



# Battle Damage Assessment / Repair (BDA/R)



TOPIC LEARNING OBJECTIVES

- Upon successful completion of this topic, the student will be able to:
- 1. Recognize the importance of Battle Damage Assessment/Repair familiarization to EDO career development.
  - 2. Identify specific roles EDOs play in Battle Damage Assessment/Repair.
  - 3. Recognize the conceptual repair infrastructure that supports Battle Damage Assessment/Repair.
  - 4. Recognize the Repair Continuum, phases, and responsible organizations from Damage Control through Expeditionary Repair or Ashore Repair.
  - 5. Explain the difference between peace-time and war-time maintenance and repair, to include associated Technical Authority.
  - 6. Describe the Command and Control (C2) architecture that supports Battle Damage Assessment/Repair.
  - 7. Recognize the impact of Operational Logistics in a Contested Maritime Environment on Battle Damage Assessment/Repair.
  - 8. Recognize existing systems of people, parts and process that provide ship maintenance and repair to sustain the Fleet during operations.

STUDENT PREPARATION

- Primary References
- 1. Joint Fleet Maintenance Manual (JFMM)
  - 2. NAVSEAINST 5400.95G Waterfront Engineering and Technical Authority Policy
  - 3. ASN(RDA) Memo Subject: Wartime Acquisition Response Plan Guidance (WARP), 04 January 2021
  - 4. GOA-21-246 Report: Timely Actions Needed to Improve Planning and Develop Capabilities for Battle Damage Repair, June 2021
  - 5. CNSP/CNSLINST 3502.7B Surface Force Training and Readiness Manual, 21 April 2021
  - 6. CNSP/CNSLINST 3040.2B Casualty Reporting, 22 February 2019
  - 7. OPNAVINST 4740.2H Salvage and Recovery Program
  - 8. NWP-3 Fleet Warfare
  - 9. NWP 3-56 Maritime Operations at Tactical Level
  - 10. NWP 3-32 Maritime Operations at Operational Level
  - 11. NWP-4 Logistics
  - 12. NWP 4-12 Navy Salvage Operations
  - 13. COMPACFLT N43 BDAR Senior Course Brief

<div><b>TOPIC LEARNING OBJECTIVES</b></div> <div>Upon successful completion of this topic, the student will be able to:</div> <div><div>9. Implement Battle Damage Assessment/Repair fundamentals in the evaluation and recommendation of courses of action for various practical scenarios.</div><div>10. Identify appropriate contracting techniques in support of Battle Damage Assessment/Repair.</div><div>11. Identify funding sources and colors of money used for Battle Damage Assessment/Repair.</div></div> <div><div>4.1.6 BDA/R</div></div>	<div><b>STUDENT PREPARATION</b></div> <div><div>14. JP 3-32 Joint Maritime Operations</div><div>15. JP-4 Naval Logistics</div><div>16. Center for Strategic and Budgetary Assessments Report: Sustaining the Fight Resilient Maritime Logistics for a New Era</div><div>17. Federal Acquisition Regulation (FAR)</div><div>18. Defense Federal Acquisition Regulation (DFAR)</div><div>19. Department of the Navy Fiscal Year Budget Estimates, “OMN Book”</div></div> <div><div>Additional References</div><div><div>1. Naval Warfare Publications (NWP) and Joint Publications (JP) are available: <a href="https://doctrine.navy.mil/default.aspx">https://doctrine.navy.mil/default.aspx</a></div><div>2. NAVSEA instructions are available: <a href="https://www.navsea.navy.mil/Resources/Instructions/">https://www.navsea.navy.mil/Resources/Instructions/</a></div><div>3. OPNAV and SECNAV instructions are available: <a href="https://www.secnav.navy.mil/doni/default.aspx">https://www.secnav.navy.mil/doni/default.aspx</a></div><div>4. Joint TYCOM instructions are available: <a href="https://cpf.navy.deps.mil/sites/cnsp/Pages/Directives.aspx">https://cpf.navy.deps.mil/sites/cnsp/Pages/Directives.aspx</a></div><div>5. Navy budget materials are available: <a href="https://www.secnav.navy.mil/fmc/fmb/Pages/Fiscal-Year-2022.aspx">https://www.secnav.navy.mil/fmc/fmb/Pages/Fiscal-Year-2022.aspx</a></div></div></div>
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# Overview

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- Need for BDA/R
- Guiding Documents
- BDA/R Continuum
- Maritime Support Plan
- Expeditionary Maintenance & Repair Facility
- Forward Deployed Ship Repair Team (FDSRT)
- Warfighting Readiness Event
- Command & Control
- Contracting strategies and funding considerations
- Summary





# Renewed Great Power Competition: North Korea



*Continues proscribed activities ...*

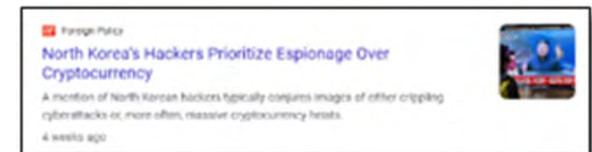
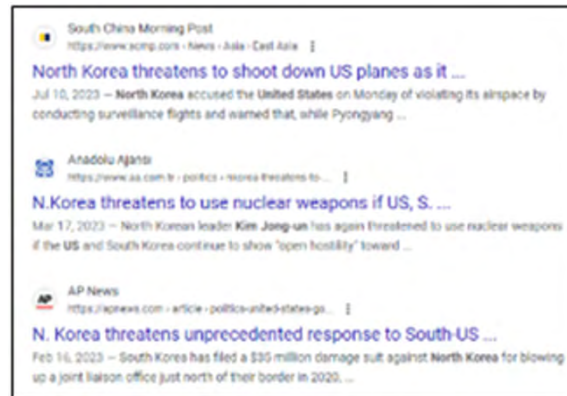


*Making threatening statements and  
taking provocative actions*



*One of the world's most active state-level  
offensive cyber programs*

*... while Russia and China impede UN actions*





# Renewed Great Power Competition: Russia



*Threatening conventional and nuclear strikes*

**Newsweek**  
**Russia Ambassador Warns U.S. Resolution Pushes for Nuclear War Over Ukraine**  
Russia Ambassador Warns U.S. Resolution Pushes for Nuclear War Over Ukraine ... warned that a new resolution proposed by two U.S. senators threatens to push ...  
4 weeks ago



*Flying simulated nuclear strike missions against the United States ...*



*Strengthening ties with the PRC through expanded military cooperation*



*... and sailing ships and submarines into close proximity of other nations*





# Renewed Great Power Competition: Russia – China Relations



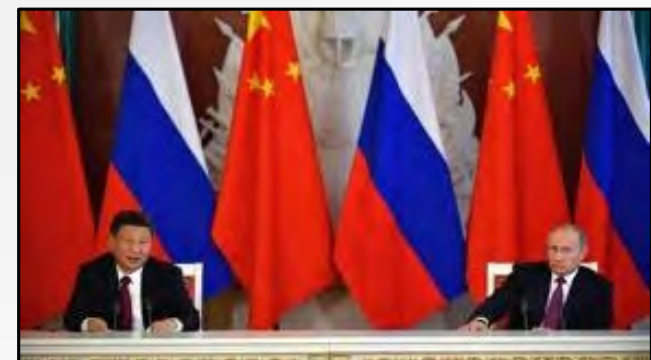
*Number and type of combined military activities is increasing*



*Integration is improving, but not to the point of complex combined operations*



*Areas of alignment: opposing U.S., creating a multi-polar world order, normalizing authoritarianism, energy*



*Areas of competition: Central Asia, the Arctic, military sales, technology theft, relative decline in Russian power*



