



# **21st NDIA Expeditionary Warfare Conference**

## **Navy Expeditionary Combat Command Balancing Capabilities & Capacity**

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NECC/NECCPAC**

*11 October 2016*

**Unclassified**



# Outline



- **Force Overview**
- **Organization**
- **NECF Innovations**
  - **New Capabilities**
  - **Recent Exercises**
- **NECF Future Capabilities**

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# Navy Expeditionary Combat Command



Coastal Riverine



Explosive Ordnance Disposal



Naval Construction (Seabees)

## ***Navy Expeditionary Combat Command Mission:***

*Organize, man, train, equip and sustain Navy Expeditionary Combat Forces to execute combat, combat support, and combat service support missions across the full spectrum of joint, combined, multinational, and civil-military operations to control and enable freedom of action throughout the sea-to-shore and inland operating environments.*



Expeditionary Intelligence



Combat Camera



Expeditionary Logistics



Expeditionary Combat Readiness

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# Navy Expeditionary Combat Force Responsibilities



- **Navy Expeditionary Combat Forces (NECF) operate forward around the globe supporting the fleet in every theater.**
  - **Clear** the battlespace of explosive, security and physical hazards; shaping the security environment
  - **Secure** the battlespace, throughout the littorals, for U.S., joint and coalition partner access and action
  - **Build** partnerships leading to domain access awareness through assured command and control (C2) and critical infrastructure development
  - **Protect** from threats to through Battlespace Awareness and Integrated Fires

