



# Acquisition Directorate

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## Research, Development, Test & Evaluation

## U. S. Coast Guard

# “Acquisition Capability” Technology Demos (ACTD)

CG-926 | CAPT John Macaluso, USCG

Innovation Expo JCTD Panel | November 2008



# Topics

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Modern Coast Guard

➤ Modern Acquisitions

➤ **RDT&E Modernization**

➤ **Acquisition Capability Tech Demos (ACTD)**

➤ **Recent Examples**



# RDT&E Modernization

## A modern RDT&E Program

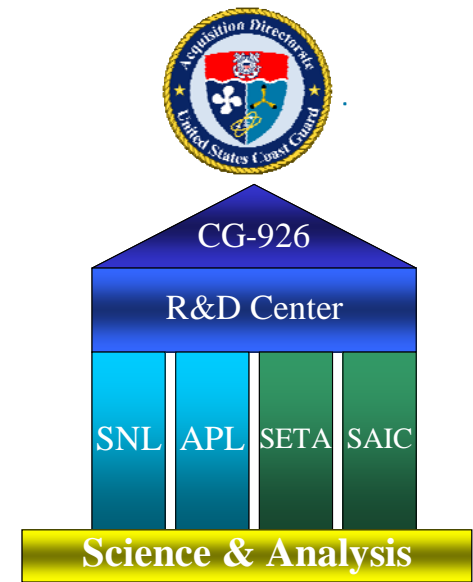
- Principal RDT&E Advisor to the Chief Acquisition Officer (CG-9)
- R&D Center – modern organization & location
- Experts in CG multiple missions & environments

## New strategic relationships

- Increased capacity, experience, and expertise
- Trusted-advisor services & SETA support

## A modern RDT&E Appropriation

- Early exploration of real-world modern technology & concepts
- Knowledge & experience informs early decisions of PM's



# Acquisition Capability Tech Demos

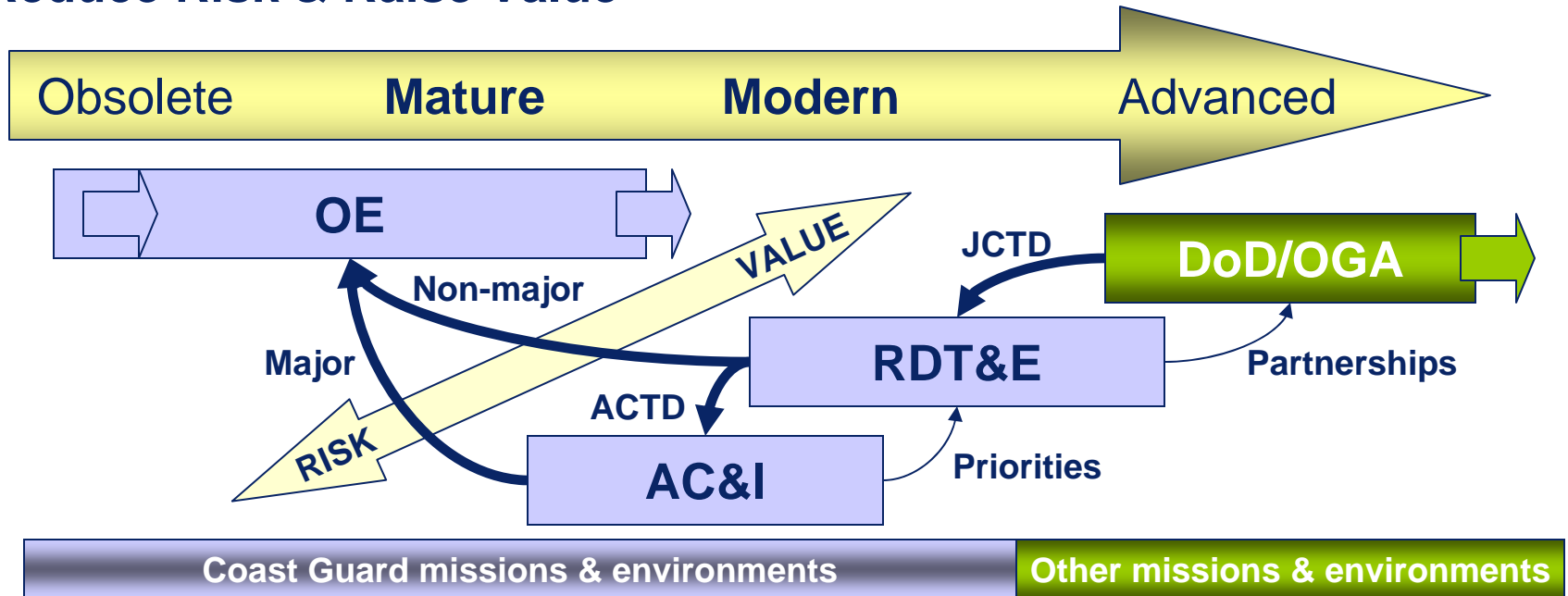
## Modern technology demonstrated in multiple environments

