10th Annual NDIA Expeditionary Warfare Conference

Major Gen Gordon Nash

Director, Expeditionary Warfare Division (N75)

The Director for Expeditionary Warfare *"shall 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."*

National Defense Authorization Act for Fiscal Year 1993
Title 10, U.S. Code 5038

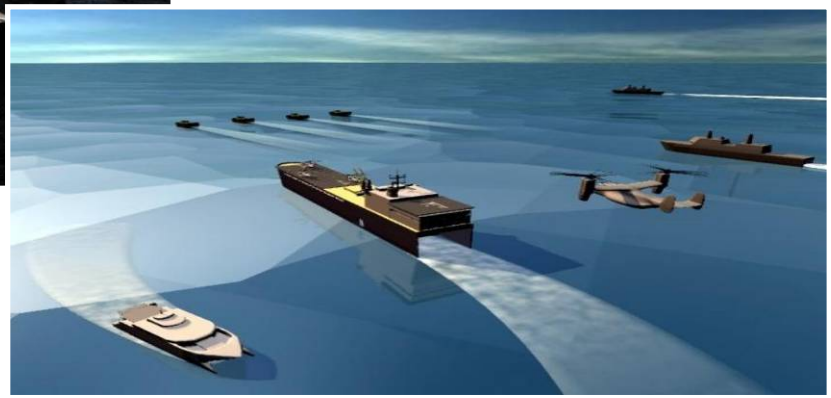
Expeditionary Warfare Branches

MINE WARFARE

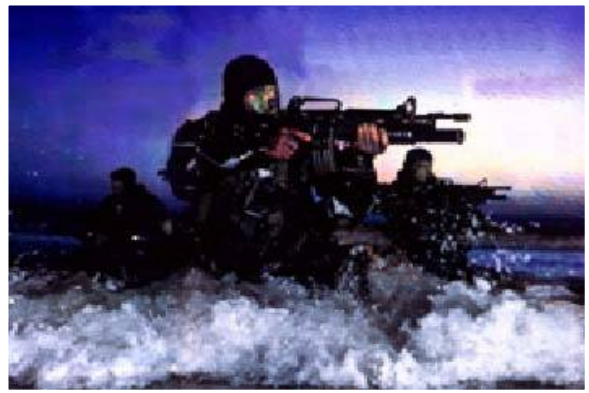
NAVAL COASTAL WARFARE

EXPLOSIVE ORDNANCE DISPOSAL

AMPHIBIOUS WARFARE

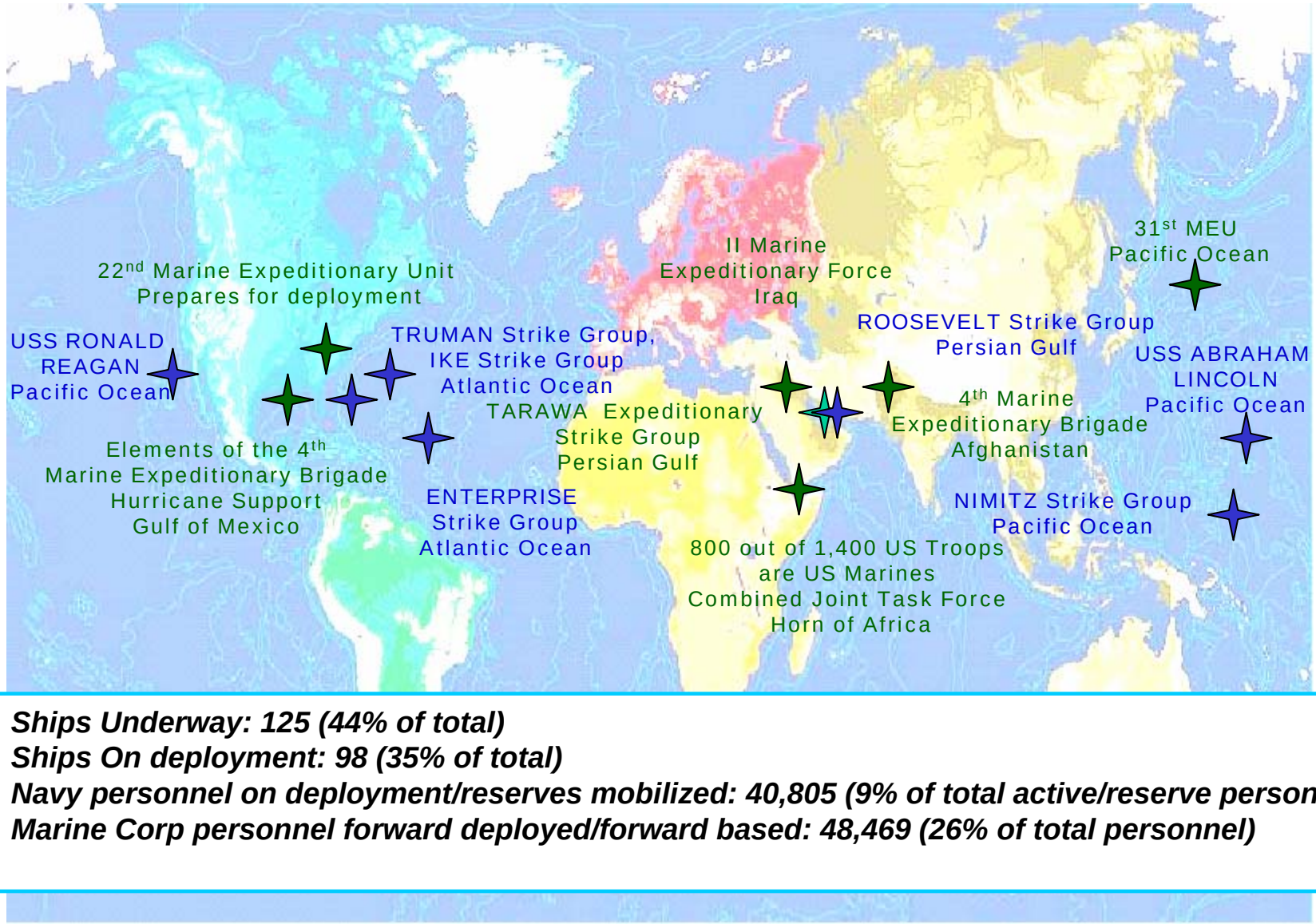


SEABASING



NAVAL SPECIAL WARFARE

US Navy / Expeditionary Warfare "Snapshot" (as of 10/24/05)



Ships Underway: 125 (44% of total)
Ships On deployment: 98 (35% of total)
Navy personnel on deployment/reserves mobilized: 40,805 (9% of total active/reserve personnel)
Marine Corp personnel forward deployed/forward based: 48,469 (26% of total personnel)

Scope of Expeditionary Warfare

Haiti – Philippines – East Timor – Eritrea – Somalia – Zaire – Liberia – Sierra Leone – Sri Lanka – Balkans – Afghanistan – Iraq – New Orleans

Expeditionary Warfare and the Global War on Terror

Operations Iraqi & Enduring Freedom
Naval Special Warfare

- **33% of all Naval Special Warfare forces are forward deployed**
- **4:1 deployment rotation**
- **Until recently, SEAL Units were deployed or away from home fourteen out of an eighteen month work-up and deployment cycle.**
- **Actively deployed to all Combatant Commands**

- 24% of EOD forces deployed in support of CENTCOM. 53% otherwise committed to GWOT

  - 3:1 Deployment Ratio

- 17% Naval Coastal Warfare forces continuously deployed to CENTCOM since 9/11.

  - 6:1 Deployment Ratio

- Mobile Diving and Salvage Unit conducted expeditionary salvage operations in 5th Fleet AOR

- Technology solutions to the IED and maritime threat being developed by NAVSEA (PMS EOD and NAVEODTECHDIV)

An Enabling Force for GWOT

-75% of Big Deck Amphibs were deployed to South West Asian AOR in direct support of OEF/OIF

-71% of Amphibious Warfare ships were underway during OEF/OIF

-Persistent forward presence of 3 ESG's at all times gives combatant commanders unrivaled operational flexibility.

-OIF: Amphibious Task Force East/West was 14 amphibs, carrying over 1,300 vehicles, 16,000 troops and 220 aircraft to the fight

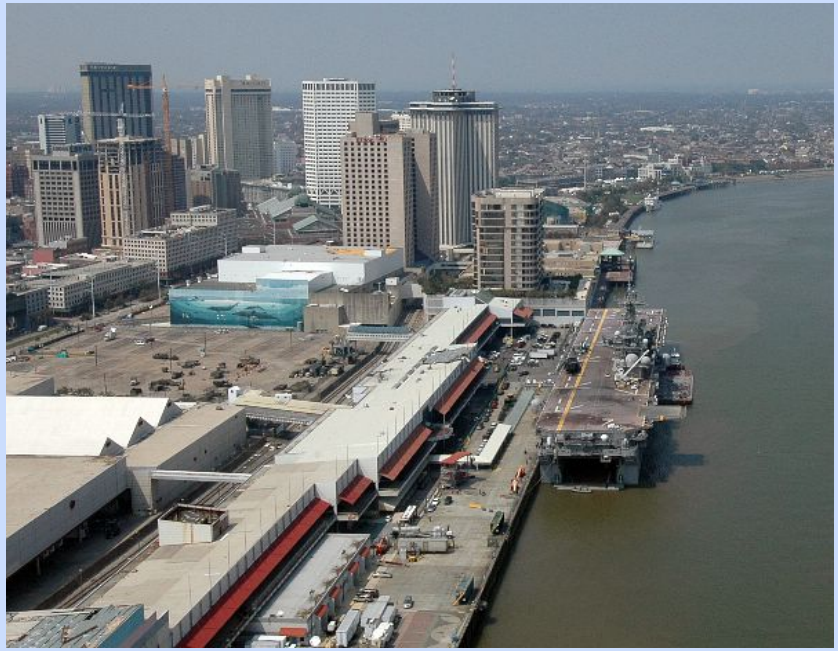
Hurricane Katrina Rescue and Relief

17 Expeditionary Warfare Ships on station
Over 50 aircraft utilized in support operations

3 Mine Counter Measures (MCM) and 1 Mine Hunter, Coastal (MHC) ships cleared 250 nautical miles of waterways and over 40 oil platforms

Mobile Diving and Salvage Unit (MDSU) 2, Naval Special Clearance Team (NSCT) 1 and USS GRAPPLE cleared 165 miles of waterway and 95% of ports from Pensacola to Pearl, MS for safe navigation.

