
Rapid Innovation Concept

***Provide unmanned capability
to address' 5th Fleet customer requirements***

Rapid Innovation Concept

Holistic “customer facing” tech implementation strategy to prepare the Fleet for adoption of unmanned systems

Problem Statement

Traditional DOD acquisition structures (OTA, SBIR, POM) operate under fixed timelines that are not aligned with the “fight tonight” operational mandate. Example multi-year POM and maintenance cycles for tech that will be obsolete in 12-18 months.

DoN SBIR/STTR Award Structure (DoN SYSCOMs tailor as needed)

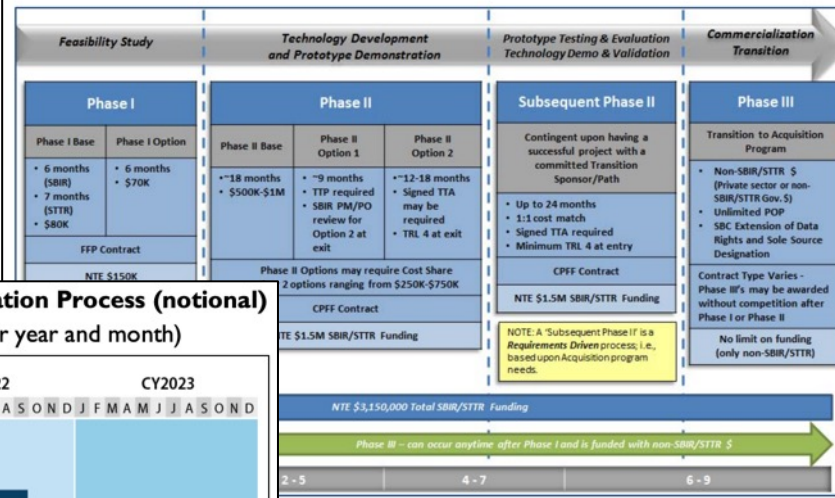
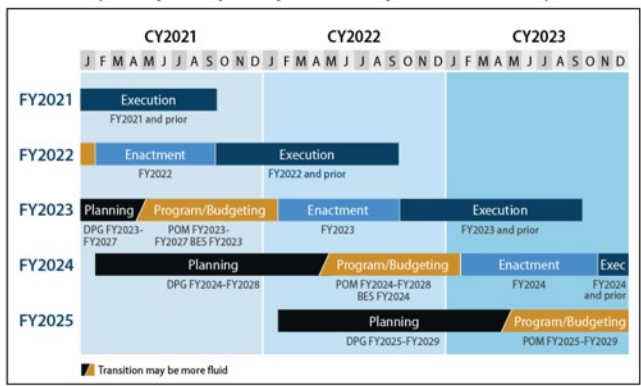


Figure 1. DOD Resource Allocation Process (notional)
(fiscal year cycle by calendar year and month)



Mission

Deliver high TRL solutions to the customer. Rapidly bring tech to AOR & utilize TF staff to drive development

- Design a testing schedule (ex. One week, One Task Force a month)
- Dialogue with customer drives which operational gaps can be answered with high TRL technology
- Customers assist in tech scans and down select of commercially available tech
- Contractors and operators perform system testing under COCO model
- Feedback drives tech iteration
- Task Force battle staffs exercise command and control functions from a central Operations Center. Prepares the Fleet for future unmanned operations
- Exercise progress monitored via specialized software
- Sensor data (full motion video, telemetry) ingested and processed by operations Center. Data architecture aligns with other COCOMs for maximum interoperability

End State

1. Increased collaboration between operational users, Task Force staffs, transition partners and OEMs.
2. Efforts designed around a continuous enduring testing model
3. Provides transition partners and warfare centers a principal location for fleet testing

Proposal 1: CTF 52

Unmanned effector delivery via USV



Texas ARL SQUID system
2 systems purchased by PMS 408 currently at NIWC PAC



Videoray Defender
Currently in EOD inventory



OPT WAM-V
2 systems currently at NIWC PAC
1 system in Bahrain



Deep Trekker ROV w Cable cutting tool



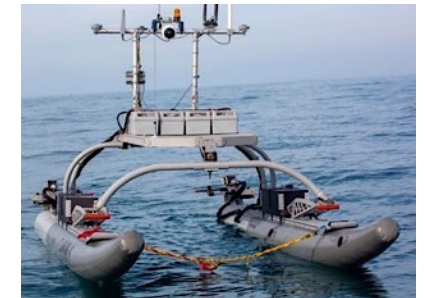
Deep Trekker cable management system



Deep Trekker ROV
Deployed from USV



Lidan Cable management system with Norbit towed Sonar array
Currently used on WAM-V USV



