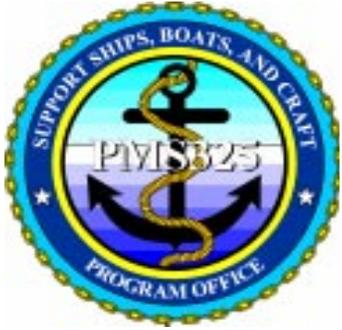


# Auxiliary Dry Cargo Carrier (T-ADC(X))



Presented to:  
**14th Annual Machinery  
Marketing Conference**

**Captain Doyle Kitchin  
Program Manager  
19 May 1999**



# Agenda

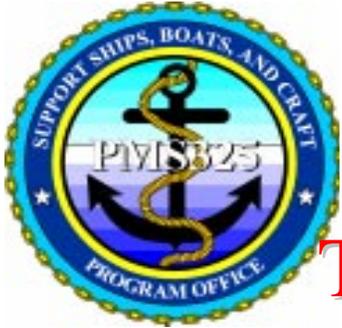


- Background
- Requirements
- Acquisition Strategy
- Point Design
- Additional Program Information

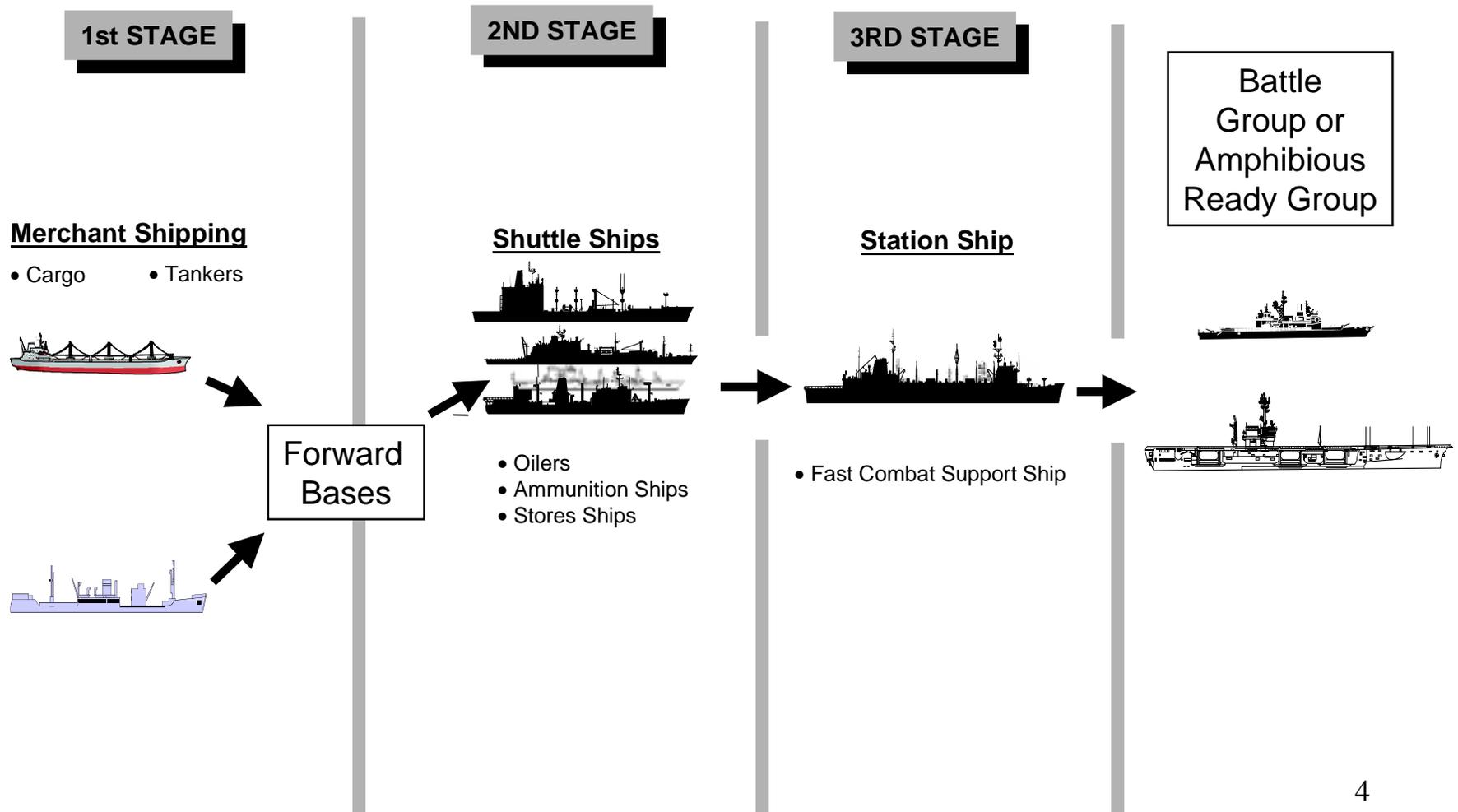
# Concept of Operations

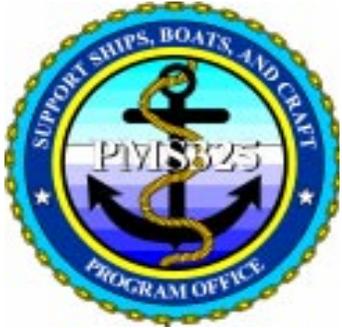
## Logistics Support For Operations In Littoral Areas