I ran into VADM Thad Allen… the senior federal officer on scene, running the whole show. He said, "Mike, you should consider renaming this ship The City of New Orleans." That says it all.
From CNO Mullen email of 9/12/05



Katrina & USS San Antonio (LPD 17)

"Never retreat… Never Surrender."
USS San Antonio, Ship's Motto

"It's a tough ship. It's a tribute to those who designed and built her."
CAPT Jonathan Padfield, CO USS San Antonio

- **Crew augmented the Jackson County Emergency Response Center.**
- **Performed rapid post storm distribution of ice, water, and meals ready to eat (MREs) to hurricane victims.**
- **Provided logistics support for the National Guard.**
- **Served over 4,000 non-crew meals.**
- **Provided shelter for over 500 people.**
- **At any given time, the San Antonio provided refuge for about 150 people.**
- **Billeted Northrop Grumman employees, National Guard troops, Navy divers and civilians.**

Why Seabasing?

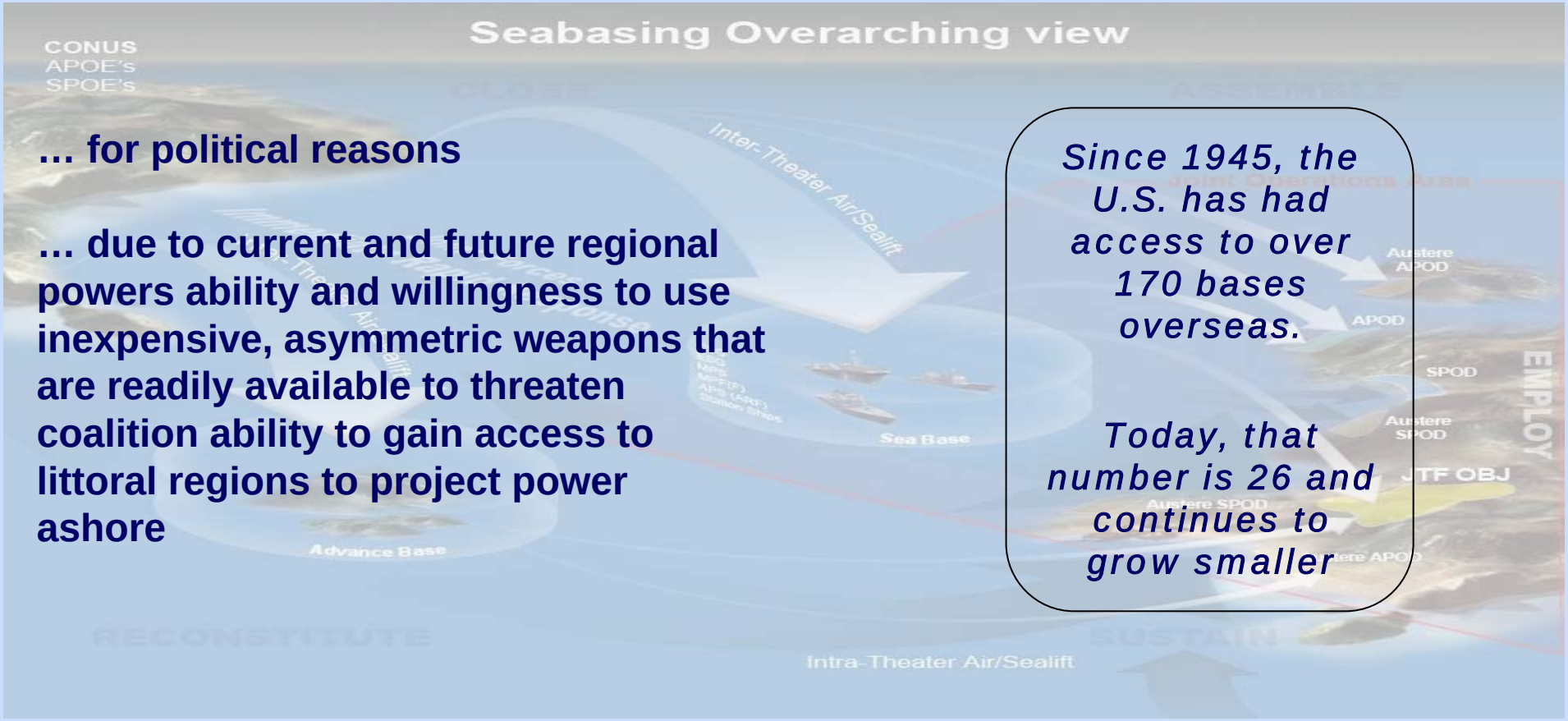
- ***Project joint power more rapidly* to confront unexpected threats, in the face of *decreasing access* and *basing* in order to:**
  - ***React promptly to theater needs***
  - ***Posture to minimize footprint***
  - ***Emphasize the ability to surge quickly***

… with agile and expeditionary forces

Reference: DoD Congressional Testimony, 2005; SECDEF Donald Rumsfeld;FY06 DoD Budget Senate Armed Services Committee; 17 FEB 2005.

The Military Challenge: Access

Access to Land Bases restricted…



… for political reasons

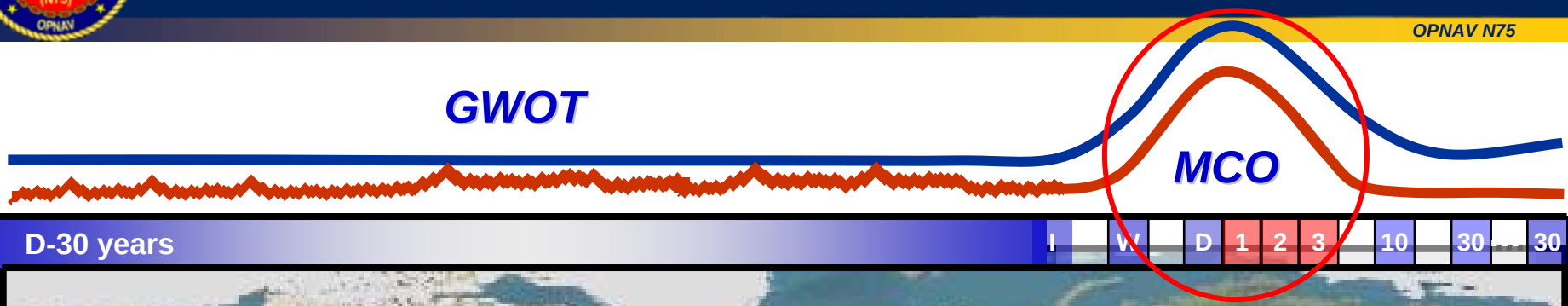
… due to current and future regional powers ability and willingness to use inexpensive, asymmetric weapons that are readily available to threaten coalition ability to gain access to littoral regions to project power ashore

Since 1945, the U.S. has had access to over 170 bases overseas.

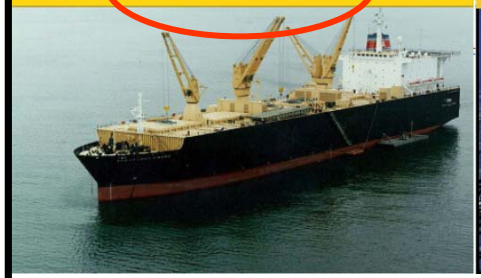
Today, that number is 26 and continues to grow smaller

Joint and coalition forces must be assured access… anytime, anyplace

Seizing the Initiative



MPSRON

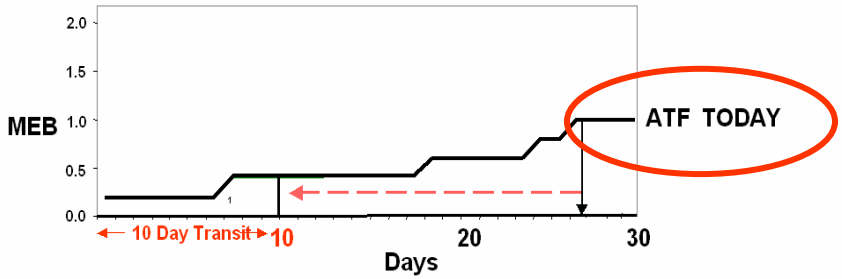


"Iron mountain ashore"