OPT WAM-V
2 systems currently at NIWC PAC
1 system in Bahrain

Proposal 1: CTF 52

Left: Mine countermeasure/offensive operations with JAIA UUVs
Right: IPOE/recovery operations with heavy duty bottom ROVs

JAIAbot swarm UUV

Low cost, expendable, open architecture UUVs that could be utilized in MCM, SSW and offensive capacity



LOW COST, HIGH SPEED, MICRO-SIZED, AQUATIC DRONES

Starting at \$10K per JaiaBot Vehicle

1 – 99 Autonomous Vehicles Operating in 1 Pod

3 Feet Long

Depth 60 m

Weight 6.5 lbs

Speedy 10 + knots

7 miles range @ >5 knots

120 Hours Loiter, 36 Hours Data Collection

Scalable deployment - 1 Day training

Open-Source Software maximizes interoperability

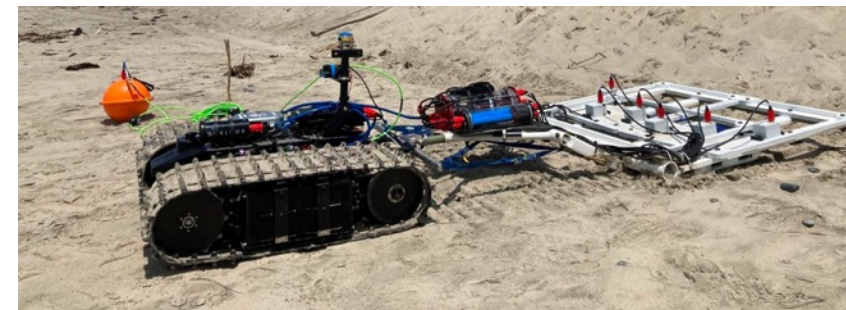
Capability driven platform , Many Variants, Multiple applications

Supports littoral maneuver, force protection, battle space shaping, ISR and more.