# Concept of Operations Three Stage Logistics Support Train

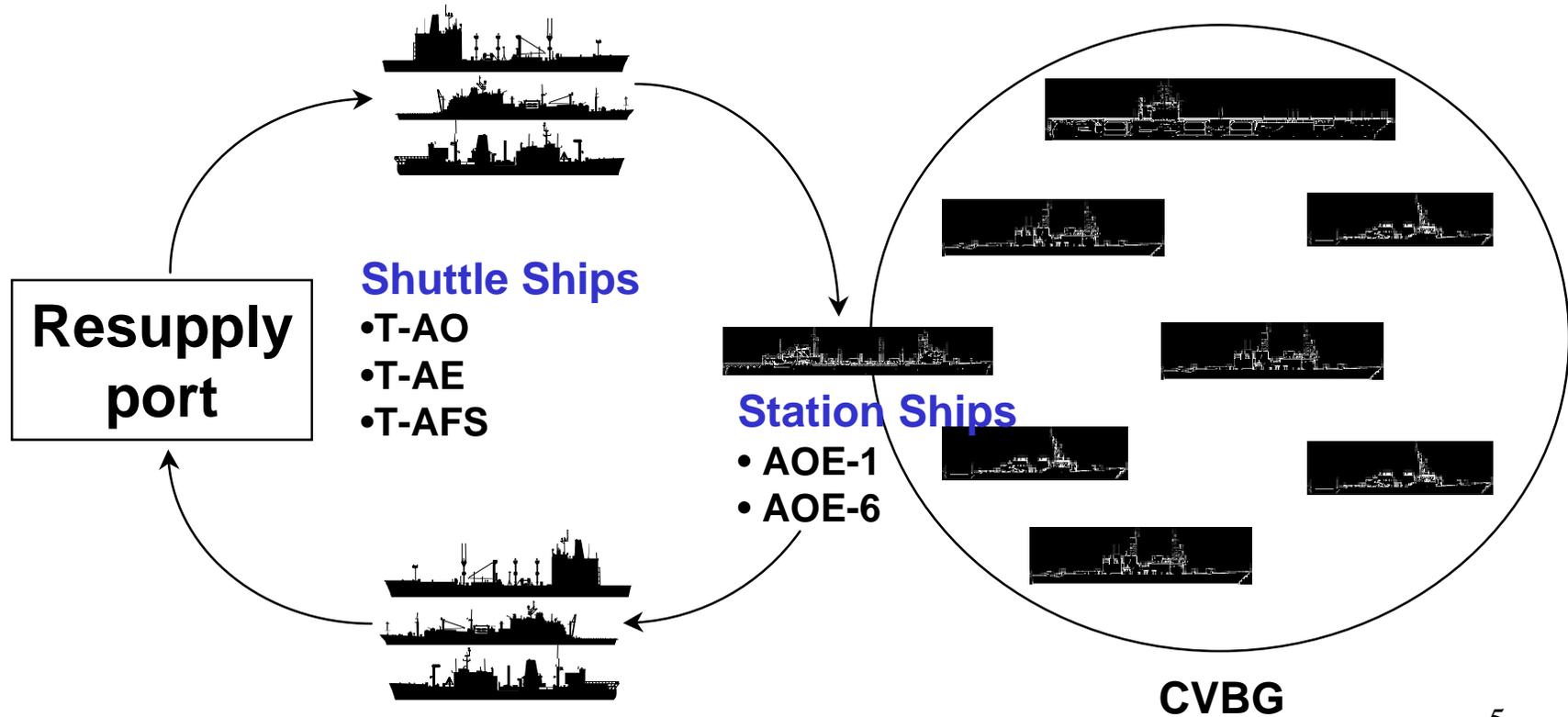


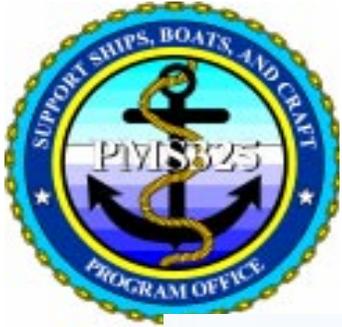


# Concept of Operations Traditional CVBG Resupply



## Station Ship / Shuttle Ship CONOPS



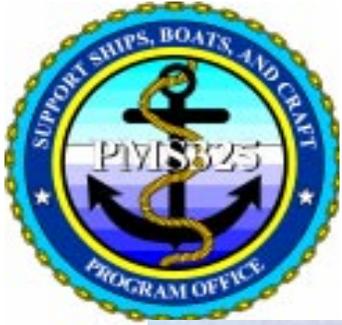


# Concept of Operations Combat Logistics Force (CLF)



- **Station Ships (AOE)**
  - **In-Theater Resupply**
  - **Operate With Battle Group**
  - **Military Crews**





# Concept of Operations Combat Logistics Force (CLF)



- **Shuttles (TAE, TAFS, TAO)**
  - Resupply Station Ships
  - Shuttle From Forward/Theater Ports
  - Civilian Crews & Military Dets (T-Ships)



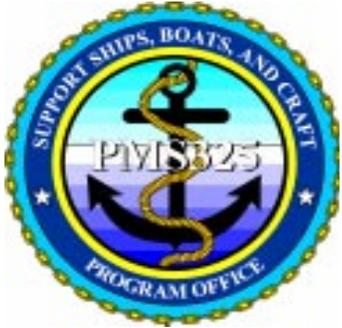


# The Combat Logistics Force

## Fast Combat Support Ships (AOE)



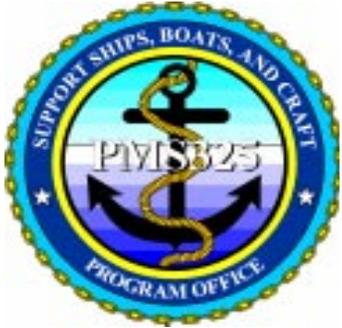