Employment
- Secure inport offload

Force arrival
- Marry up with troops ashore

Capacity
- Densely Packed



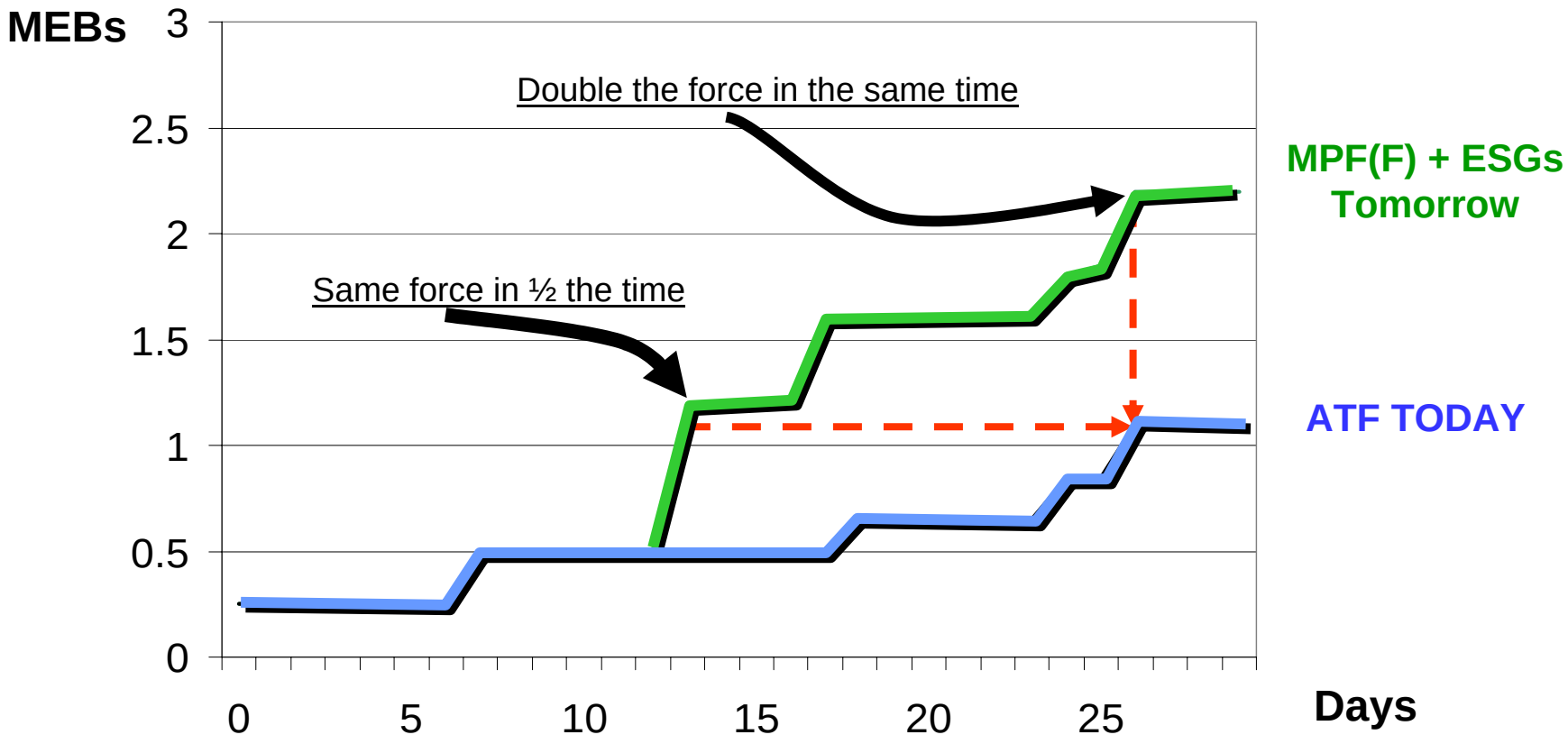
Closure/Employment
- Time for build up...weeks/month+

Effectiveness
- Centralized, limited... stove-piped forces

Strike & C2
- Naval strike ...and C2

28 Days from Norfolk to the Arabian Gulf
47 Days from San Diego to the Arabian Gulf

Accelerate Access...Rapid Deployable Surge



The Goal: Forcible Entry Capability in days/weeks, by Leveraging Deployed and Self-deploying Assets

Source: Joint Staff JFEO Study, 2003

Scaling the Sea Base

Humanitarian Assistance…

Immediate search, rescue, restore and relief operations

Counter-insurgency…

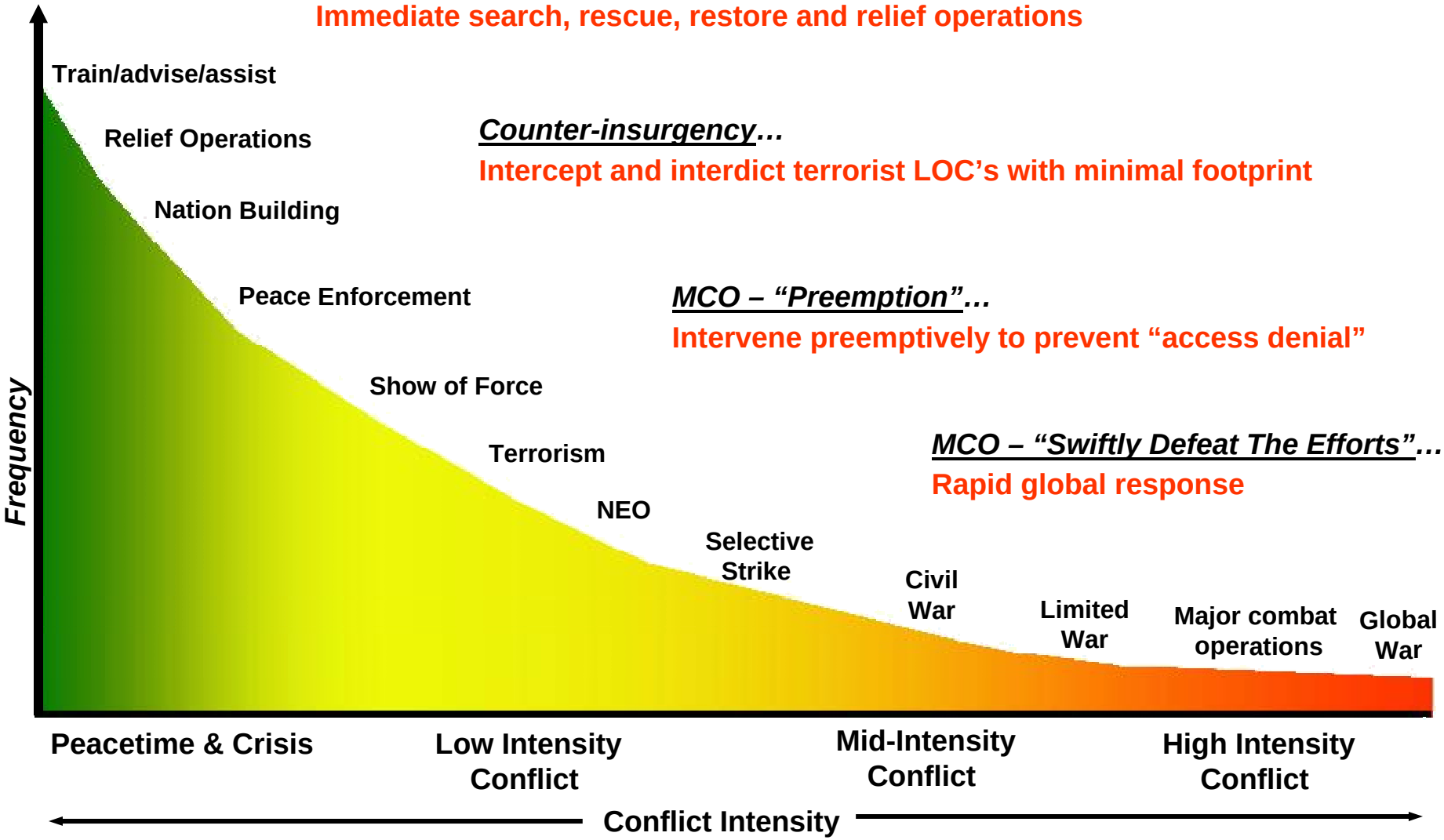
Intercept and interdict terrorist LOC's with minimal footprint