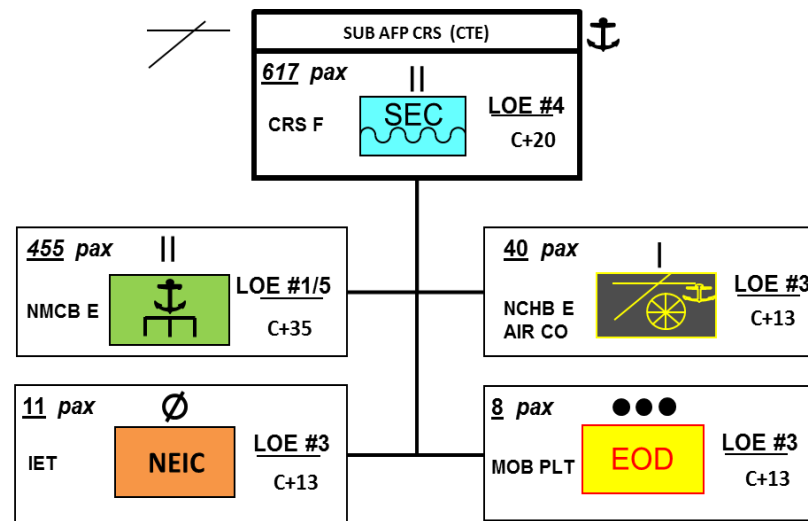


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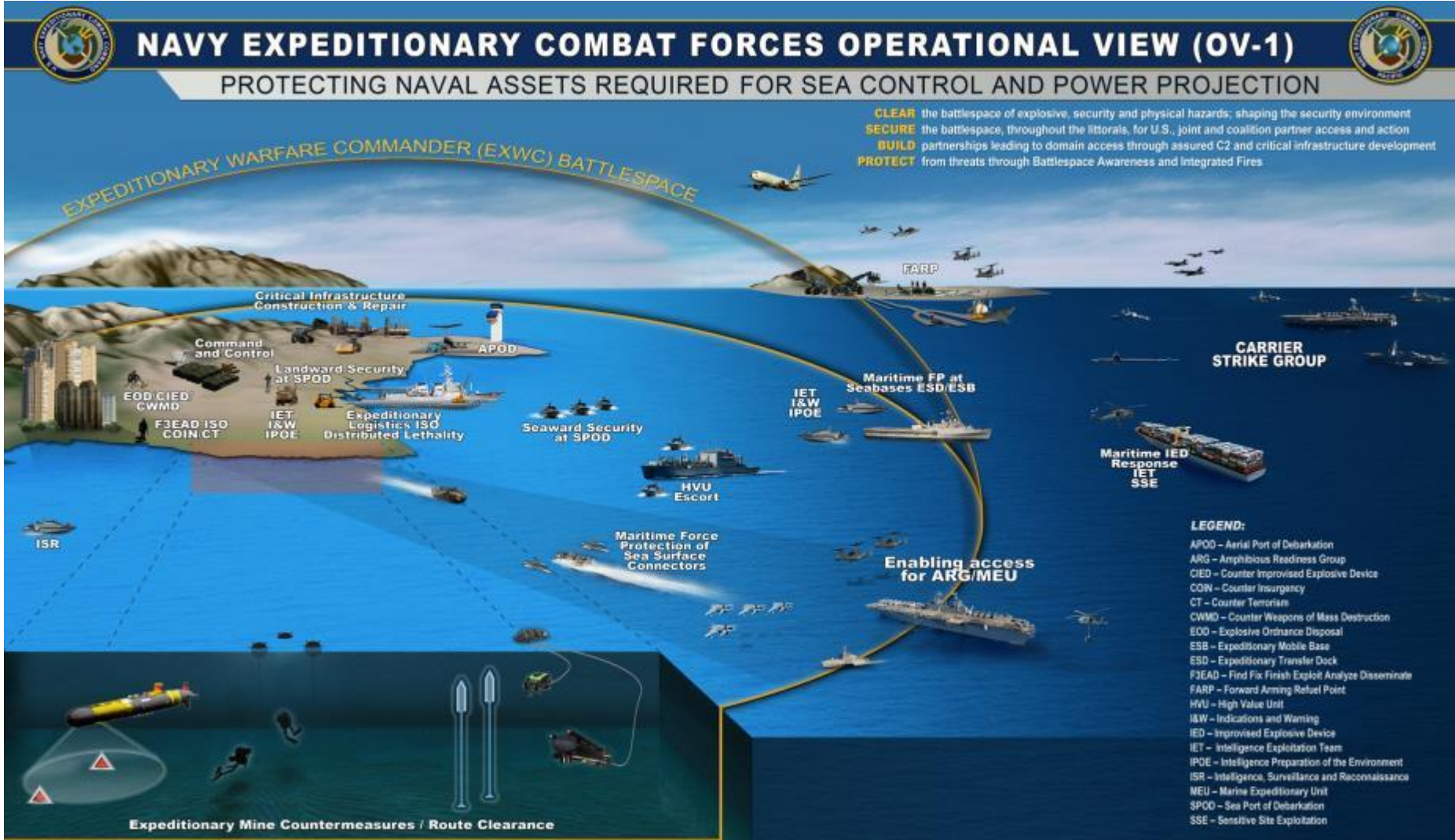
# Navy Expeditionary Combat Force – How We Fight Today

- Task Organized into Adaptive Force Packages (AFPs)
  - O5/O6 command
  - Expeditionary operations in austere locations
- Adaptive Force Packages (AFP) are scalable in capability, size and scope; task-oriented consistent with supported-commander requirements, and by their very nature expeditionary
- The use of AFPs provide the Navy Expeditionary Combat Force (NECF) sustainable operational warfighter capabilities
- The Navy Expeditionary Combat Command (NECC) routinely uses major fleet and combined exercises to test concepts, interoperability and exercise NECF Command Elements in Navy Mission Essential Tasks (NMET)