# Renewed Great Power Competition: China

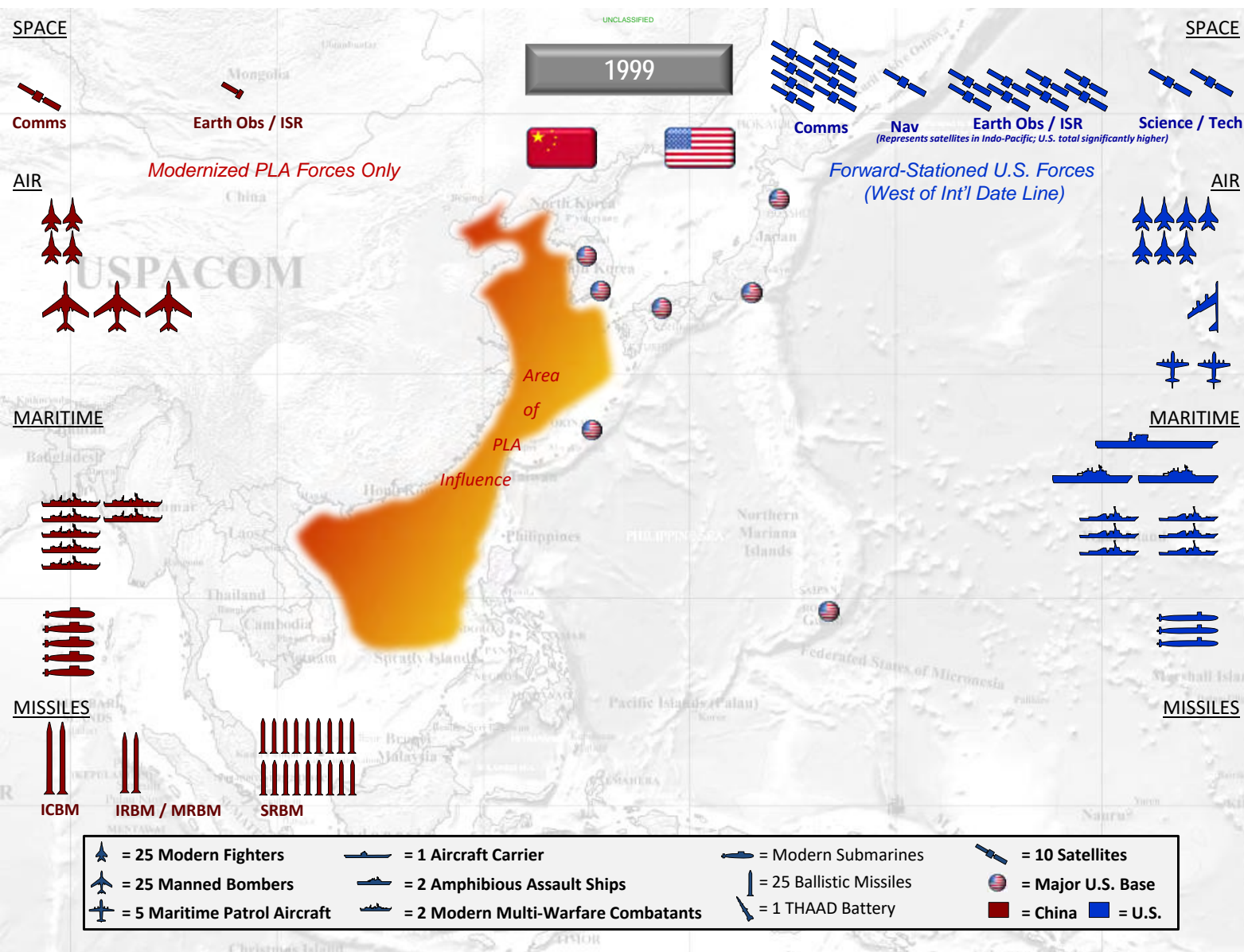
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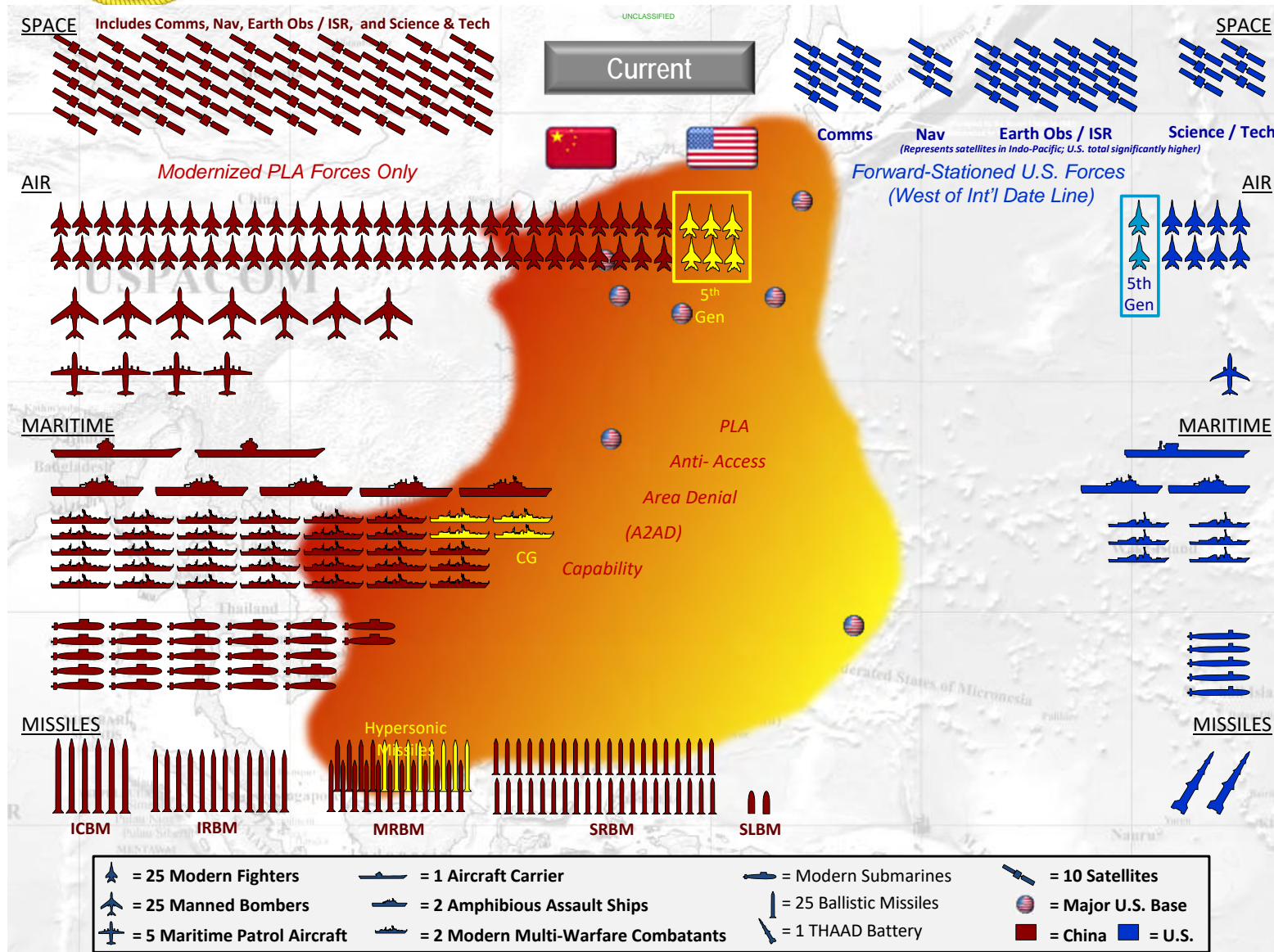