MCO – "Preemption"…

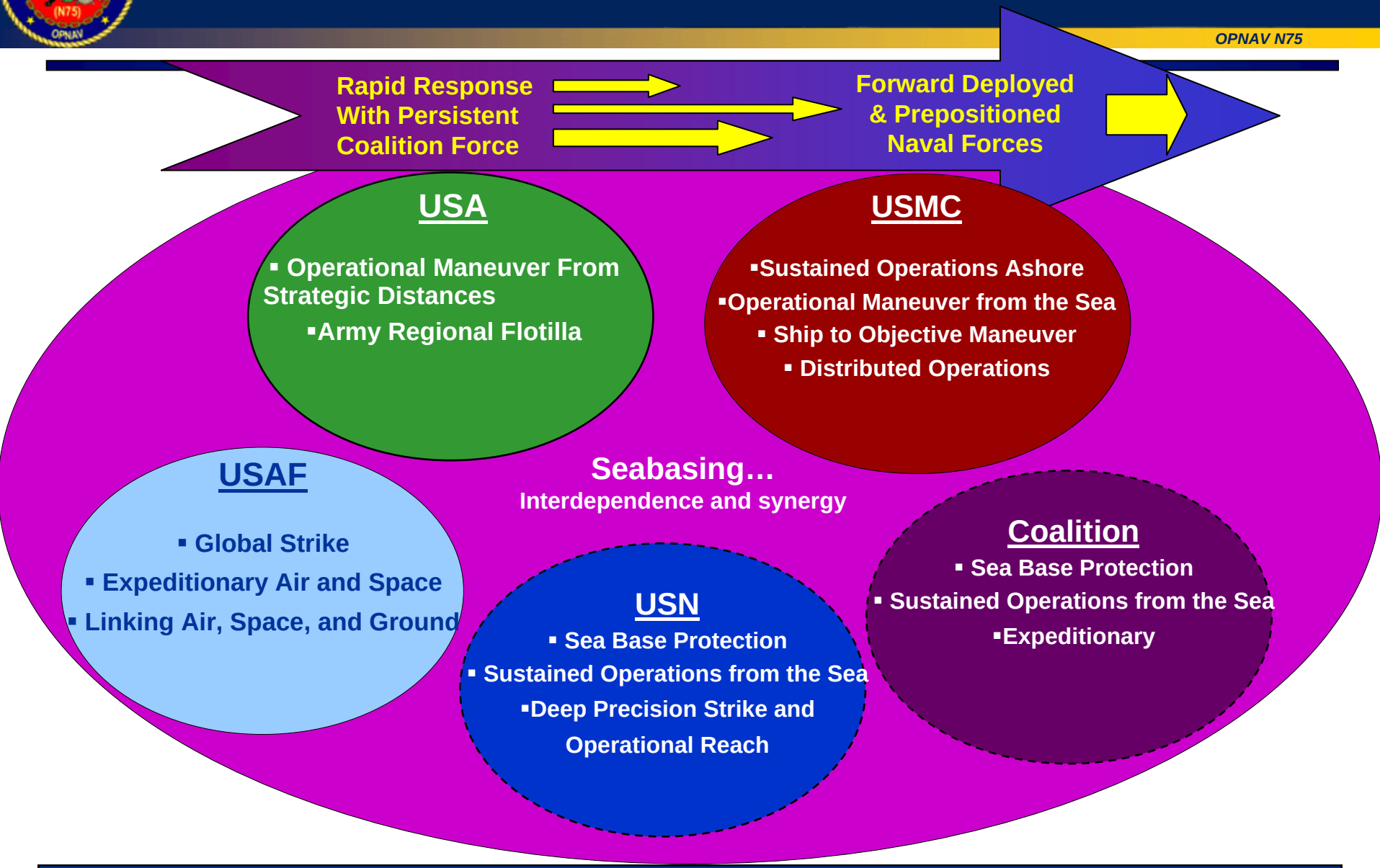
Intervene preemptively to prevent "access denial"

MCO – "Swiftly Defeat The Efforts"…

Rapid global response



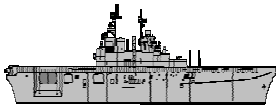
Power of Complementary Global CONOPS



Combined Force Response . . . enabled by Seabasing

MPF(F) Squadron Composition

LHA(R) w/MEB C2



- *Lightship Displacement: 30,862 MT*
- *Landing Spots: 9/ship*
- *Ship Speed: 22kts*

2

LHD w Aviation C2

- *Lightship Displacement: 28,540 MT*
- *Landing Spots: 9/ship*
- *Ship Speed: 22kts*

1

LMSR (Large Medium Speed RoRo)

- *Lightship Displacement: 36,289 MT*
- *Landing Spots: 2/ship*
- *Ship Speed 24 kts*

3

T-AKE (Dry Cargo Carrier)

- *Lightship Displacement: 25,700 MT*
- *Landing Spots: 2/ship*
- *Ship Speed 20 kts*

3

- **Squadron is 14 ships**
- **6 hulls: 2 hot production lines, 1 new design**
- **Full MEB (1 vertical battalion and 2 surface battalions) are selectively offloadable**
  - **Personnel for second surface battalion are on Sea Base**
- **11 of 14 ships built to commercial survivability standards (minor enhancements), 3 ships to military survivability standards**
- **MLP required for surface interface**
- **Meets delivery timeline for vertical and surface battalions**
- **Significant Industrial Base stability**

Legacy Dense Pack

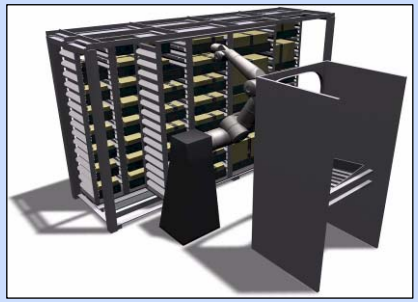
- *Lightship Displacement: 19,900 MT*
- *Landing Spots: 1/ship*
- *Ship Speed 18 kts*

2

MLP(w/Troops)

- *Light Ship Displacement: 28,423 MT*
- *Landing Spots: VERTREP*
- *Ship Speed 20kts*

3



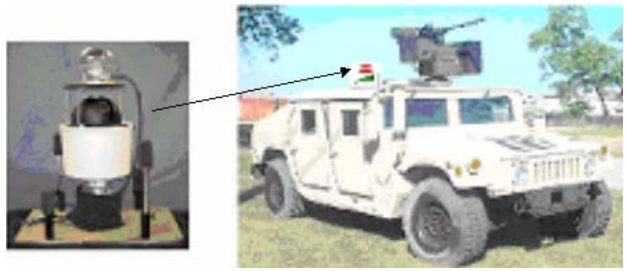
Expeditionary Warfare Science and Technology

Quick Reaction

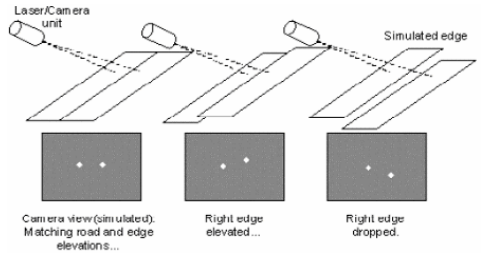
CRISSTL Ball

Compact, Remote Imaging Surveillance System with Two-pi+ OutLook

Naval Special Warfare



Hostile Fire Detection & Localization



Trail Edge Warning

Rapid Technology Transition

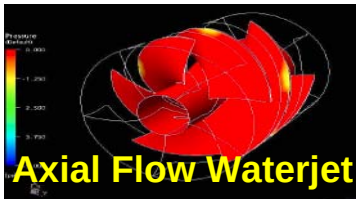
Explosive Ordnance Disposal / Naval Coastal Warfare

