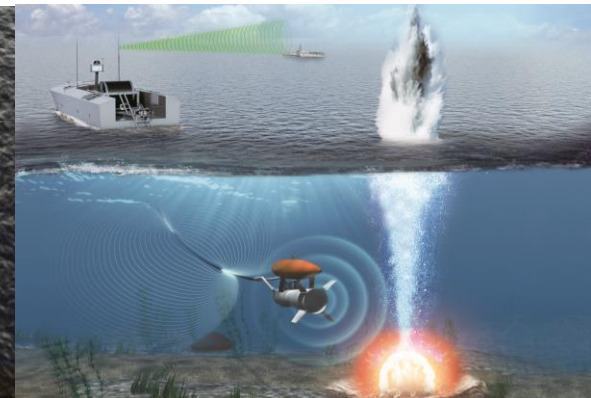


Unmanned Maritime Systems



23 Aug 2016

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PMS406 Unmanned Maritime Vehicles (UMV)

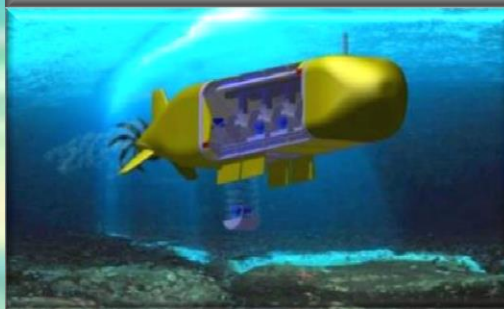


**Surface Mine Counter Measures
UUV (Knifefish)**



*Hunting for Volume and Bottomed /
Buried Mines in High Clutter Environment*

**Large Displacement Unmanned
Undersea Vehicle (LDUUV)**



*Intelligence Surveillance Reconnaissance
(ISR), ASW, IPOE and Deployable Payload*

**Extra Large Unmanned Undersea
Vehicle (XLUUV)**



Deployable Payloads

**Mine Hunting Unmanned
Surface Vehicles (MHU)**



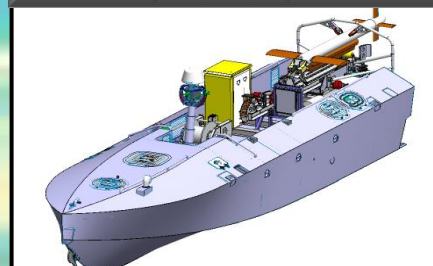
Mine Hunting

**Unmanned Influence Sweep
System (UISS)**



Mine Sweeping

**Common USV (CUSV) with
An/AQS-Q20/24**



Mine Hunting

RMMV



*Mine Hunting w/
AN/AQS-20 Sonar*



Notional UMV Plan



Knifefish

Extended Range Knifefish (TREK)

