



# ANTX Purpose & Success Stories

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# Background



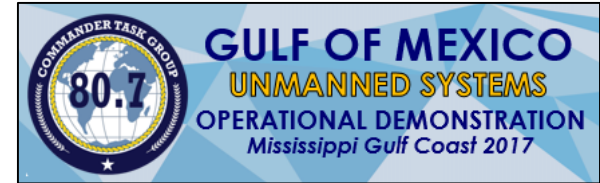
**2016** – Naval Oceanography attends ANTX 2016

**2017** – Naval Oceanography executes Operational Demonstration

**2018** – Naval Oceanography partners with the warfare centers and executes ANTX18 with the theme of “Human Machine Interaction”

**2019** – Naval Oceanography and warfare centers execute ANTX18 with the theme of “Prepare for Battle: Undersea Security”

**2020/2022** – ANTX20 executed with the theme of “Smart Ocean” in partnership with NAVSEA, NOAA, Industry Partners and Academia.





# ANTX - Smart Ocean Theme Naval Oceanography Vignettes



## UxS Exploitation Supporting Non-Combatant Evacuation Operations



## Environmental Sensing



## Joint Disaster Response



## MA-X for USV Operations



## Airborne Laser Bathymetric Survey from Shipboard Vertical Takeoff and Landing



## UUV Intelligence, Surveillance Reconnaissance Novel Target



## Air Deployable Glider

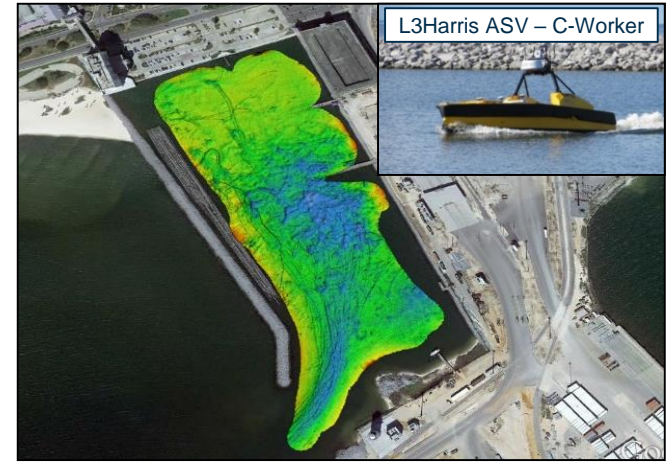




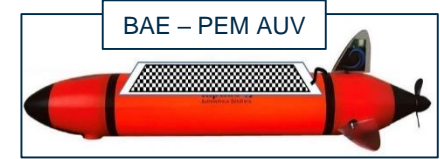
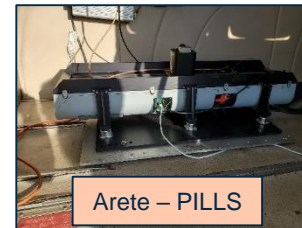
# ANTX 2018-20 Success Story Hydrography / Bathymetry



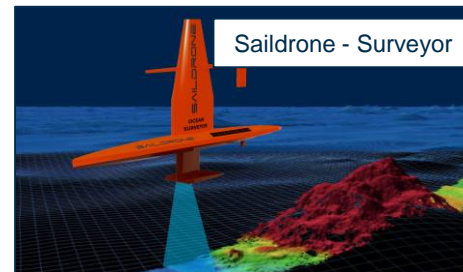
## ANTX 2018:



## ANTX 2019:



## ANTX 2020:



**Pursuing  
Operational  
Testing at  
RIMPAC/TW22**



# ANTX 2018-20 Success Story

## Hydrography / Bathymetry cont.



### Objective:

- Evaluate tech at the research and development or commercial level before the technologies become militarized and integrated at the operational level
- ANTX 2018
  - Goal: “Incorporate UxS and “autonomy” where and when it makes sense.”
    - L3 ASV – C-Worker 5
    - QPS – Qinsy, Qimera
    - Leidos – Optionally Manned Survey Launch
- ANTX 2019
  - Goal: “Assess the battlespace using a **multi-domain UxS** complement, remotely offload sensed data for rapid exploitation, and extend the UxS mission profile using renewable energy sources.”
    - AstraLiTe – Edge Lidar
    - Arete Associates – Pushbroom Imaging Lidar for Littoral Surveillance (PILLS)
    - iXblue Defense Systems – DriX
    - MARTAC – MANTAS T-12 ENV
    - BAE Systems – Persistent Environmental Monitoring AUV
- ANTX 2020 - Underway
  - Goal: “Project technology to a **real-world military survey operations scenario.**”
    - Woolpert – Bathymetric Unmanned Littoral LiDAR for Operational GEOINT (BULLDOG)
    - iXblue Defense Systems – DriX
    - Saildrone – Saildrone Surveyor (SDS)





# The Future...



## Gulf Coast NavalX TechBridge (GCTB)

- Launched by Sec. Geurts in Dec 2020
- Collaboration between CNMOC, NSWC PCD and NRL-South
- Spans from Tallahassee, FL to New Orleans, LA
- Director: Holly Gardner (NSWC PCD);
- Deputy Director: Joseph Calantoni (NRL-South)
- Thrust Areas:
  - Coastal Sciences and Technology
  - Assured Maritime Access
  - Operational Meteorology and Oceanography
- ***Future ANTX-type initiatives will align with GCTB goals & thrust areas***



## CENOTE

- Commercial Engagement Through Ocean Technology; NOAA-Navy collaboration wrt UxS
- MOA exists between NOAA & Navy
- NOAA establishing Unmanned Operations Center in Gulfport, MS
- NOAA enduring partner on ANTX-type demonstrations and tests





# Questions?