- **Cargo Capacity:**
  - 156,000 bbls Fuel**
  - 1,800 tons Ammo**
  - 650 tons Stores**
- **Length: 754 feet**
- **Beam: 107 feet**
- **Speed: 25 knots**
- **Aircraft: 2 CH-46Ds**
- **Crew: 25 Officers**  
**470 Enlisted**



# The Combat Logistics Force Ammunition Ships (TAE)



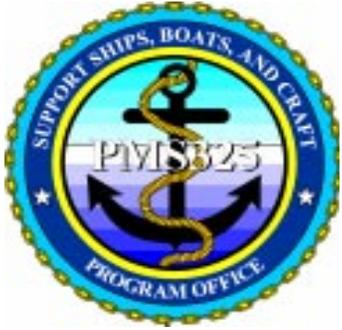
- **Cargo Capacity:**  
5,500 tons Ammo
- **Length:** 564 feet
- **Beam:** 81 feet
- **Speed:** 20 knots
- **Aircraft:** 2 CH-46Ds
- **Crew:** 125 Civilians  
24 Military



# The Combat Logistics Force Combat Stores Ships (TAFS)



- **Cargo Capacity:**  
3,925 tons Stores
- **Length:** 581 feet
- **Beam:** 79 feet
- **Speed:** 20 knots
- **Aircraft:** 2 CH-46Ds
- **Crew:** 124 Civilians  
48 Military