LDUUV

AUP/ XLUUV

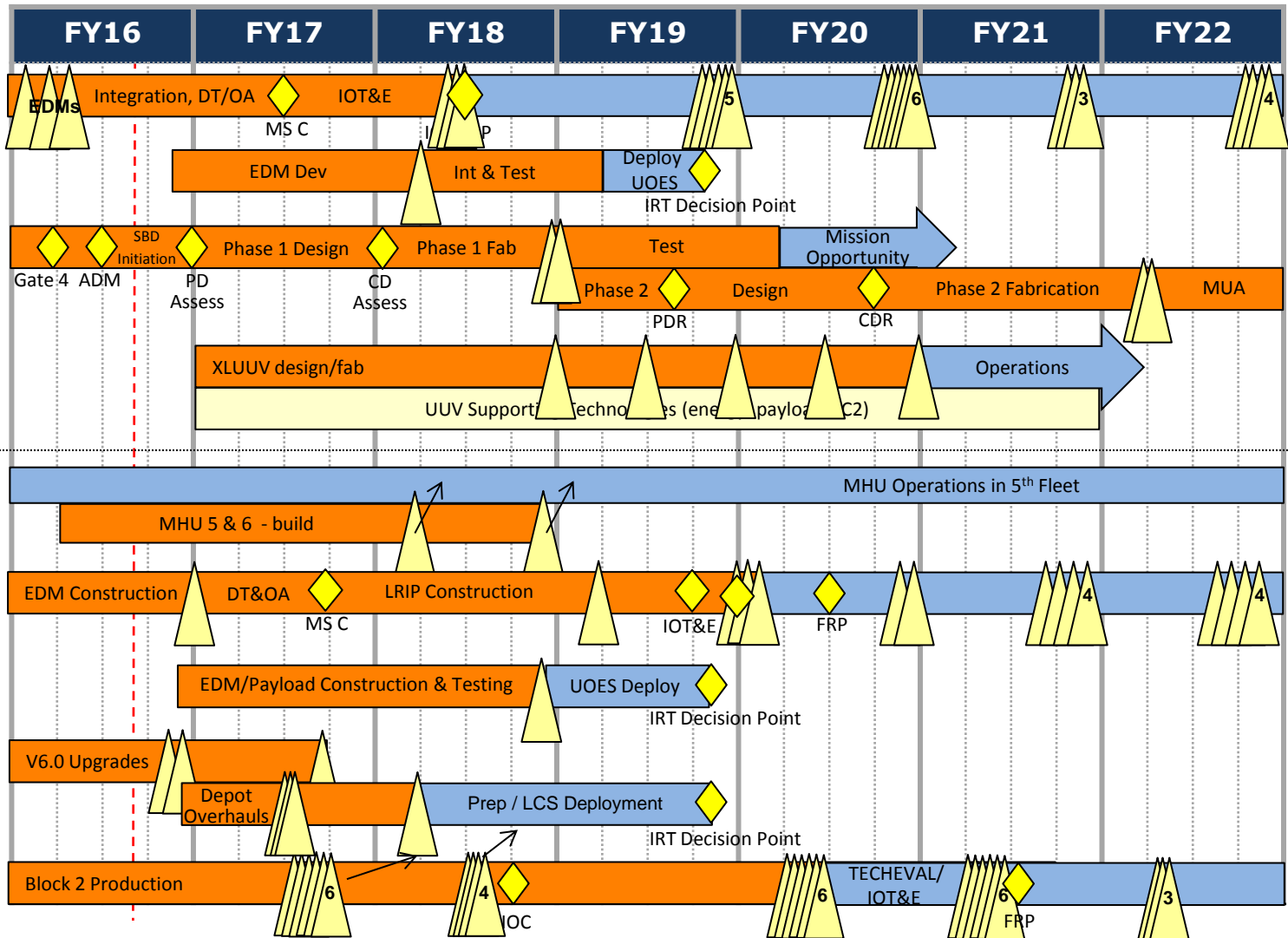
MHU

CUSV+Sweep (UISS)

