



NAVAIR Test & Evaluation (AIR-5.0)

13 November 2014

Presented to:

NAVAIR/NAWCAD Industry Day 2014

Presented by:

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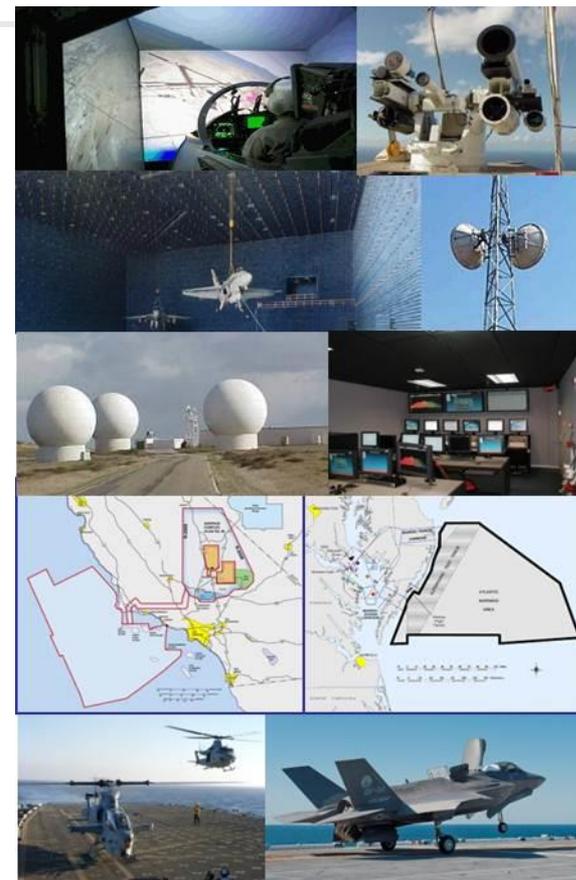


NAVAIR Test & Evaluation (AIR-5.0)

Provide timely and cost effective test and evaluation capabilities across the acquisition continuum through the use of a technically capable workforce, efficient processes and world class test infrastructure to enable the delivery of effective and suitable weapons systems and Warfighting capabilities to Naval, Joint and Coalition warfighters today and into the future.

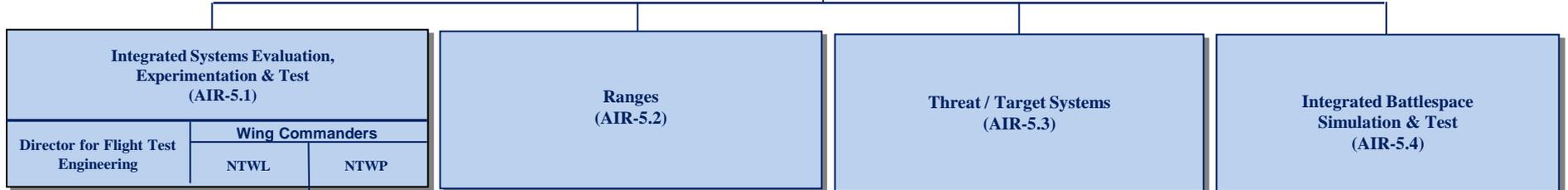
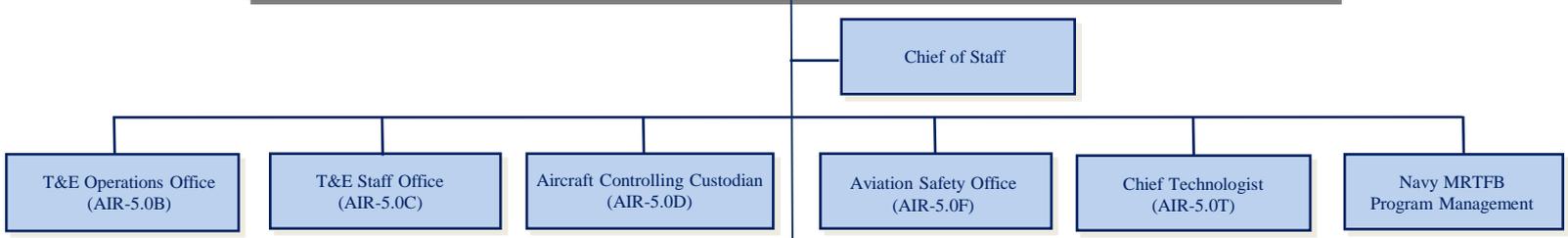
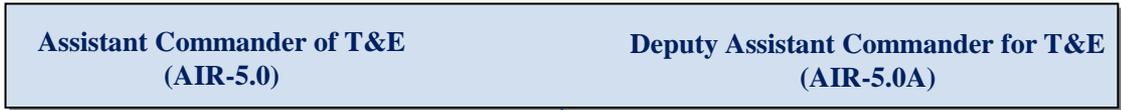
CAPABILITIES . . . FOR FULL SPECTRUM TESTING