# China's Build-Up (1999)





# China's Build-Up (Current)

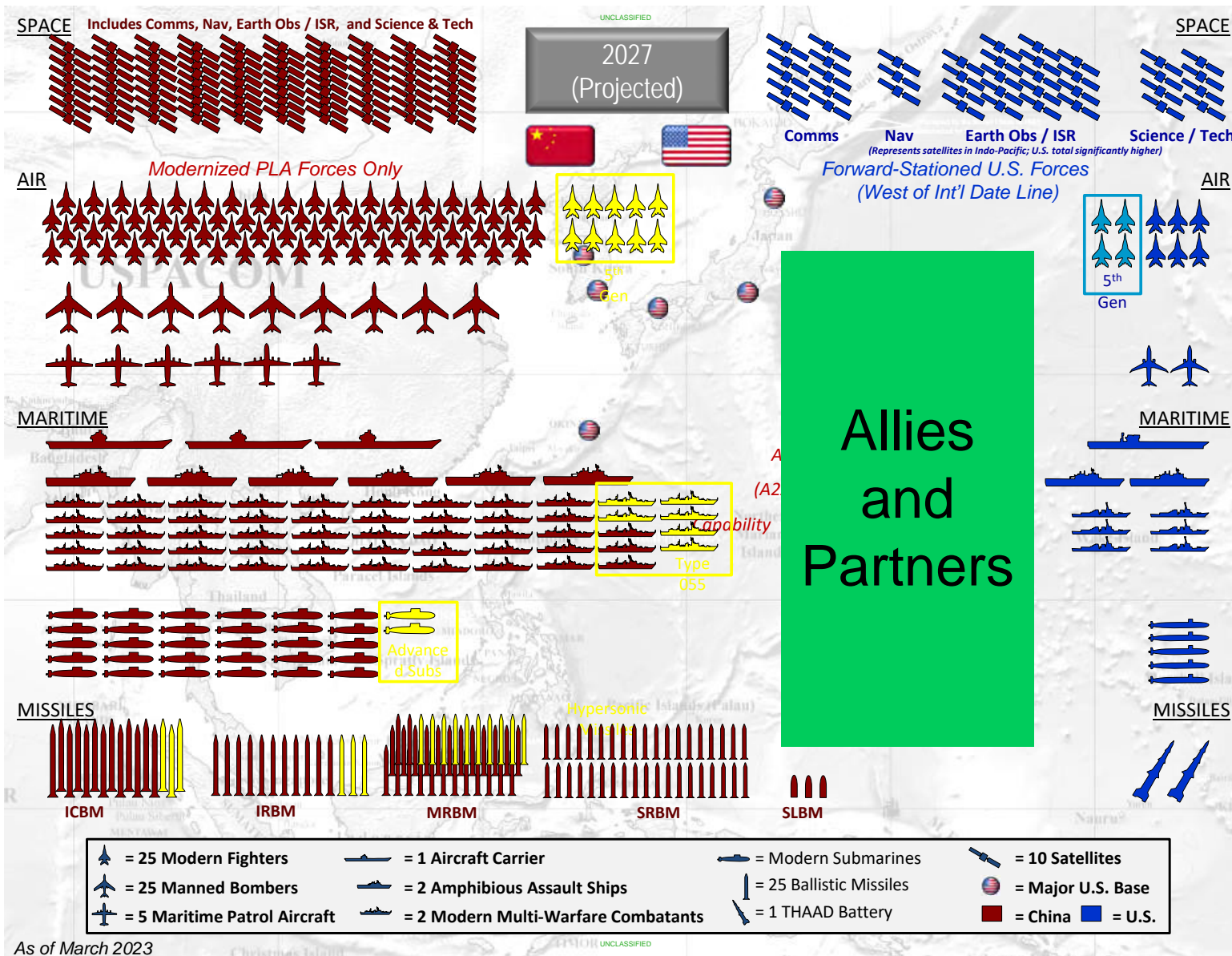


As of March 2023





# China's Build-Up (2027)







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# Guiding Documents

- President
  - National Security Strategy
- SECDEF
  - Regional Sustainment Framework
  - National Defense Strategy
- SECNAV
  - WASSP/WARP
- CNO
  - Maritime Sustainment Strategy
  - NAVPLAN 2024 (Project 33 – Fight from the MOC)
- USFF
  - GMRP
  - SWaRM CONOPS
- CPF
  - Mobile Logistics Campaign Plan
  - Planning Order (June 2023)
    - Maritime Support Plan (MSP) - NAVSEA Planning Order Response





# Wartime Acquisition Response Plan

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ASN(RDA) Memo 04 JAN 2021:

- “An established and practiced wartime response is a core proficiency of both acquisition and warfighter readiness.”
- “...this memorandum serves as a call to action *for each SYSCOM*, their affiliated PEOs and Field Activities, to establish a Wartime Acquisition Response Plan (WARP)...”
- Strategic objectives
  - Capacity building
  - Capability building
  - Data-driven actions and investment
  - Execute contingency operations
  - Train and exercise the workforce to pivot during wartime
  - People and culture





# NAVPLAN / Project 33



- “Navigation Plan Update” summarizes the security environment, technology, progress, and constraints
- “How We Fight” details integration, distributed maritime operations, fighting as a fleet, and building warfighters
- “How We Accelerate?” is about implementing Project 33 and expanding the Navy’s warfighting contribution
- ***“80 percent mission capable/mission ready rate across the fleet”***
- ***“We must build and retain a deep bench of Sailors and civilians . . . and overcome the 22,000 Sailor shortfall we faced at the start of 2024”***

4.1.6 BDA/R

- “more ready players on the field by 2027”
- ***“Fight from the MOC”***





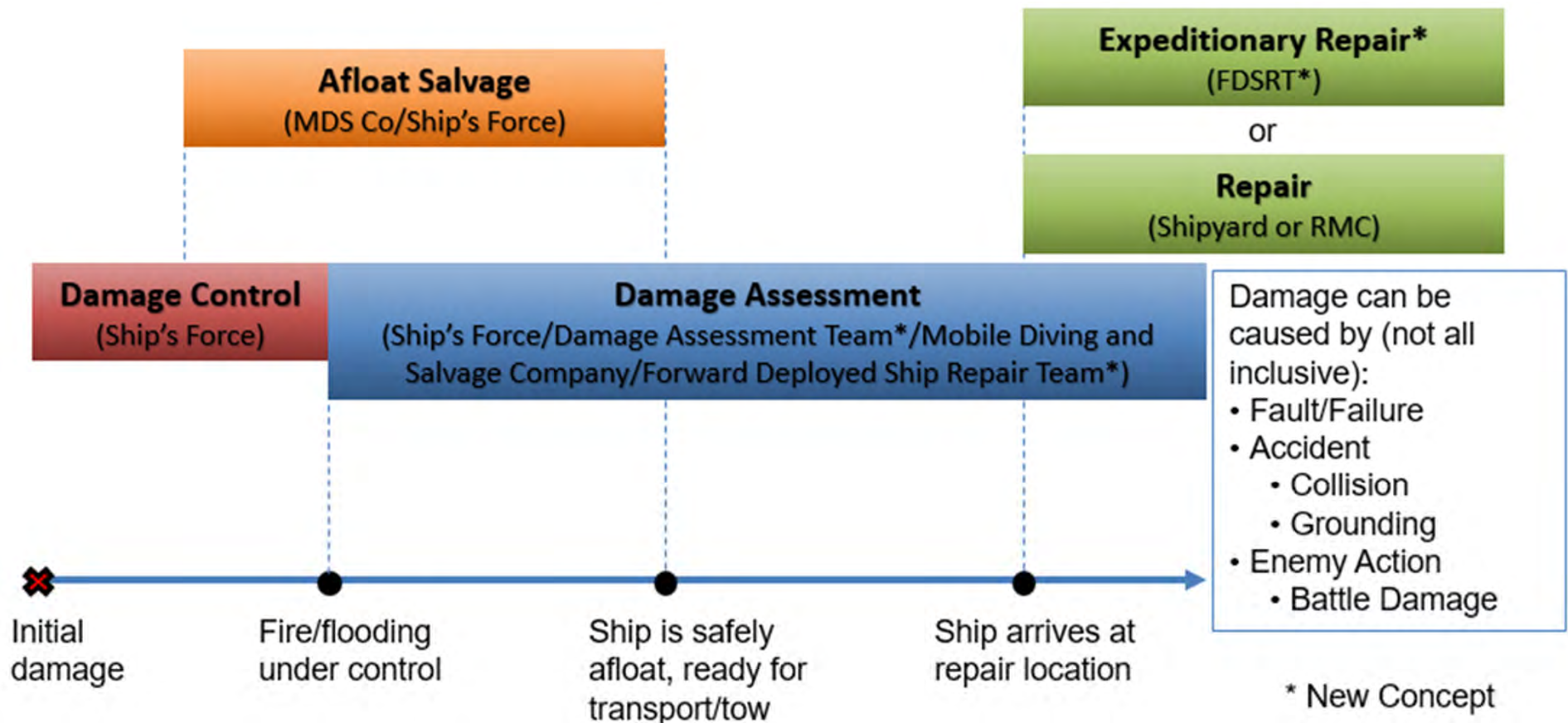
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# BDA/R Continuum



Forward Deployed Ship Repair Team (FDSRT)  
Mobile Diving and Salvage Company (MDS Co)






# Damage Control

- After the vessel sustains damage, crew members conduct efforts to combat, isolate, and minimize damage
  - Firefighting
  - Patching
  - Dewatering
- Main intent is to keep the vessel operable until disposition is determined
  - Remain in the fight
  - Sail for repair
  - Remain afloat until further assistance arrives
- Damage control is primarily the responsibility of Ship's Force
- Damage control efforts will often continue throughout the BDA/R process

# STRUCTURAL DAMAGE


## SIZE IT UP

Casualty initial reports, assessment, evaluation and information  
What do I have

ORDERED	EXECUTED	STR Sag	
		<b>Reported = (Size It Up)</b> <i>Report Casualty Steps</i>	
		1. Report Structural Damage.	
		2. Rapid response on scene.	
		3. Establish communications, take initial actions and report.	
		4. Structural damage in one compartment or compartments.	
		5. Compartment name, number and space access, if accessible.	
		6. Location within the compartment.	
		7. Size and cause of damage (hull rupture, splits, seams, cracks, bulging, etc.).	
		8. Immediate material damage (fixed systems, passive fire protection, etc.).	
		9. Immediate personnel actions (flying squad, repair party services), request assistance.	
		10. Set the box around the damage.	
		11. Determine additional damage (smoke, HAZMAT).	
		12. Determine personnel actions (evacuate the area).	
		13. Report and size up the damage.	
		14. Move to Engage (Fight It).	


## FIGHT IT

Casualty engagement  
What am I doing to make progress

ORDERED	EXECUTED	STR Sag	
		<b>Engaged = (Fight It)</b> <i>Engage Casualty Steps</i>	
		1. Engage Structural Damage.	
		2. Determine attack method.	
		3. Determine type of equipment (steel shoring, wood shoring, shores, PHARS, PECU, PEARS).	
		4. Isolate structural damage within space; maintain boundary boxes.	
		5. Team brief of assessment, tactic, access risk; establish and check boundaries.	
		6. Isolate and electrically disconnect the damage.	
		7. Establish communication with the damage.	
		8. Determine method, continue or terminate the attack.	
		9. As required, determine the attack method takes effect and re-evaluate the damage.	
		10. Casualty Phase.	

