



## ***23.1/23A SBIR/STTR Topic Workshop***

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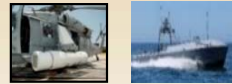
# PEO USC Portfolio

## Constellation Class Frigate



FFG 62

## Foreign Military Sales



Mining, MCM & Unmanned



Small Combatants

## Unmanned Maritime Systems



LUSV



MUSV



Sea Hunter



OVERLORD USVs



LDUUV



MUUV RAZORBACK



XLUUV/AUP

## Littoral Combat Ship



PMS 515

PMS 525

PMS 406

PMS 501

PMS 340

PMS 420

PMS 408

PMS 495

## LCS Mission Modules



MCM Mission Package



SUW Mission Package



Common Mission Package Equipment



UISS



MCM USV



In-Service Support



Knifefish



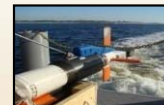
AN/AQS-20



AMNS Archerfish



COBRA



AQS-24



ALMDS



Hammerhead



Quickstrike



CDM



Barracuda



CREW & CUAS



MK11 SDV



NSW Systems



VAS and Small Arms

## Expeditionary Missions



Joint EOD



Underwater EOD



Expeditionary Medicine



Anti-Terrorism Afloat



MMUBA

As of October 2022 - DISTRIBUTION A - Approved for public release

ACCELERATE | INNOVATE | DELIVER



# *What We Are Looking To Fund*

R&D to close technology gaps or overcome significant technical hurdles:

- Investigate applications of novel technical solutions/approached
- Demonstrate feasibility/viability of new capabilities
- Incremental improvements to existing capabilities
- Solve and mitigate obsolescence issues
- Moderate technical risk, early-stage development
- Potentially game-changing technologies



# *What We Are Not Looking to Fund*

- Basic research (i.e., research with the primary goal of knowledge creation)
- Analytical or “market” studies of existing technologies or products/services
- Engineering solutions without innovation
- Projects where there is no strong chance of transition success