# Navy Expeditionary Combat Forces Battlespace



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# Outline

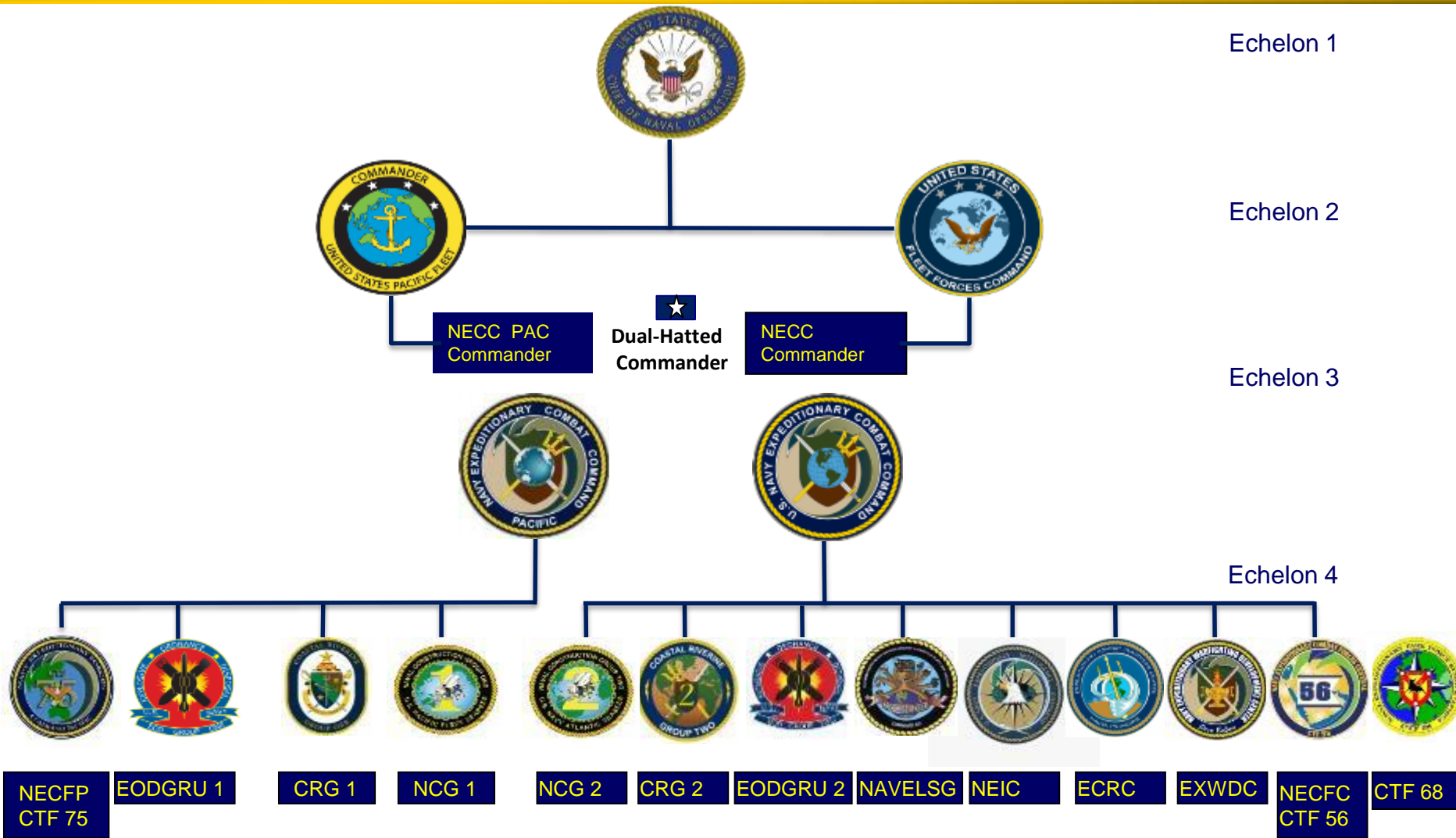


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# Navy Expeditionary Combat Forces Organization



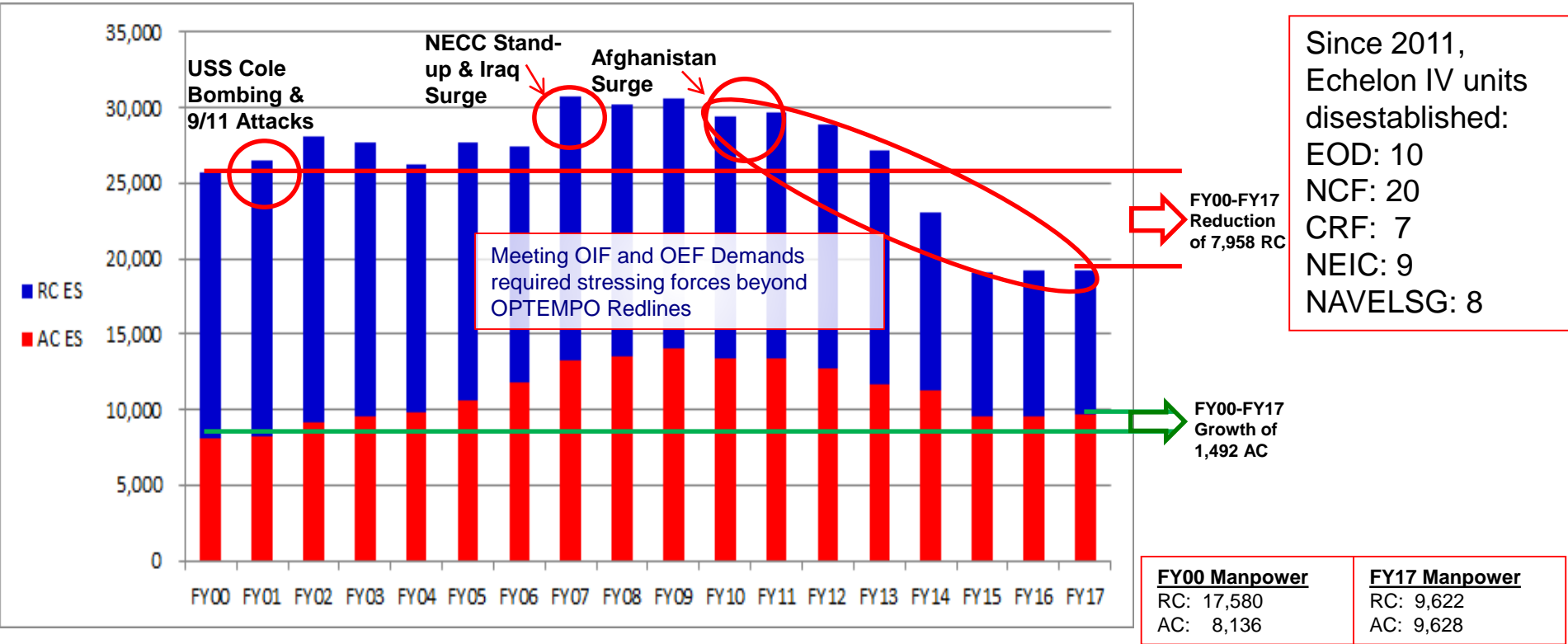
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# Force Structure History