- Maritime, arctic environments – harsh & austere

## Adapted to Coast Guard multiple missions

- Match acquisition concepts with modern technology

## Reduce Risk & Raise Value



# Examples

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**Comprehensive Maritime Awareness (CMA) JCTD**

**Global Observer JCTD**

**Gulf Coast Maritime Predator Demonstration**

**Unmanned Aircraft System (UAS) ACTD's**



# Summary

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**A modern RDT&E Program,  
with new strategic relationships,  
funded by a modern RDT&E Appropriation is  
using early exploration & ACTD's to  
reduce the risk & raise the value of  
adapting modern technologies to  
acquisition, operational, and regulatory programs in  
the modern Coast Guard.**



# Discussion

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# Backups



# CMA JCTD

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**RDT&E Liaison to ONR**

**NRL Project “USCG Vessel Tracking Project”**

**MDA PIO & RDT&E Program involvement**

**CMA JCTD**

**CG-2 (Intelligence) & RDT&E Program involvement**

**Coalition data fusion & sharing**

**“Need to Share” – sensitive info for coalition & port partners**

**CMA won JCTD Management Team of the Year Award**



# Global Observer JCTD

High-altitude UAS – endurance of several days, hydrogen ICE\*

Multi-mission – configurable payload

- Persistence: “Unblinking eye”
- Communications & Data Relay

CG-6 championed DHS S&T sponsorship



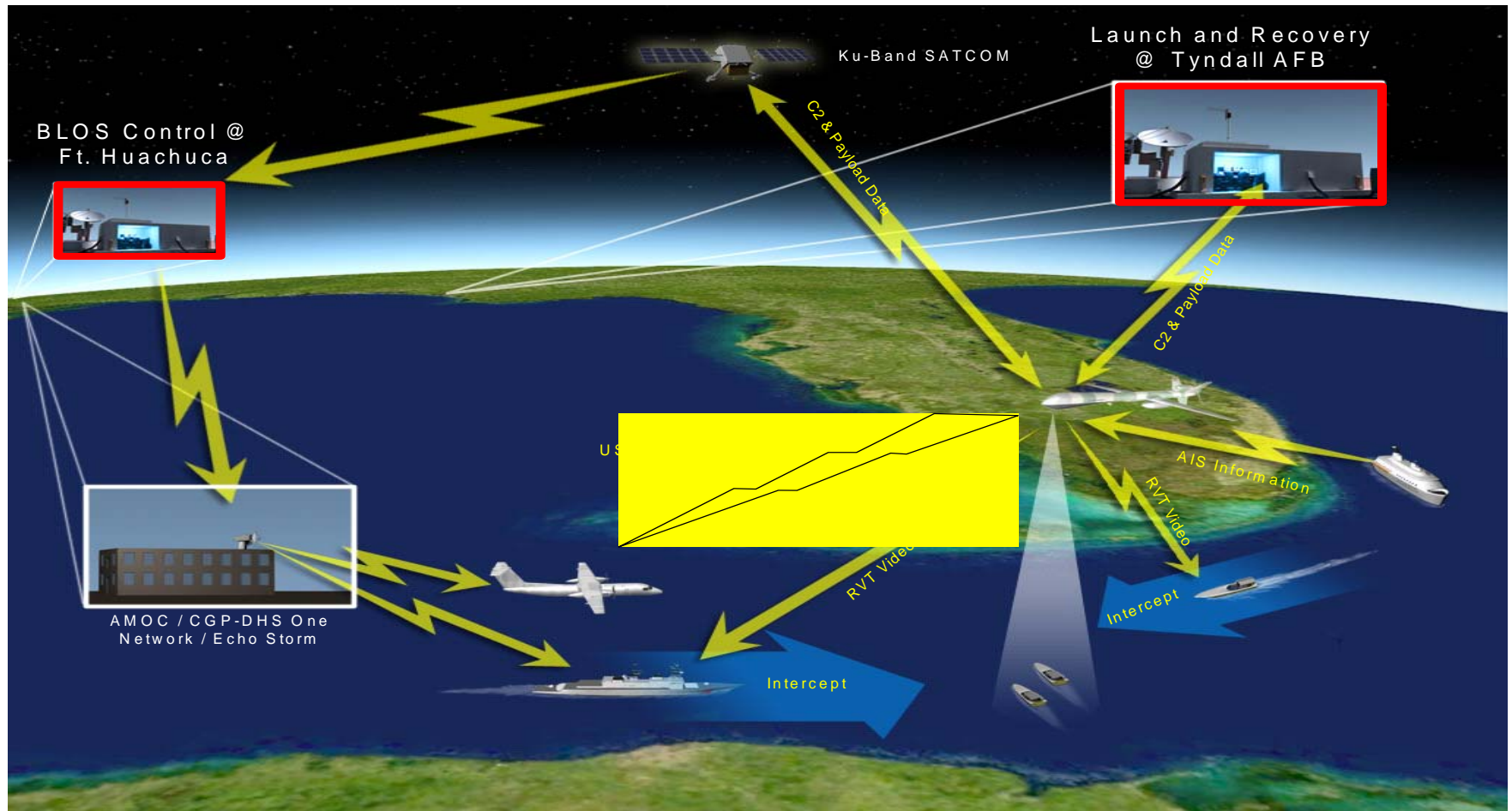
CONOPS includes Homeland Security vignettes

