



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

## PMW 750 Carrier and Air Integration Program Office Brief to NDIA

28 October 2015  
CAPT Andy Gibbons  
Program Manager (PMW 750)  
858.537.8909  
[andrew.gibbons@navy.mil](mailto:andrew.gibbons@navy.mil)

Statement A: Approved for public release; distribution is unlimited (23 OCTOBER 2015)

*Information Dominance;  
Anytime, Anywhere...*





# PMW 750 Mission



*Deliver integrated, joint and coalition-interoperable C4I capabilities for our Navy's aircraft carriers, force-level amphibious ships, command ships, and aircraft*

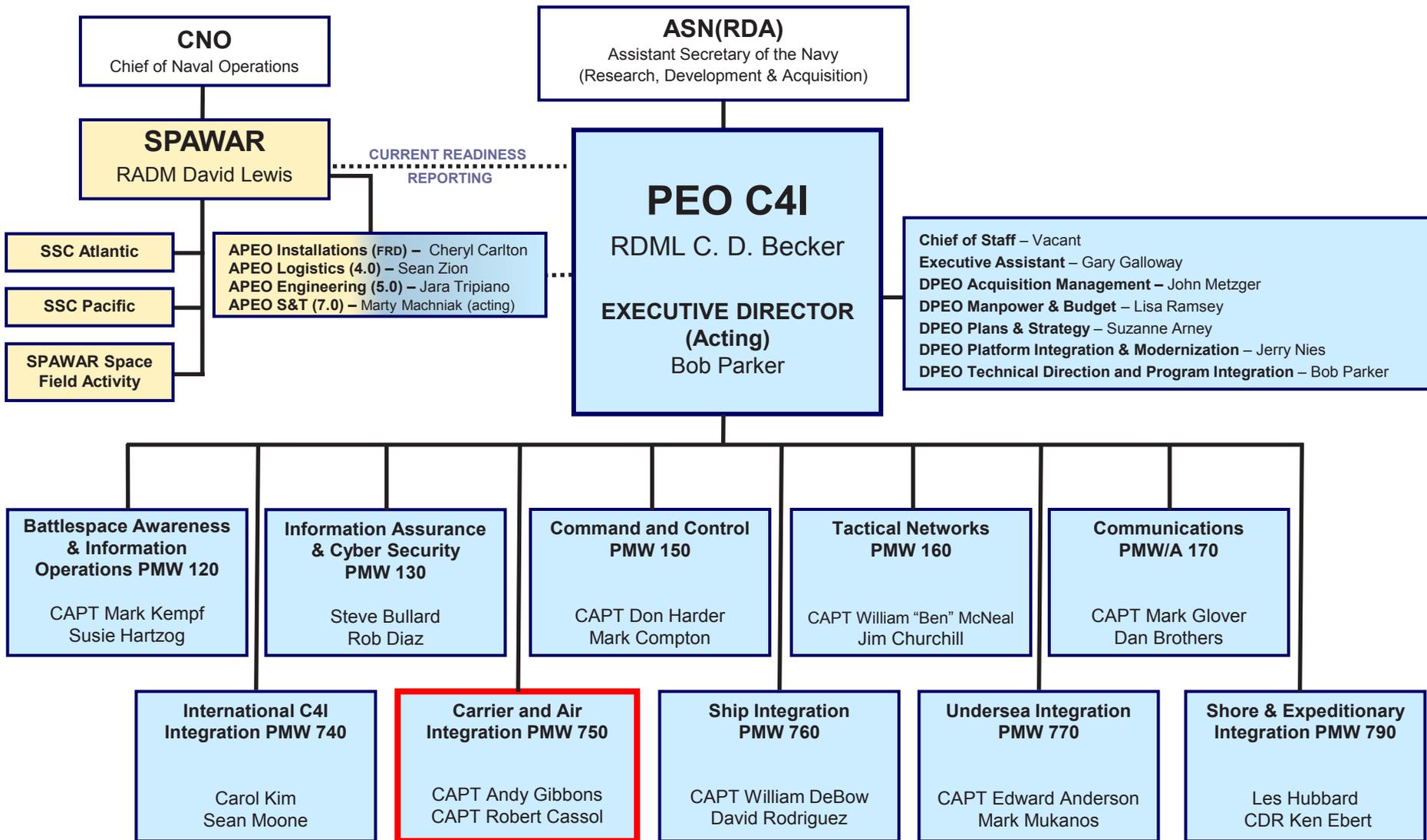
## Specific Mission Areas/Programs:

- **Advanced Planning:** Long-term C4I Modernization Planning for Force-Level Ships (CVN, LHA, LHD and LCC)
- **Modernization:** Installation Planning and Execution
- **New Construction:** Deliver tested/integrated C4I Capabilities for Force-Level Ships (includes RCOH)
- **Programs:** Capability development and integration for TacMobile and NAVAIR programs (UCLASS, JSF, Triton, P-8, and E-2D)
- **Air Integration:** Integrate Naval Aviation C4ISR Capabilities

*PMW 750 provides Platform C4I integration support to the Surface Warfare & Naval Aviation Enterprises*



# PEO C4I Organizational Structure





# New Construction Alignment



**NAVSEA  
05**



**PMS 312  
RCOH**  
8 Way MOA  
PM2PM Agreements



**PMS 378/379  
CVN 78/79**  
8 Way MOA  
PM2PM Agreements



**PMS 377  
LHA 6/7  
LHA 8**

**SUPSHIP  
NNS GC**

## PMW 750 Integrates, Tests & Delivers C4I Capability Package to New Construction Ships



**PMW 120  
Battlespace  
Awareness  
& IO**



**PMW 130  
IA & Cyber  
Security**



**PMW 150  
Command  
& Control**



**PMW 160  
Networks**



**PMW 170  
Comms**

**SSC LANT**

**PMW 750 is C4I PARM for Force-Level Ships**



# PMW 750 New Ship Construction Integration Efforts



- Baseline Management
  - Manage over \$100M funding and schedules of all C4I/SPAWAR systems to be installed per platform using CPFF/FFP contracts
- Systems Design and Integration
  - Design and develop the engineering drawing package for all C4I/SPAWAR systems (cabling, mounting, etc) with over 150 racks per platform and over 3,100 drops
  - Manage interfaces between systems
  - Develop and assess Engineering Change Proposals
- Production Test and Integration Facility
  - Integrate and test radio communication system of systems
  - Provide ancillary equipment (e.g. Large screen displays, frequency standard, etc)
  - Design, build, and integrate over 55+ racks of C4I equipment
  - Develop platform test procedures
- Manage shipboard C4I installation and tests
- Expanded responsibilities with CVN 73 to include overall Zone Integrator and C4I UCLASS modifications

***PMW 750 Delivers all C4I for New Construction CVNs and LHAs***



# C4I Rack Integration



System	Pushed (POR) Racks	Integrated Racks
<b>Network:</b> CANES	CVN 79 - 49 ea.  LHA 8 - 48 ea.	CVN 79 - 3 ea. CANES VIDEO LHA 8 - 3 ea. CANES VIDEO
<b>Comms:</b> JCC Spaces	CVN 79 - 52 ea. ADNS, BFTN, GBS, NMT, CBSP, DMR, MOS, DCGS-N, MICS, NAVSSI, CDLS, HFDAG, JTT, VIG, NAVMACS, CDLMS,  LHA 8 - 42 ea. ADNS, BFTN, GBS, NMT, CBSP, DMR, MOS, NAVMACS, CDLS, HFDAG, JTT, VHF, EPLRS	CVN 79 - 47 ADNS, TVS, NMT, CBSP, ATIP, DMR, HFDAG, KIV- 7M, KY/CRYPTO, QMCS, LMMT  LHA 8 - 53 ea. ADNS, TVS, NMT, CBSP, ATIP, DMR, HFDAG, KIV- 7M, KY/CRYPTO, SINGARS, EPLRS, DWTS, LMMT
<b>SSES:</b>	CVN 79 - 6 ea. SSEE INC F  LHA 8 - 6 SSEE INC F	CVN 79 - 9 SSEE INC F plus SI Comms  LHA 8 - 9 SSEE INC F plus SI Comms