## MONITOR IT

The fight is complete,  
No further spread, Clean it up

ORDERED	EXECUTED	STR Sag	
		<b>No = (Monitor It)</b> <i>No Casualty Steps</i>	
		1. No Structural Damage (contained, repaired or isolated).	
		2. Maintain boundary boxes.	
		3. Investigate for hidden and secondary damage in electrical and fluid systems, vital equipment, pass through cables and controllers.	
		4. Clear space of hazards.	
		5. Conduct damage assessment, take photos, and report.	
		6. Debrief team.	

*Damage Control serves to limit the extent of the destruction*



# Afloat Salvage

- Afloat salvage occurs when additional resources arrive to render aid beyond the capabilities of the ship's crew
- Afloat salvage can take many forms, focused on both the ship and the surrounding environment
  - Rescue and assistance (R&A)
  - Emergency repairs beyond Ship's Force capability
  - Object retrieval
  - Environmental cleanup
  - Towing





# Afloat Salvage

- The Navy's R&A capability is primarily comprised of three entities:
  - Military Sealift Command (MSC): Provides the towing and transportation capability as well as salvage vessels
  - Mobile Diving Salvage Units (MDSUs): Provide the personnel to perform salvage and repair operations
  - Supervisor of Salvage and Diving (SUPSALV/NAVSEA 00C): Provides salvage facilities, material, and technical assistance
- R&A efforts prepare the ship for the next steps:
  - Tow or movement to repair facilities
  - Return to fight
- Continued R&A may occur for cleanup and recovery after the ship has moved into the next phase

*R&A provides aid needed for transition to repair or return to operation*





# Damage Assessment

- Damage Assessment is the analysis of a ship's integrity and capability following damage
- **Damage Assessment informs the decision of how to disposition the ship** (return to fight, expeditionary repair, etc.)
- More complete analysis requires more intrusive methods and time
  - Visual assessment
  - Stability assessment
  - Vulnerability models
- Assessment occurs at many levels
  - Ship's Force
  - Salvage Forces (MDSU, SUPSALV)
  - Ashore Damage Assessment Teams: Regional Maintenance Center (RMC), Naval Shipyard (NSY), Naval Systems Engineering & Logistics Directorate (SEA 05)

*Damage Assessment determines how repairs will be addressed*



# Expeditionary Repair

- Expeditionary repair is a **new concept** involving repair conducted by a dedicated maintenance team, such as a Forward Deployed Ship Repair Team (FDSRT), at a forward location
- Its purpose is to **restore partial or full mission capability without return to a depot-level facility**
- FDSRTs composed of personnel brought from larger facilities, e.g., NSYs, RMCs, SurgeMain, and Contractors
- Shop-in-a-Box (SIB) containers to enhance expeditionary repair:
  - SIB will enhance the repair capabilities at Shore Facility Intermediate Maintenance Activity (SFIMA) and FDSRT levels by providing boxes of materiel, tooling, and equipment to supplement existing assets or build up organic capabilities
  - Contents based on tiered system for various phases of the repair continuum and specialized for tasks (pumping, power restoration, etc.)
    - Tier 1: Afloat Salvage and Damage Assessment
    - Tier 2: Expanded capabilities for Expeditionary Repair
    - Tier 3: Major Expeditionary Repair and additional maintenance capabilities

*Expeditionary repair provides in-theater maintenance to accelerate return to operation*

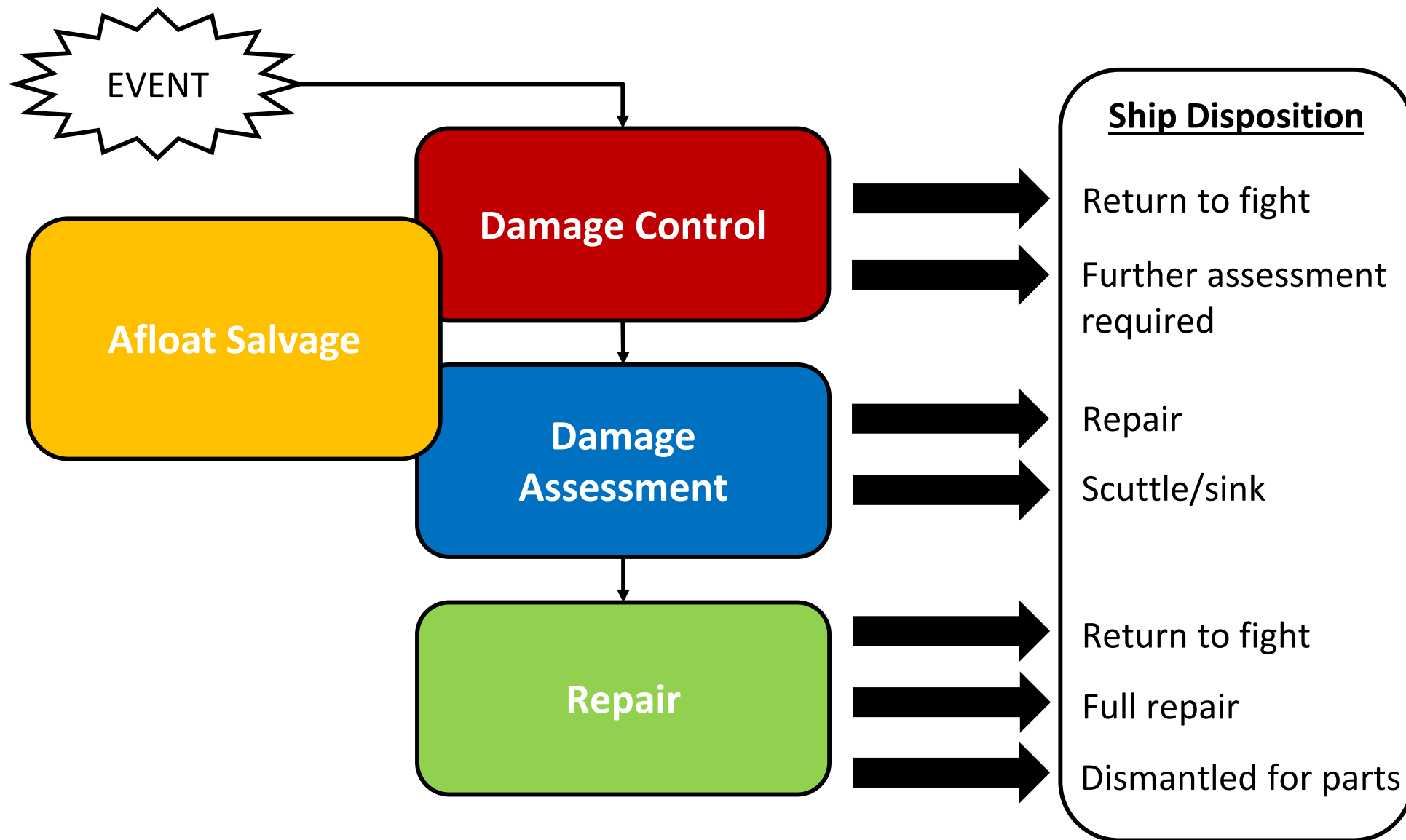


# Repair

- Higher-level repairs take place at a dedicated facility such as Public or Private Shipyards overseen by Naval Supervising Activity (NSA) (i.e., NSY, RMC, Supervisor of Shipbuilding (SUPSHIP))
  - Manning, capabilities, and facilities of a dedicated maintenance/repair activity provide the opportunity for more complete repair
- Depot-level repair can require extensive planning and resources that will impact the facility's current planned workload (i.e., new construction, CNO availabilities, Continuous Maintenance availabilities (CMAV))
- Final disposition includes three options:
  - Complete repair: may require extended duration in-port but returns a fully capable ship
  - Partial repair: returns the ship with required capabilities in a more timely manner
  - Scrapping: when damage is too severe to repair or cannibalization is more operationally effective, the ship can be broken up for parts



# Outcomes in BDA/R Continuum







# Factors Affecting Ship Disposition

- Threat level:
  - Ability to take down required systems for maintenance/repair
  - Danger to R&A and repair personnel (especially civilian and Contractor)
- Operational scenario and timelines
  - May require quicker return to service than full repair allows
  - Unique needs of the situation determine what capabilities must be returned
- Extent of damage
  - Mission critical vs. non-mission critical systems
  - Returning some capabilities to the fight may be worth leaving others degraded
- Availability/capability of nearby facilities
  - Transit time/resources
  - Cost
  - Escort

*EDOs are essential in assessing and informing decisions in a damage scenario*



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# Maritime Support Plan (MSP)

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- CPF PLANORD issued 22 Jun 23, tasking NAVSEA to develop a MSP prepare to provide specified maintenance and repair tasks forward, and across the spectrum of conflict
- NAVSEA MSP presented to CPF 30 Aug 23
  - Defines Force Packages comprised of equipment and/or people to support maintenance and repair
  - Designates NAVSEA as **lead integrator** for MSP execution
- Force Packages = People and equipment/tools
  - Afloat Augmentation
  - Afloat Independent
  - Ashore Robust
  - Ashore Lean
  - Ashore Austere