- CBP / CG law enforcement operations

\* Internal Combustion Engine

# Gulf Coast Maritime Predator Demo

## USCG/CPB Joint Operations



## Global Hawk / Broad Area Maritime Surveillance (BAMS)

- Vessel detection, tracking and classification
- 36 hrs hour fuel endurance

National Strategic Asset  
55K feet and above

Source of Strategic Data



55,000 feet

Operational Altitudes depicted:  
Aircraft can fly higher, however current sensors are not effective at higher altitudes.

20,000 feet

## Predator B

- Vessel detection, tracking, classification and identification
- 24 hour endurance

Agency Operational Asset  
20K feet and below



8,000 feet

## Fire Scout

- Vessel detection, tracking, classification and identification
- 5 hour endurance

Cutter-Based Tactical Asset  
8K feet and below



# UAS4NSC – Project Timeline

## R&D Center

### NSC-UAS Project Team

#### - Validation

*Constraints Analysis Interim Report*

#### - Market Research & Analysis

*Market Survey Interim Report*

*Test Plan*

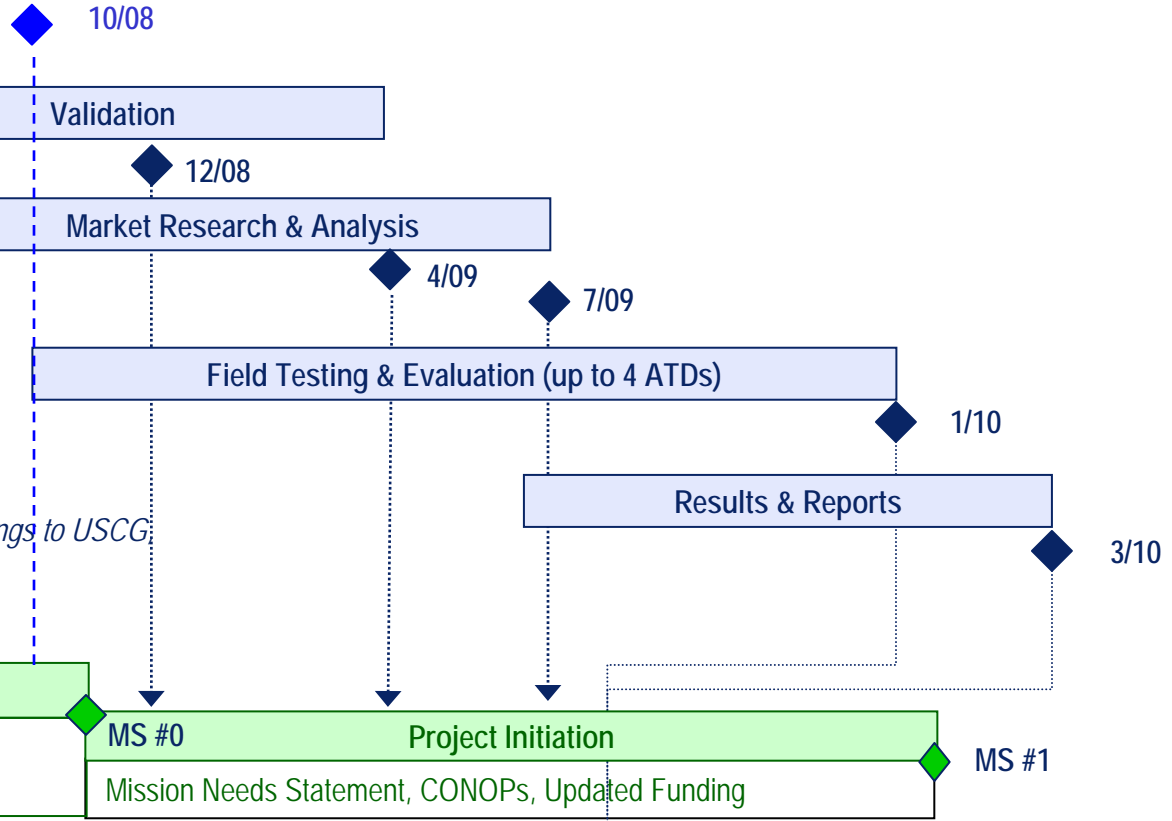
#### - Field Testing & Evaluation (up to 4 ATDs)

*Test Interim Report*

