Rebuilding Naval Fleets

Lessons Learned from the UK Experience
Rebuilding Naval Fleets. Lessons Learned from the UK Experience

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Same as Report (SAR)
Since 2000, MOD Has Engaged RAND to Study Major UK Warship Programs . . .

- Type 45 Destroyer
  - Acquisition options and implications

- Future Aircraft Carrier Programme
  - Options for reducing costs
... and to Evaluate the UK’s Maritime Industrial Base and Shipbuilding Processes

- Type 45 Destroyer
  - Acquisition options and implications

- Future Aircraft Carrier Programme
  - Options for reducing costs

- United Kingdom’s Naval Shipbuilding Industrial Base

- Outsourcing and Outfitting Practices

- Monitoring Shipbuilding Programmes’ Progress

- Differences Between Military and Commercial Shipbuilding

- UK Submarine Industrial Base
  - Sustaining design and production resources
  - MOD roles and required technical resources
  - Options for initial fueling

- Sustaining Key Skills in the UK Naval Industry
Think of Two Periods for UK Naval Programs

1990 to 2000

• End of Cold War led to force draw down
  – Need for less capability
  – Money was not the issue
• Competition was king
• Fixed price contracts were the norm
• Responsibilities shifted to industry
• Decade ended with ambitious shipbuilding plans

• 2000 to 2010
Post-Cold War Force Reflected Lower Requirements


- Mine Hunters and Coastal Craft
- Conventional Attack Submarines
- Nuclear Attack Submarines
- Ballistic Missile Submarines
- Destroyers / Frigates
- Cruisers
- Large Amphibious Ships
- Aircraft Carrier
And Led to Declining Combatant Deliveries...
. . . And Declining Shipbuilding and Repair Employment. . .
That Occasioned Bankruptcies and Consolidation in UK Shipbuilding Industry

- Harland & Wolff
- Swan Hunter
- Appledore
- Ferguson (Port Glasgow)
- Cammel Laird
- Barrow
- Scotstoun
- GEC
- GEC/Marconi
- BAE Marine
- Govan
- Kvaerner
- Vosper Thornycroft
- VT Group

● Receivership

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In 2000, the UK Announced an Ambitious Shipbuilding Plan

<table>
<thead>
<tr>
<th>Ship Type</th>
<th>Production Run</th>
</tr>
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<tbody>
<tr>
<td>Future MH</td>
<td>4</td>
</tr>
<tr>
<td>Future Sub</td>
<td></td>
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<tr>
<td>FSC</td>
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<td>MARS</td>
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<td>JCTS</td>
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<tr>
<td>Astute</td>
<td>8</td>
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<td>CVF</td>
<td>2</td>
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<tr>
<td>OPV (H)</td>
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<td>T45</td>
<td>12</td>
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<tr>
<td>LSD(A)</td>
<td>4</td>
</tr>
</tbody>
</table>

N = Production Run
Think of Two Periods for UK Naval Programs

1990 to 2000

2000 to 2010

• Competition wasn’t working
• Cost and schedule problems
  – Astute
  – Type 45
• Money became tight
• Defense Industrial Strategy; Maritime Industrial Strategy
• Industry consolidation
• Terms of Business Agreement
Ambitious Plans Have Been Scaled Back

- Future MH
- Future Sub
- FSC
- MARS
- JCTS
- Astute
- CVF
- OPV (H)
- T45
- LSD(A)

N = Production Run

And the Fleet Continues to Shrink
As Shipbuilding Industry Base Consolidated

- **1985**: Harland & Wolff, Swan Hunter
- **1990**: Appledore, Ferguson (Port Glasgow)
- **1995**: Cammel Laird
- **2000**: GEC, GEC/Marconi
- **2005**: BAE Marine
- **2010**: BVT

**Note**: Red circles indicate receivership.
What Should US Defense and Industry Leaders Take Away from the UK Experience?

• In recent past, UK defense policymakers
  – Didn’t pay close-enough attention to nor act upon long-term needs
  – Let government technical and program management skills atrophy
  – Shifted too much responsibility and risk to shipbuilders
  – Held a laissez faire economic attitude regarding shipbuilding industrial base
    • Mergers/acquisitions
    • Bankruptcies

• Today, MOD is playing catch-up to redress these shortcomings
  – Redressing these issues simultaneously and quickly will be challenging

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Lessons for the U.S. (?)

- Take a long-range strategic view
- Use consolidated plans not program specific
- Sustain key resources
- Choose when to use competition
- Choose when to use fixed price contracts
- Be prepared to close shipyards
Our UK Ministry of Defence Work Has Covered Broad Range of Issues