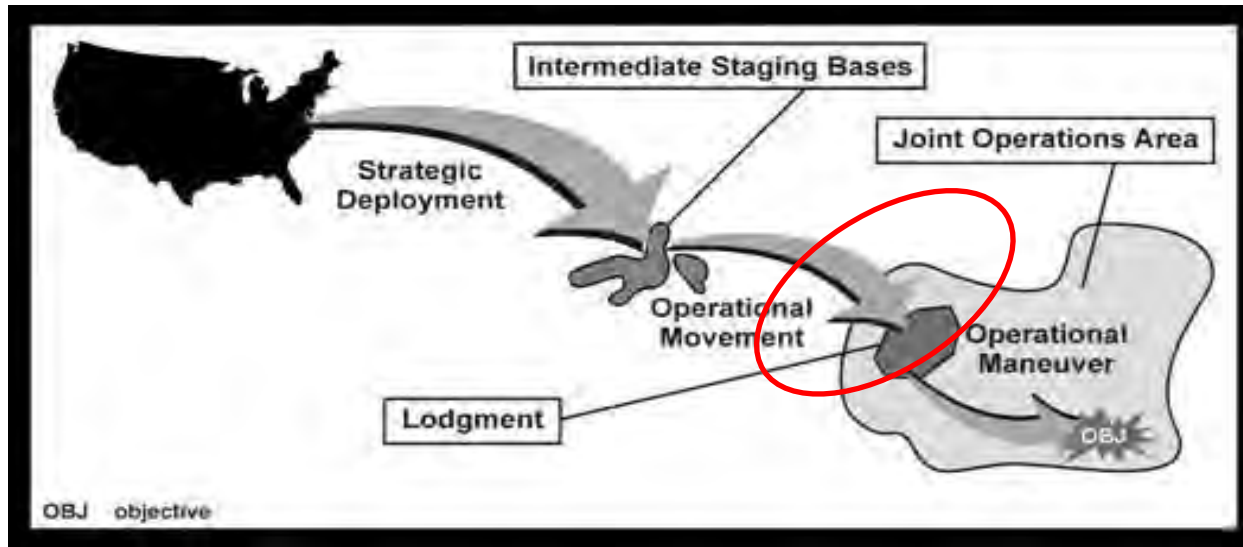
**Area-denial: prevent
tactical freedom of action**

Emerging A2/AD threats will require US joint forces to be proficient at Operational Maneuver from Strategic Distances



Operational maneuver from strategic distance combines global force projection with maneuver against an operationally significant objective. It requires strategic reach that deploys maneuverable land power to an operational area that provides a position of advantage... Success demands full integration of all available joint means. Thus, it combines force projection with land maneuver to operational depth in an integrated, continuous operation.

Key to *OMFSD* will be seizing a joint lodgment



Airborne operations



Air landing/air assault operations



Amphibious operations

21st century amphibious assaults will thus focus on the forcible entry mission

- Forcible entry: Seizing and holding of a military lodgment in the face of armed opposition.
- Lodgment: A designated area in a hostile or potentially hostile operational area that, when seized and held, makes the continuous landing of troops and materiel possible and provides maneuver space for subsequent operations.