CUSV MCM

RMMV

AQS-20





UMV Challenges/Opportunities



U
U
V

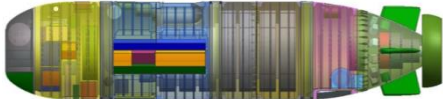
- **Knifefish**



- **PLUS**



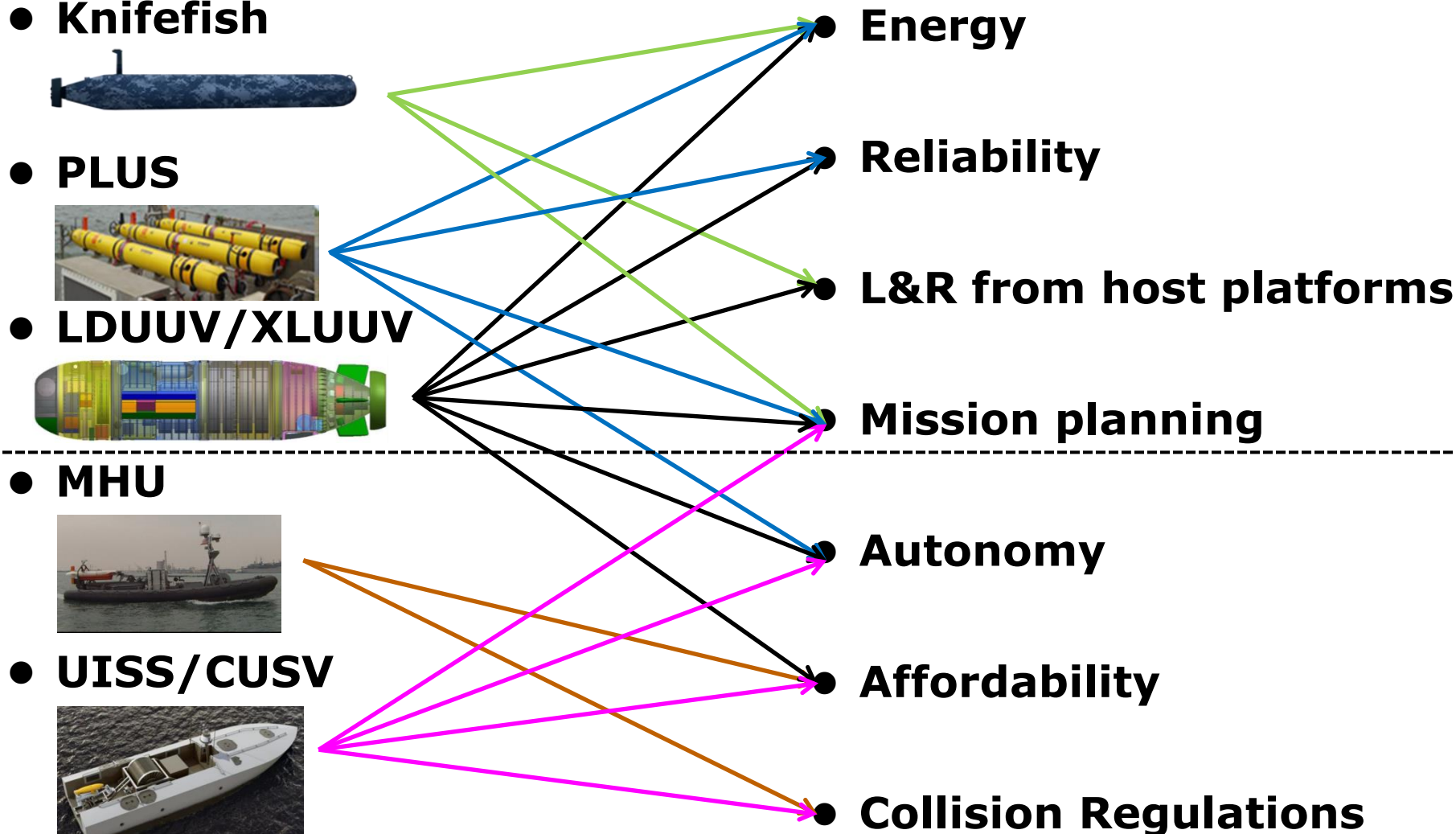
- **LDUUV/XLUUV**



- **MHU**

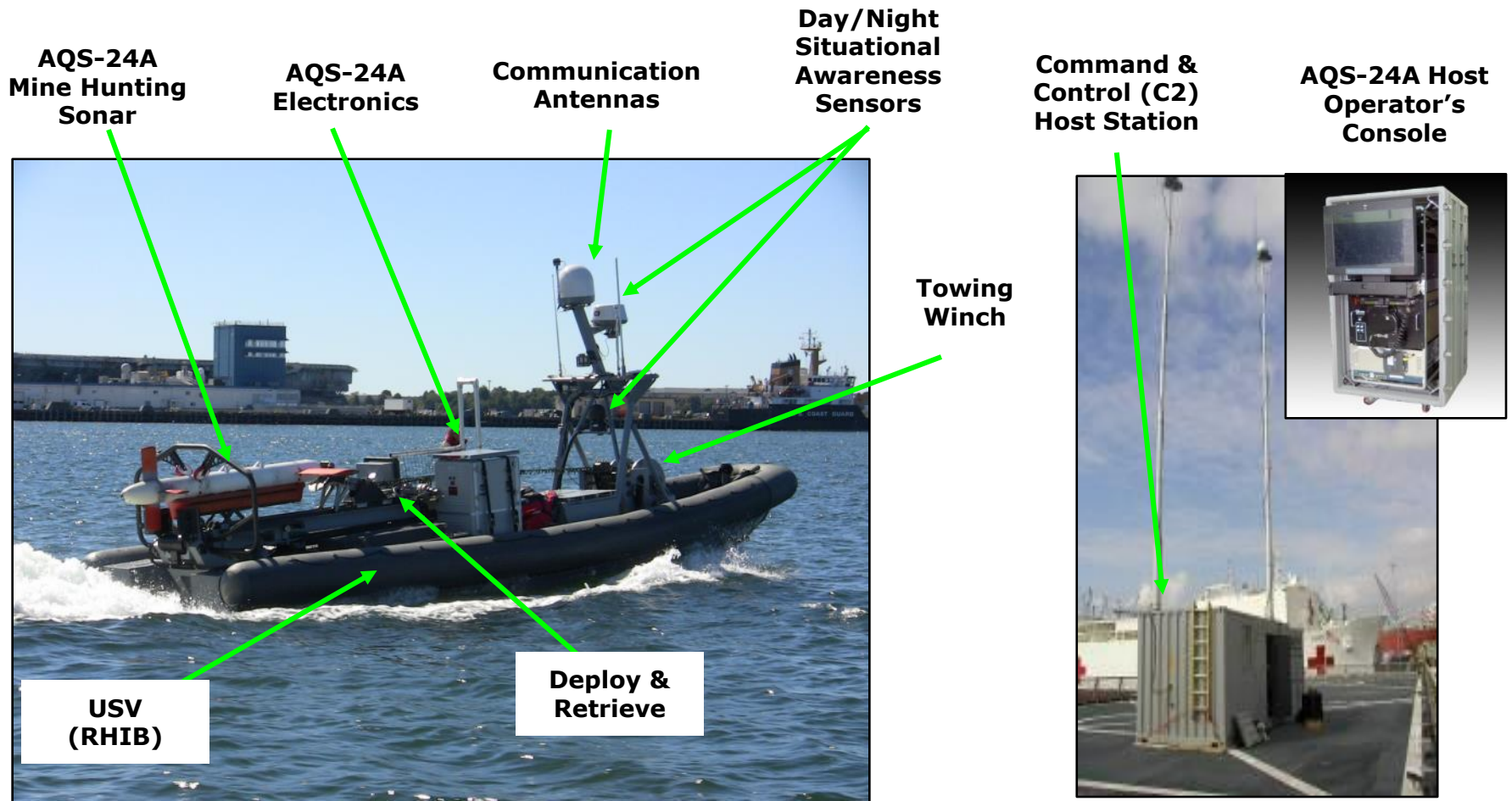


- **UISS/CUSV**

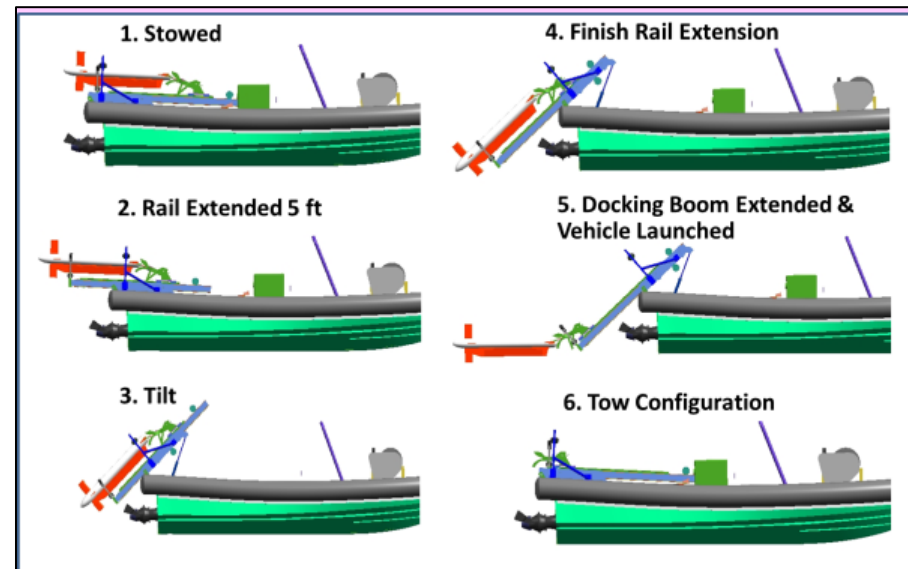