# MSP – Force Package Summary

- Afloat Augment – Augment organic Intermediate Maintenance capability of deployed CSG/ESD/T-AS
  - Address gaps (manning and skills) to intermediate maintenance Required Operating Capabilities Projected Operating Environment (ROC&POE)
  - Increased capability and capacity of existing equipment with skilled artisan workforce
- Ashore Robust – Contract Management Oversight of foreign maintenance capability
- Afloat Independent – Intermediate Maintenance Activity (IMA) afloat ("tender-like" capability)
  - Consolidated on single large Vessel of Opportunity (VOO), or distributed across multiple smaller VOOs
  - Comprised of multiple Force Package Elements (FPEs) of equipment and people, each FPE to address a specific repair capability
  - Total FP's individual FPE's tailorable, and in aggregate provide required IMA capability
- Ashore Lean – Intermediate Maintenance Activity (IMA) ashore
  - Comprised of multiple Force Package Elements (FPEs) of equipment and people, each FPE to address a specific repair capability
  - Total FP's individual FPEs tailorable, and in aggregate provide required IMA capability
  - Utilizes ashore infrastructure for Base Operations Support functions
- Ashore Austere – Ashore Lean capability with Base Operations Support requirements provided by other units deployed to a designated location





# Afloat Augmentation

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- Force Package Definition
  - 25-50 personnel
  - Tailored to augment manning / skill gaps of afloat IMA
  - Enables 24/7 repair of casualties within the strike group with fly-away
- C2
  - Personnel report to CSG / ESG via ship CO
  - NAVSEA retains ADCON
- Supported Command Requirements
  - CSG / ESG and Ship provide tasking, materials, equipment, and habitability services (racks, office space, communications and food)
- Supporting Command Requirements
  - NAVSEA provides people to CSG / ESG
  - TYCOM determines afloat IMA gaps



# Ashore Robust

- Force Package Definition
  - Repair Availability Project Team to execute Contract Management Oversight (CMO) for D-level ship repair at contracted, private shipyards
  - Port location has significant infrastructure and industry available to support ship maintenance, repair, and husbandry (Robust)
  - Most work conducted by contractors with US capabilities for oversight and support for IMA level work as required (can be combined with Ashore Lean Force Package)
- C2
  - FDSRT could remain under NAVSEA OPCON (through crisis), or could fall under Task Force OPCON when established & become an Expeditionary Maintenance and Repair Unit (EMRU)
  - NAVSEA retains ADCON of deployed forces



# Ashore Robust (cont.)

- Supporting Command Requirements
  - NAVSEA CMO Team includes Project Manager (PM), Marine Surveyor (MS), QAS, Support Engineer, Fire & Safety Officer, and a Logistics Management Specialist
    - Team develops work specs and procedures to mitigate lack of Foreign Contractor (FC) familiarization with NAVSEA requirements, including PCPs for critical work
  - Host Nation provides (via US Embassy), access, basing and overflight (ABO) agreements to allow access of US Navy vessels for repairs and sustainment, coordination with Host Nation shipyard, lodging for team (PT) and support personnel
  - NAVSUP provides contracting services
  - NAVFAC or Host Nation provides facilities for Government personnel, warehousing
  - CNIC or Host Nation provides Port Operations and ship husbanding services, and basing functions





# Afloat Independent

- Force Package Definition
  - Expeditionary Maintenance and Repair Unit (EMRU) (FDSRT + EMRF under Task Force command structure) to accomplish tender-like IMA level work
  - Consists of an EMRF and FDSRT
  - Fleet to define size of the FDSRT and the ship (USS / USNS / contracted VOO)
  - Can deploy on a single ship or distributed over multiple ships
- C2
  - Unit assigned OPCON/TACON to Task Force Commander
  - NAVSEA retains ADCON of deployed forces
- Supported Command Requirements
  - Task Force Commander provides ship(s), EMRF capabilities, and directs movements / tasking
- Supporting Command Requirements
  - NAVSEA provides Force Package to Task Force Commander
  - Vessel provides laydown and power for the EMRF and habitability services



# Ashore Lean

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- Force Package Definition
  - Force Packages (or EMRU) to accomplish IMA level work at a port location
  - Port location has some shore infrastructure available to support ship repair, maintenance and husbandry (Lean)
  - FDSRT relies on local habitability services
- C2
  - FDSRT could remain under NAVSEA OPCON (through crisis), or could fall under Task Force OPCON when established (become an EMRU)
  - NAVSEA retains ADCON of deployed forces



# Ashore Lean (cont.)

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- Supported Command Requirements
  - Fleet or Task Force Commander provides movement, lay-down, and tasking
- Supporting Command Requirements
  - NAVSEA provides Force Package to Fleet or Task Force Commander
  - Host Nation provides (via US Embassy), access, basing and overflight (ABO) agreements to allow access of US Navy vessels for repairs and sustainment, coordination with Host Nation shipyard, lodging for team (PT) and support personnel
  - NAVSUP provides contracting support
  - NAVFAC provides facilities for Government personnel, warehousing
  - CNIC provides Port Operations and ship husbanding services





# Ashore Austere

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- Force Package Definition
  - EMRU to accomplish IMA level work at a port location
  - Port has no shore infrastructure available to support ship repair, maintenance, and husbandry (Austere)
  - Requires Navy Expeditionary Combat Command (NECC) support for sustainment
- C2
  - EMRUs are assigned OPCON/TACON to Task Force Commander
  - NAVSEA retains ADCON of deployed forces
- Supported Command Requirements
  - Task Force Commander provides movement, lay-down, and tasking



# Ashore Austere (cont.)

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- Supporting Command Requirements
  - NAVSEA provides Force Package to Task Force Commander
  - Host Nation provides (via US Embassy) access, basing and overflight (ABO) agreements to allow access of US Navy vessels for repairs and sustainment
  - NAVSUP provides contracting support for ship husbanding requirements, translation services, transportation, etc.
  - NAVFAC/NECC provides facilities for personnel to execute CMO functions, warehousing, hotel services for project team facilities and equipment (fuel, power, water, etc.), and expeditionary piers (Mulberry Harbors) for vessels unable to berth at the austere location's ports
  - CNIC provides Port Operations and ship husbanding services (location dependent)
  - NAVWAR



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# Expeditionary Maintenance & Repair Facility

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- Expeditionary Maintenance and Repair Facilities (EMRFs) are mobile maintenance and repair facilities that are comprised of a set of Expeditionary Maintenance and Repair Containers (EMRCs)
  - Machinery
  - Tools
  - Equipment
  - Supplies required to conduct IMA level work





# Expeditionary Maintenance & Repair Facility

- Capabilities: Each EMRF is a suite of custom designed mobile maintenance and repair facilities provides Industrial Plant Equipment (IPE), materials, and applicable workspaces to execute required IMA level maintenance and repair in seven primary capability sets:
  - Hull/Structural
  - Inside/Outside Machine
  - Electrical
  - C4I and Combat Systems (C5I)
  - Support Services
  - EMRC Hotel Services
  - Material Storage
- Size: A full EMRF is expected to be a set of approximately 14 - 42 EMRCs and 8 power packs, and is scalable and separable depending on the Fleet's mission needs



# Expeditionary Maintenance & Repair Facility

- Transport: EMRCs are designed to be transported by land, air, or sea and meet the DoD Joint Standards Board requirements for shelters. They are the same size/shape as a 20ft Shipping Container to allow for this multi-modal deployability
- Remote Support: The EMRF will include 'Distance Support – Remote SME' capabilities that create a digital mesh network and connects remotely through Starlink (low side) and Starshield (high side) or equivalent systems
- Acquisition: NAVAIR PMA 260 (Marine Aviation Logistics Program) design specifications are being leveraged for EMRCs. The future Program Office for resourcing & maintaining EMRCs will fall under SEA-21. Once assigned, a short and long-term acquisition strategy will be developed