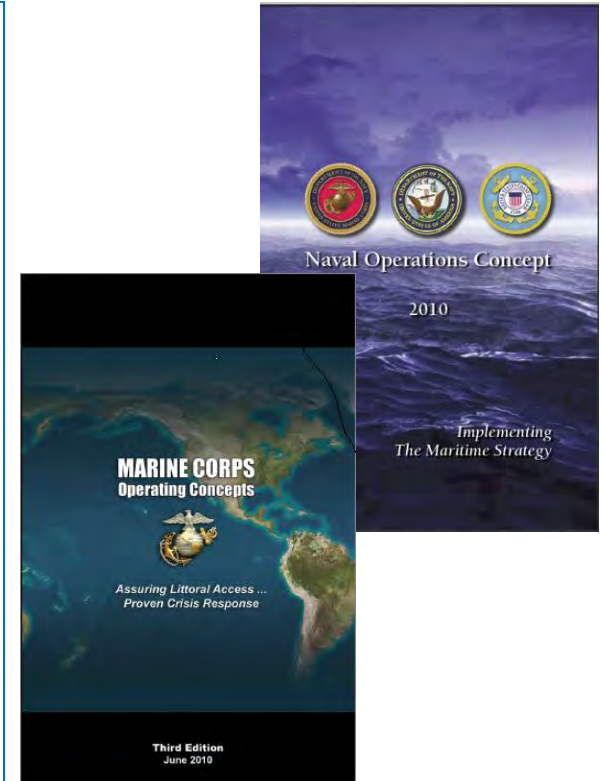
Forcible Entry: lessons from the past

- Navy/Marine amphibious assaults in the Pacific in WW II
 - The lodgment itself was the objective
 - Extensive shaping ops and rapid combat power buildup
- Army amphibious theater entry operations
 - The lodgment was the first move in an extended land campaign
 - Emphasis on surprise/deception
 - Most often combined with airborne landings
- Against sophisticated G-RAMM threats, will combine the Army theater entry approach with Navy/Marine advance force/shaping ops



The naval answer: Littoral Maneuver

Defined in NOC and MOC as *–The ability to transition ready-to-fight combat forces from the sea to the shore in order to achieve a position of relative advantage over the enemy.*



Recent Naval & Marine operating concepts reflect shift towards Littoral Maneuver

What's Different or New???

- **Character of Adversary**
 - Anti-access and area denial (A2/AD) threats armed with G-RAMM systems
 - Diffused/dispersed threat posture
- **Joint context—seize a lodgment vs. part of a naval campaign**
 - Scenarios for theater entry require larger Joint force vice a 1-2 MEB AE objective
- **Importance of extended naval shaping operations**
 - Persistent surveillance capability essential
 - Integrated fleet air and missile defenses (NIFC-CA)
- **Time before landing operations**
 - No more 10-30-30
- **Distance from the shore for surface landing ops**

Littoral maneuver will once again demand close Navy and Marine Corps collaboration

- **Force build-up and shaping phases**

- “Outer network battle”
- Offensive ASW
- Reliance on long-range and covert strike