Simplified integrated logistics support and low total cost of ownership

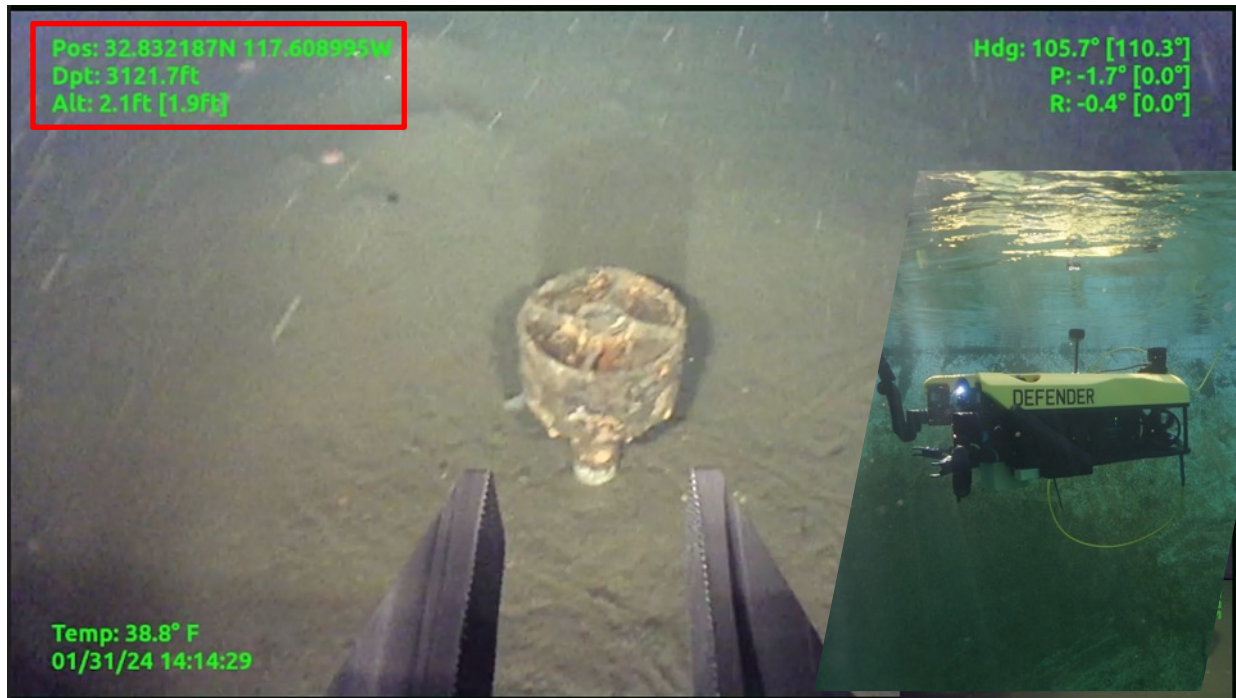


GreenSea bayonet 150, 250 could be delivered via 11M RHIB or WAM-V to deliver acoustic markers on mines for prosecution by JAIA bot UUVs.
Various sensors could be affixed on the Bayonet (Long range sonar, magnetometer array or acoustic comms for UUV dynamic re-tasking)



Proposal 1: CTF 52

Left: Deep water reconnaissance via small form factor ROV
Right: Robotic platform operations by US and coalition partners fed to JOC



Deep water ROV capability currently exists. Four defender units capable of 4000 FSW currently reside at NIWC PAC. Traditional testing and fleet roll out plans estimate fielding at FY26/27

Robotics platforms can easily be integrated into operational units. Pertinent data such as Full Motion video and telemetry is streamed to Operations Floor via tactical comms kits. Easy to deploy tech can help define concepts such as port damage repair, battle damage repair and organic ISR capability



Deep Trekker Mag Crawler
Vessel Inspection tool



Deep Trekker DTG3 ROV
Fits in one pelican ideal for fly away



Teal 2 sUAS
Minimal training/employment time



Skydio X10D sUAS
Minimal training/employment time

Proposal 2: All CTFs

Tactical Re-supply via UAS



TRV 150
Current USMC POR high payload
UAS (~150 LBS)

Multiple avenues of approach for conducting tactical resupply. Additional capability allows for units to remain on station longer without the need for return to afloat staging base.



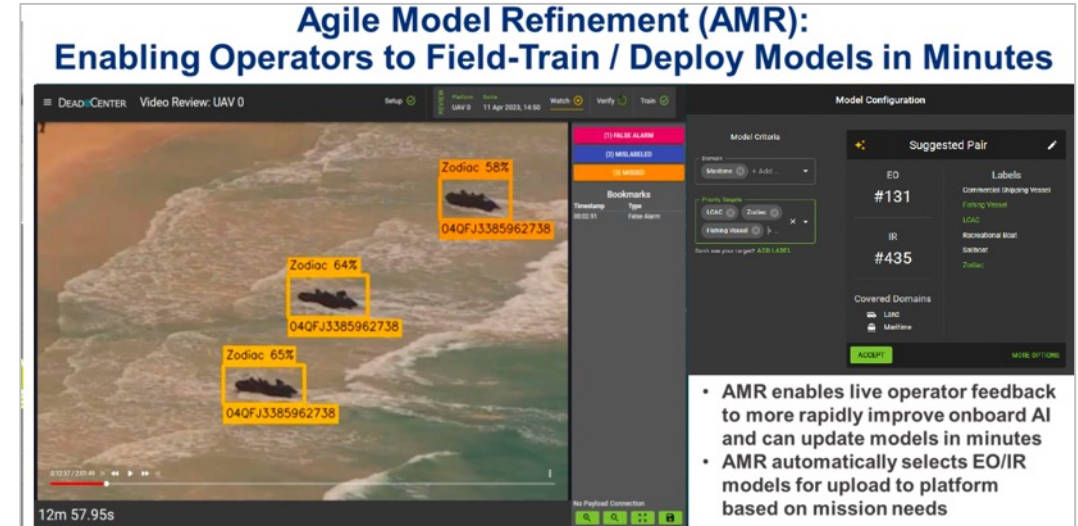
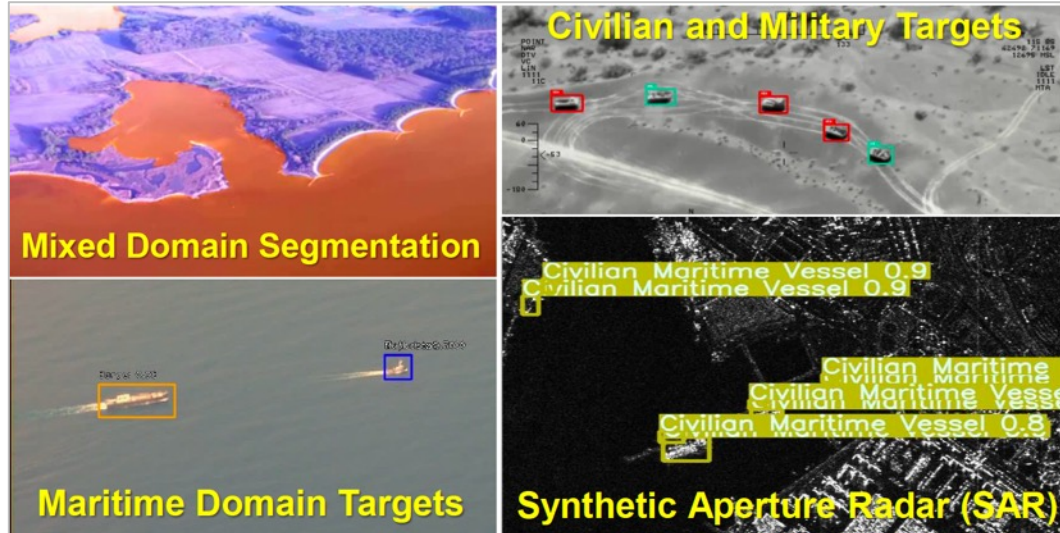
Anduril Ghost UAS
Lo g endurance, advanced sensors
and high payload capacity