# The Combat Logistics Force Fleet Oilers (TAO)



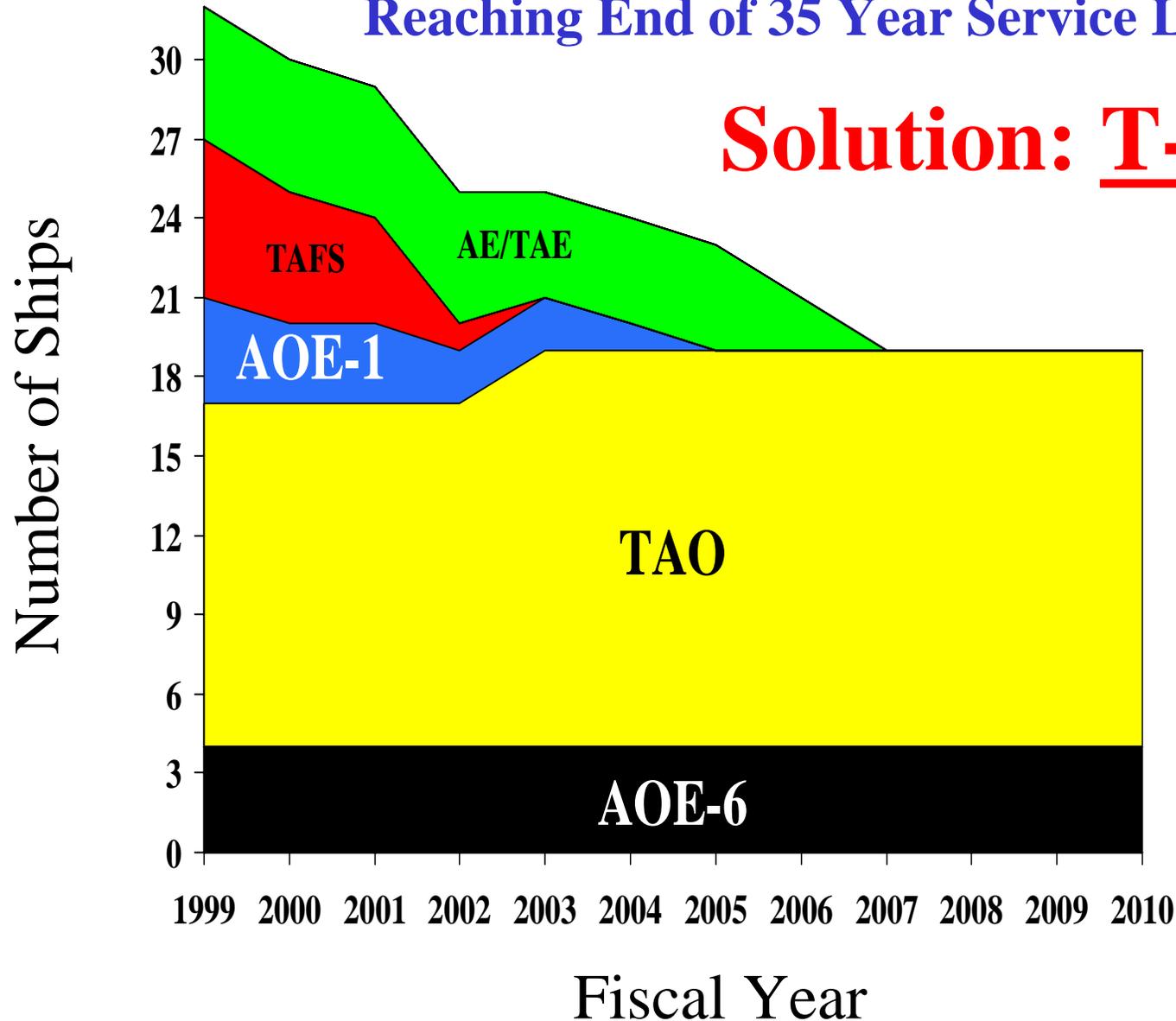
## TAO

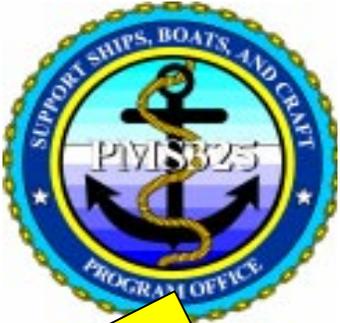
- Cargo Capacity:  
159,500 bbls Fuel
- Length: 677 feet
- Beam: 97 feet
- Speed: 20 knots
- Crew:  
85 Civilians  
23 Military