WETBOT Remote Hull Search Vehicle

BomBot Remote EOD Vehicle

Future Naval Capabilities

CLOSE

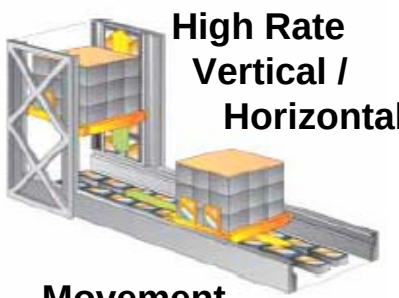


Compact / Agile

Material Mover

ASSEMBLE

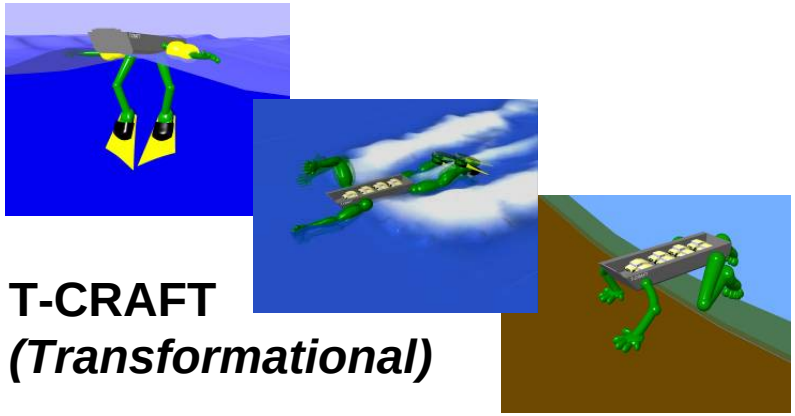
EMPLOY



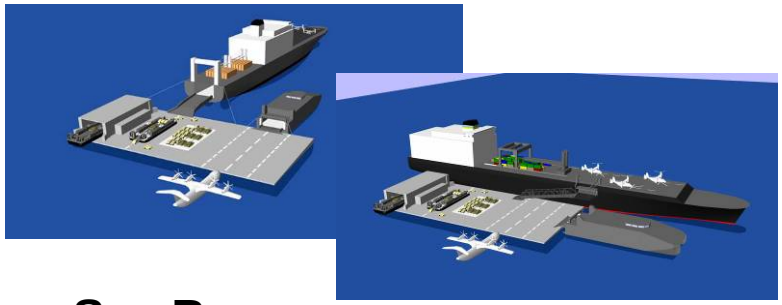
SUSTAIN

RECONSTITUTE

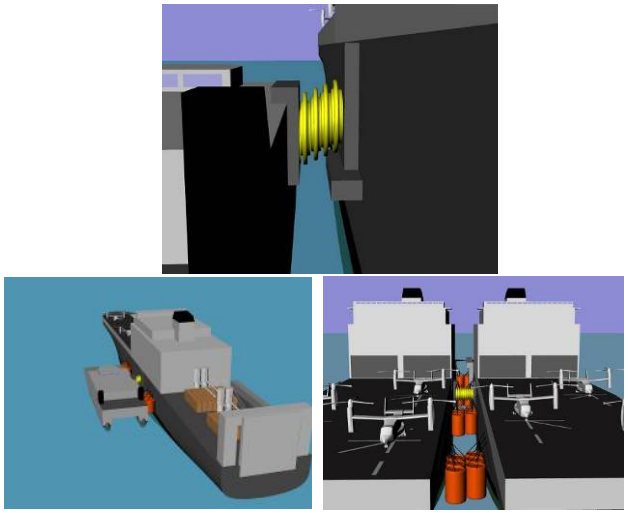
Innovative Naval Prototypes



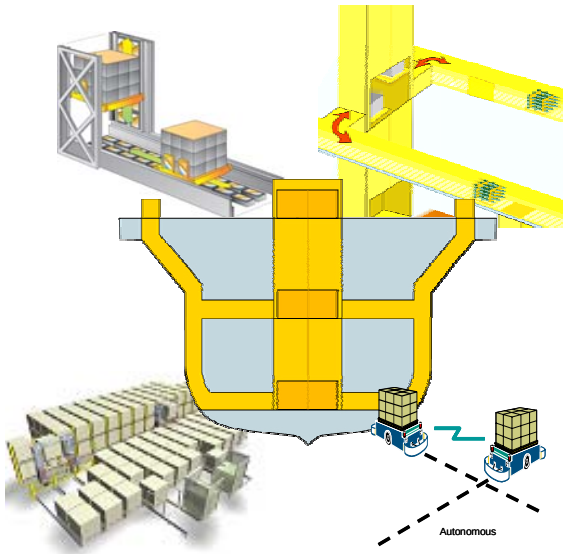
T-CRAFT
(Transformational)



Sea Base
Intermediate Transfer Station

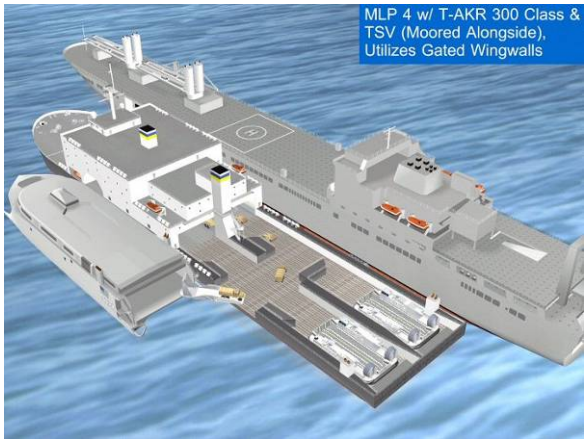


Personnel Transfer At-Sea

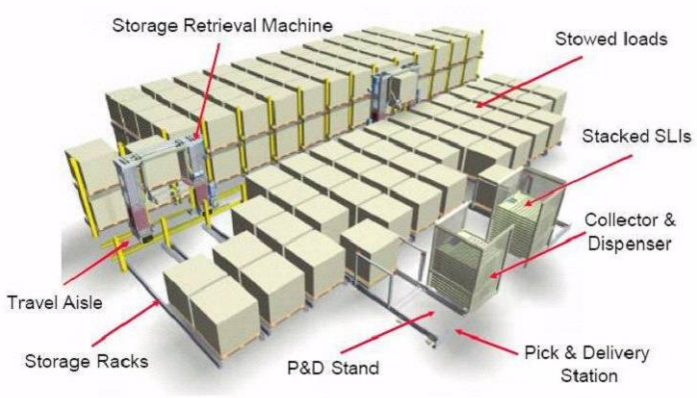


TransPORTS

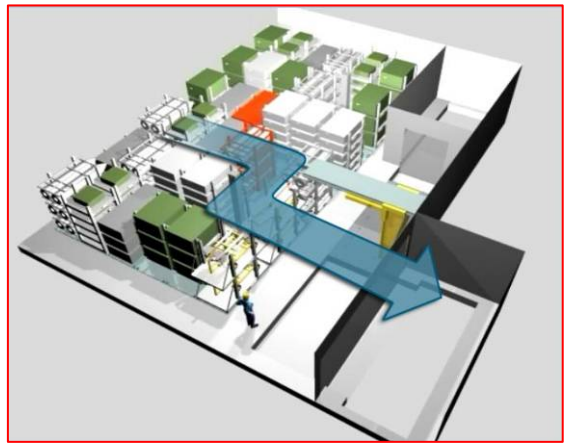
Key Seabasing Technologies



Mobile Landing Platform

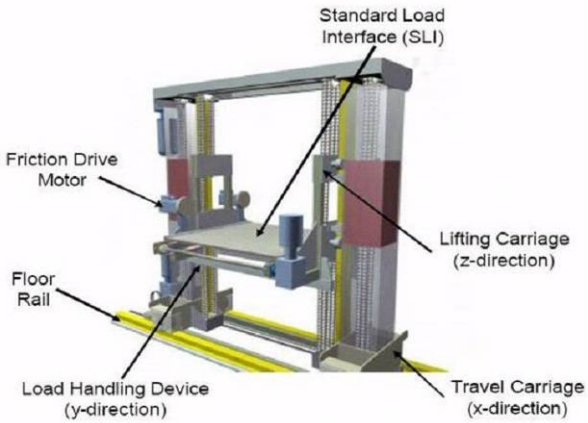


Automated Cargo Handling



Selective Offload

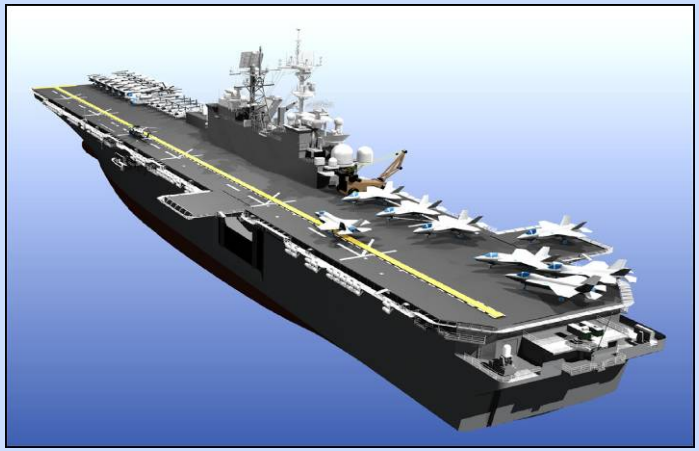
Heavy Underway Replenishment



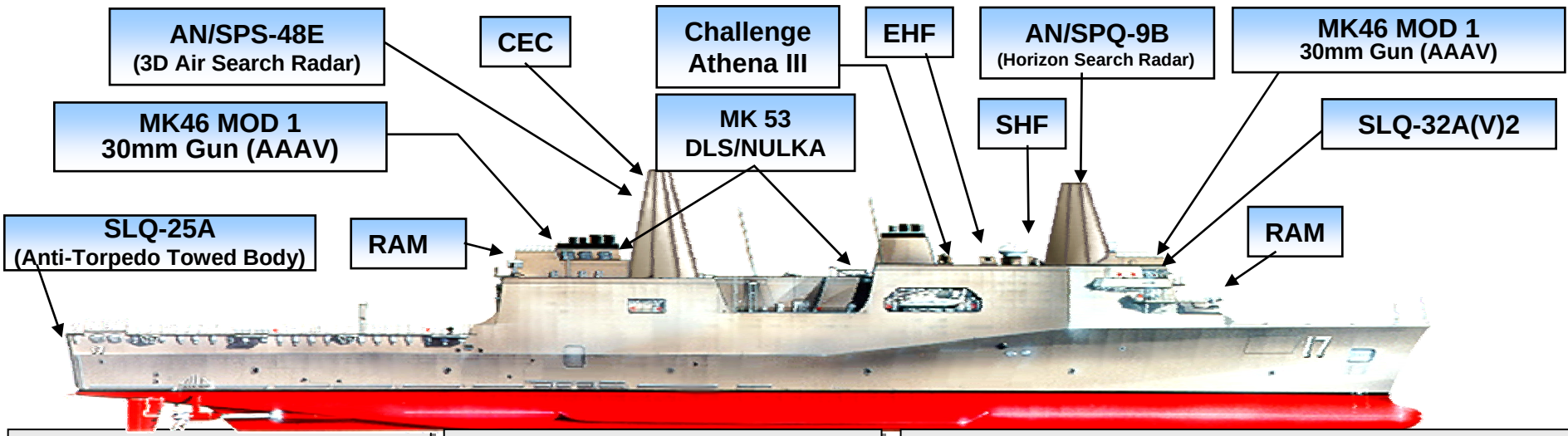
Selective Retrieval Machine

Skin-to-Skin Cargo Transfer

The Future of Expeditionary Warfare



LPD 17 Capabilities



SURVIVABILITY

- Radar Cross Section Reduction
- Magnetic Signature Reduction
- Shock Hardening
- Blast Hardened Bulkheads
- Fragmentation Protection
- Collective Protection System
- Smoke Ejection System
- Fire Insulation

COMBAT SYSTEMS

SPS-48E
SPQ-9
SPS-73
SLQ-32(V)2
SSDS
CEC
GCCS-M
RAM
SRBOC
NULKA
30 mm MK 46 MOD 1 Gun (2)