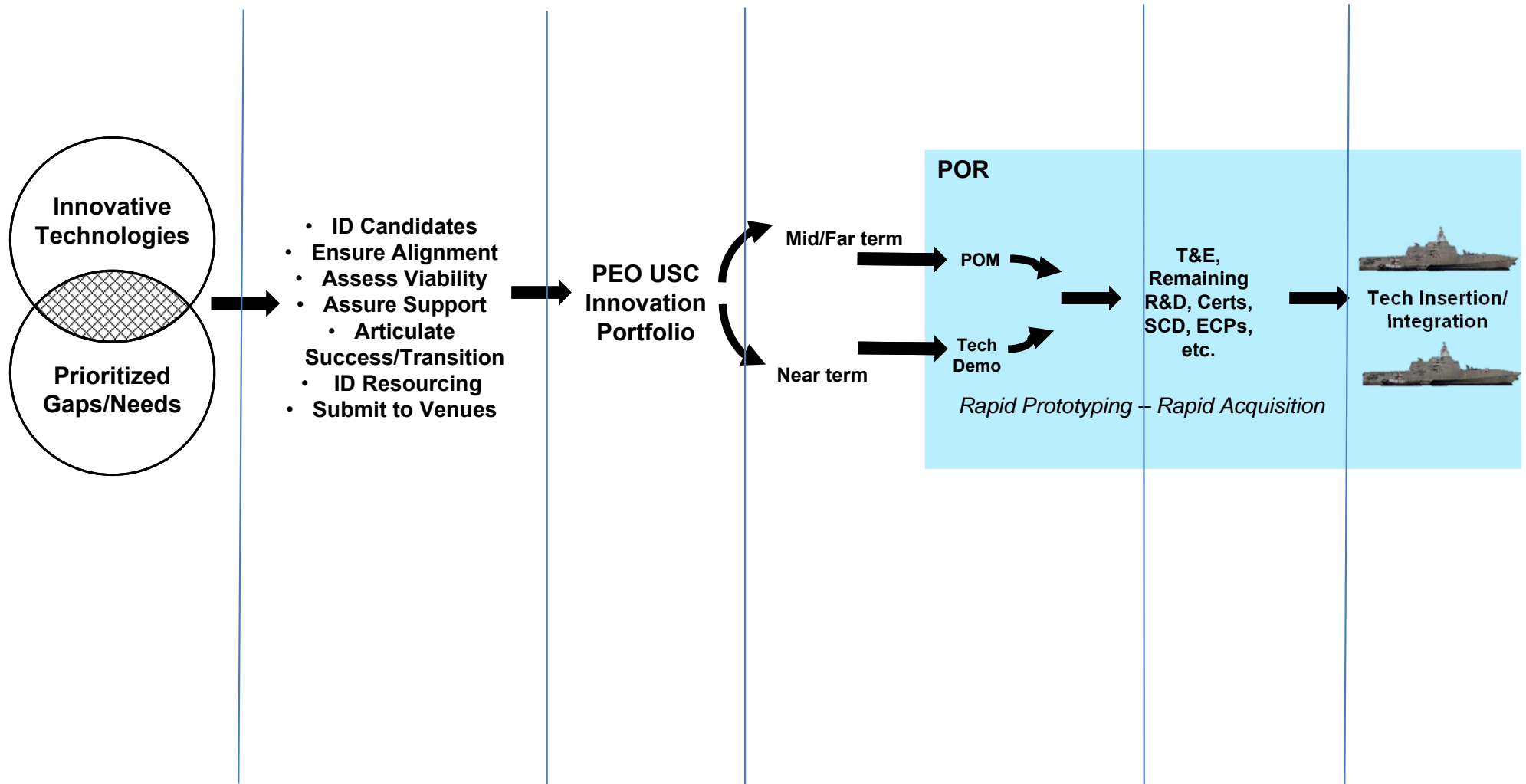


# How to Participate

- **Step 1: Determine your firm's eligibility**
  - Review complete eligibility requirements in the SBIR Policy Directive – [Chapter 6: Eligibility and Application \(Proposal\) Requirements](#)
  - For SBA's Guide to SBIR/STTR Program Eligibility, please search for SBIR Eligibility at <https://www.sbir.gov/> (You must use the search function on the top right had side of the page.)
- **Step 2: Find a Topic**
  - Review the current announcements at <https://www.dodsbirsttr.mil/submissions/login> to identify topics of interest. Be sure to review both the DoD Announcement Instructions and the agency-specific Instructions.
- **Step 3: Participate in the BAA Pre-release**
  - During the BAA pre-release period, communication between small businesses and topic authors is highly encouraged.
- **Step 4: Prepare Your Proposal**
  - All proposals are screened to determine responsiveness with submission requirements published in the DoD SBIR/STTR Program Announcement and instructions. Proposals that do not comply with the requirements are considered non-responsive and are not evaluated. Proposals that do comply with the requirements are evaluated by engineers and/or scientists to determine the most promising technical and scientific approaches.
- **Step 5: Submit Proposal**
  - All SBIR/STTR proposals must be prepared and submitted electronically through the DoD SBIR/STTR Electronic Submission website at <https://www.dodsbirsttr.mil/submissions/> and in accordance with the program announcement.



# Innovation Process







## *23.1 PEO USC SBIR Topics*

### N231-035: Automatic Target Recognition (ATR) in Complex Underwater Environments

- Develop adaptive Artificial Intelligence / Machine Learning (AI/ML) automatic target recognition (ATR) algorithms to support Autonomous Undersea Vehicle (AUV) operations in complex environments.

### N231-036: Long-Range Acoustic Communications System

- Develop a long-range service-request system capable of transmitting relay-assisted service-request messages in littoral water environments that is robust to doppler effects and provides low-probability-of-detection guarantees for the messaging signal and service-requesting sources.



## *23.1 PEO USC SBIR Topics*

### N231-038: Perceptually Lossless Unmanned Underwater Vehicle (UUV) Sensor Data Compression

- Develop an innovative data compression capability for unmanned vehicle sensor data that can send large amounts of sensor data acoustically and over the horizon using a limited bandwidth.

### N231-042: Pressure-Tolerant Electronically-Steered Antennas (ESAs) for Satellite Communications

- Develop a electrically steerable, pressure tolerant phased array antennas for use on UUVs with the following RF electrical performance. This will enable closing high data rate communications links with proliferated low earth orbit (PLEO) satellite constellations, enabling transfer of large data file sets to/from the UUVs.





## *23.1 PEO USC SBIR Topics*

### N231-048: Signal Processing for Underwater Explosion Detection and Localization

- Develop signal processing techniques to detect an underwater explosion and provide range and bearing information utilizing transducers from a program of record. Also, to include the current transducers that can be used to distinguish between two underwater explosions occurring over a short timescale.

### N231-055: Centralized Automated Fault Monitoring

- Develop the capability for an automated centralized network fault monitoring for networked equipment. Solution must provide and capture open interfaces to ingest data from Navy Programs of Record (PoRs), Contractor Furnished Equipment (CFE) cross communicate with all network enclaves. Include, monitoring data from devices considered traditional security devices as well as non-traditional components such as Machinery Control systems.



## *23.A PEO USC STTR Topic*

### N23A-T013: (STTR) Unmanned Underwater Vehicle (UUV) Sensor Data Transformation Tool

- Develop a software tool to transform and create synthetic sensor data from information received by a different sensor.



# Resources

- The Small Business Administration has several local partners to train and support potential SBIR/STTR applicants.
  - <https://www.sbir.gov/local-assistance>
- SBIR/STTR solicitations and helpful resources.
  - <https://sbir.defensebusiness.org>
- DoD SBIR/STTR Innovation Portal (DSIP)
  - <https://www.dodsbirsttr.mil>
- Where to find information about DoN SBIR?
  - <https://www.navysbir.com>