# Current Situation

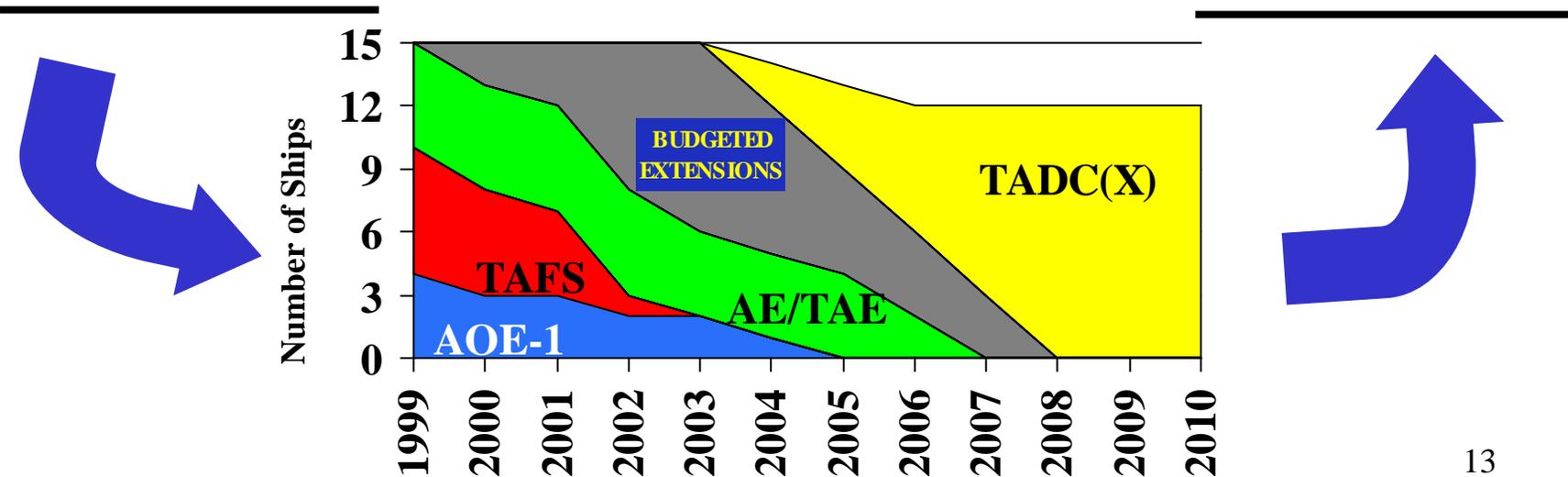
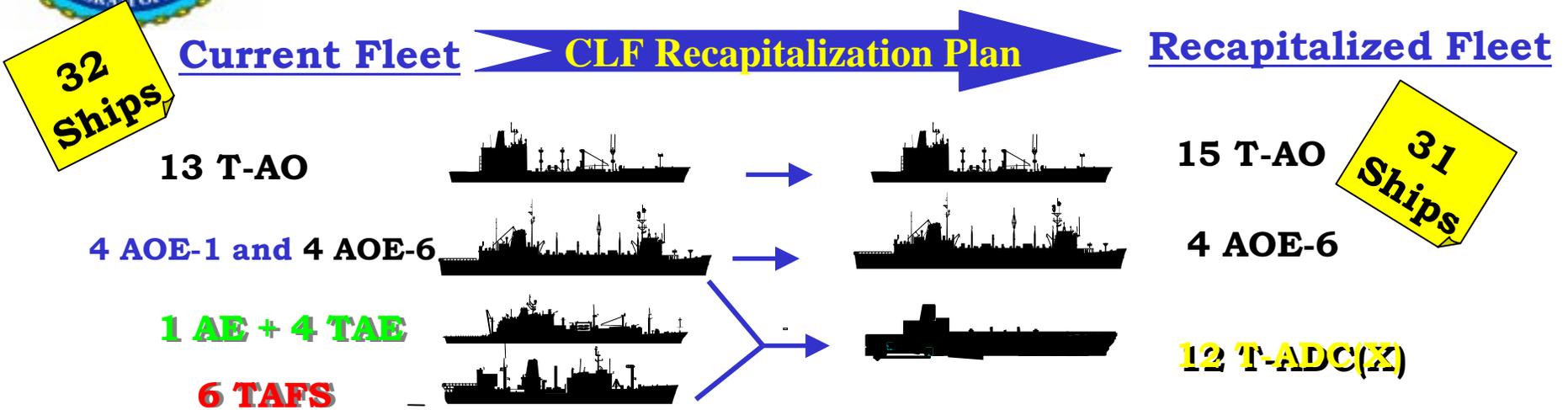
Problem: AOE-1/Stores/Ammo Ships  
Reaching End of 35 Year Service Lives

Solution: T-ADC(X)





# Requirement AoA Findings





# Shipbuilding Profile

CY00



CY 01



CY 02



CY 03

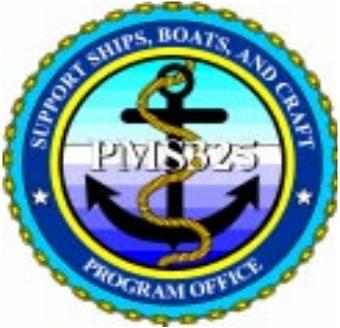


CY 04



CY 05





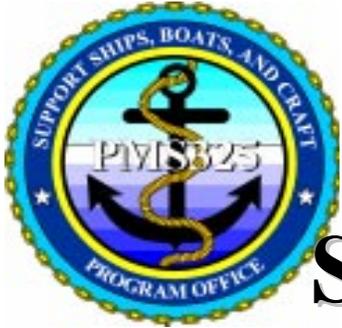
# **T-ADC(X) Mission**

## **•Primary Mission**

- Deliver Steady Stream of Ammunition and Stores**
- In Its Shuttle Role - Provide Logistics Lift Capability**