DETECT

CONTROL

ENGAGE

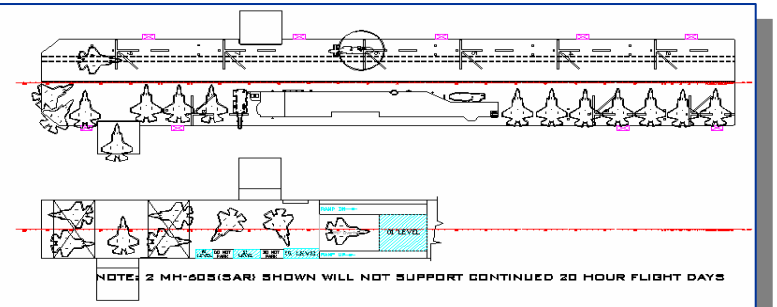
C4I SYSTEMS

SWAN (SIPR/NIPR)*
NAVMACS
ADNS
MAGTF ROUTER*
VTC Capability*
T-RDF ANTENNAS*
BF E-Mail*
COWAN*
EPLRS-DR*
GCCS-M
EHF
SHF (Dual Channel Capability)
DMR (UHF SATCOM/ All UHF & VHF)
CDLMS (Link 11/16)
NAVSSI
NTCSS
KSQ-1
DWTS

SPACE, WEIGHT AND SERVICES

SSES
NALCOMIS
AFATDS
DTAMS

LHA(R) FLT 0 / LHA-6
Variation of the LHD Class



- 4 Additional JSF
- Increased JP5 capacity
- 100% Maintenance capability
  - Aviation shops
  - 2 high hats for MV-22
- Increased Stability

ELECTRONICALLYRECONFIGURABLE COMMAND AND CONTROL COMPLEX

HANGAR DECK EXTENDED FORWARD AND AFT 42% GROWTH

MEDICAL RESIZED

HANGAR HIGH HAT ENLARGED AND ONE ADDED FOR AIRCRAFT MAINTENANCE

HANGAR

VEHICLE STOWAGE

MAG MAG MMR AMR MMR MAG MAG MAG MAG

STERN GATE & MCHRY DELETED

WELL DECK SUBDIVIDED

AMR WITH A/C PLANT

LOWER VEHICLE SUBDIVIDED

MAGAZINE PROTECTION

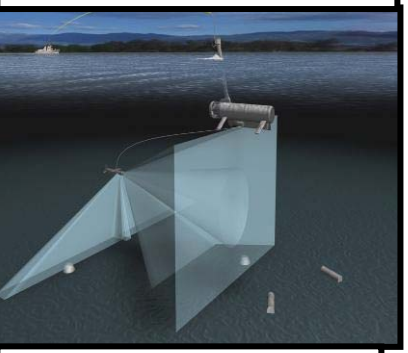
LONGITUDINAL STRENGTH MODS

ADDITIONAL JP 5 TANKS
(BALLAST TANK CONVERSION)
600K-→ 1.3m GAL

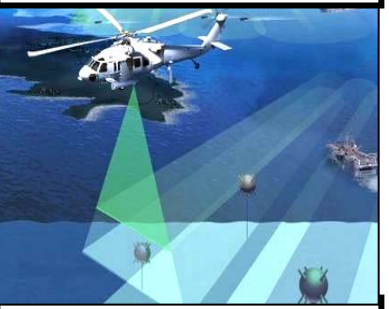
- Same C4I Suite as LHD 8
- Same propulsion as LHD 8

Littoral Combat Ship (LCS)
Flight 0 & Mine Countermeasures Mission Package

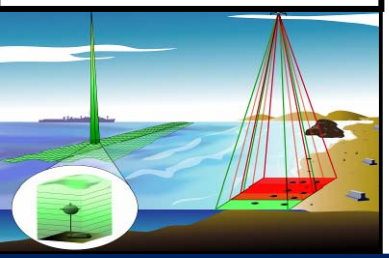
Remote Mine Hunting System & AN/AQS20A

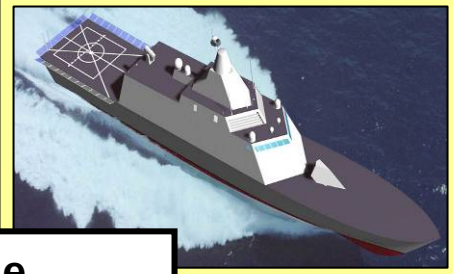


Airborne Laser Mine Detection System

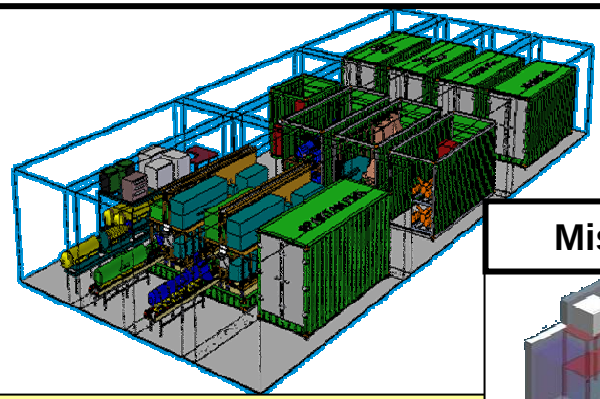


Coastal Battlefield Reconnaissance & Analysis System

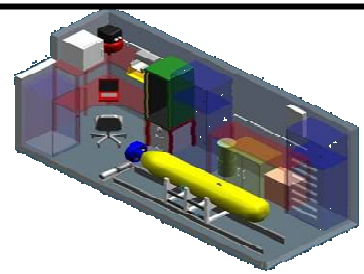




Mission Package

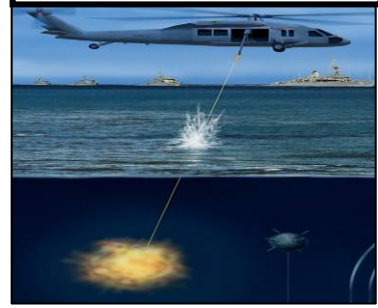


Mission Module

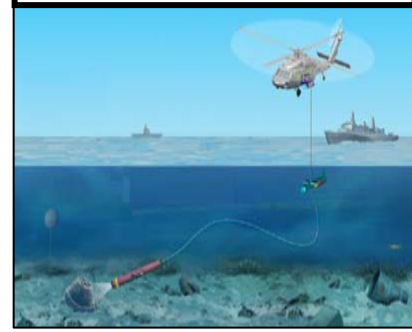


Full Mine Warfare Package: FY10

Rapid Airborne Mine Clearance System



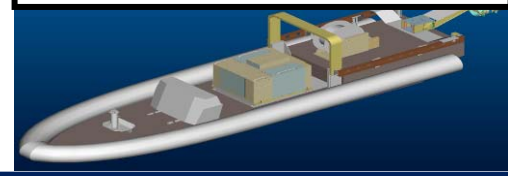
Airborne Mine Neutralization System



SCULPIN Unmanned Underwater Vehicle

Battlespace Preparation Autonomous Underwater Vehicle

Unmanned Surface Vehicle & Organic Airborne and Surface Influence Sweep



Surface Connectors

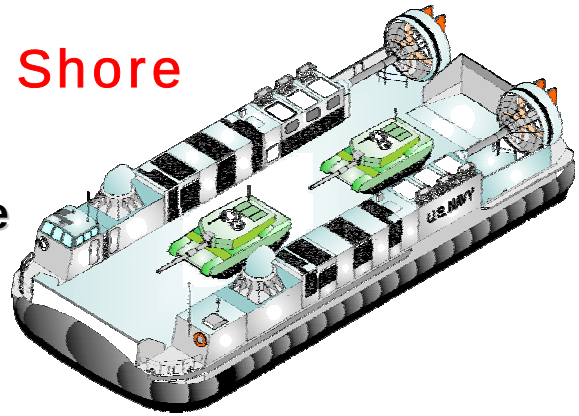
Well Deck to Shore

LCU-1600

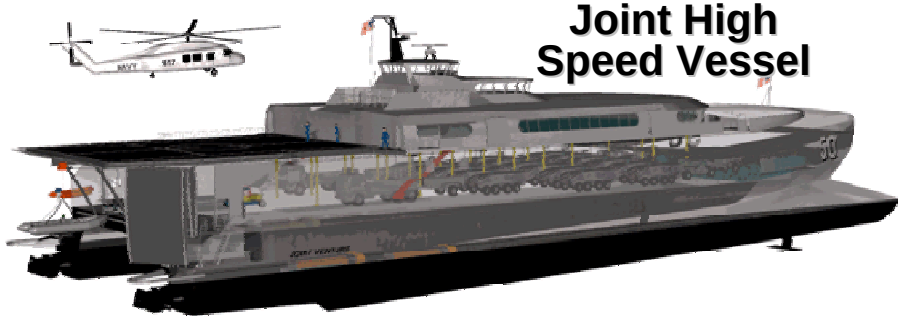
LCAC Service Life Extension Program

Well Deck to Shore and Sea Base to Shore

Seabase-to-Shore Connector



Joint High Speed Vessel



Intra-theater Connector – High speed surface lift within the Sea Base & Sea Base to austere port

Air Connectors

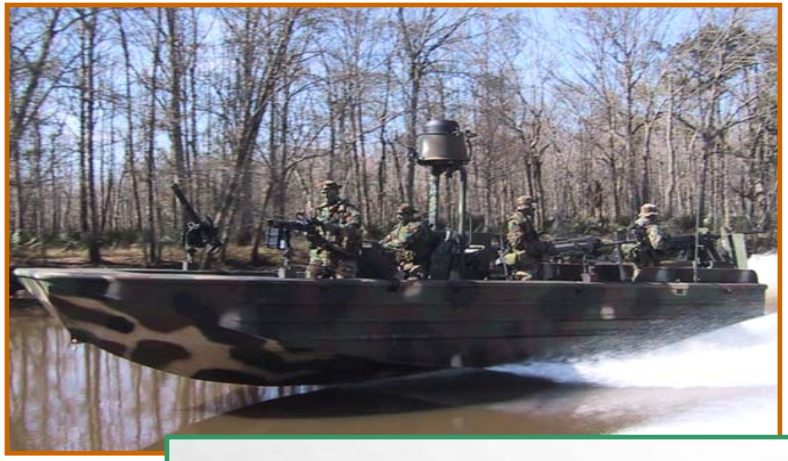
Legacy

CH-46E
&
CH-53E

Future

Joint
Heavy
Lift

Navy Riverine Force



Navy Riverine Force

- Commander, Fleet Forces Command (CFFC)
  - Active Component Squadron (3)
    - FY05/06
  - Reserve Component Squadron (2)
    - FY07/08
- 36 armed/armored Combatant Craft
  - Three 12-craft squadrons
  - Two crews per craft for 24/7 operations
  - Total lift equivalent 1 USMC Rifle Co.

