"Sustain combat readiness ... with the right combat capabilities - access, speed, agility, adaptability, persistence, awareness and lethality - for the right cost."

Admiral Mike Mullen, CNO Guidance, 2006
Adaptive Force Packages and Force Structure -- an LCS example

Mine Countermeasures

<table>
<thead>
<tr>
<th>Time</th>
<th>Clearance Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Tailored</td>
</tr>
<tr>
<td>10</td>
<td>3 LCS</td>
</tr>
<tr>
<td>20</td>
<td>1 LCS</td>
</tr>
<tr>
<td></td>
<td>Today</td>
</tr>
</tbody>
</table>

Anti-Submarine Warfare

<table>
<thead>
<tr>
<th>Time</th>
<th>Area Clearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3 LCS</td>
</tr>
<tr>
<td>20</td>
<td>1 LCS</td>
</tr>
<tr>
<td>40</td>
<td>Today</td>
</tr>
</tbody>
</table>

Surface Warfare

<table>
<thead>
<tr>
<th>Red Kills</th>
<th>Armed Craft Swarm Defense</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3 LCS</td>
</tr>
<tr>
<td>50</td>
<td>1 LCS</td>
</tr>
<tr>
<td>100</td>
<td>Today</td>
</tr>
<tr>
<td>150</td>
<td></td>
</tr>
</tbody>
</table>

Barrier Ops

<table>
<thead>
<tr>
<th>Range</th>
<th>3 LCS</th>
<th>1 LCS</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>200</td>
<td></td>
</tr>
</tbody>
</table>

“We will develop Adaptive Force Packages ... in support of operations in blue, green, and brown water environments ...” Admiral Mike Mullen --- CNO Guidance, 2006
Adaptive Force Packages, Mission Packages, and Modularity

Sensor / System Level

Vehicle Level

Mission Package Level

Containerization / Transportation Level

ISO STDs

Published ICD

AUVSI

MRUUV

RMS

USV

VTUAV

AQS-20A

Mine Hunting

Mine Identification

RTAS

Bi-Static ASW

MPCE

Software

MIW

ASW

SUW
The First LCS Mission Package Realized

RMS

AQS-20A

BPAUV

AMNS / ALMDS / RAMICS

OASIS & Helo Mod Kit
Mission Package
Open Computing Environment

• Maximum use of existing S/W – Common S/W apps with Current Fleet platforms
• MPs interface with LCS Sea frame through documented ICD
• OA Level 3 COTS H/W allows Open System model for acquisition and development

Sea Frame - Mission Package INTERFACE

• Common format
• Specified in the Interface Control Document
• Common set of Tools and Processes

Industry Refresh
• Open Business Model
• Via MPI
Mission Package Open Business Model Approach

Mission Package Integrator

- Hardware
- Software
- C3
- In-Service Support Tools
- Products
- Defined Architecture & Interfaces

Spiral Development

- Mission Package Computing Environment
- SUW MP
- ASW MP
- MIW MP

Transportable

- Truck
- Plane
- Rail
- Ship

Staged

- MP Support Facility

Deployed

- LCS-1
- LCS-2

Mission Package Integrator

- LCS-11
- LCS-22

Support Facility