## Navy Expeditionary Combat Forces

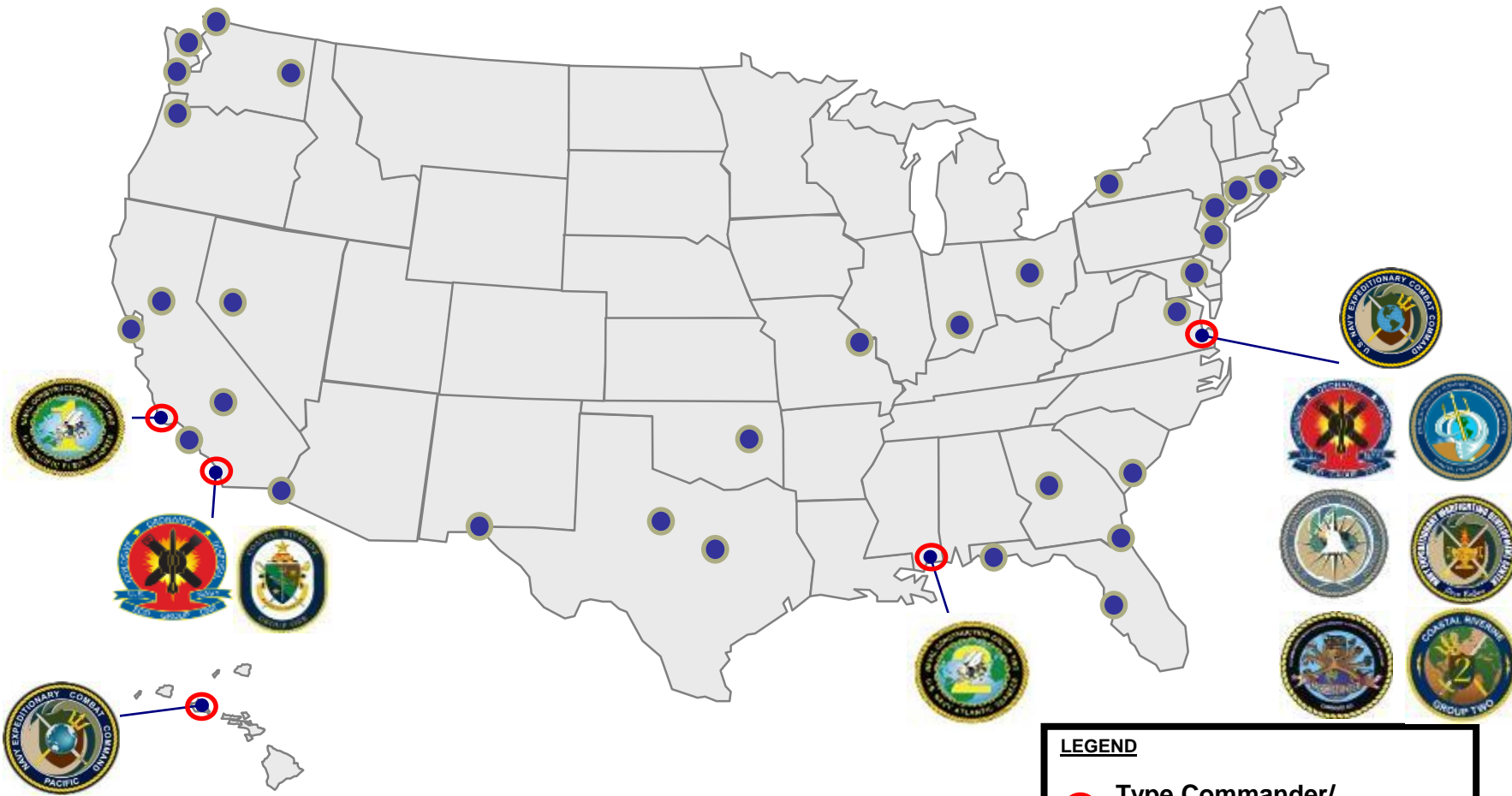


**BLUF:** Today's Navy Expeditionary Force is overall 25% smaller than it was in 2000 and 37% smaller than it was in 2007



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# Navy Expeditionary Combat Forces Unit Locations



