



Newport News Shipbuilding

A Division of Huntington Ingalls Industries

Unmanned Maritime Systems

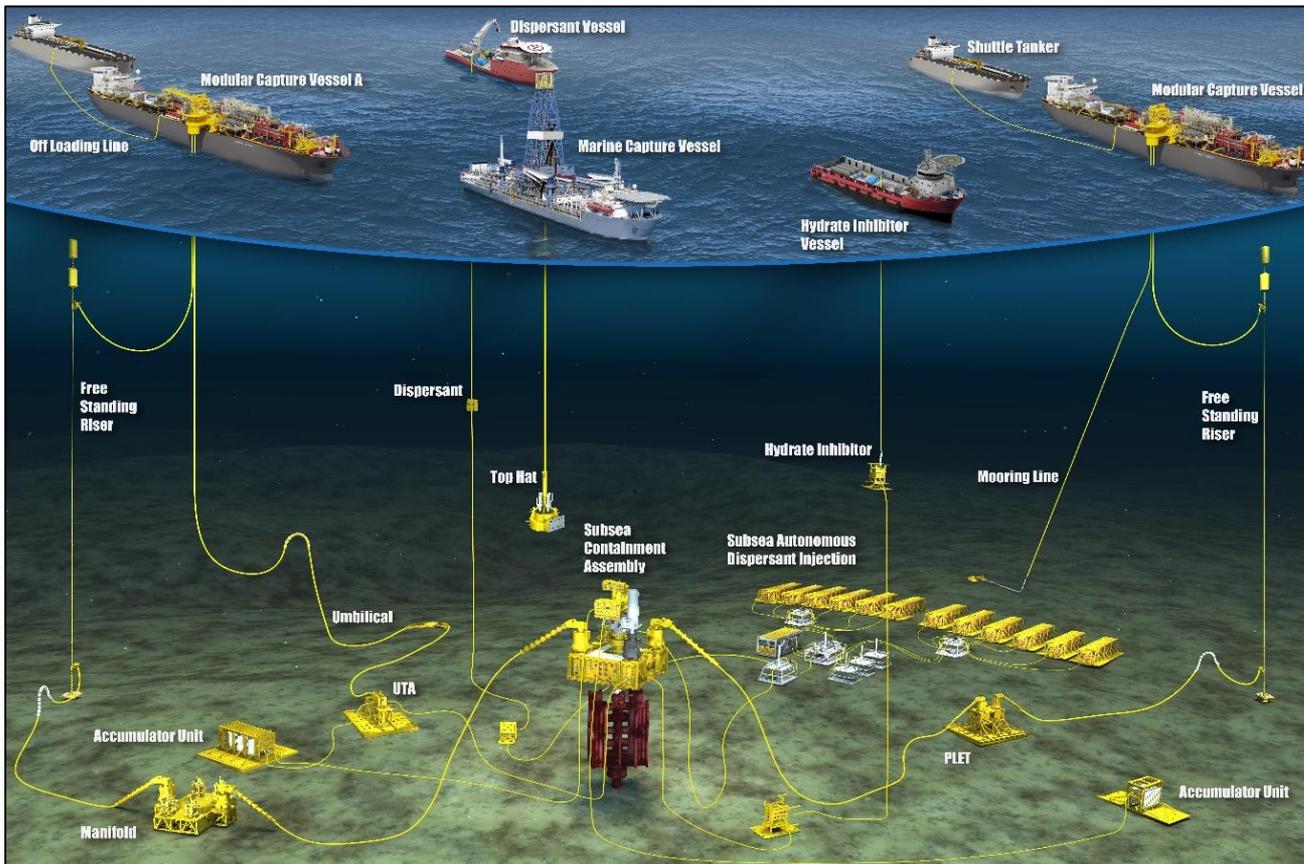
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Vice President,
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Newport News Shipbuilding

Commercial Market



- Oil and gas industry
 - Primarily ROV moving toward autonomous
- Experimental vehicles



Remotely Operated Vehicle (ROV)
Undersea vehicle powered and controlled via cable