- **Advance force phase**

- Persistent surveillance and strike
- Mine sweeping

- **Littoral maneuver phase**

- STOM
- Counter-G-RAMM battle
- Counter-swarm battle

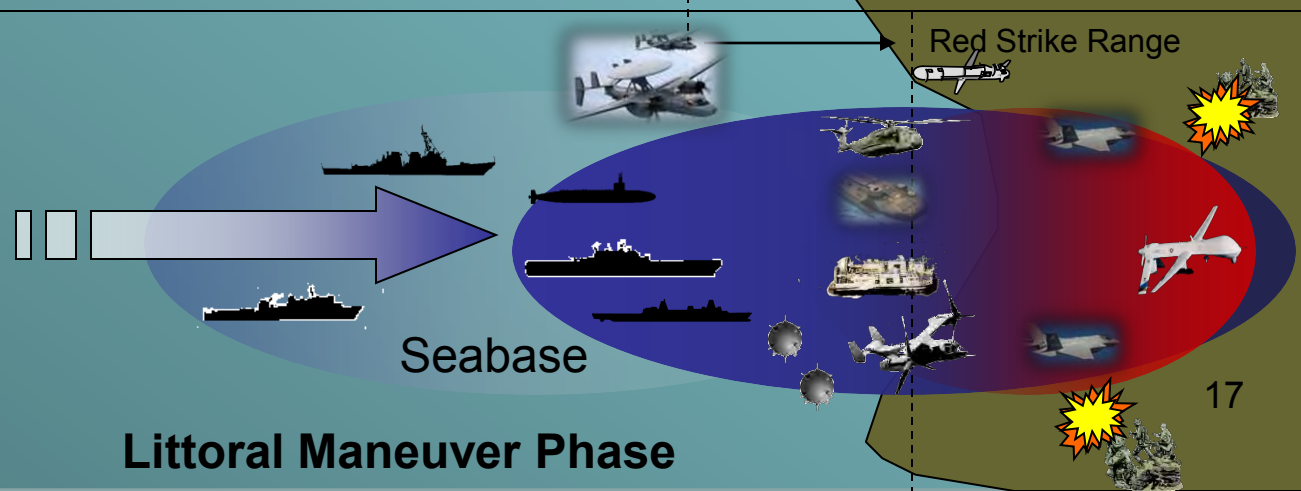
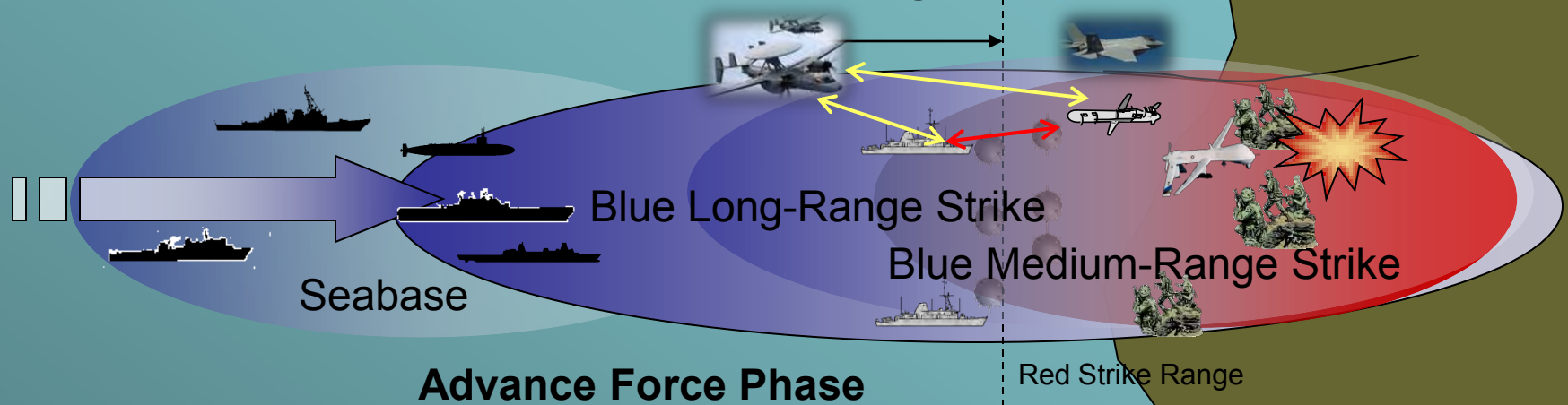
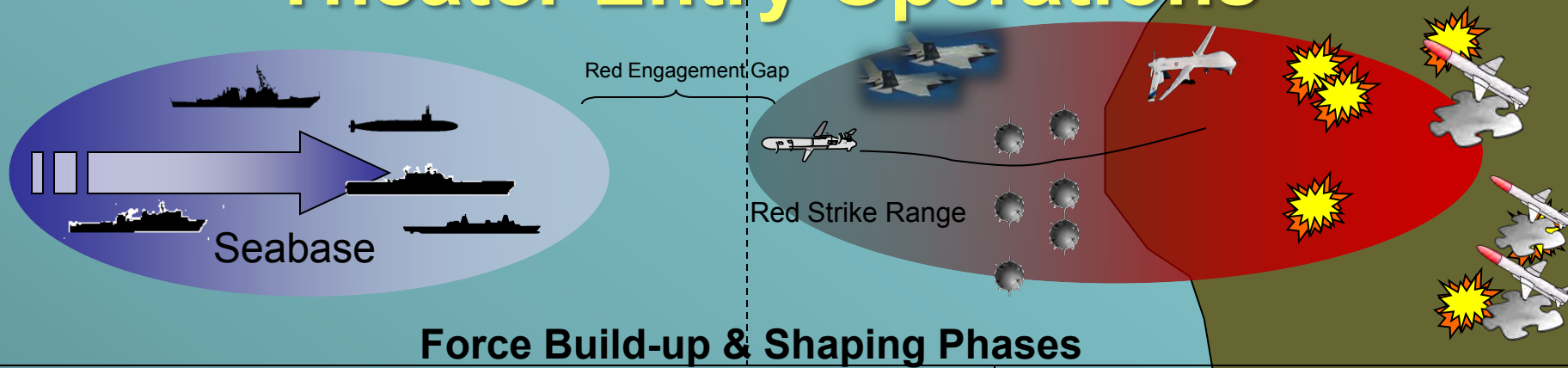
- **Rapid reinforcement phase**

- Expand the inner G-RAMM perimeter
- Rapid RSOI
- Airborne?