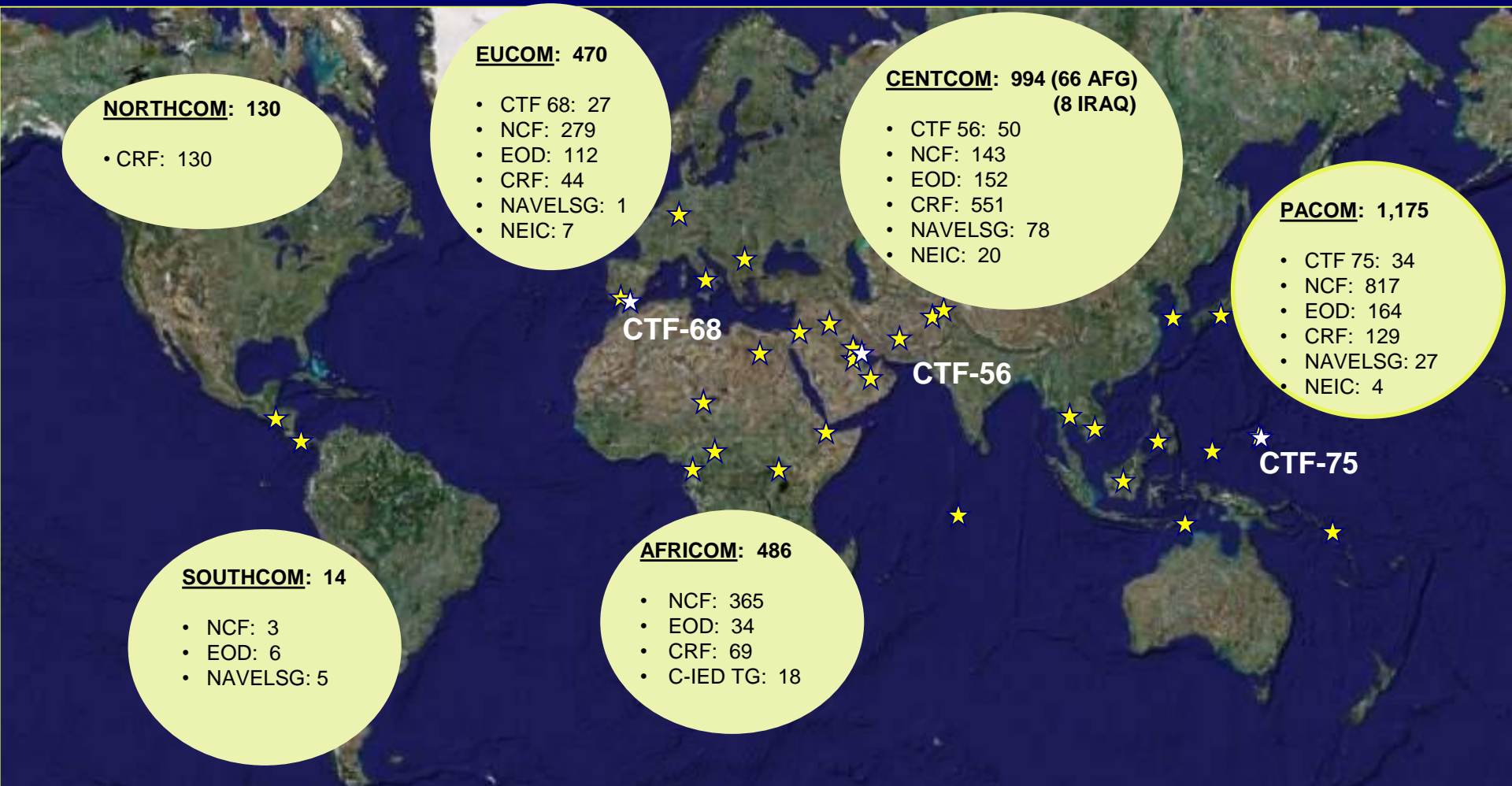
**LEGEND**

-  Type Commander/  
Echelon IV Headquarters
-  Additional NECF Active/  
Reserve Locations

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# Navy Expeditionary Combat Forces Deployed Forces as of 30 Sep 16



**“If you are not mobile, you are not relevant!” ADM Swift, Commander, U.S. Pacific Fleet, May 2016**

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# MK VI Patrol Boat (PB)



MK VI Patrol Boat

## Design Characteristics

- Length x Beam x Draft: 84.8' x 20.5' x 4.5'
- Range: 600 nm at full load (4000+ gal of fuel)
- Speed in 3' seas at full load: 25+ kts cruise, 35+ knots sprint
- Crew: 2 crews, 5 personnel each, plus 8 person mission team (18 total)

**Mission:** Provide capability to persistently patrol shallow littoral areas beyond sheltered harbors and bays for the purpose of force protection of friendly and coalition forces and critical infrastructure

## Concept of Operations

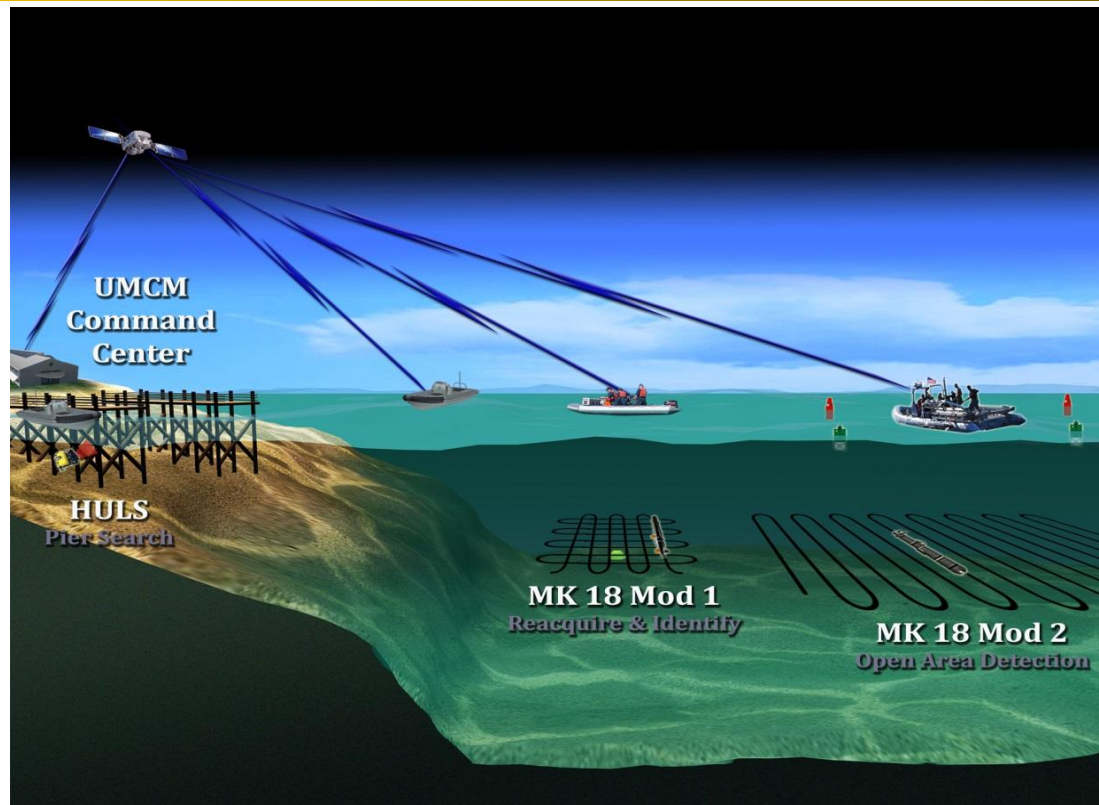
- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li>• Able to conduct a variety of missions:           <ul style="list-style-type: none"> <li>– Surface Warfare (FAC and FIAC)</li> <li>– Maritime Infrastructure Protection</li> <li>– Mine Warfare – with UUV</li> <li>– Intelligence, Surveillance, Recon</li> <li>– AFSB and/or shore-based</li> </ul> </li> <li>• 24-hour un-supported operations</li> </ul> | <ul style="list-style-type: none"> <li>• Supports UAV, USV, and UUV</li> <li>• Mission Reconfigurable</li> <li>• Deploy in threes, operate in pairs</li> <li>• Supported by maintenance det</li> <li>• MK VI PB is capable of conducting missions associated with more costly platforms (e.g., DDG, MCM, LCS)</li> </ul> | <ul style="list-style-type: none"> <li>• Mission Reconfigurable</li> <li>• Deploy in threes, operate in pairs</li> <li>• Supported by maintenance det</li> <li>• MK VI PB is capable of conducting missions associated with more costly platforms (e.g., DDG, MCM, LCS)</li> </ul> |
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# Expeditionary MCM Mission