Unmanned Undersea Vehicle (UUV)
Undersea vehicle powered and controlled without cable, sometimes referred to as Autonomous Undersea Vehicle (AUV)

Source: A graphic representation of MWCC's Containment System, Marine Well Containment Company

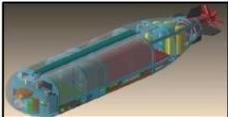
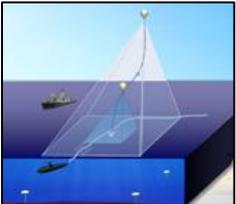
DoD / Military Market



Deployed

Acquisition / Development

Early Stage / Technology Development

Air Vehicles	<p>Fire Scout</p>   <p>Scan Eagle</p>  <p>Triton</p>	 <p>UCLASS</p>	 <p>TERN</p>
Surface Vehicles	 <p>Sea Gliders</p>  <p>MUSCL</p>  <p>Port Security USV's</p>  <p>AQS-24</p>	 <p>IUSS</p>  <p>SEAFOX</p>	 <p>ASW USV</p>  <p>ACTUV</p>
Undersea Vehicles	 <p>AN/WLD-1</p>  <p>ROV</p>  <p>Remus</p>	 <p>Knifefish</p>  <p>SWCS</p>	 <p>Proteus</p>  <p>Upward Falling Payloads</p>

DoD / Military unmanned maritime vehicles include air, surface and undersea

Naval Undersea Systems Market



Unmanned Undersea Vehicles (UUVs)



Test Vehicles, Drones and Decoys



Large Displacement UUV

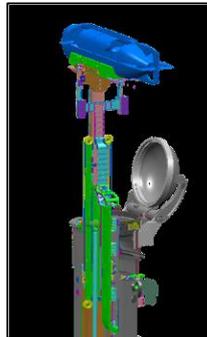


Mine Hunting and Research UUV's and Gliders

Submarine Mission Systems



Dry Deck Shelter Modernization



Submarine Payload Modules, Launch and Recovery Systems, ISR Hardware, etc.

Special Technologies and Programs



Classified Programs



Research, Development, Test and Evaluation (RDT&E)

Operations and Full Life Cycle Support



Operations

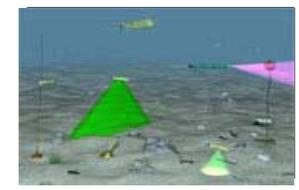


Operations



Submarine Rescue System

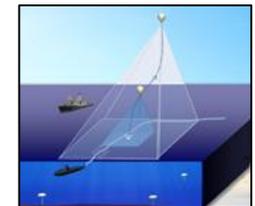
Undersea Infrastructure



UUV Charging Stations



Sensors, Networks and Communications



Upward Falling Payloads

Estimated 2020 funding of \$1.1 B and industry addressable market of \$0.7 B

Undersea Solutions Group



- Former Engineering Solutions Division of The Columbia Group
 - Now subsidiary of HII reporting to Newport News Shipbuilding (NNS) as Undersea Solutions Group
 - Acquired on January 30, 2015
- Capabilities:
 - Leading designer and builder of manned and unmanned underwater vehicles
 - U.S. Navy
 - Foreign military sales
 - Builds and converts specialized craft and applications
 - Support of submersibles and submarines
 - Navy special warfare
 - Mine warfare / countermeasure systems
 - Advanced undersea weapons
 - Headquartered in Panama City Beach, Florida
 - Employs 30 associates:
 - Engineers
 - Analysts
 - Craftsmen
 - Technicians
- Strategic acquisition by HII-NNS to improve positioning for UUV market



Source: HII News Release, First Female Divers Crew and Operate a Dual-Mode Underwater Vehicle, July 6, 2015.

Summary



- Unmanned maritime market includes air, surface and undersea components
- While commercial remotely operated undersea vehicles used to dominate the space, the DoD / military segment is becoming the larger market opportunity
- Based on its geographic location, strong DoD / military relationships, and large technology and manufacturing companies / capabilities, Virginia will be a significant player in this emerging market
- As with any new industry / technology, planning for the thoughtful development and management of this arena will be critical to its success