BACKGROUND

- Inability of Navy to satisfy USCENTCOM RFF 397
- Draft OSD PDM commits FY07 QDR lockbox
- GWOT Working Group
- Quadrennial Defense Review

PROJECTIONS

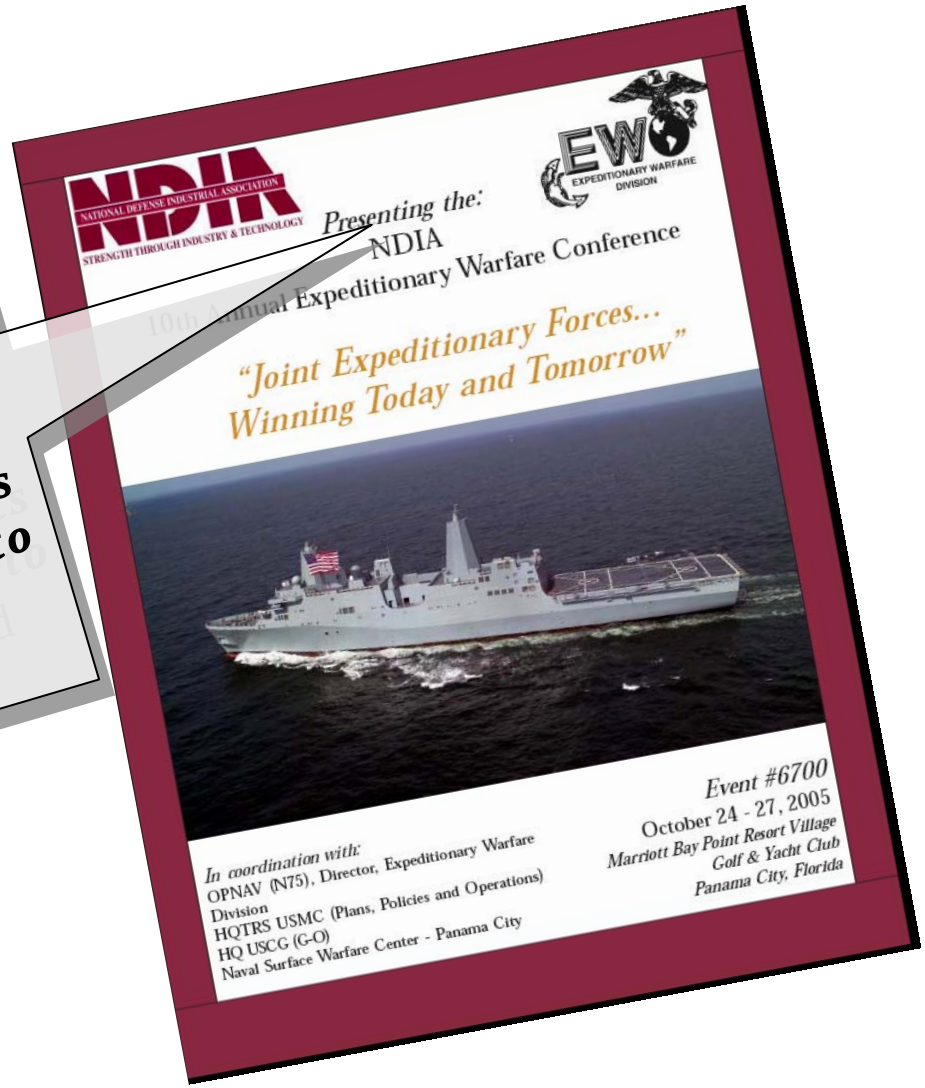
- Primary Missions:
  - River Patrol and Interdiction
  - Troop Movement

Summary

Where Industry can help…

OBJECTIVES

To provide an opportunity for the Services to ***provide clear statements of their requirements and intent to industry***, service laboratories, and other interested parties



Title	ONR BAA No.	Close Date
• High Capacity At-Sea Transfer of Materials, Personnel, and Equipment	04-005	16-Jan-04
•Sea Base Transformational Package and Ordnance Rapid Transfer System (TransPORTS) Prototype Demonstrator	05-018	4-Jun-08
• Sea Base Intermediate Transfer Station (ITS) Prototype Demonstrator	05-019	4-Jun-08
• Sea Base Connector Transformable-Craft (T-CRAFT) Prototype Demonstrator	05-020	4-Jun-08
• Personnel Transfer At-Sea Prototype Demonstrator	05-021	4-Jun-08
• Design and Fabrication of a High Performance Lift Fan System for the Landing Craft Air Cushion (LCAC)	RFP: N61331-06-R-0003	15-Nov-05
• High Rate Vertical / Horizontal Material Movement	SUSD0501	26-Oct-05
• Shipboard ISO Container Breakout & Repacking	SUSD0502	22-Nov-05

For more information, see: www.onr.navy.mil/02/baa **&** www.nsrp.org/seabasing

QUESTIONS?

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The Military Challenge: Speed

Maritime Preposition Squadron (MPS)
Marine Expeditionary Brigade (MEB) Timeline

EO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	…	30	…	43	44	45

- Administrative offload vice amphibious assault
- Full reliance on land bases
- Fails to provide the “seize the initiative” force

Amphibious Task Force (ATF) MEB Timeline

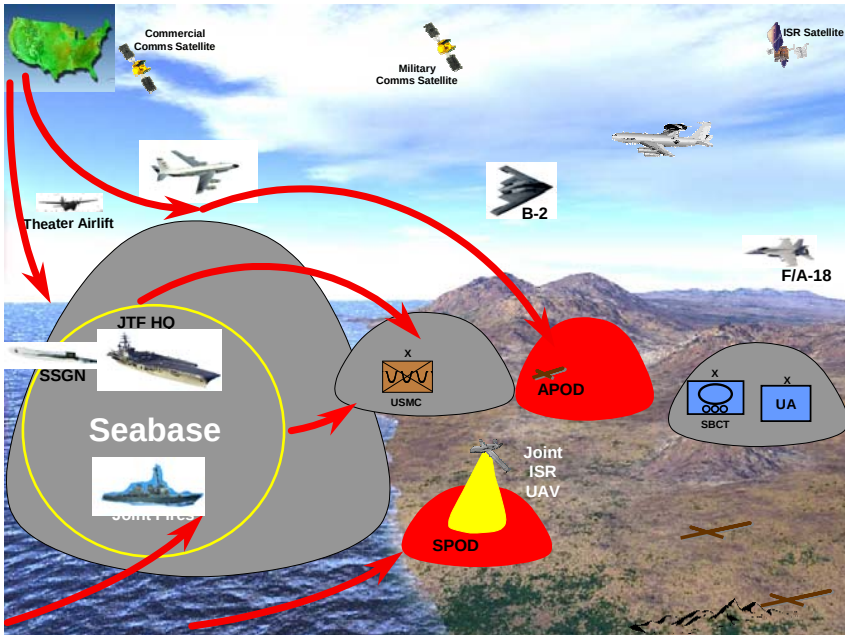
EO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	…	30	…	43	44	45

- Fails to provide the speed to “seize the initiative”

28 Days from Norfolk to the Arabian Gulf
47 Days from San Diego to the Arabian Gulf

Lines of Operation for Seabasing

Top Level Measures of Performance For Joint Forcible Entry Operations



Close W/in 10-14 days of execution order.

