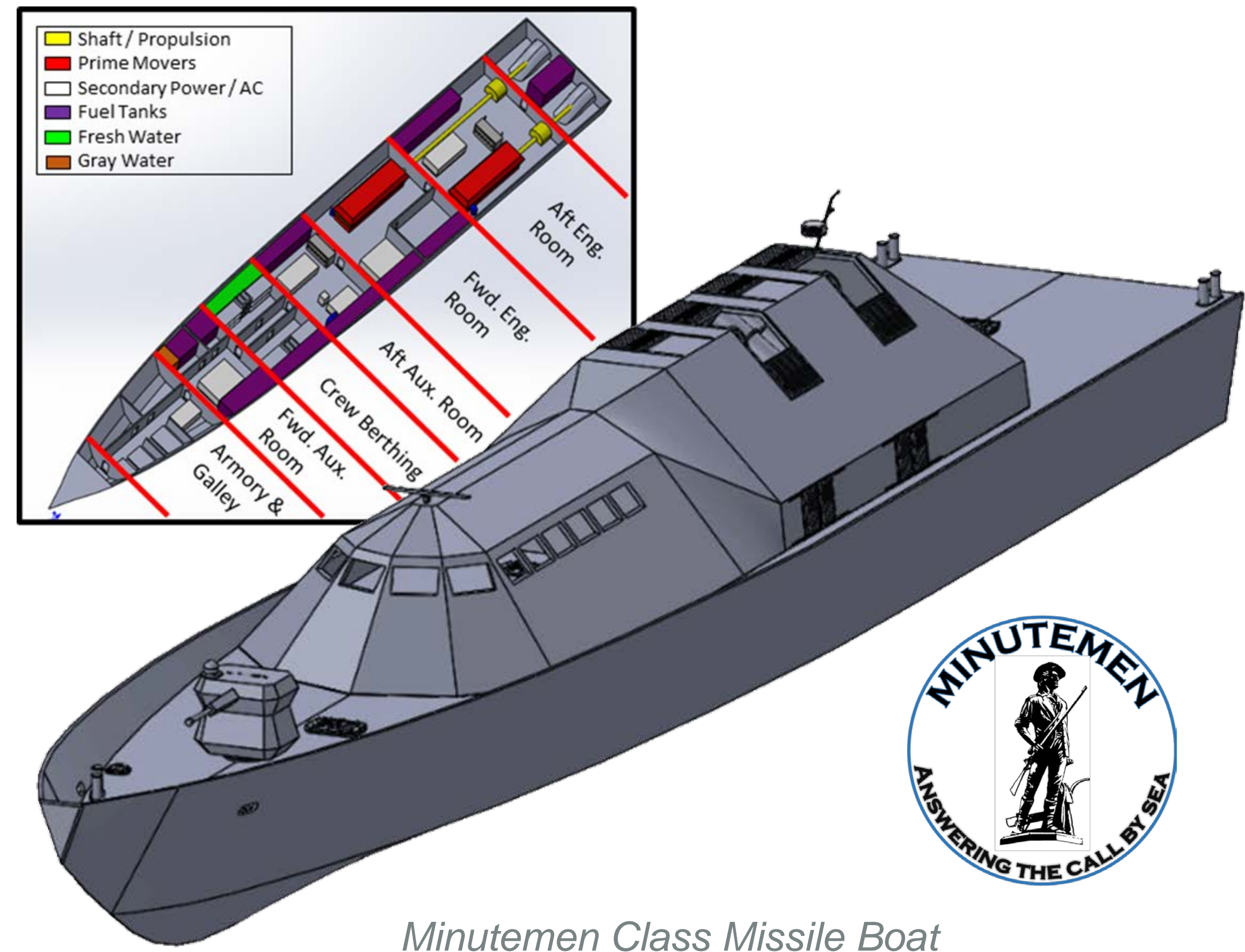


Problem Statement

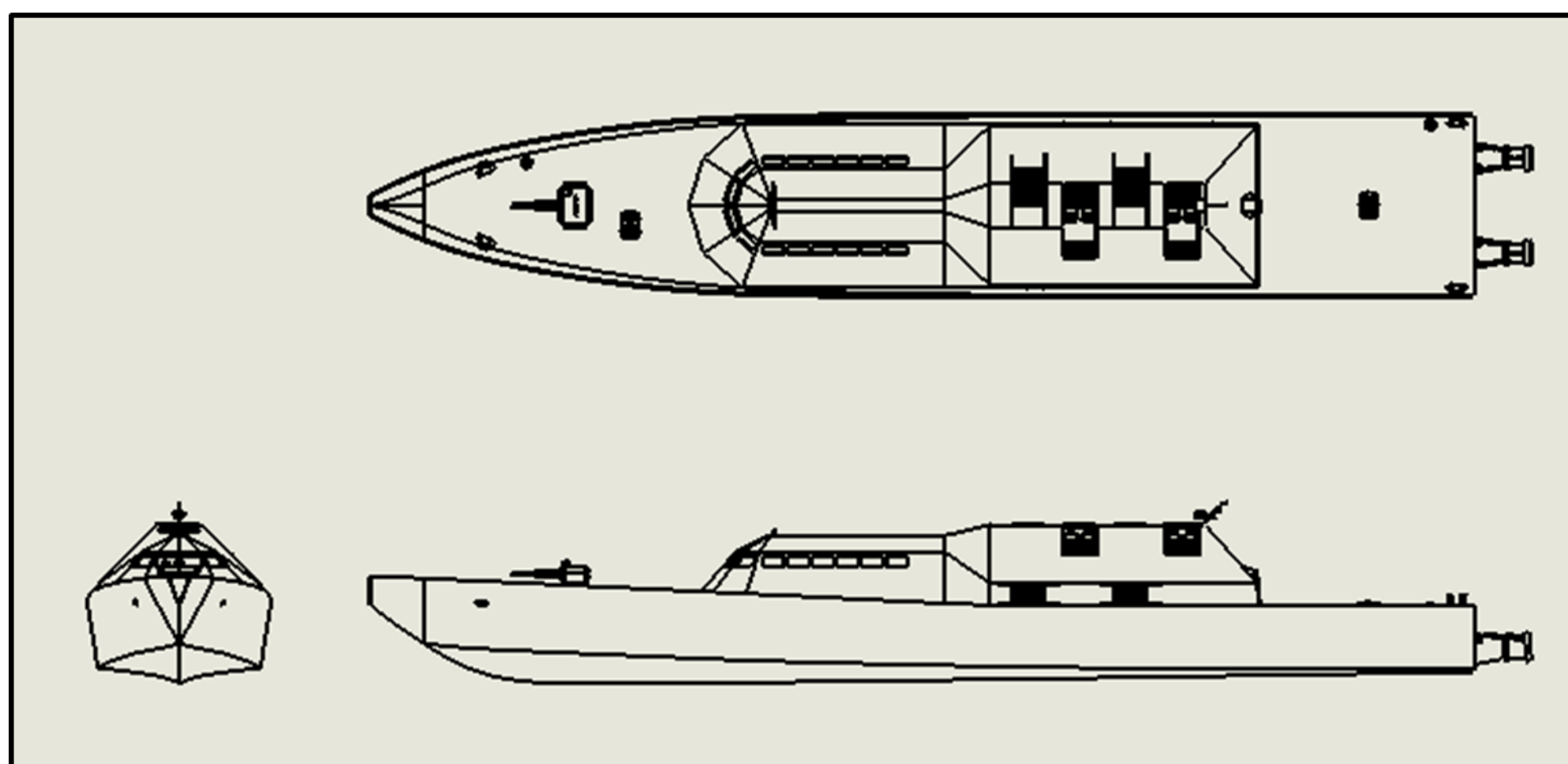
- Sea control traditionally provided by capital ships is increasingly difficult as advanced sea-denial strategies reduce global maritime security.
- Distributed lethality has the ability to overcome these challenges by forcing adversaries to disperse their defenses into a countering position.
- In order to accomplish this mission, a conceptual design of an affordable surface vessel capable of offensive surface operations for sea control is required.



Minutemen Class Missile Boat

Design Solution

- Small groups of quick and effective, low cost missile boats, capable of operating on the forward edge within the littorals to keep the enemy at bay is conceived as the solution.