- **Mission:** Counter naval mines and other underwater explosive threats in near shore areas.
- **Expeditionary MCM (ExMCM):** The MCM mission conducted by EOD forces, and often where surface and airborne MCM assets cannot operate due to geographic or depth limitations.
  - Pre-assault/Advance Force in support of Amphibious Warfare missions
  - Underwater explosive threats - as well as obstacles - in confined or restricted areas including harbors, ports, beach approaches and potential assault force landing sites.
- Intelligence Preparation of the Environment (IPOE): EOD divers, marine mammal systems and unmanned systems to assess moored, ground and buried mine threats.
  - SLOCs, Choke Points
  - Q-Route surveys



**A scalable platform and sensor agnostic approach to execute MCM missions**

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# C4I



- **Mission:** Provide a modular, scalable and rapidly deployable command and control system for Expeditionary Forces.
- **Where Expeditionary C4I is going**
  - Single network system (NETC2) leveraging DJC2 product line
    - NETC2V2 is an everything -over-IP (EOIP) IT and communication system that provides classified and unclassified voice, video and data network services
  - Multiple RF paths for IP based communications (HF, VHF, UHF, UHF SATCOM/w MUOS, SHF, EHF) that are plug and play between boats, vehicles, man packs and TOCs
    - Protected Communications (i.e. EHF)
  - More automated cybersecurity solution & remote assistance
  - Strive for commonality with the afloat Navy
    - Shipboard communication solutions don't always work for the other half of the expeditionary force (ground mobile, small boat, small teams in urban areas)



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# Airfield Damage Repair (ADR)

- **Mission:** Combatant Commanders' warfighting plans require airfield damage repair (ADR) capabilities in order to sustain air operations that are essential to multiple missions
- **NECC Objectives:**
  - Employ Naval Construction Force (NCF / Seabees) capabilities to conduct ADR in maritime and expeditionary environments are essential to enabling and sustaining Naval and Joint air operations.
  - Assess evolving threats to maritime and expeditionary airfields demand unique, equipment, skill sets and training to generate NCF ADR capability.



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# Energy Solutions

## FIELDIED INITIATIVES (EFFICIENCY GAIN)

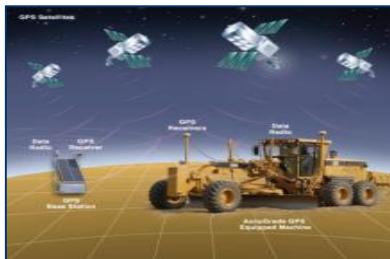
- Construction Equipment GPS Blade Control (40%)
- Adv Medium Mobile Power System (20%)
- Improved Environmental Control Unit (20%)
- Expeditionary Facilities (30%)
  - Energy Efficient Tent Liners
  - LED Lighting
  - Solar Shades

## ONGOING INITIATIVES (EFFICIENCY GAIN)

- Expeditionary Power Integration and Control (EPIC) (45%)
- More efficient ECU (20-50%)
- Fuel Efficient MTRV (27-40%)
- Renewable Energy Technology Maturation (TBD)
  - Solar, wind, tidal, waste to energy