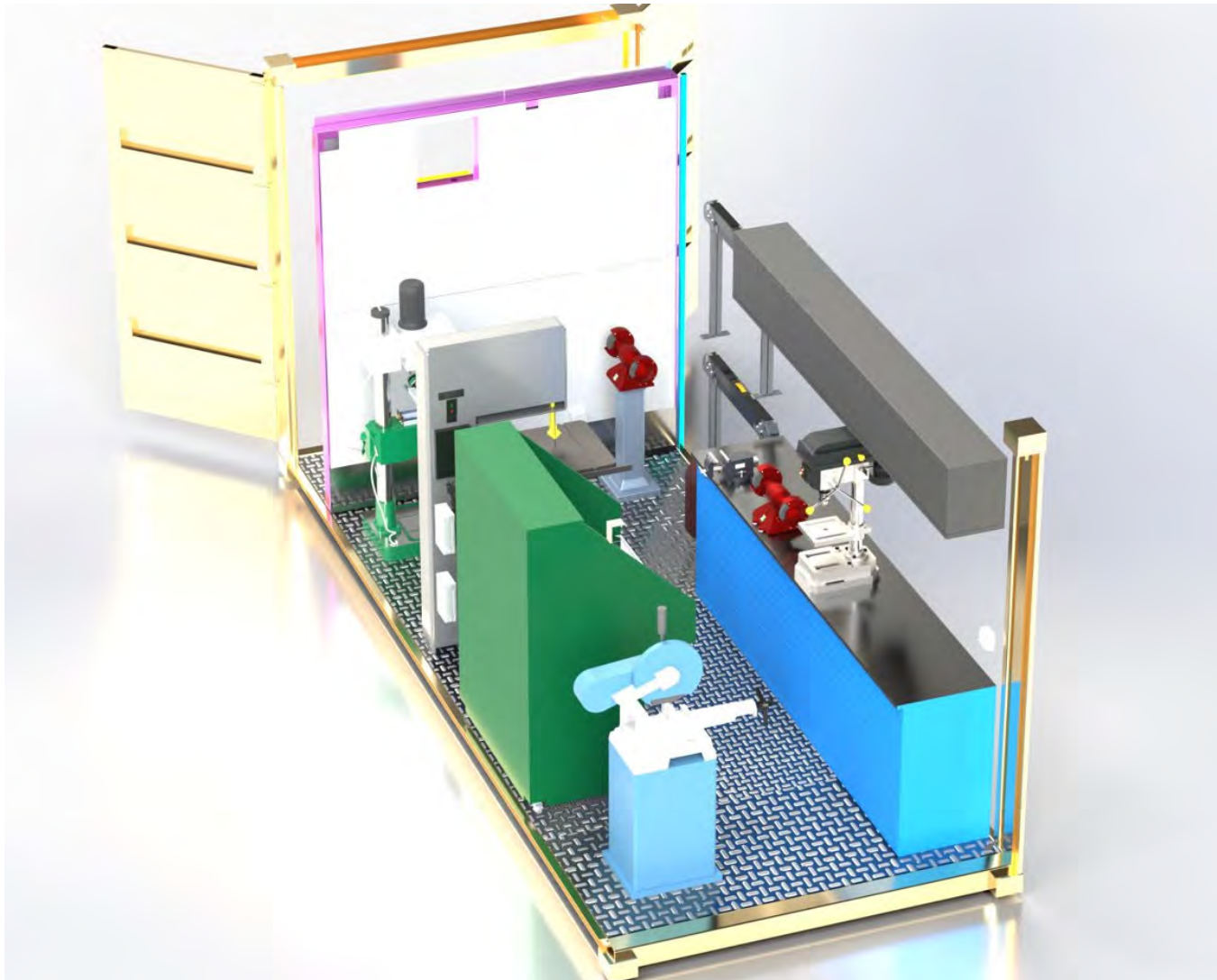
# Expeditionary Maintenance & Repair Facility

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- Hull/Structural: Welding, Brazing, Structural Repair, Piping Repair, Preservation, Boat Repair
- Inside/Outside Machine: Fluid Flow, Mechanical, Piping Systems, Pump/Compressor, HVAC Tech, Hydraulic, Machinery/Valve, Diesel, Gas Turbine, UNREP, Helicopter Landing Site Equipment
- Electrical: Power Distribution, Lighting, 2M, Cable/Fiber Optic
- C4I and Combat Systems (C5I): CS Alignment, AEGIS, VLS, Gun Repair, Electronics, IC, Antennas, Weapons Systems
- Support Services: Machine Shop, Advanced Manufacturing, Cold Spray, Calibration/NDT, Weight Handling/Rigging, Gas Generation, Fly-Away Dive Locker (FADL), Proj. Mgmt/Engineering Services
- EMRC Hotel Services: Power, HVAC, LPAC
- Material Storage: Tool Room, Scaffolding, Temporary Services, Raw Materials, etc.



# Misc Workshop





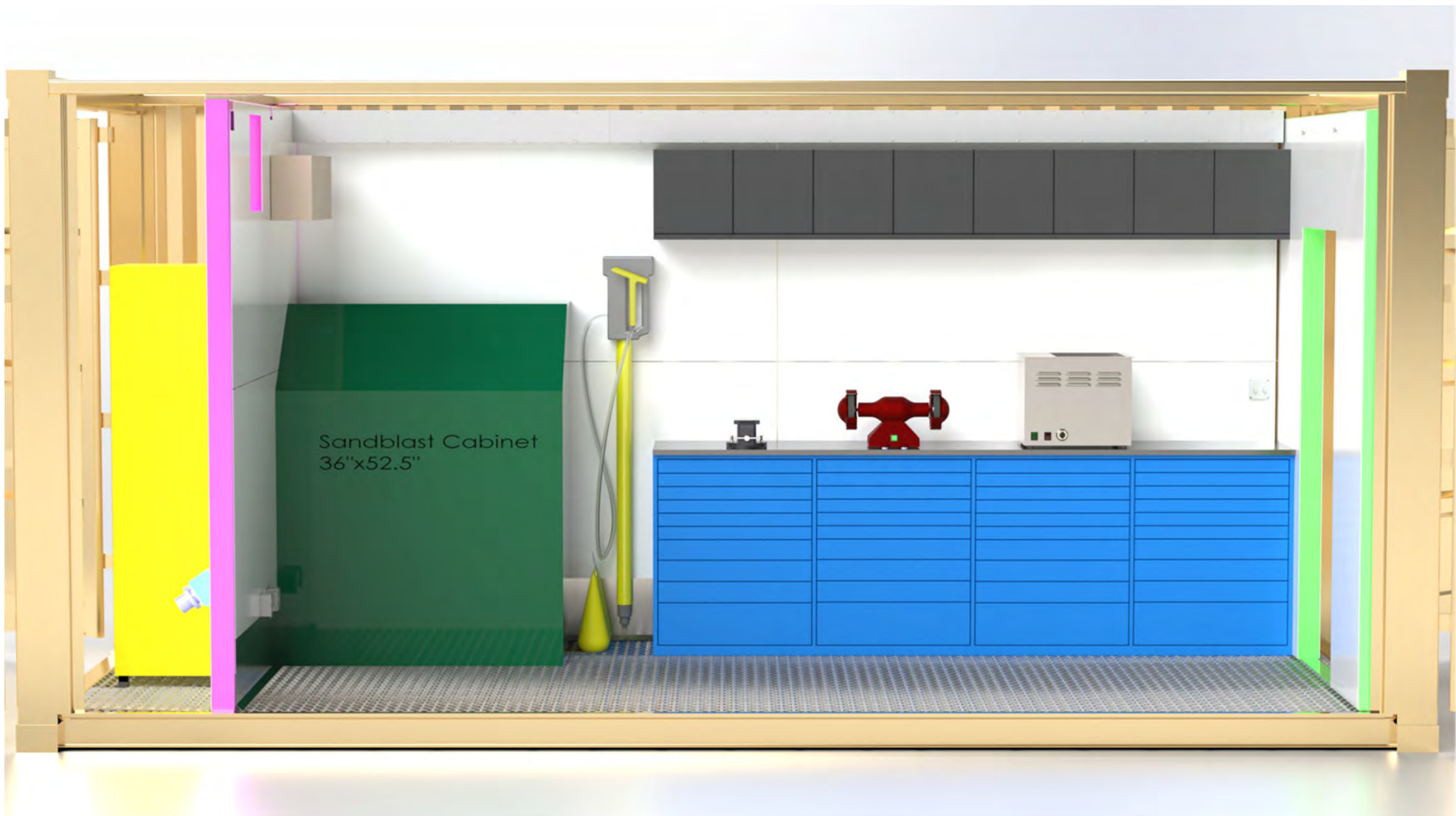


# Sheet Metal/Pipe Bending





# Parts Cleaning





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# Forward Deployed Ship Repair Team (FDSRT)

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- FDSRT is the PEOPLE
  - Mission Set
    - Expeditionary Repair Availabilities
    - Battle Damage Assessment / Repair (BDA/R) team
    - Contract Management Oversight (CMO) of foreign contractors
    - Fleet Technical Assist
  - Source
    - NAVSEA & NAVWAR teams (AC/RC/Civ/CTR)
  - Concept
    - Minimum number of people → broad skills vice specialist
  - NEC Focused
  - Field Activities will compose teams and pipelines
    - RMCs, NSYs, WCs



# FDSRT Skillsets (quantities)

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- Leadership (3)
- Combat Systems and AEGIS SMEs (5)
- Engineers and Planners (12)
- Project Manager (5-10)
- Contracting and Logistics (5-8)
- Divers (18)
- Riggers (10-20)
- Structural (20)
- Piping (10-15)
- Machinery (20)
- Electrical (20)
- Electronics (20)
- Temporary Services (10-15)
- QAS (NDT capable) (10)
- Safety (4)
- Ordnance (2)
- 2M Technician (2)
- Additional SME as req