Key enablers

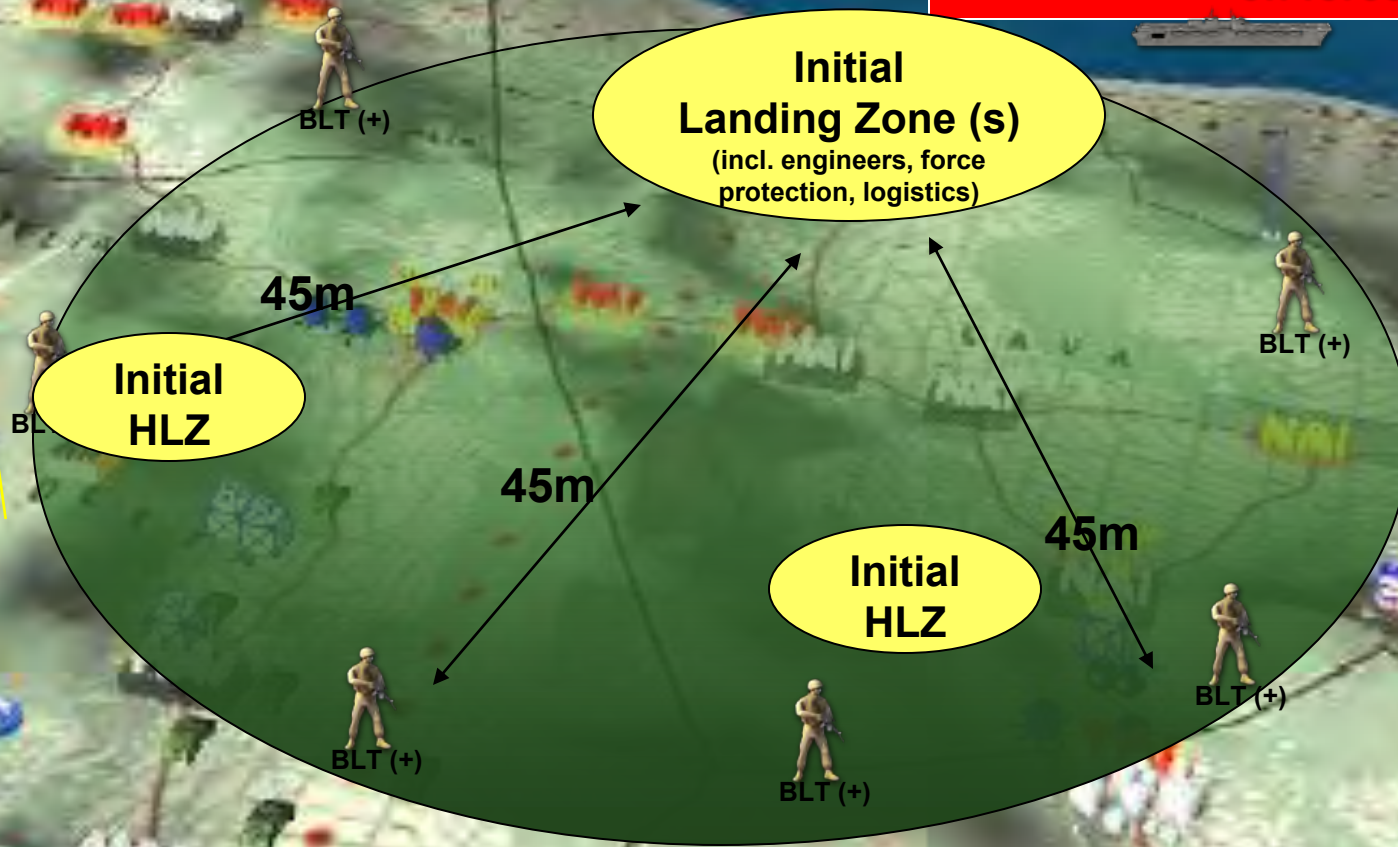
- CVNs and naval tac air
- NIFC-CA
- Navy BMD
- SSNs/SSGNs
- NSW and Marine force recon
- LCS
- Mine Warfare
- DDG-1000s
- NECC
- Amphibious ships
- V-22
- Family of STS connectors
- MPF
- JLOTS
- JHSV
- Unmanned systems
- Extended Range 5” round
- Counter G-RAMM

