Direct Rapid-Response Emergency Action Multi-Platform Savoir-System
Scope

- Introduction
- CONOPS
  - Location
  - Deployment
    - RIB
  - Rescue
  - Recovery/Return
    - Mothership
- System Life Cycle
- Questions
CONOPS - Location

- Importance of Locating Personnel in Distress
  - Vessels carrying migrants aim to avoid detection.
- Radar
  - 10.25 nm search range in good conditions.
- Drone
  - Over the horizon searching ability –
    - Imagery and video surveillance.
  - Increase sea area that can be searched.
  - Reduce operating costs of the mothership.
CONOPS - Deployment

- Deployment of the RIB from the Mothership
  - The RIB will be stored in the life raft bay on a telescopic cradle to be lowered into the water along the stern ramp then collapsed.

- 2 Deployment Scenarios:
  - Incident less than 200nm
  - Incident greater than 200nm

- Potential Alternative Deployment Methods
  - Air Deployment (Hercules Aircraft)
  - Multiple RIBs located around the Mediterranean,
  - Autonomously controlled RIB.
An 18% margin has been applied to the VCG and 29% margin to the weight.

25% fuel margin applied and compensating tanks fitted to correct trim as fuel is used.

Self righting mechanism is included on the A frame.

### FAST RESPONSE RIB

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length Overall [m]</td>
<td>12</td>
</tr>
<tr>
<td>Beam [m]</td>
<td>3</td>
</tr>
<tr>
<td>Maximum Vertical Extent [m]</td>
<td>2.5</td>
</tr>
<tr>
<td>Draught [m]</td>
<td>0.75</td>
</tr>
<tr>
<td>Crew</td>
<td>10</td>
</tr>
<tr>
<td>150 man Life rafts</td>
<td>7</td>
</tr>
<tr>
<td>Installed Power [HP]</td>
<td>580</td>
</tr>
<tr>
<td>Speed (full payload) [knots]</td>
<td>30</td>
</tr>
<tr>
<td>Displacement [Tonnes]</td>
<td>11.3</td>
</tr>
<tr>
<td>Range [nm]</td>
<td>200</td>
</tr>
</tbody>
</table>
Fast Response Rescue RIB

- An 18% margin has been applied to the VCG and 29% margin to the weight.

- 25% fuel margin applied and compensating tanks fitted to correct trim as fuel is used.

- Self righting mechanism is included on the A frame.
CONOPS - Rescue

- **Scenario A**
  - All personnel on boat – STABLE

- **Scenario B**
  - Some personnel in water
  - Some personnel on boat - UNSTABLE

- **Scenario C**
  - All personnel in water - SUNK
CONOPS – Recovery

- Personnel Recovery
  - Wet Dock
  - 2 Mini RIB’s Deployed
  - Winch into recovery bay
  - Conveyor belt floor system

- Life Raft recovery
  - Overhead deck crane to recover life raft
  - All 7 life raft recoverable onto boat deck
  - 150 man life rafts are serviced and repacked
CONOPS - Recovery

- Recovery Bay 20m x 8.8m x 4.5m
- 2 x 5m Support RIBs loaded at the rear
- 12m Fast Response Rescue RIB loaded using telescopic cradle
- 2 x 2 tonne winches
Mothership ship - PARTICULARS

<table>
<thead>
<tr>
<th><strong>LOA</strong></th>
<th>90m</th>
<th><strong>Propulsion</strong></th>
<th>2 x medium speed diesels (driving electric propulsion) 7,250kW each</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beam</strong></td>
<td>16.5m</td>
<td><strong>2 x electric azimuth thrusters</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Draft</strong></td>
<td>4.25m</td>
<td><strong>Range</strong></td>
<td>5000nm</td>
</tr>
<tr>
<td><strong>Displacement</strong></td>
<td>2,500-3000te</td>
<td><strong>Endurance</strong></td>
<td>30 days (96 hours with 1000 survivors)</td>
</tr>
<tr>
<td><strong>Max Speed</strong></td>
<td>20 knots</td>
<td><strong>Crew</strong></td>
<td>25 + 10 medical staff</td>
</tr>
</tbody>
</table>

Electric propulsion provides the option to travel at speed or operate large amounts of machinery as will be required when conducting rescue operations.

Casualty removal by helicopter can be achieved from foc’sle in reasonable sea states.

Build cost of an order of magnitude less than equivalent displacement warship.

Option to use ship as auxiliary troop carrier gives more attractive pricing to governments.
General Arrangement

• 3000m³ of accommodation for survivors

• Crew accommodation contained within superstructure

• Enclosed walkways around MMS

• Large medical facility

• Recovery facility held inside watertight aft compartment

• More than one rescue operation during a single deployment

• Additional above deck life rafts (200% of crew and compliment)
Hydrostatics & Hydrodynamics

<table>
<thead>
<tr>
<th>Weight</th>
<th>Value</th>
<th>CB</th>
<th>M</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight Steel</td>
<td>1345te</td>
<td></td>
<td></td>
<td>0.46</td>
</tr>
<tr>
<td>Weight Outfit</td>
<td>583te</td>
<td>CB</td>
<td></td>
<td>0.83</td>
</tr>
<tr>
<td>Weight machinery</td>
<td>567te</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Mission Systems</td>
<td>375te</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Survivors</td>
<td>80te</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2950te</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required installed power for 18 knots</td>
<td>10.44MW (with 30% margin)</td>
<td>Installed power (including electrical requirements)</td>
<td>14.5MW</td>
<td></td>
</tr>
</tbody>
</table>

Sectional area held aft to support mission systems
System Life Cycle

- **Build**
  - Proven Technologies
  - NOT a warship
  - Does not dock down

- **Maintenance**
  - Regular docking periods
  - In class
  - Electric motors, require less servicing to diesel engines

- **Durability/Disposal**
  - Similar to existing ships
  - Repurposed life rafts
Any Questions?