*Approximately 200 personnel per FDSRT*





# Overview

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- Need for BDA/R
- Guiding Documents
- BDA/R Continuum
- Maritime Support Plan
- Expeditionary Maintenance & Repair Facility
- Forward Deployed Ship Repair Team (FDSRT)
- Warfighting Readiness Event
- Command & Control
- Contracting strategies and funding considerations
- Summary



# Warfighting Readiness Events

- Ship Wartime Repair & Maintenance Exercise (SWaRM-EX)
  - OCONUS NSA led D-Level CMAV
  - 2-3 weeks of planned and corrective maintenance work
  - May have Warfighting Readiness events included
- Objective:
  - Demonstrate NAVSEA integration of resources to form Ashore and Afloat Force Packages (FDSRT and EMRF capabilities)
- Salvage Exercise (SALVEX)
  - MDSU led
- Voyage Repair (VR)
  - OCONUS NSA Led
- Battle Damage Assessment and Repair Exercise (BDAR-EX)
  - CPF directed and supported by NAVSEA
  - TTX focused
- Expeditionary Maintenance and Repair Availability (EXRAV)
  - ISIC: CONUS NSA led I-Level EMRT
  - NSA: OCONUS NSA
  - Core capabilities will include subset of established Force Package Elements



# Overview

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# Theater Joint Force Maritime Component Commander (T-JFMCC)

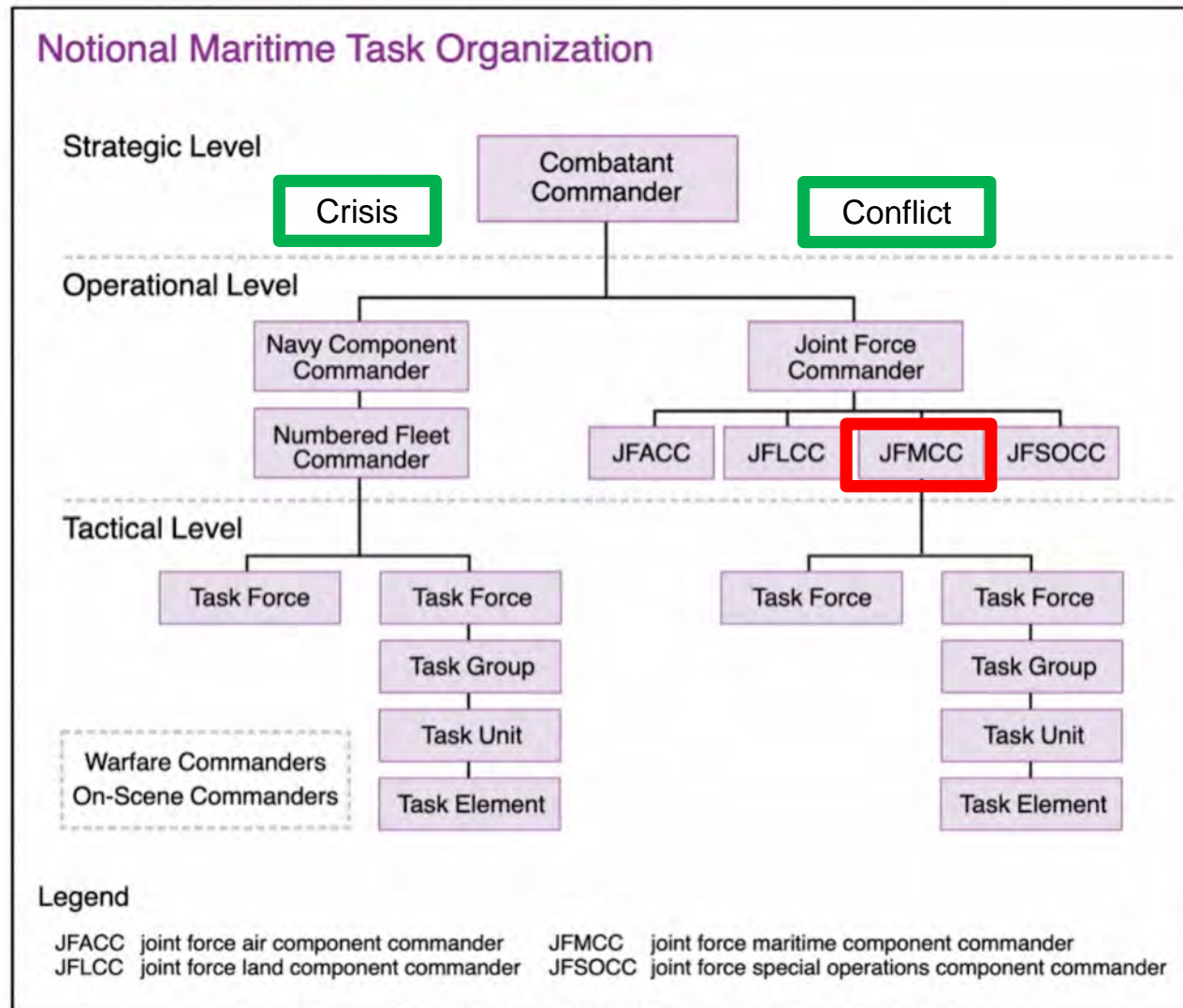
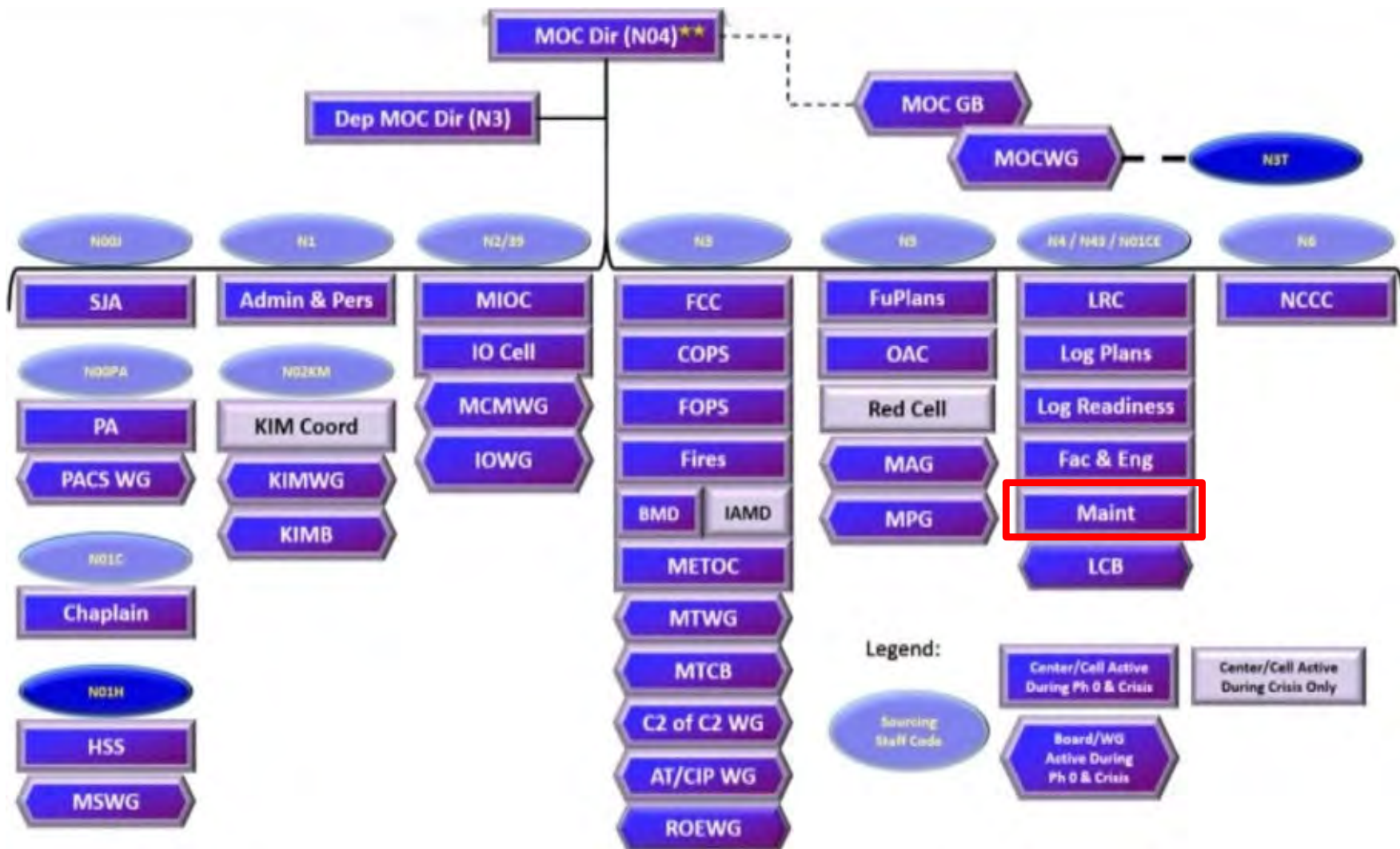