## **•Secondary Mission**

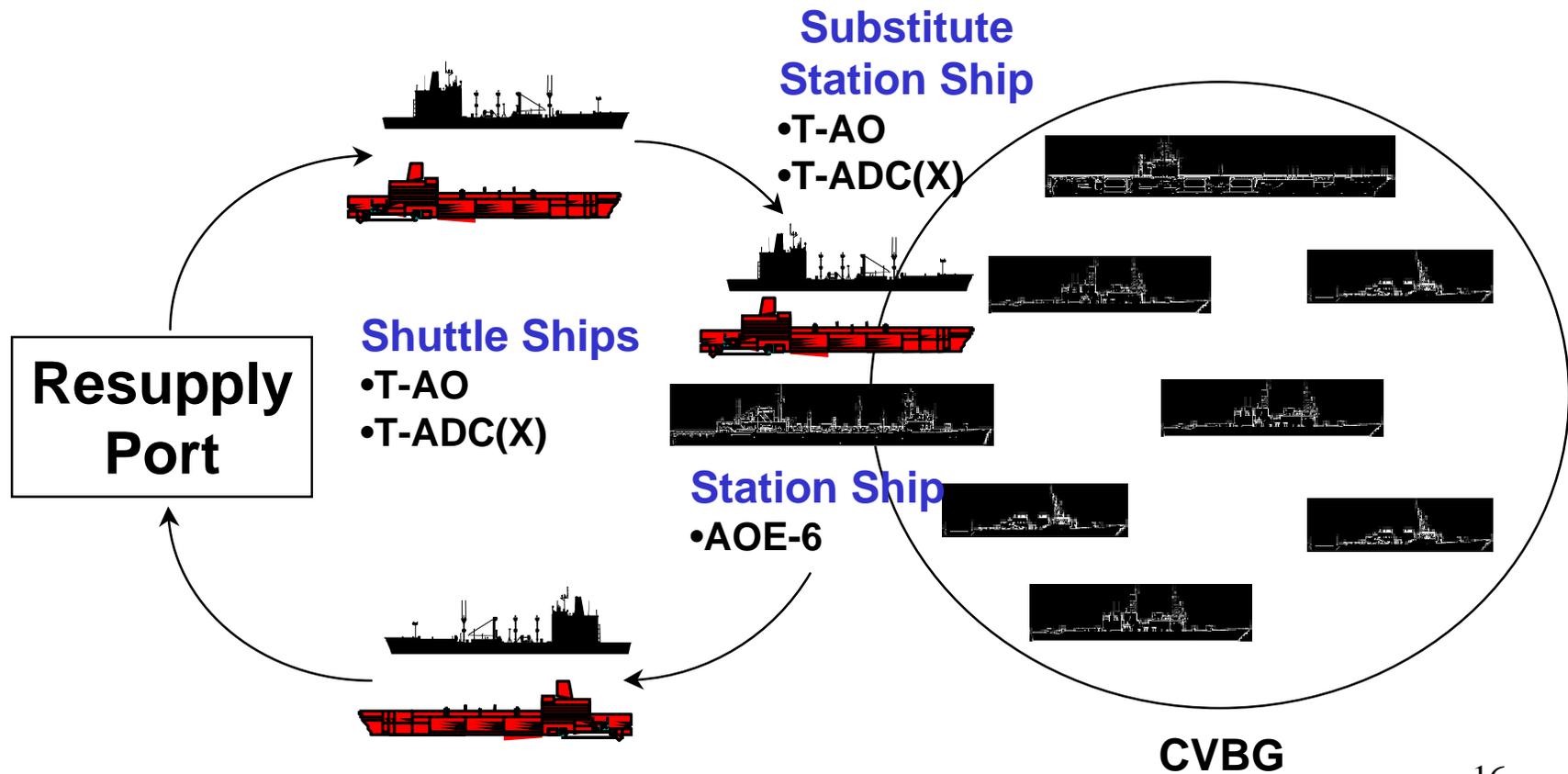
- Perform Substitute Station Ship Role in Company W/ T-AO**