IECU



GPS Blade Control



EPIC



MTVR



AMMPS



LED



Bio Fuel



Efficient ECU

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# BOLD ALLIGATOR

- **Scenario:** An annual Fleet Forces Command / MARFORCOM amphibious exercise designed to improve Naval Amphibious core competency and refine ESG-2 and 2<sup>nd</sup> MEB staff's ability to plan and execute MEB sized amphibious operations from a seabase
- **NECC Key Objectives:**
  - Provide NECC LNOs to incorporate integrated staffs (FICE)
  - Seebes provide composited forces in theater to assist with forward operating bases
  - Continue interoperability with Coalition forces (availability of CENTRIX)
  - Enhance and continue to revitalize the relationships between the Navy and Marine Corps regarding amphibious operational capability
  - Develop and refine the supporting/supported relationship and doctrine for MEB/ESG/NECC integrated operations
  - Execute C2 of all forces in support of amphibious operations from the seabase and phase aspects of C2 ashore



## Recent accomplishments:

- CRF integration with ESG
- Coordination of fires support from MEB/ESG
- UAV integration into air planning
- NCF Expeditionary Advanced Bases
- EOD ExMCM validation for ESG support

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# RIMPAC

- **Scenario:** RIMPAC fosters Multi-national cooperation and trust, enhances interoperability, enables professional engagement, and achieves respective national objectives to build capable and adaptive coalition partners
- **NECC Key Objectives:**
  - Maintain and improve Mil-to-Mil relations between U.S. and participating foreign forces
  - Assist in conducting amphibious raids and assaults with combat construction units
  - Conduct Humanitarian Assistance / Disaster Relief, and Search and Rescue Operations
  - Integrated logistics and combat service support
  - Diving operations and explosive clearing



## Recent accomplishments:

- C4I NETC2 demonstration/integration
- EOD ExMCM with LCS
- NCF HA/DR training with coalition
- NAVELSG Strategic lift integration

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# DAWN BLITZ

- **Scenario:** Leverages the SOCAL operating area as maneuver space in order to increase amphibious combat readiness via the conduct of a joint, combined amphibious exercise
- **NECC Key Objectives:**
  - Enhance Naval and Coalition relationships through common amphibious exercise
  - Execute dynamic and scripted training designed to develop staff and/or individual core competencies in Amphibious operations, to include:
    - Conduct limited Over the Horizon (OTH) operations with available connectors
    - Conduct amphibious supporting operations
    - Conduct kinetic and non-kinetic fires in support of amphibious operations
    - Incorporate joint, Interagency, Intergovernmental, and Multinational(JIIM) operations



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# Defense Support of Civil Authorities Humanitarian Assistance / Disaster Relief



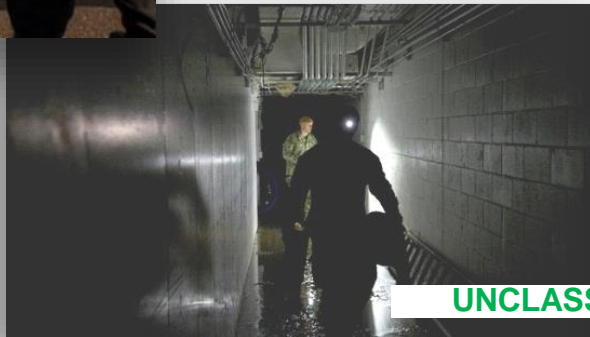
## • Defense Support of Civil Authorities (DSCA)

- Designated Navy Lead Element, CTF 86
- Liaise with Civil Authorities to perform tasks in accordance with Stafford Act
- Activities: Minnesota Bridge Collapse, Hurricane Sandy Response, Exercise Ardent Sentry



## • Humanitarian Assistance/Disaster Relief (HA/DR)

- Adaptive Force Package task organized to support designated operations
- Activities: Hurricane Irene-Haiti, Hurricane Mathew - Haiti



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# The Way Ahead

- Equipment weight reduction to ease deployment lift requirements and maneuverability ashore
- Force protection boat (34 ft replacement) that is smaller, armed, and armored with fast speed, long range with good seakeeping capabilities
- Soil stabilization (concrete) to create a faster means for Airfield Damage Repair (ADR)



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# Summary



- What can industry do for us
  - Improve algorithms for data analysis aids
  - High data rate transport for ExMCM afloat
  - Protected communications in a Command and Control in a Denied or Degraded Environment (C2D2E)
  - Mobile secure network connectivity
  - Lightweight common tactical picture
  - Stronger, lighter, high endurance materials
  - Reduced Life Cycle Costs: Training, Maintenance, Technology Refresh

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