Figure IV-1. Notional Maritime Task Organization



# T-JFMCC MOC Structure







# Authorities

- **OPCON (Operational Control)**: the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission
- **TACON (Tactical Control)**: the authority over forces that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish missions or tasks assigned
- **ADCON (Administrative Control)**: the authority a commander has over subordinate forces regarding administrative matters like personnel management, supply, training, unit readiness, and discipline
- **DIRLAUTH (Direct Liaison Authority)**: is a communication authorization that allows a subordinate to directly coordinate with a command or agency. It can be used during joint military operations, humanitarian crises, and disaster relief



# Orders

	Order Type	Intended Action	Secretary of Defense Approval Required
Warning order	WARNORD	Initiates development and evaluation of COAs by supported commander. Requests commander's estimate be submitted.	No. Required when WARNORD includes deployment or deployment preparation actions.
Planning order	PLANORD	Begins planning for anticipated President or SecDef-selected COA. Directs preparation of OPORDs or contingency plan.	No. Conveys anticipated COA selection by the President or SecDef.
Alert order	ALERTORD	Begins execution planning on President or SecDef-selected COA. Directs preparation of OPORD or contingency plan.	Yes. Conveys COA selection by the President or SecDef.
Operation order	OPORD	Effect coordinated execution of an operation.	Specific to the OPORD.
Prepare to deploy order	PTDO	Increase/decrease deployability posture of units.	Yes (if allocates force). Refers to five levels of deployability posture.
Deployment/redeployment order	DEPORD	Deploy/redeploy forces. Establish C-day/L-hour. Increase deployability. Establish joint task force.	Yes (if allocates force). Required for movement of unit personnel and equipment into combatant commander's AOR.
Execute order	EXORD	Implement President or SecDef decision directing execution of a COA or OPORD.	Yes.
Fragmentary order	FRAGORD	Issued as needed after an OPORD to change or modify the OPORD execution.	No.

## Legend

AOR     area of responsibility  
 C-day   unnamed day on which a deployment operation begins  
 COA     course of actions  
 L-hour   specific hour on C-day at which deployment operation commences or is to commence  
 SecDef   Secretary of Defense

Ref: Joint Publication 5-0, I-17



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# Contracting Strategies

- *Contracting strategies for BDA/R would be formulated based on the specific requirements of the situation in close coordination with warranted Contracting Officers*
- Federal Acquisition Regulations (FAR)/Defense FAR (DFAR) recognizes the need for acquisition flexibility in contingency and emergency situations
- Acquisition Flexibilities (FAR/DFARS Part 18/218) states contingency contracting and emergency acquisition is frequently performed on short notice and without benefit of an established office structure, thus certain acquisition and emergency flexibilities are prescribed:
  - Dollar thresholds for procurements are increased
  - Simplified forms and procedures are authorized



# Contracting Strategies

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- Letter Contracts (FAR Part 16.603) are a means to authorize a Contractor to immediately begin delivering supplies or performing services before the terms and conditions of the contract can be agreed upon also known as Undefined Contract Actions (UCA)
  - This strategy is used only when negotiating a definitive contract is not possible in sufficient time to meet the requirement, and
  - The Government's interest demands that the Contractor start immediately





# Contracting Considerations

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- Ship repair of U.S. based ships away from homeport has specific legal requirements:
  - Under current statute/law, all ship repair (Availability) for U.S. based (or U.S. homeported) ships are to be accomplished by a U.S. company
  - U.S. based ships can have voyage repairs conducted overseas by a foreign company, but voyage repairs are limited to restoring the capability of the ship to return to the U.S. for permanent repair
  - The only exception is declared Forward Deployed Naval Forces (FDFN), these ships can be and are repaired overseas by foreign companies



# Funding

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- Fleet Commanders (i.e., PACFLT, USFF) through their respective Fleet Maintenance Officers (FMO) are responsible for budgeting, scheduling, and executing ship maintenance and modernization, including emergent maintenance requirements
- Depot level work not scheduled (emergent repairs) is funded under DoN Restricted Availability/Technical Availability (RA/TA) program with OMN
  - Other RA/TA (ORATA)
  - Emergent RA/TA (ERATA) also known as emergent repair
    - FY18 request for additional appropriations included emergent repairs (\$673M) for USS FITZGERALD (DDG 62) and USS JOHN S MCCAIN (DDG 56)
- Additionally, Echelon 2 Fleet Commanders (i.e., PACFLT, USFF) are responsible for funding all costs related to salvage or recovery of fleet assets under their cognizance



# OMN Funding Example

Department of the Navy  
FY 2019 President's Budget Submission  
Operation and Maintenance, Navy  
Budget Activity: Operating Forces  
Activity Group: Ship Operations  
Sub-activity Group: Ship Maintenance

	<u>Prior Year (FY 2017)</u>						<u>President's Budget (FY 2018)</u>						<u>Budget Year (FY 2019)</u>
	<u>Budget</u>		<u>Actual Inductions</u>		<u>Completions</u>		<u>Budget</u>		<u>Estimated Inductions</u>		<u>Carry-In</u>	<u>Budget</u>	
	Qty	(\$ in K)	Qty	(\$ in K)	Prior Yr	Cur Yr	Qty	(\$ in K)	Qty	(\$ in K)	Qty	Qty	(\$ in K)
Overhauls	3.0	999,605	3.5	1,251,281	3.0	0.0	3.0	1,005,268	3.0	926,348	6.0	1.0	1,175,748
Selected Restricted Availabilities (SRA)	9.0	595,302	30.5	1,509,500	14.0	10.5	12.0	1,216,756	18.0	1,604,976	9.0	3.0	1,239,996
Surface Incremental Availabilities (SIA)	0.0	0	2.0	24,122	0.0	1.0	2.0	0	0.0	0	0.0	0.0	638
Planned Incremental Availabilities (PIA)	1.0	323,297	1.5	523,403	2.0	0.0	0.0	600,727	1.0	773,758	2.0	1.0	752,756
Planned Maintenance Availabilities (PMA)	1.0	40,253	7.5	335,060	9.0	3.0	2.0	16,203	0.0	26,655	2.0	0.0	172,082
Carrier Incremental Availabilities (CIA)	2.0	17,667	2.0	27,475	0.0	2.0	2.0	100,518	3.5	19,117	0.5	1.0	13,674
Service Craft Overhauls (SCO)	1.0	32,481	1.0	21,481	0.0	0.0	0.0	396	0.0	380	0.0	0.0	27,095
Emergent Repair (ERATA)	n/a	232,334	n/a	163,616	n/a	n/a	n/a	184,738	n/a	853,805	n/a	n/a	172,513
Miscellaneous RA/TA (ORATA)	n/a	956,455	n/a	1,237,874	n/a	n/a	n/a	1,495,699	n/a	1,267,762	n/a	n/a	1,506,087
Continuous Maintenance (CM)	n/a	199,401	n/a	385,725	n/a	n/a	n/a	401,628	n/a	354,080	n/a	n/a	338,117
Reimbursable Overhead	n/a	514,288	n/a	481,558	n/a	n/a	n/a	547,128	n/a	585,354	n/a	n/a	539,042
Non-depot / Intermediate Maintenance	0.0	1,274,353	0.0	1,488,261	1.0	0.0	0.0	1,600,402	1.0	1,433,123	0.0	0.0	1,503,674
Congressional/Departmental Shift	n/a	0.0	n/a	0	n/a	n/a	n/a	0.0	n/a	0	n/a	n/a	-2,769,000
TOTAL	17.0	5,185,436	48.0	7,449,356	29.0	16.5	21.0	7,169,463	26.5	7,845,358	19.5	6.5	4,672,422



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# Summary

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- What document has directed SYSCOMs, affiliated PEOs and Field Activities to develop war-time response plans, to include ability to do battle damage repair?
  - ASN(RD&A) Wartime Acquisition Response Plan (WARP)
- What are the phases of the BDA/R continuum?
  - Stabilization, R&A, Damage Assessment, Expeditionary Repair or Repair





# Summary

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- What phase of the BDA/R continuum is focused on determining impact to equipment and mission warfare areas? Who will be involved in this step?
  - Assessment phase
  - NAVSEA 00C, Fleet Salvage Officer, Fleet/TYCOM, NAVSEA: RMC, NSY, SEA05, SUPSHIP, PEOs
- Who will maintain OPCON/TACON of an affected unit in a BDA/R situation? Who will provide support to operational/tactical Commanders?
  - Fleet Commanders retain OPCON/TACON
  - SYSCOMs, TYCOMs provide support to operational/tactical Commanders
- What strategy can a contracting officer use to authorize a contractor to immediately begin delivering supplies or performing services before the terms and conditions of the contract are agreed upon?
  - Letter Contract (FAR Part 16.603) also known as Undefined Contract Actions (UCA)