Theater Entry Operations



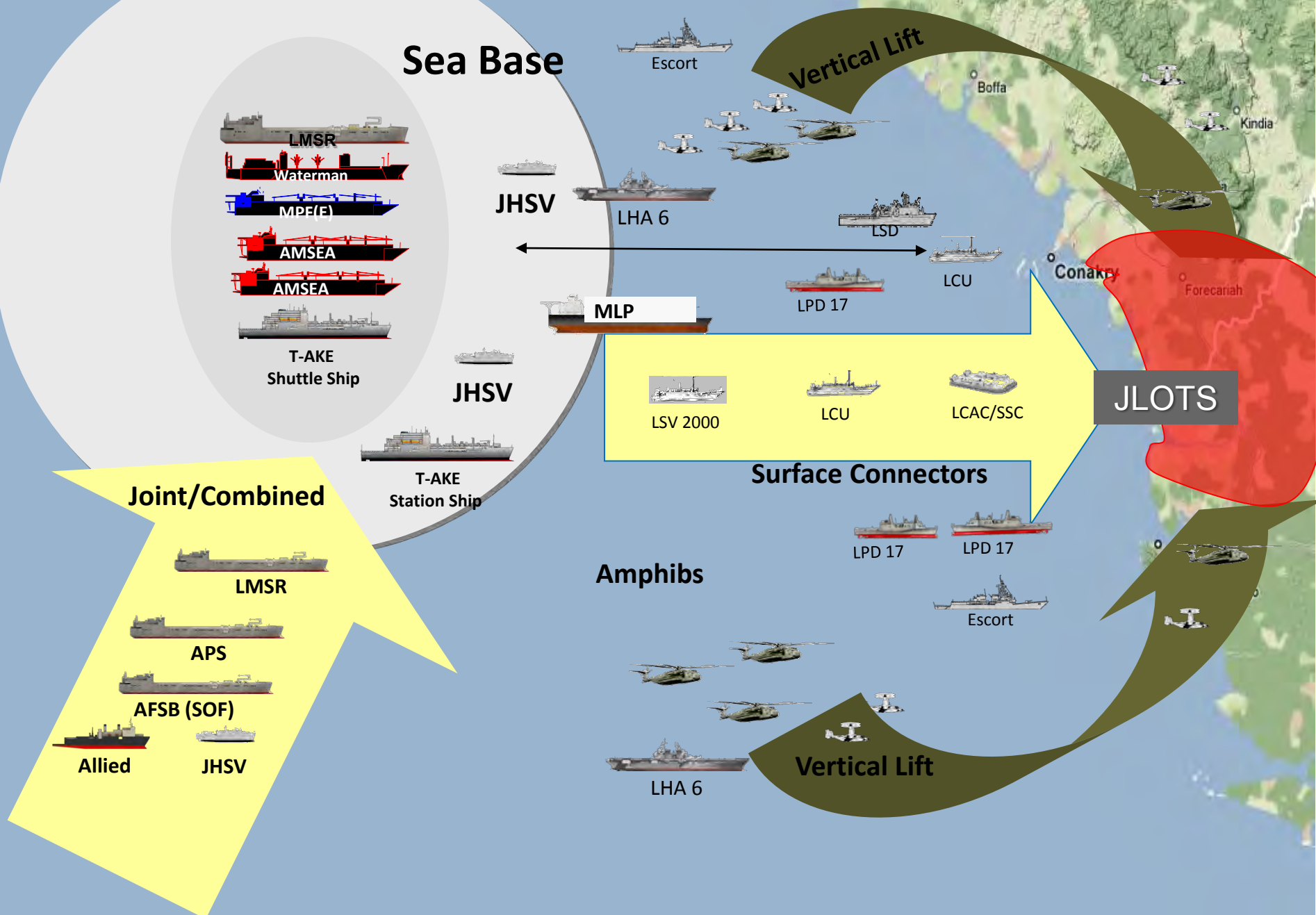
Joint Lodgment

Supported by Joint fires, including USAF bombers, Marines and Army air assault/airborne assets gain access and secure joint lodgment for follow on forces.