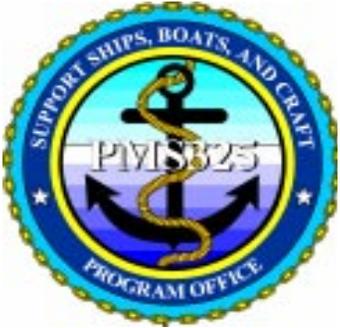


# T-ADC(X)

## Shuttle/Substitute Station Ship

### Station Ship / Shuttle Ship CONOPS





# Operational Requirements



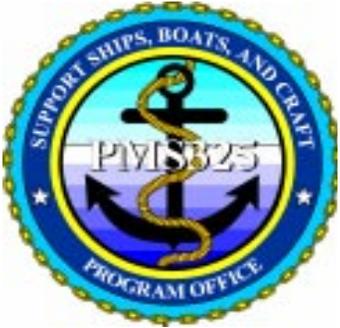
- Commercially designed and constructed - ABS/USCG/SOLAS
- Full AFS or AE loadout (or 60% of each) plus 18K bbls cargo oil
- Simultaneous Operations from 5 transfer stations
- Mobility
  - Sustained Speed 20 kts, Endurance 14,000 NM @ 20 kts
- Limitations
  - 210 m LOA, Panamax Beam, 9.5 m full load draft, 41 m air draft
- Navy Standard Underway Replenishment Equipment
- Two H-46D/H-60 Helos Hangared



# Requirements in Excess of Commercial Practice



- Shock resistance for firefighting, exterior comms and damage control equipment.
- Weather Deck washdown, DECON Station and protective clothing.
- Degaussing System & NIXIE
- T-ship Damage Control and Management System
- Navy Aviation Facilities
- Navy Exterior Communications

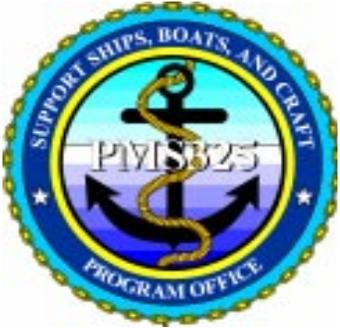


# T-ADC(X) Acquisition Key Features



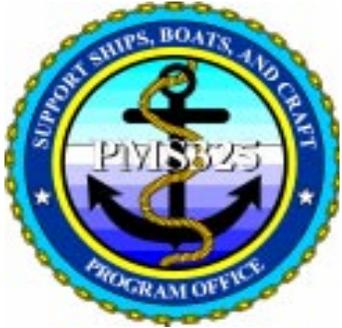
- Commercial Ship Acquisition
- Performance Specification
- Innovation in Cargo Flow Efficiency
- Minimize Life-Cycle Cost
- Build the Entire 12 Ship Class Using a Single Design
  - Requirement for Two Shipyards
- One Competition for the Class of Ships
- Award Lead Ship with Priced Options for 11 Follow Ships



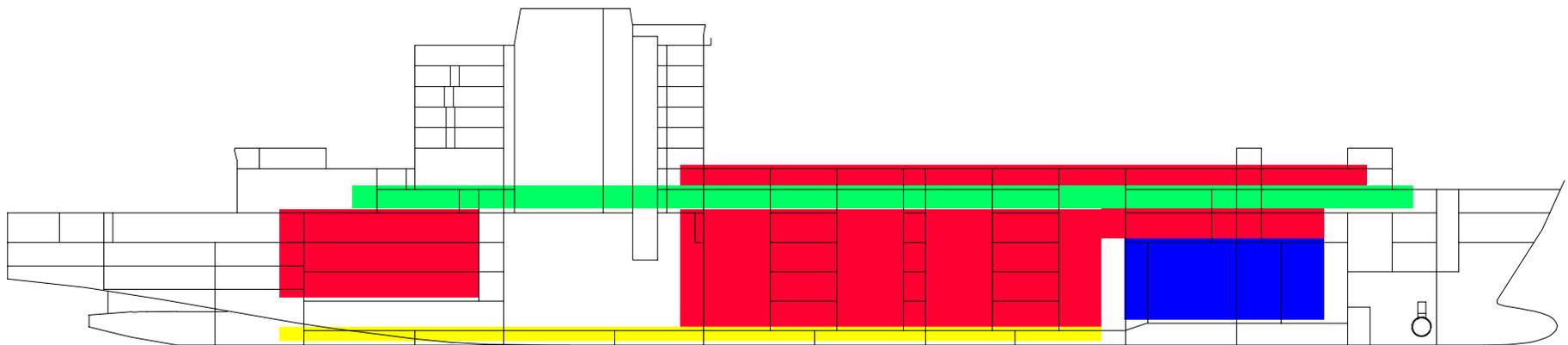


# Phase I

- Award up to 5 Cargo System Integration Study Contracts
- If Teams Form, They Must Be Non-exclusive
- Potential Industry Days
  - Cargo Handling
  - Performance Specification