**Summary:** CVN 79: Pushed = 107, Integrated = 59  
LHA 8 : Pushed = 96, Integrated = 65

**PMW 750 Designs, Builds, Installs, and Tests ~ 40% of all C4I on CVNs and LHAs**



# Fleet Modernization Alignment



## Ship Program Managers

## Fleet Commanders

## TYCOMs



**PEO Carriers**



**NAVSEA 21**



**USFFC  
NCF**



**CPF**



**CNAF  
CNSF**

**MARCOR  
SYSCOM**

**PMW 750 Fleet Modernization Interface:  
Fleet VTC, FDNF VTC, NCMC, C4I Program Reviews w/SPMs**



**PMW 120  
Battlespace  
Awareness  
& IO**



**PMW 130  
IA & Cyber  
Security**



**PMW 150  
Command  
& Control**



**PMW 160  
Networks**



**PMW 170  
Comms**

**SPAWAR  
FRD**

**Primary POC for Afloat Force-Level C4I Modernization & Integration**



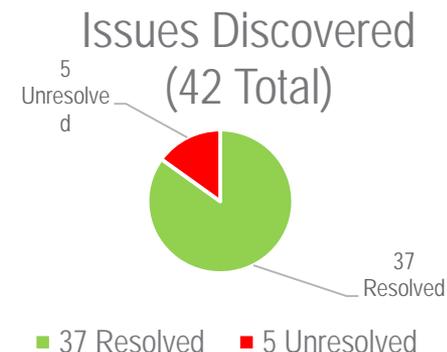
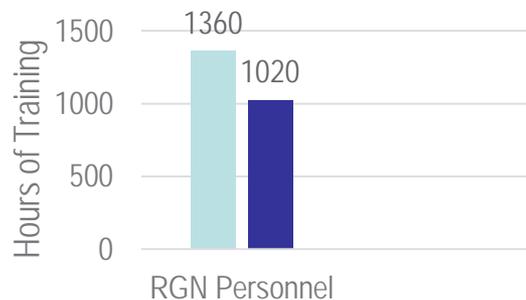
# Carrier Dashboard/Quick Look (notional)



Test Event	Description	Status
1	MTJ, ADNS INC II to ADNS INC III	100%
2	MTJ, ADNS INC II to ADNS INC II	
3	STJ / STA / UTJ	100%
4	LOS / Beyond LOS Link 11/16	100%
5	System Initialization and Configuration	78%
6	Data Manipulation and Transport	90%
7	GCCS-M to DCGS-N Functionality	100%
8	Pre-SOT Execution Readiness	100%
9	Mini-SOVTs	100%
10	LMMT	100%
11	SREL	100%
12	Virtual Secure Enclave (VSE)	

Primary Systems	Primary Systems	Secondary Systems	Supporting Systems	Mini-SOVT Systems	Capability
CANES UNCLASS	CDLMS / NGC2P	AIS	SSDS	Motorola Scanner	MTJ
CANES GENSER	NMT	JTT	GBS	DCGS-N / GBS	STJ
CANES SREL	CBSP	GALE	NAVSSI	RAPIDS	UTJ
ADNS	EHF TIP	JADOCs	RADMERC	PPLAN	SAT Link 11
GCCS-M	DCGS-N	TBMCS	MAKO Chat	DMDS	HF Link 11
	LMMT	CV-TSC	JTIDS/ MIDS	MedWeb	Link 11 LOS
		USW-DSS	CDLS		Link 16 LOS

Mini-SOVT Systems			
AIS	RAPIDS	DCGS-N / GBS	Motorola Scanner
PPLAN	DMDS	MedWeb	



■ Proficiency Training Provided  
■ SME Training Provided

■ 37 Resolved ■ 5 Unresolved



# PMW 750 Alignment to Support NAE




**PEO  
Ships**  
\*LHA/LHD



**PEO  
Carriers**



**PEO A**



**PEO T**



**PEO  
U&W**



**PEO  
JSF**

**AIR  
1.0**

**PMW 750 Alignment with NAE: Aviation Council of Captains, A/SI EXCOMs, QPRs, TIMs, C4I Air Platform (CAP) IPTs, ISRATs**



**PMW 790**  
Shore and Expeditionary Integration



**PMW 120**  
Battlespace Awareness & IO



**PMW 130**  
IA & Cybersecurity



**PMW 150**  
Command and Control



**PMW 160**  
Networks



**PMW/A  
170**  
Comms\*

**NAVIGATION  
GPS/NAVWAR**

\*Dual-reports to NAVAIR 1.0 For GPS/Navigation

**PMW 750 is the C4I "One Stop Shop" for the Naval Aviation Enterprise**



# Air-Sea Integration Overview

- **PMW 750 acts as a “One-Stop Shop” for PMW – PMA Coordination and Collaboration**
  - PMW 750 manages NAVAIR-funded C4ISR Engineering
  - POR/Enterprise C4ISR solutions, rather than boutique solutions
    - “Common Core Capabilities”
    - Saves money
    - Improves Interoperability
- **Planning and Execution Processes aligned to PEO C4I Best Practices with minimal variation**



