



**Program Executive Office  
Command, Control, Communications,  
Computers and Intelligence (PEO C4I)**

# **Inputs from Program Managers**

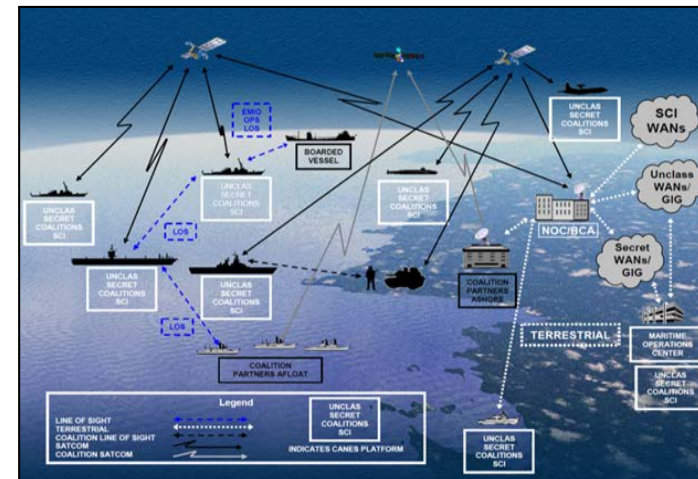
## **Small Business Training Week #18**

**25 April 2018**  
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***Integrated Information  
Warfare for the  
21<sup>st</sup> Century***





## CANES (LAN)

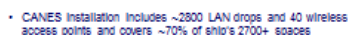
## LEGACY (LAN)



- **Production work includes**
  - Welding, fabrication and foundation work for 19 racks
  - Replacing 14.6 miles of cable
  - HVAC work, lighting mode and decking work spaces
  - 3 new power panels and rewiring of 12 others
- **Post production & system lift off work includes:**
  - Migration of user data from temporary LAN
  - Upload and connect ~80 hosted or connected systems
  - Load major apps (GCCS-M, NTCCSS)
  - System operational verification testing (SOVT) on individual application and network SOVT

Type	By-the-Numbers
Cable Removed	14.6 Miles
Cable Installed	10 Miles of CAT 5 and 5 Miles of Fiber
Number of cables "connectorized"	1,581 (includes CATs, fiber & power connectors)
Number of racks installed	19
Weight of system installed	29,731 lbs. (includes ancillary gear)
PC's	190
Drops	191
Printers	38
Wireless Access Points	6
Compartments in a DOG	>300
Compartments affected by CANES in a DOG	260
Applications connected, hosted and tested	>80

**Integration into overall availability master schedule is critical**

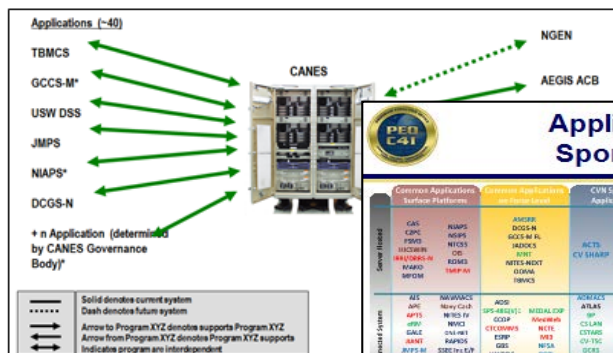


- **Production work includes**
  - Welding, fabrication and foundation work for 49 racks
  - Replacing 104 miles of cable
  - HVAC work, power and lighting masts and decking
- **Post production & system light off work includes**
  - Migration of user data from legacy / temp LAN (ISNS, SCI Network, CENTRIXUS-M)
  - Upload and connect 112 hosted or connected systems
  - Load major apps (GCCS-M, NTCCS, DCOSG-N, etc)
  - System operational verification testing (SOVT) on individual application and network SOVT

Type	By-the-Numbers
Fiber Optic Cable Penetration	40,000 Man Hours Authorized
	to RICHARD REAGAN
Cable Installation	113 miles (600,000 feet) on order; (does not include any additional drop requirements—up to 35 additional miles of cable)
Cable removed	104 miles
Number of racks installed	49
Weight of system installed	> 77,000 lbs.
PC's	852 Desktops, 239 laptops, 50 dual domain thin clients
Drops	2,828
Printers	216
Wireless Access Points	40
Compartments in a CVN	> 2700
Compartments affected by CANES in a CVN	> 70% of all accessible spaces
Applications corrected, hosted and tested	112 Applications in Application Integration System Integration and SLM for Installation

2

- **6-7 Security Enclaves per ship**
- **100's to 1000's of Users per Ship**
- **Various quantities of Sub, Unit and Force Level platforms**
- **Multiple HW / SW Baseline permutations**
- **Numerous Hosted Applications & Connected systems**
- **Training & Maintenance**







# PMW 160 S&T Capability GAPS



## CANES

- Architecture to host ACS
- Automation on CANES
- Agile Enclave for mission req.
- HW/OS Agnostic Modular Solution

## ADNS

- Composable and Virtualized Network Functions
- Increased Network Routing Agility and Data Transport Efficiency (QoS)
- Methodology for Dynamic Load Balance
- Improve Ship to Ship Communication at all level