- T&E Planning, Execution, Data Analysis and Reporting
- Mission aligned Test Squadrons (VX-20, HX-21, VX-23, VX-30, VX-31)
- U.S. Naval Test Pilot School
- Operation and Sustainment of NAVAIR Ranges
- T&E Target and Threat Systems Engineering, Simulation and Operation
- Distributed Site Testing enabled by RDT&E Network Infrastructure
- Aircraft installed systems simulation and stimulation
- Weapons and aircraft systems Hardware-in-the-Loop testing
- System of systems evaluation enabled by Synthetic Environments and Virtual Battlespace
- Naval electromagnetic environmental effects
- Shipboard Suitability evaluation
- Aircraft launch and recovery equipment compatibility
- Ship/Air interoperability testing
- Aircraft Controlling Custodian for aircraft safety, inventory, Support Equipment Controlling Authority (SECA) and Aircraft Material Maintenance Team (AMMT)
- NAVAIR Technical Assurance Board (NTAB)

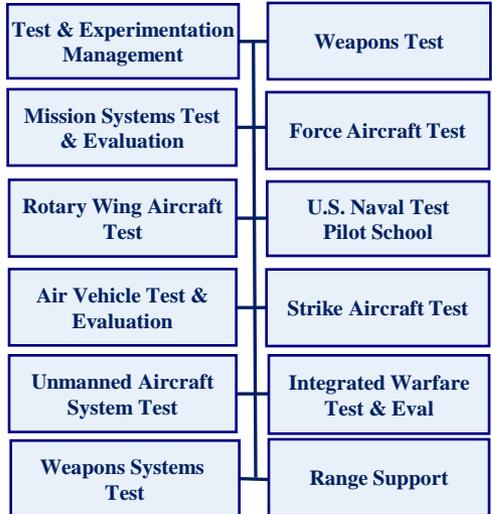




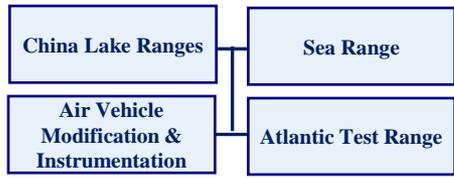
Test & Evaluation (AIR-5.0)



5.1 Capability:



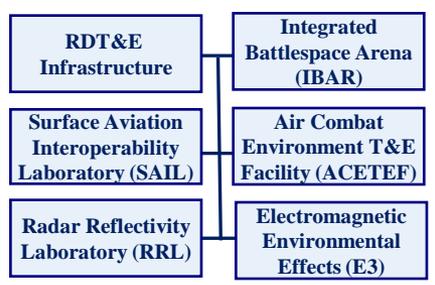
5.2 Capability:



5.3 Capability:



5.4 Capability:





Integrated Systems Evaluation Experimentation & Test (AIR-5.1)

Provides the resources for full life cycle program T&E support from requirements review to the design, planning, execution, evaluation, & reporting of experiments and tests of aircraft, unmanned air vehicles, weapons, weapons systems & integrated warfare systems.

- Test & Experimentation Management
- Flight Test Engineering
- Naval Test Wings/Squadrons
- Flight Test Risk Management
- Operational, safety and maintenance oversight of test assets and execution
- U.S. Naval Test Pilot School and College of T&E