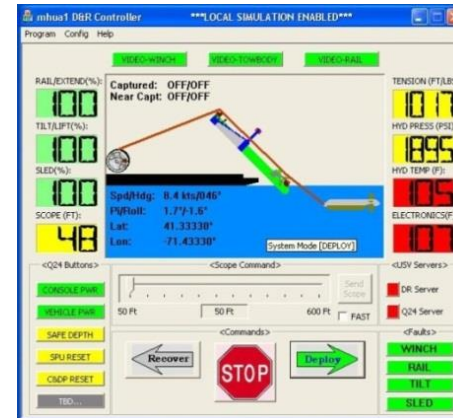
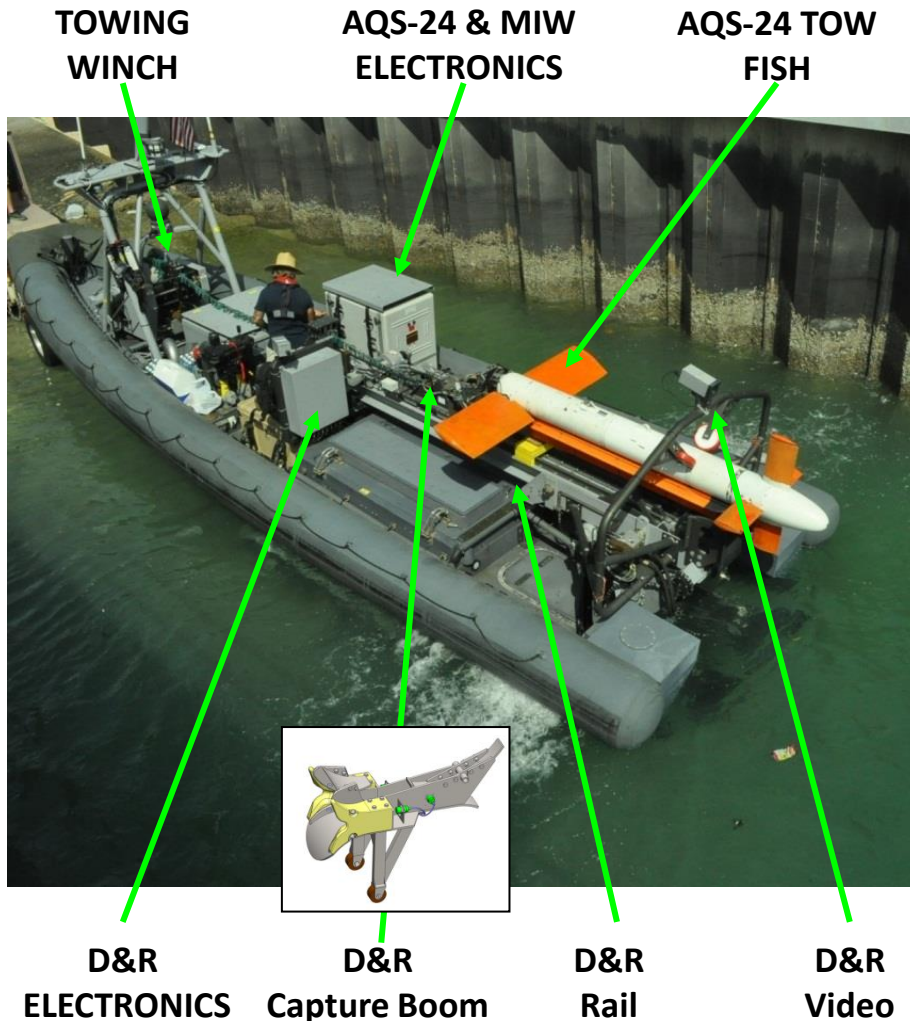




Mine Hunting Unmanned Surface Vehicles (MHU)