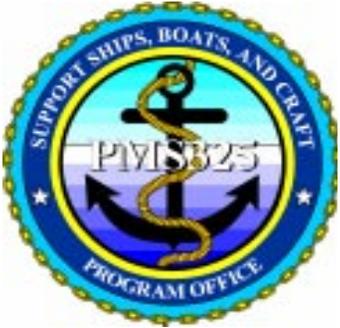


# T-ADC(X) Point Design



	English	Metric
<b>LOA</b>	689 ft	210 m
<b>Beam</b>	100 ft	30.5 m
<b>Draft</b>	28.9 ft	8.9 m
<b>Full Load Displacement</b>	35,850 lt	36,416 mt
<b>Sustained Speed</b>	20 kts	20 kts
<b>Max Dry Cargo Weight</b>	5463 lt	5550 mt
<b>Percent AE 26 Ammo (vol)</b>	100%	100%
<b>Percent AFS 1 Stores (vol)</b>	or 100%	or 100%
<b>Max Cargo Fuel Weight</b>	3,318 lt	3,371 mt
<b>Cargo Fuel Volume</b>	25,000 bbl	3,969 m <sup>3</sup>

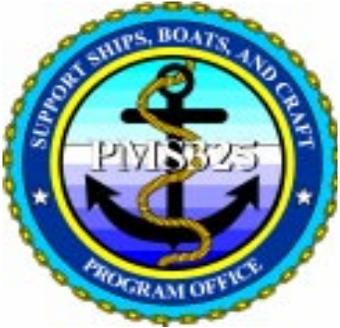
Cargo Handling/ Prestaging	
Dry Cargo Hold	
Cargo Oil	
Ship's Fuel	



## Why Do a Point Design?



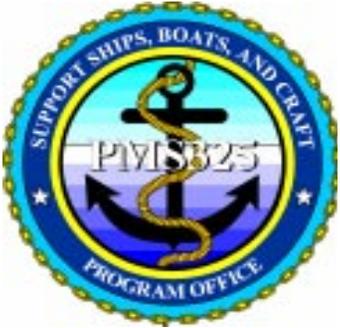
- Verifies performance requirements are achievable and affordable.
- Tool for assessing early cost / requirements impacts.
- Highlights missing/overlooked performance requirements.
- Intend to provide design and data to industry as information.



# Areas for Industry Innovation



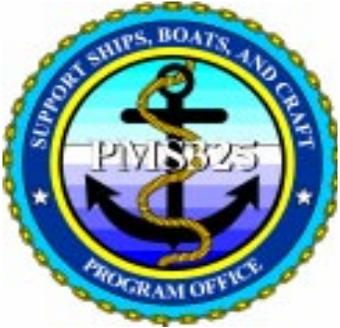
- Material Handling and Cargo Flow Efficiencies
  - Inventory management and planning aids
  - Incorporation of commercial practices and new technology
  - Flexibility to stow and handle various types of cargo
- Propulsion Systems
  - Propulsors
  - Prime Movers
  - Fuel Efficient Design



# Areas for Industry Innovation



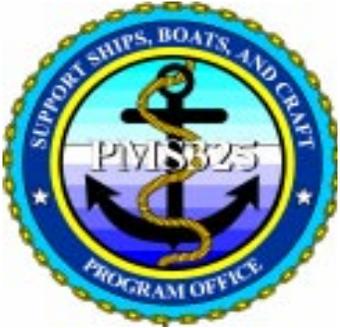
- Auxiliary Systems
  - Pumps (Ship System and Cargo)
  - Motors
  - Materials
  - Fluid Systems
  - Electrical Systems
- Ship Operations
  - Integrated Bridge Design
  - Environmental Compliance
  - Mooring Equipment
  - Accommodation ladder



# Areas for Industry Innovation



- Hotel Services
  - Messing and Food Service Design
  - Domestic Stores Handling
  - HVAC Systems
  - Waste Handling Systems
- Corrosion Control
  - Tank Coating Systems
  - Paint Systems
  - Cathodic Protection



# Additional Program Information



- NAVSEA Contracts Directorate Website at  
**[http://www.contracts.hq.navsea.navy.mil/webdata/acq/infodoc/t-adc\(x\)/t-adc\(x\).html](http://www.contracts.hq.navsea.navy.mil/webdata/acq/infodoc/t-adc(x)/t-adc(x).html)**
- T-ADC(X) Information Site  
**<http://www.navsea.navy.mil/adcx/pubadcx.html>**
- T-ADC(X) Intranet Site (The procedure to request access to this site is provided on the T-ADC(X) Information Site)  
**<http://adcx.navsea.navy.mil/padcx/intranet/home.html>**