MQ-4/Triton



UCLASS



E-2D



Joint Strike Fighter



P-8A/P-3C



# TacMobile Overview

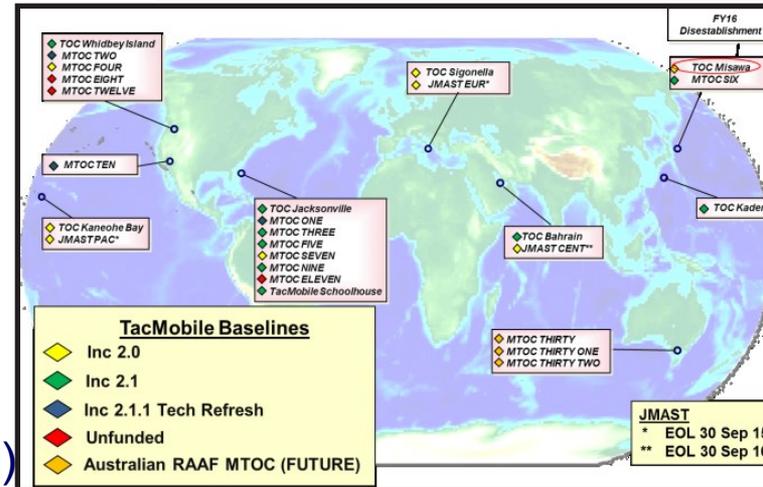
- **TacMobile is a critical C4I enabler for NAVAIR**

- P-8A, P-3C, AAS cannot operate without TacMobile
- Provides P-8A Poseidon & P-3C Orion with persistent operational and tactical
  - C4I infrastructure
  - Battle Management
  - Weapons Systems Interfaces
  - Tactical Decision Aids
  - Post mission ISR PED
  - ASW acoustic analysis and mission reconstruct

- **22 Platforms (Inventory Objective)**

- Tactical Operations Centers (TOC)
- Mobile Tactical Operations Center (MTOC)