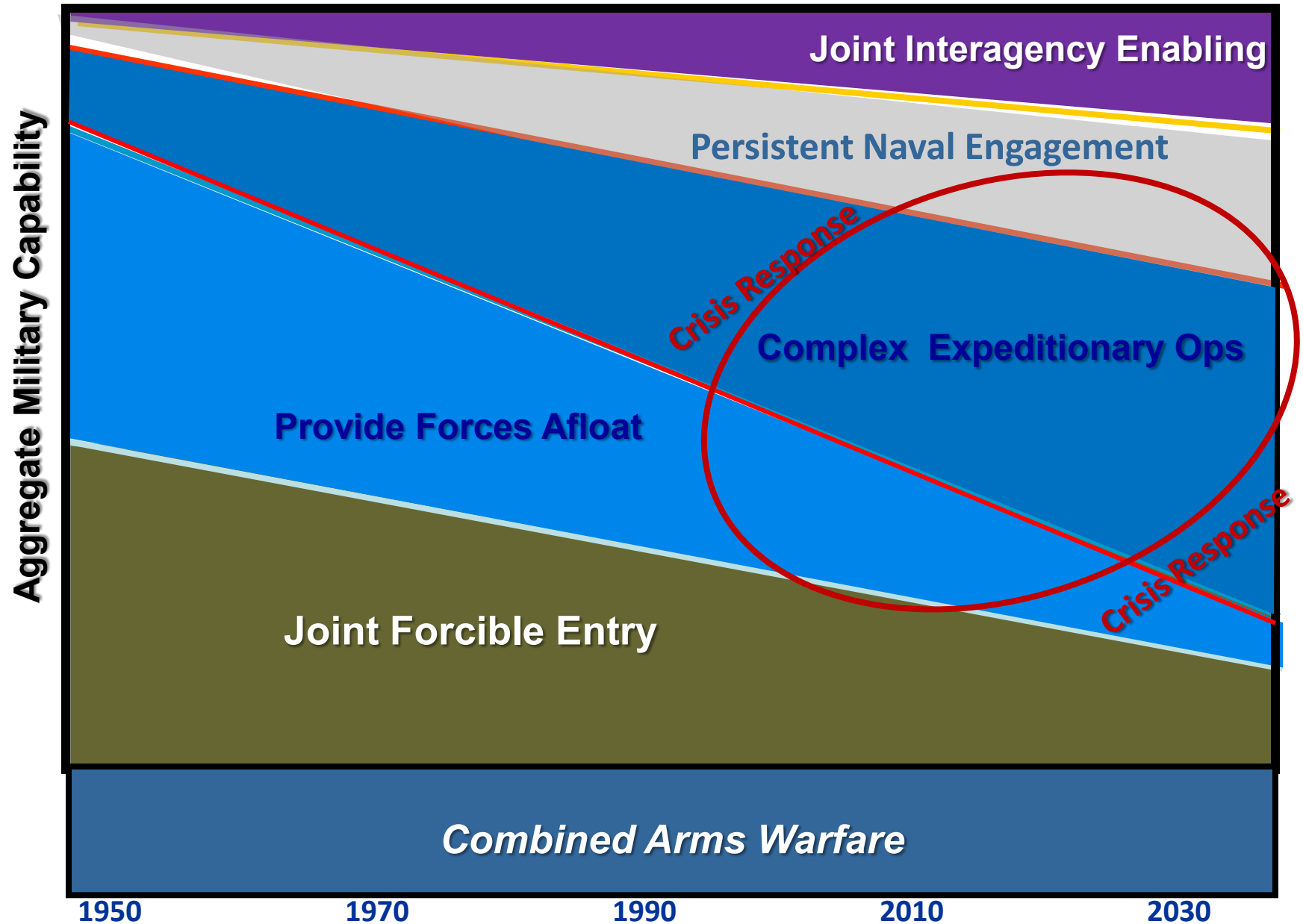


Littoral maneuver force must secure/clear lodgment against projected G-RAMM threat

Rapid Reinforcement/Sustained Joint Throughput



How much capacity?



Current POR seems about right



- World War II

- Total force 96 divisions (5 airborne, 6 Marine)
- Amphibious lift for 13 divisions (14% of non-airborne divisions)



- Present Capacity

- Total Force of 85 BCT equivalents (6 airborne, 11 Marines)
- Amphibious lift for 2 BCT equivalents (2.5% of non-airborne)
- MPF, JHSVs, JLOTS, and surge sealift critical

Conclusion

In the 21st century, what kind of amphibious capability do we really need to deal with the most likely scenarios, and then how much?

- Why retain an amphibious assault capability?
 - To win the **battle for access**
- Most likely scenario?
 - **Theater entry** in an **A2/AD environment**
- How much capacity do we need?
 - 2 MEB seems about right—with moderate risk
 - Investments applicable over ROMO have priority
 - Requires additional conceptual development, gaming & exercises

Questions?