Assemble

Joint capabilities w/in 24-72 hours of arrival

Employ At least one JFEO brigade over-the-horizon AND within one period of darkness (8-10 hrs)

Sustain At least two joint brigades

Support selected joint maintenance

Provide level III medical

Reconstitute

Reemploy one JFEO brigade operating ashore within 10-14 days

Framing the range of capabilities

Attributes of Seabasing
...Measures of Effectiveness

Capacity
- the measure of how much joint force capability can be supported **…Troop, Aviation, Logistics**

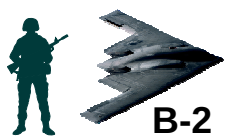
Rate
- how fast tasking can be accomplished **…Sortie Generation, Throughput**

Infrastructure
- the physical requirements and facilities needed **…Flight Deck, Crew, Automation**

Interoperability
- seamlessly integrate and support joint force capability**…Joint, Coalition, COTP**

Survivability
- protect joint force capabilities **...Hull, Mass, Dispersion, Maneuver**

Accessibility
- the flexibility to bypass or operate within the physical constraints**...APOD, SPOD, Austere, Beach**







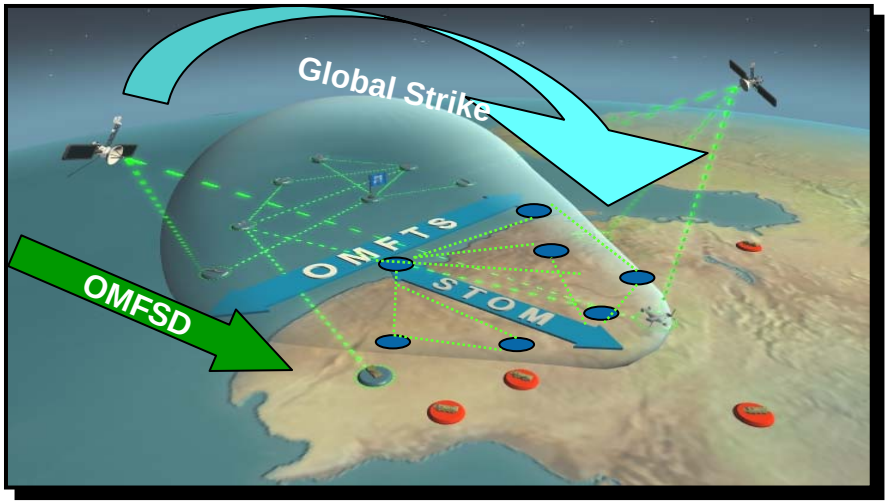





Framing the measures of effectiveness

Seabasing Joint Integrating Concept

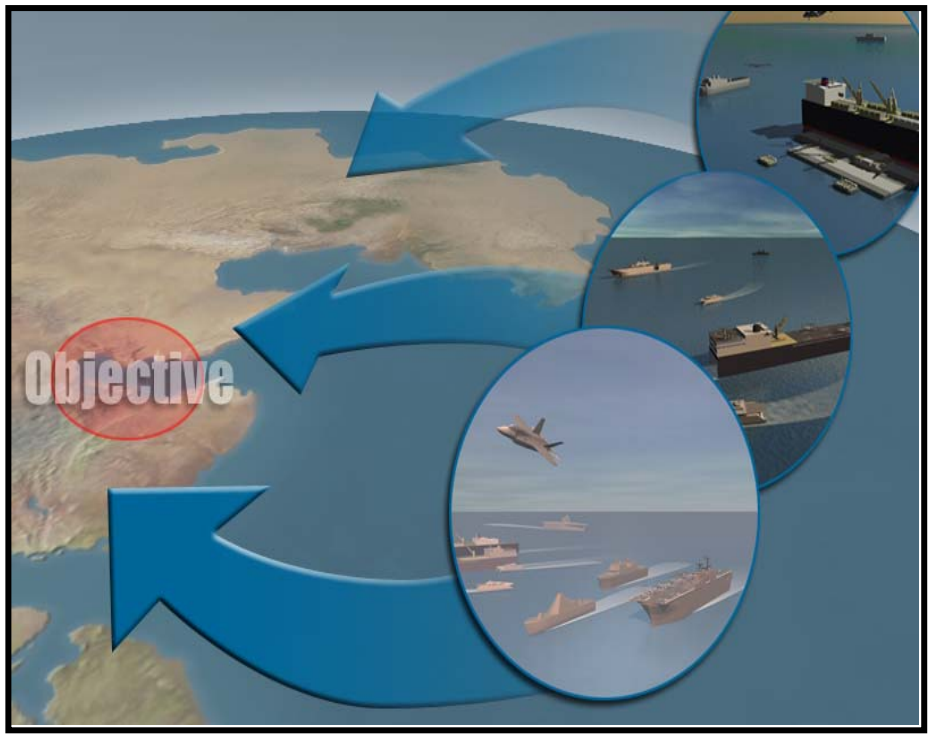
Principles



1. The sea as maneuver space
2. Leverage forward presence
3. Expand access options … reduce dependence on land bases
4. Create uncertainty
5. Protect joint forces
6. Scalable, responsive joint power projection
7. Sustain joint force operations

References:
National Defense Strategy
Defense Planning Guidance
National Military Strategy

Seabasing Joint Integrated Concept Principles



- The sea as maneuver space
- Leverage forward presence
- Create uncertainty
- Protect joint forces
- Scalable, responsive joint power projection
- Sustain joint force operations

Seabasing is defined as the rapid deployment, assembly, command, projection, reconstitution, and re-employment of joint combat power from the sea, while providing continuous support, sustainment, and force protection to select expeditionary joint forces without reliance on land bases within the Joint Operating Area (JOA). These capabilities expand operational maneuver options, and facilitate assured access and entry from the sea.

Scope for the Development of Seabasing

- **Develop a Seabasing Concept for 2015-2025 based on strategic guidance and aligned with the Service Transformation Roadmaps**
  - **National Defense Strategy (May 2005)**
    - **Secure access to key regions from the global commons**
    - **Use rapidly deployable military forces… speed**
    - **Deny our enemies sanctuary**
    - **Demonstrate the will to resolve conflicts decisively … persistence**
  - **Service Transformation Roadmaps**
    - **Army … *operational maneuver from strategic distances***
    - **Marine Corps … *operational maneuver from the sea***
    - **Air Force … *air and space expeditionary force***
    - **Navy … project power using *maneuver space provided by the sea***

References:
United States Army 2004 Army Transformation Roadmap, July 2004.
United States Air Force Transformation Flight Plan 2004.
Naval Transformation Roadmap 2003.

Joint Definition of Seabasing

Seabasing is …

- **Rapid deployment… and projection… of joint combat power from the sea**
- **Providing continuous support, sustainment, and force protection to select expeditionary joint forces**
- **Without reliance [as necessary] on land bases within the Joint Operating Area (JOA)**
- **Providing expanded operational maneuver options**
- **Facilitating assured access and entry from the sea**

Reference: Seabasing Joint Integrating Concept Section 2.3 Definitions.

Accelerate access… to rapidly seize the initiative in joint operations

Framing the Strategic Landscape

1. ***Support "Defense Strategy for the 21st Century"***
   - *Assure Access… Operational Availability*
   - *Defeat at a Distance… Strategic Challenges*

} ***Speed***

2. ***<u>Transform</u> to <u>"desired capabilities"</u>… operating from***
   - *The <u>Sea</u> … that <u>accelerate access</u> forward*
   - *<u>Space</u>...that enable <u>pervasive awareness</u>*
   - *<u>Cyberspace</u>… that support <u>networked joint operations</u>*

} ***Access***

3. ***Accept risk in capabilities that do not support***
   - *Distributed, netted, persistent*
   - *Immediately employable forward*
   - *Rapidly deployable surge*

} ***Persistence***

Joint Operational Independence, Interdependence, and Capability Enabler

Sea Basing

- Phased At-Sea Arrival and Assembly
- Full Integration of Naval Logistics and Joint In-Transit Visibility (ITV)
- At-Sea Transfer of Personnel, Intermodal Containers and Out-sized Equipment
- Selective Offload
- Bulk Liquid Delivery
- Sea Based Maintenance Capability: Shipboard and Mobile

Sea Basing (cont)

- At-Sea Reload of NSFS Assets
- Sea Based Medical Capacity
- Decontamination/Isolation Capability
- Reconstitution at Sea
- Projection of Firepower for Support of Joint Forces Ashore
- Joint Command and Control
- Sea Base Platform Survivability

Navy Coastal Warfare

- Weapon to defeat sub-surface Anti-Swimmer
- Weapon to defeat sub-surface Delivery vehicle System
- Multi-role precision guided monition (PGM)
- Automatic target recognition system
- Distance support for maintenance
- Navy Infantry Combat ID system
- Sub-surface swimmer detection system
- Sub-surface delivery vehicle detection System
- Littoral ASW target sensor/link
- High-speed ballistic close-in weapons system

Explosive Ordnance Disposal

- Counter remotely controlled improvised explosive devices (RCIED)
- Standoff detection of explosives
- UUV buried mine detection and classification
- Diver buried mine detection and classification
- Precise navigation for divers and UUVs
- Physics based modeling of unexploded ordnance
- Non-explosive limpet mine neutralization
- Improved communications link for unmanned systems
- 3-D sonar detection capability for limpet mine mission
- Obstacle avoidance sonar

Navy Special Warfare

- **Manpower**
  - Industry leveraging media, academia and national think tanks.
- **C4ISR**
  - Full spectrum compatibility (land, sea, air and space)
- **ISR platforms/sensors**
  - UAVs, UUVs and USVs
  - Unattended sensors - Persistent, miniature, man-portable and multi-spectral
- **Signature management**
  - Reduce multi-spectral signatures of SOF operators, vehicles and weapons
- **IED Detection and Defeat.**
- **Seabasing Platforms would be:**
  - Blue, Green and Brown water capabilities (surface and subsurface)

Amphibious Warfare

- **Under LCAC/Seabase to Shore Connectors:**
  - **Enhanced or new skirt technology**
  - **Improved Lift fans , Improved Propulsion system**
  - **Improved Reliability, Maintainability and Availability (RM&A)**
- **Under MPF(F):**
  - **Selective offload capability.**
  - **Skin-to-skin mooring technologies**
- **Under Current Ship requirements:**
  - **Reduce the Footprint**
    - **Weight, size, power, bandwidth**
  - **Build in *INTEGRATION* with the ships at the beginning of the design cycle**

Mine Warfare

- Sensor to detect buried mines in the water and on land
- Sensor to detect stealthy mines
- Surface influence sweep
- Emulation sweep
- Pressure mine sweep
- Standoff breaching systems for beach and surf zones
- Remote command and control capability for undersea environment
- Cooperative and “smart” unmanned vehicles
- Autonomous underwater weapon