**WHO**

**SYSCOM:** NAVSEA  
**Sponsoring Program:** PEO-SUBS  
**Transition Target:** Virginia Class Submarine PMS-450  
**TPOC:** (540)653-3639  
**Other transition opportunities:** PEI  
Encapsulation technology can be applied to many Navy programs, such as ships and components for Unmanned Undersea Vehicles, structures for Dry Combat Submersibles and components for torpedoes.  
**Notes:** Enables Virginia Class Submarines to carry and deploy a wide range of Unmanned Undersea Vehicles and payloads.  

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**WHAT**

**Operational Need and Improvement:** The primary objective of this SBIR Phase II effort, is to develop an Adaptable Universal Composite Canister (AUCC) System for the VPM. This canister design will be adaptable to permit the packaging of a variety of payloads, thereby increasing the number of roles that a submarine can perform. This modular approach will permit a variety of missions through deployment of an assortment of payloads without requiring that the submarine return to port. The canister system will cost-effectively accommodate a variety of underwater deployable payloads (UUVs, UAVs, etc.) while providing the required common hosts services within a shock mitigation environment. In addition to lowering the costs of launching a variety of payloads, we believe that the AUCC will enhance mission capability by permitting rapid loading and integration. As an added benefit, the AUCC will also permit Team Sub to field and evaluate other payloads which could be deployed via the VPM.  

The AUCCS-VPM design will also develop a concept for the required interface capabilities between combat systems, ship services and payload providers. This will ensure connectivity between the various payloads and the AN/BYG-1 Combat Control System on the submarine.  
**Specifications Required:**  
Meet MIL-DTL-901E Shock and Vibration Requirements, Submarine Material Requirements  
**Technology Developed:**  
Encapsulation Methods using Composite Canisters  
**Warfighter Value:** Enables a larger family of Payloads to be deployed from Virginia Class submarines  

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**WHEN**

**Contract Number:** N00178-17-C-8002  
**Ending on:** December 30, 2019  

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<tr>
<th>Milestone</th>
<th>Risk Level</th>
<th>Measure of Success</th>
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<td>Material test results</td>
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<td>October 2018</td>
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<td>Develop Manufacturing Processes</td>
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<td>Filament winding and bonding process</td>
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<td>December 2018</td>
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<td>Combat System Interface</td>
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<td>Canister Design</td>
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<td>Preliminary Design Completed</td>
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**HOW**

**Projected Business Model:** PEI will be the OEM and fabricate for LRIP and full production AUCC and composite canisters for the payloads at our 35,000 sq ft composite manufacturing plant in Lincoln NE  
**Company Objectives:** Develop a concept for an Adaptable and Universal Composite Canister (AUCC) system for the Virginia Payload Module. Lower the overall cost of launching payloads by accommodating a variety of underwater deployable payloads (UUVs, UAVs, etc.)  

Provide a standardized electronics interface between the Common Weapon Launcher (CWL) and the AUCC payloads  
**Potential Commercial Applications:** unmanned undersea vehicles, launchers, torpedoes  

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