Engineering Design Concept of Minutemen Vessel

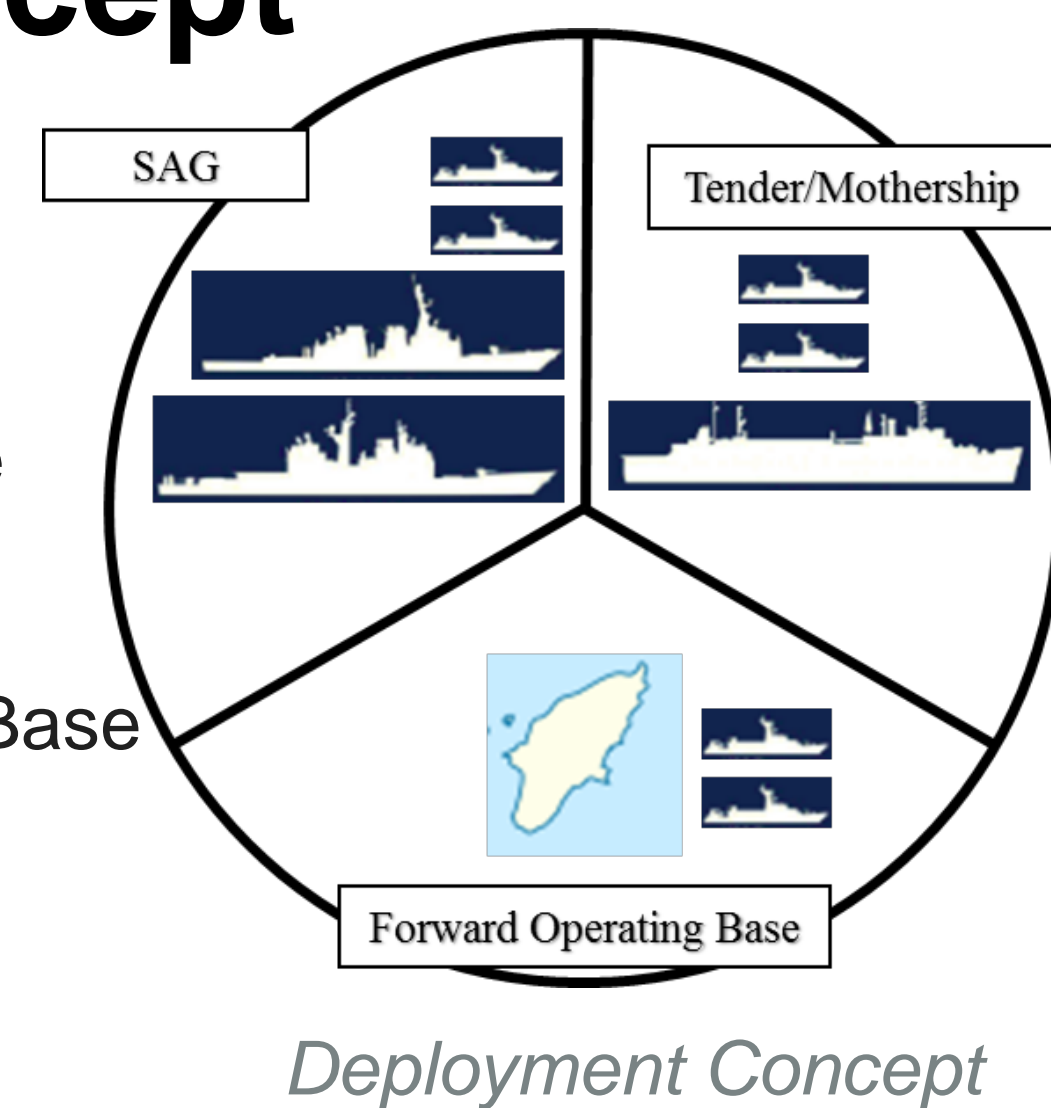
Ship Characteristics

- Hull Type: Planing monohull
- Length (LOA): 51.2 m (168 ft)
- Beam: 8.48 m (27.8 ft)
- Draft: 1.57 m (5.2 ft)
- Freeboard: 2.1 m (6.9 ft)
- Displacement: 316 MT (311LT)
- Shaft Power: 12,000 kW (16,100 Hp)
- Service Speed: 18 knots
- Max Speed: 40 knots

Operational Concept

- Deployment:

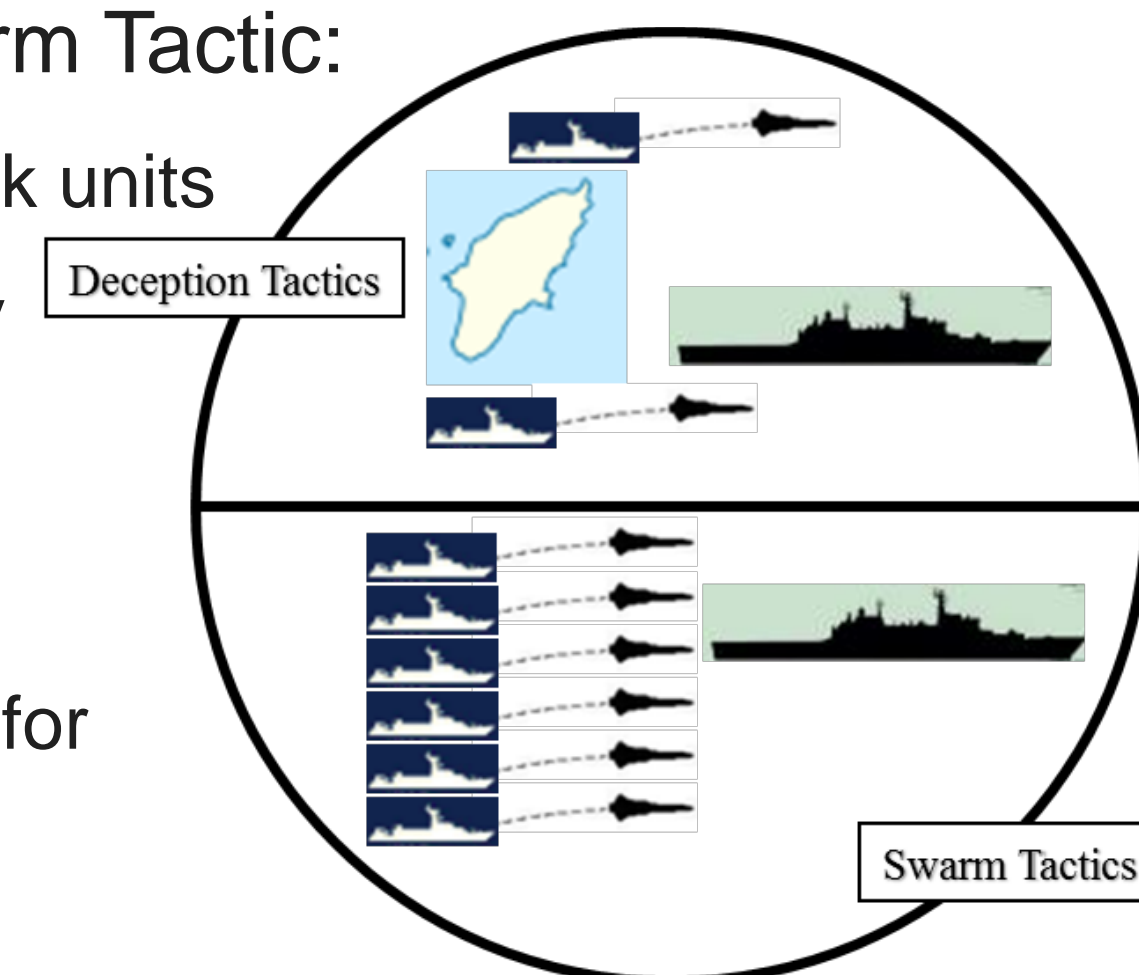
- Selectable Options
 - Forward Operating Base
 - Tender / Mothership
 - Afloat Forward Staging Base



Deployment Concept

- Employment:

- Large Squadron Swarm Tactic:
 - Variable size (2-8) task units
 - Overwhelm adversary
- Element Deception
 - 1-2 vessel elements
 - Size/geography used for deception and cover
 - Engage and redeploy



Employment Concept

- Material: Aluminum
- Manning: 12 crew, +17 additional personnel
- Armament
 - 8 RGM-84 Harpoon, Block 2+ ER
 - 1 MK 38 Mod 3
- Total Cost: \$88 million (\$53M vessel only)

Total Ship Systems Engineering

www.nps.edu/Academics/gseas/TSSE/index.html

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