Tailored planforms can be
mounted on USVs to carry
and deploy UAS greatly
enhancing range



Proposal 3: CTF 51/5, 52, 57, 55, TF3

Conduct MDA/Range Clearance with existing Group 2 UAS. Deliver existing ISR capability to the TF level.
Reduces reliance on limited AOR assets. PMA 263 assets operate from Air base.



Proposal 4: All CTFs

**Real-time translation capability of maritime traffic via software defined radios.
Easily develop IW models that provide essay to units on the water**

- Voice to text language models via RF. Ability to translate language via web browser application



- Raspberry pi server to Hack RF SDR


Proposal 5: All CTFs

Small form factor mesh networks at the tactical edge

STACK systems and AF MCHMR products deliver ability for tactical units at the edge to push sensor data into the cloud cross domain solutions. Users have ability to feel high side COPs via a minimal footprint





Controlled Unclassified Information



GLOBAL JOINT SERVICE C2 MESH NETWORK & CLOUD TRANSPORT DEMONSTRATION

OUR SOLUTION: MCHMR & AZURE

We have leveraged advancements in DoD owned MANET radio technologies and combined the already proven cloud compute, storage, and transport capabilities to deliver a solution that supports echelon spanning joint & coalition operations at scale. We accomplished this in 4 weeks and with zero budget, by leveraging investments already made and using proven capabilities that can be rapidly scaled across the services, Australian, and Japanese partners by January 2026...

CURRENTLY FIELDIED CAPABILITY	MCHMR	Deployed Footprint & Form Factors Demonstrated
1) STARSHIELD/STARLINK	✓	  <p>MANET C2 High Mobility Radio (MCHMR) & Azure Platform <u>eliminates</u> the need for licensing or support by outside vendors and is fully operational <u>today</u>.</p> <p>Wearable Edge Connect Equivalent: a MPU-5 with built in 5G/LTE and Secure Wi-Fi for additional capabilities and reduced footprint (<i>avail June 24</i>).</p> <p>Use Case: Allows any warfighter to have a built-in backhaul for cloud connectivity, and can operate as a Wi-Fi hotspot for US and Coalition MPE operations at Secret//Rel security level.</p> <p>Use Case: Aircrew can leverage secure Wi-Fi via MPU-5 in 1st and 2nd Island Chains in DDIL environment for Electronic Flight Book connectivity to Azure Virtual Desktop suite of applications (<i>Mattermost, chatsurfer, etc</i>).</p>
2) 5G LTE / Aggregation	✓	
3) Cloud Infrastructure	✓	
4) SD WAN	✓	
5) Network Agnostic	✓	
6) BLOS MESH Networking	✓	
7) Radio over IP	✓	
8) Full Motion Video	✓	
9) CSFC Wi-Fi	✓	
10) Portable and Rapidly Deployable	✓	
11) Contractor Support @ Licensing	✗	