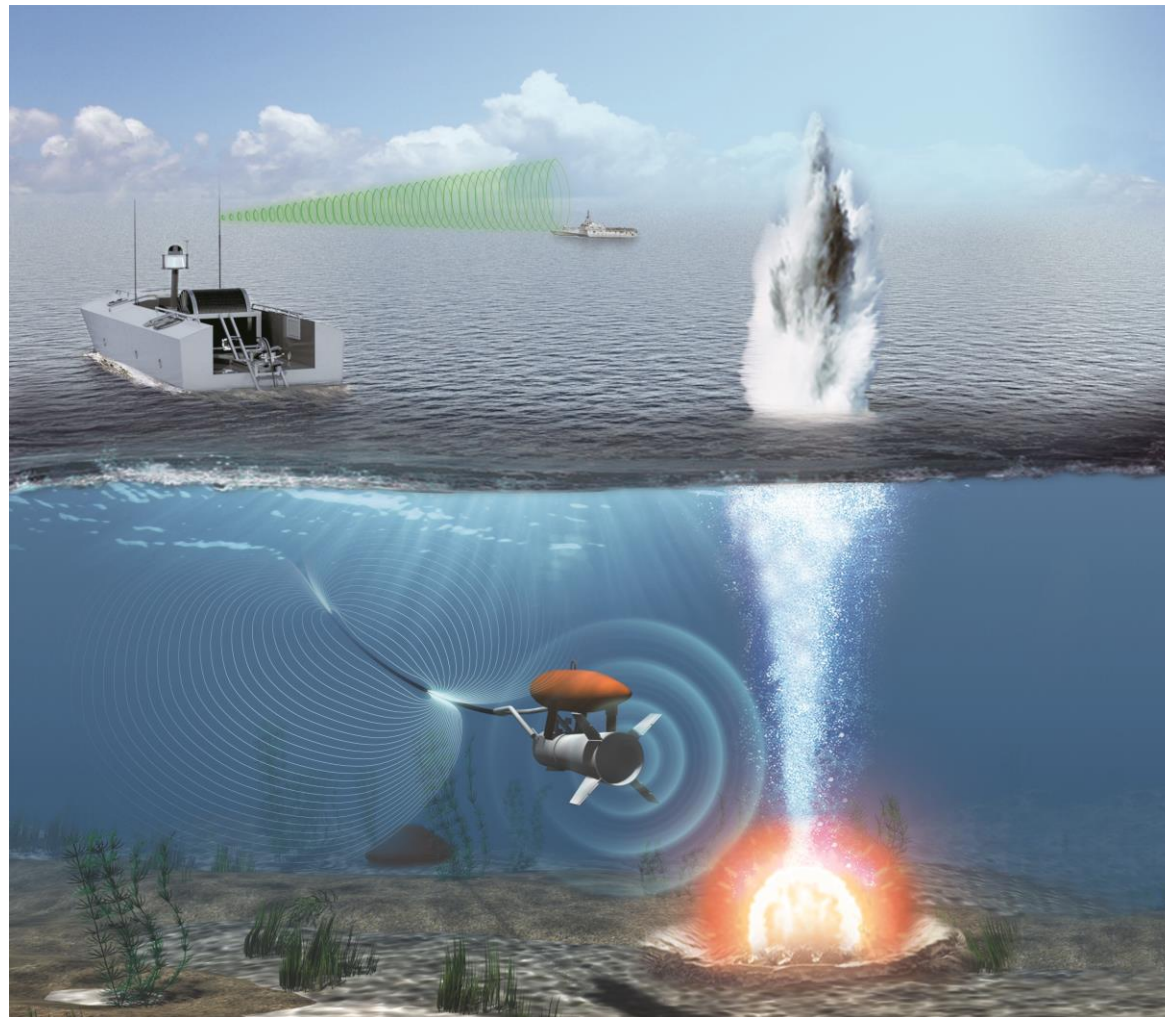


MHU Payload Deploy & Recovery





Unmanned Influence Sweep System (UISS)



****Conceptualized images****



Unmanned Influence Sweep System (UISS) Overview



Requirements Documents

Provides low-cost, long endurance, semi-autonomous mine sweeping capability to counter acoustic and/or magnetic influence mines.