## TOP 5 Capability GAPS

- **Architecture to host ACS**
- **Automation on CANES**
- **Cyber Defense/Detect/Alert/Prevention(IA)**
- **Methodology for Load Balance (ADNS)**
- **Modular Application Services(ACS)**

## ACS

- Modular Application Services
- Data Analytics
- Data Fusion

## Cyber Security

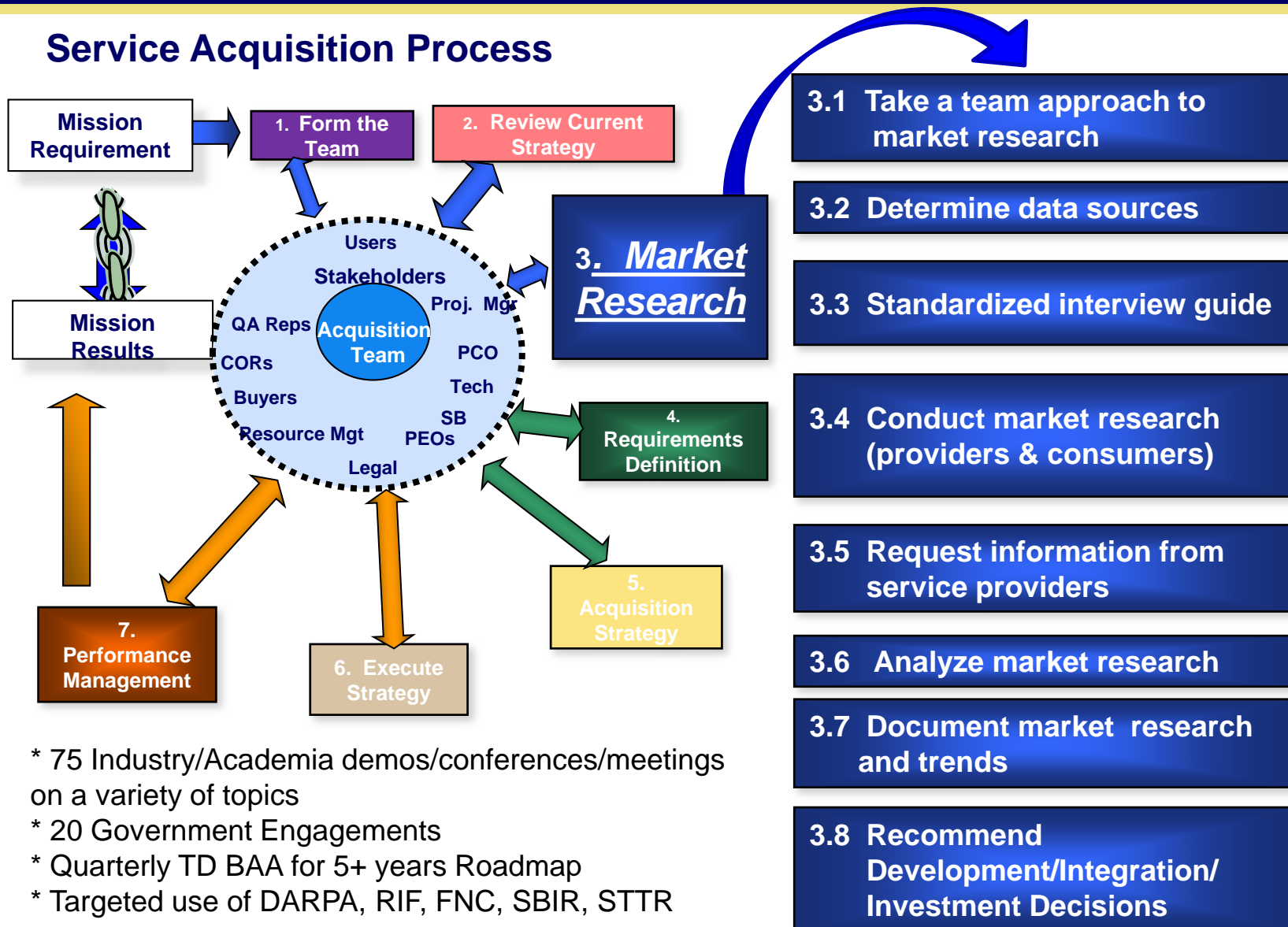
- Cyber Defense/Detect/Alert/Prevention proactively
- Anomaly Detection for cyber defense with Machine Learning



# PMW 160 TD / APM S&T Roles with Market Research



## Service Acquisition Process



- \* 75 Industry/Academia demos/conferences/meetings on a variety of topics
- \* 20 Government Engagements
- \* Quarterly TD BAA for 5+ years Roadmap
- \* Targeted use of DARPA, RIF, FNC, SBIR, STTR



# Contracts

## **Fleet Installations**

- **ADNS Inc III:** 129 complete, 44 in progress
- **CANES:** 67 complete, 43 in progress
- **ISNS Upgrades:** 126 complete, 6 in progress

## **Production Contracts**

- **ADNS IDIQ MAC** Production contract
- **CANES IDIQ MAC** Production contract

## **Service Contracts**

- Engineering, PM Support, Logistics, Installation, Etc.

## **Upcoming Opportunities**

- **CANES** Baseline Analysis of Alternative Services (BAAS)
- **CANES** Virtual Training





# Discusssion



And many more ...

**Industry - Thank you for your support to PMW-160 and the Fleet!**