#### - Results & Reports

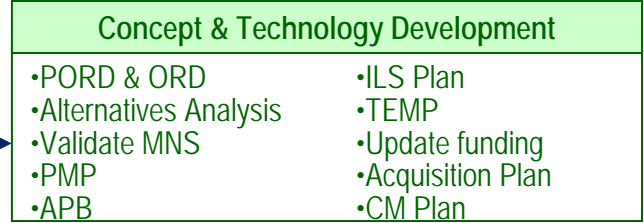
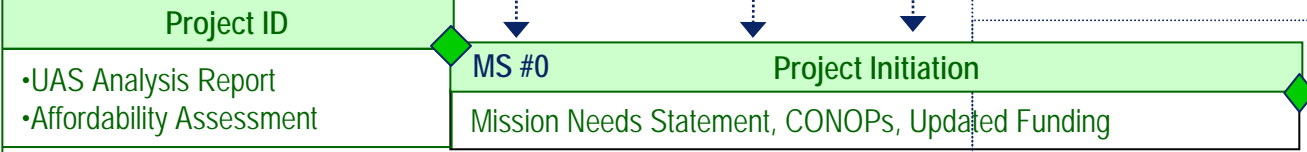
*UAS Technical Feasibility Report & Briefings to USCG;*

*DHS, OMB, & Hill*



## CG-931

### Acquisition Support Team



Note: Acquisition MS's are shown for context of deliverables only.  
Actual dates are pending resolution of FY09 and FY10 AC&I budgets.

# Strategic Relationships

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## **Sandia National Labs**

- Experts in technology, analysis, T&E, M&S (8,500 employees, 1,500 PhD)
- Trusted-advisor strategic relationship with USCG
- Dept of Energy Lab working for DHS (by Homeland Security Act)

## **Johns Hopkins Applied Physics Lab**

- Experts in naval systems (4,200 employees, 790 PhD)
- Trusted-advisor strategic relationship with USCG
- Navy University Affiliated Research Lab

## **SETA Contract: ABSG Consulting, Inc. plus 19 subs**

- Experts in acquisition-support functions
- Private-sector entity
- Works for R&D Center under IDIQ contract

## **SAIC Contract**

- Experts in systems development and integration
- Private-sector entity
- Works for R&D Center under IDIQ contract