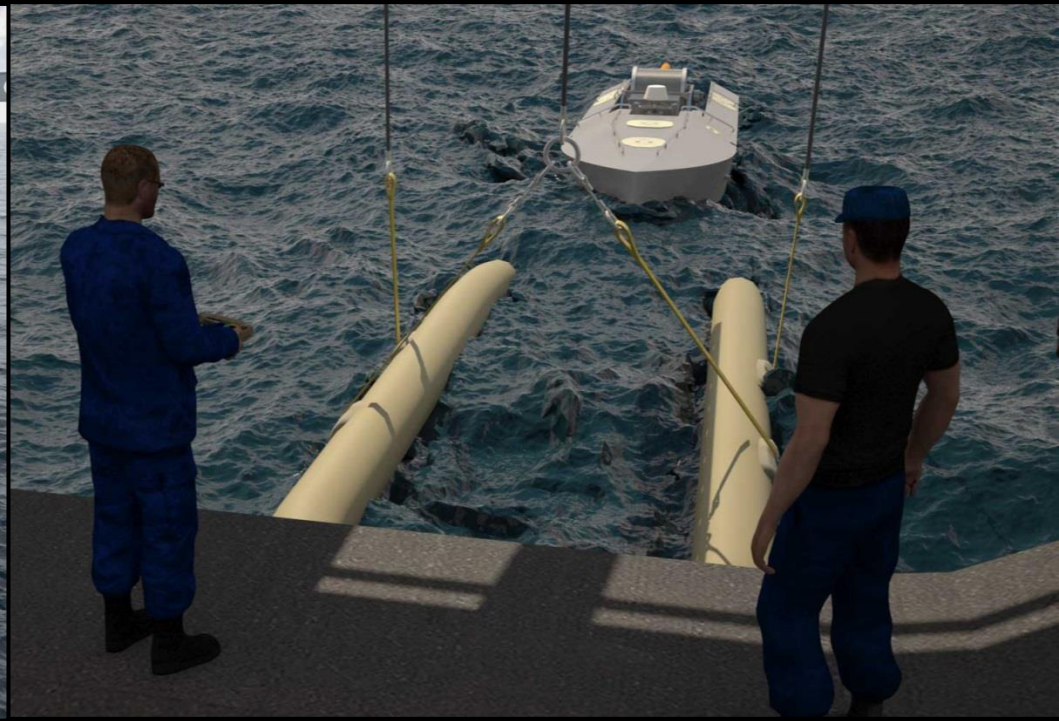
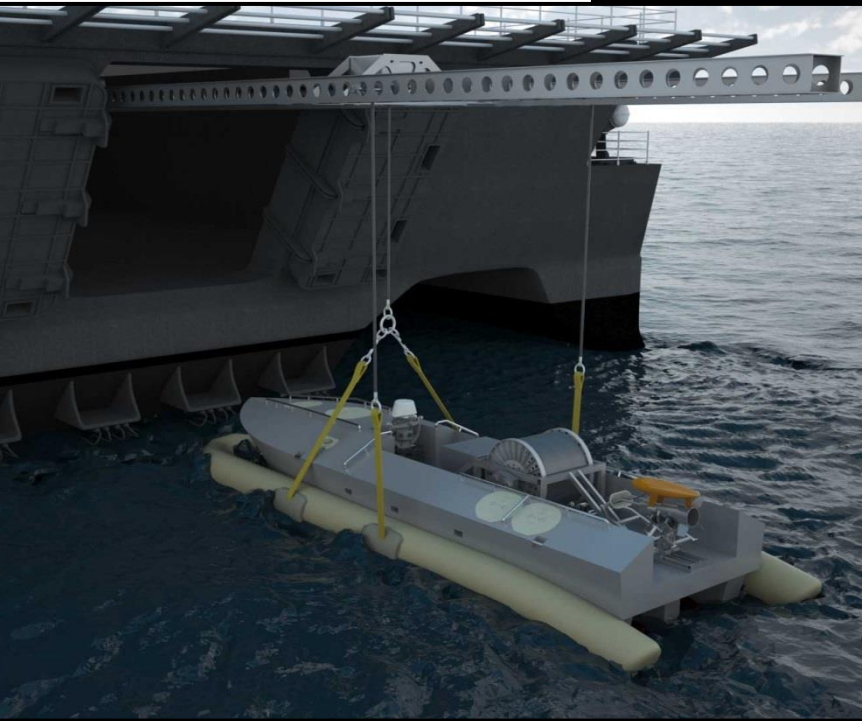
Acquisition Key Milestones

- ✓ Draft RFP released: Q1FY13
- ✓ Industry Day held: Q1FY13
- ✓ RFP release: Q4FY13
- ✓ Proposals received: Q1FY14
- ✓ MS B Decision: Aug 2014
- ✓ Source Selection: Awarded 30 Sep 2014
- ✓ PDR: April 2015
- ✓ CDR: Jan 2016
- ❑ EDM Construction





Unmanned Influence Sweep System (UISS)