- **Strong partnership with PMA-290 and CDR Patrol Reconnaissance Group**



**TacMobile is classified as a Weapons System**



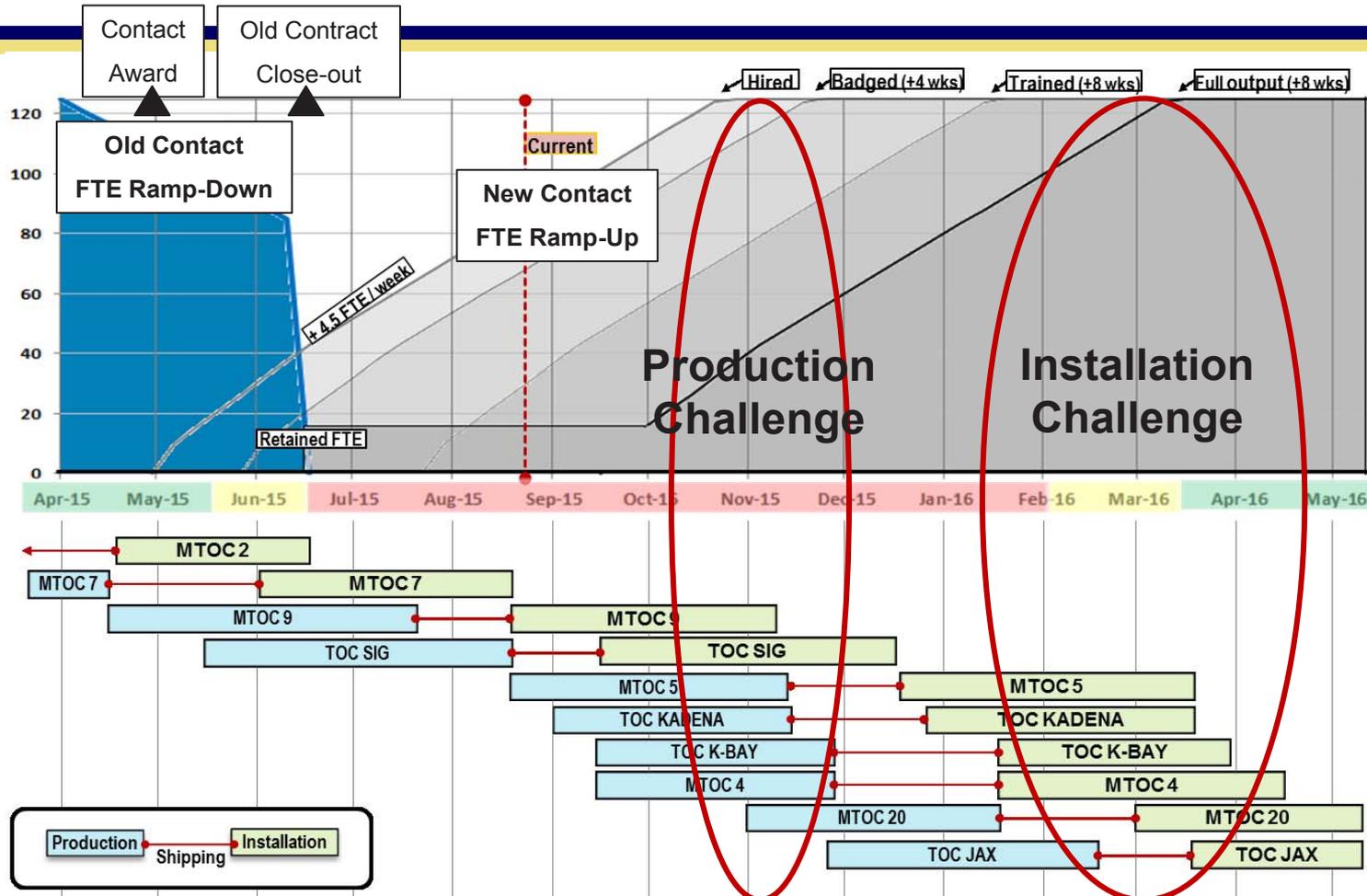
# We Require a Wide Variety of Skills from Industry *(TacMobile Example)*



- Program Managers, Lead Engineers, Lead Logisticians, System Administrators, System Security Engineers, Information Assurance SMEs, Security Classification Guide Developers
- Software Developers for: SOA, C+, Java, TacMASS, MARS, Acoustic Signal Processing, Unix/Linux/Windows
- Software Integrators, Testing and Evaluation Engineers, Logisticians, Help Desk Support, Configuration Managers, Training Specialists, Shipping Specialists, Technical Writers, Drafter/CAD Operators
- Production Managers, Electronics Technicians, P-3C/P-8A Interface SMEs, Hardware Engineers, Technical Analysts, Production Engineers, ISEA support, Software Loading and Configuration SMEs, Facilities Electricians, Architecture & Planning, CPD Developers



# Contract Churn Impacts on IMS



**Loss of Corporate Knowledge impacts Quantity and Quality of Industry Partnership**



# Where Industry Can Help

## *Our Top Five*



### **1. Looking ahead, we anticipate more built-in dependencies across programs**

- e.g. ADNS POR is key enabler for Air-Sea-Land Integration
- Multiple POR and Operational Stakeholders are involved
- *“An IP in Every Aircraft”*

### **2. Trans-Program Integration is a growth area**

- C4I Baseline Deliveries require collaboration from Design to Delivery
- Government is improving its partnering effort
- Innovative Industry partnering/collaboration is needed

### **3. Cyber Security is here to stay (*and it's a growth area across the entire Navy Enterprise*)**



# Where Industry Can Help *Our Top Five*



## **4. As Government improves its partnerships, we need to move up Maslow's Hierarchy**

- Looking beyond shipboard installations, we anticipate Aviation Platforms and Sensors will *drive* shipboard installation decisions
- *“From ship-centric to Strike Group centric”*

## **5. Current readiness trumps future readiness**

- *... when resources are tight*
- Innovative ILS (especially Training) solutions that reduce Operations and Sustainment Costs are expected to be a growth area
- *“Simplifying the Sailor's Experience in a 'Cloudy' Future”*