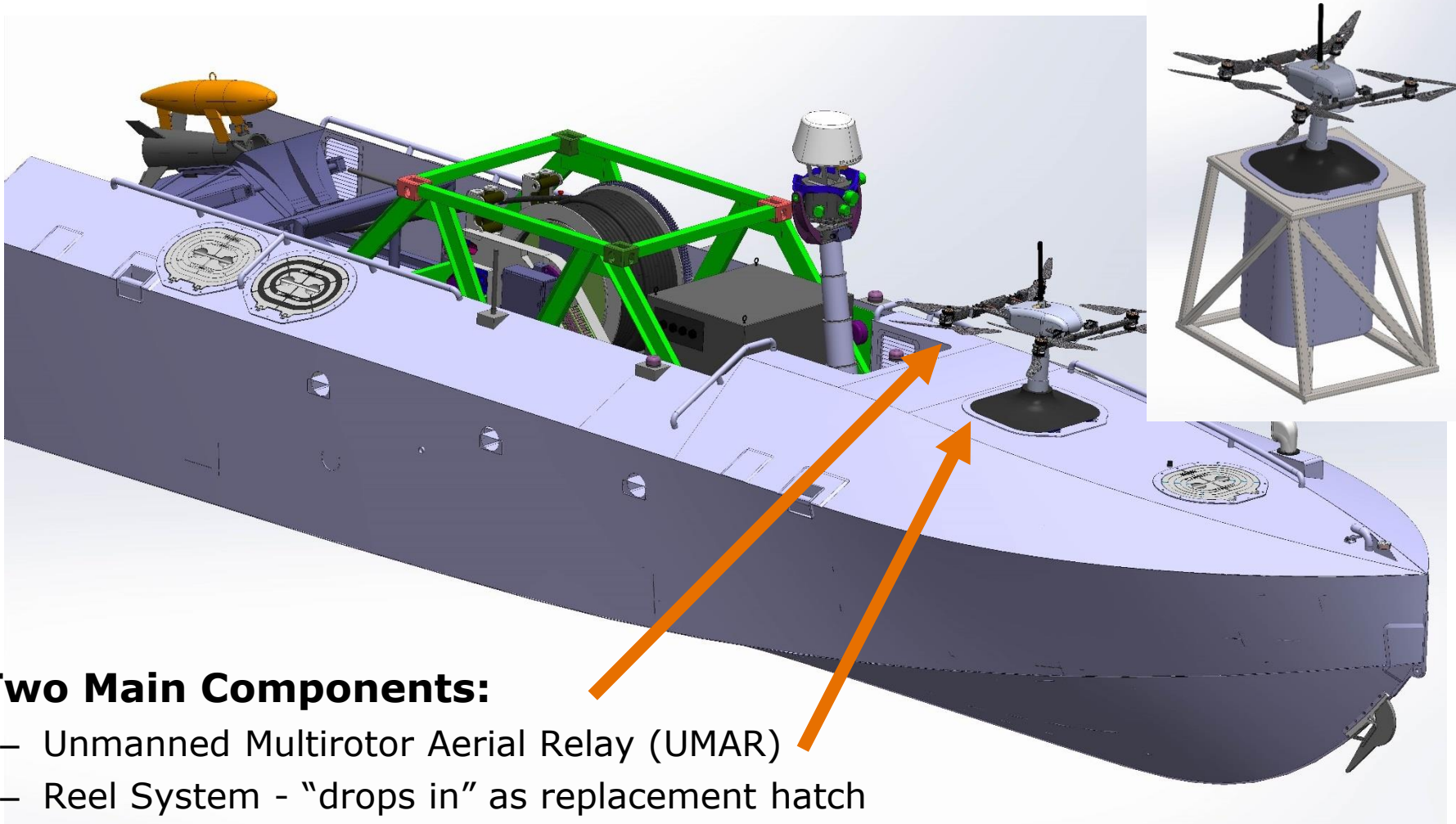
Operational Range Extension Potential Operational Concept



Use tethered Unmanned Multirotor Aerial Relay (UMAR) to extend Mine Countermeasures (MCM) Line-of-Sight (LOS) operations
Expand and enhance Intelligence, Surveillance, and Reconnaissance (ISR) and overwatch capabilities



Unmanned Multirotor Aerial Relay (UMAR)



Two Main Components:

- Unmanned Multirotor Aerial Relay (UMAR)
- Reel System - “drops in” as replacement hatch