Integrated Systems
Products tested and evaluated

Evaluations
Most important product

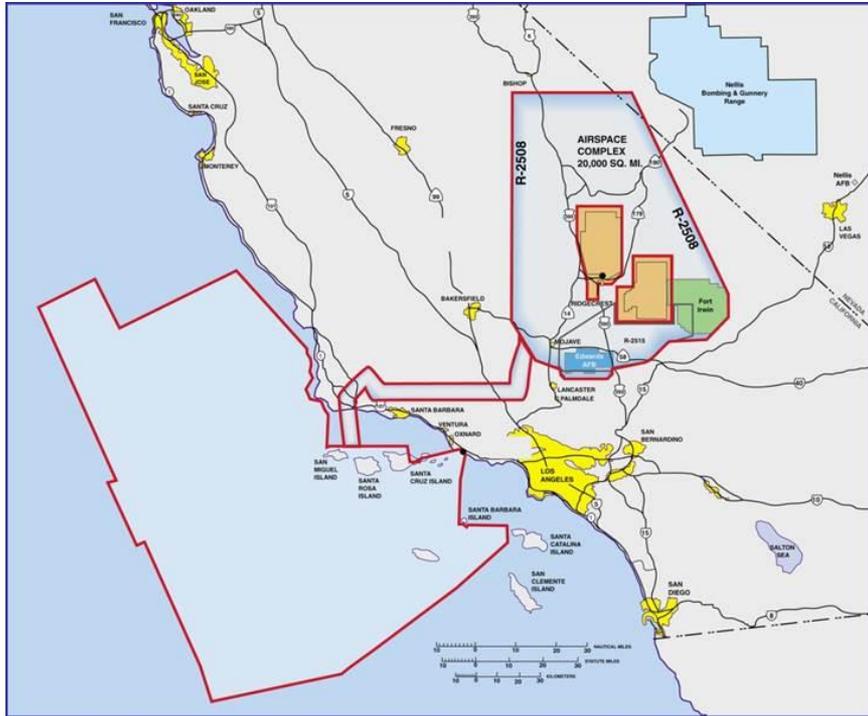
Experimentation
Enables Integrated Warfighting Capability T&E

Test
Most visible product



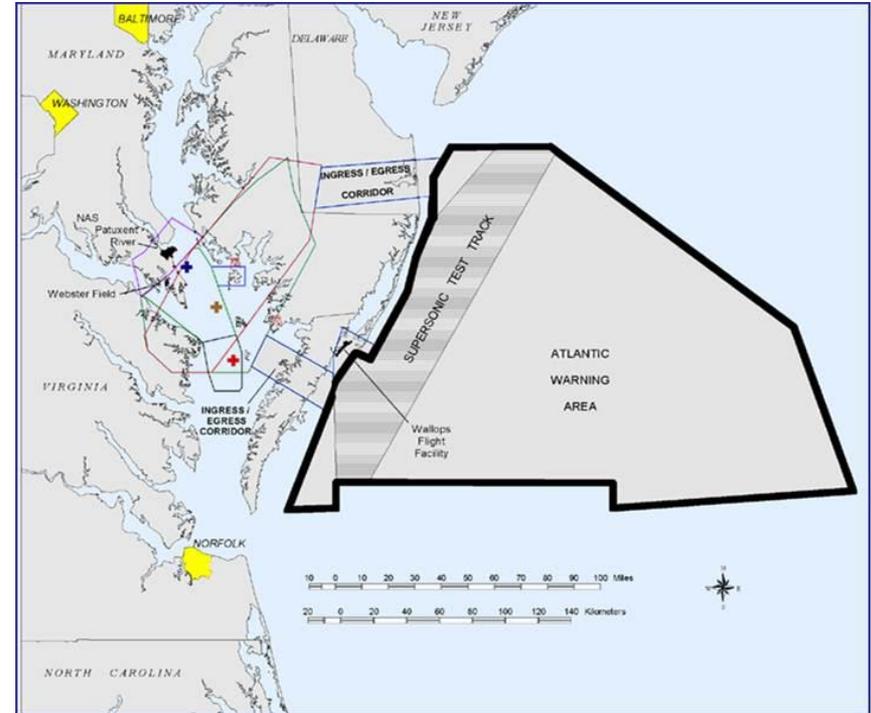
NAVAIR Ranges (AIR-5.2)

PACIFIC RANGES



- R2508 Restricted Airspace
 - Approx. 20,000 sq. mi.
 - FL200 to unlimited altitude
- Land & Electronic Combat Ranges
 - Restricted Areas R2505, 2524, 2506
 - Approx. 1.1M Acres
 - Surface to unlimited altitude
- Offshore Ranges
 - Warning Areas Approx. 36,000 sq. mi.
 - Surface to unlimited altitude

ATLANTIC RANGES



- Chesapeake Test Range
 - Restricted Areas R-4002/5/6/7/8
 - Approx. 2,400 sq. mi.
 - Surface to 85,000 ft.
- Offshore Ranges
 - Warning Areas W-107/8/386
 - Approx. 18,000 sq. mi.
 - Surface to unlimited altitude



Threat & Target Systems (AIR-5.3)



Threat/Target Systems Management

Provides entry point for Sponsors to form integrated project offices, and externally directed project offices

Atlantic/Pacific Target & Marine Operations

World wide surface and airborne target and marine operational services including unique mods and augmentation

Target Systems Engineering

Target systems technology development, acquisition support, systems integration, operations engineering, EIs, LECs

Combat Environment Threat Simulation

Development and technical support of RF/EO/IR/UV/Laser Threat simulator systems & TACTS

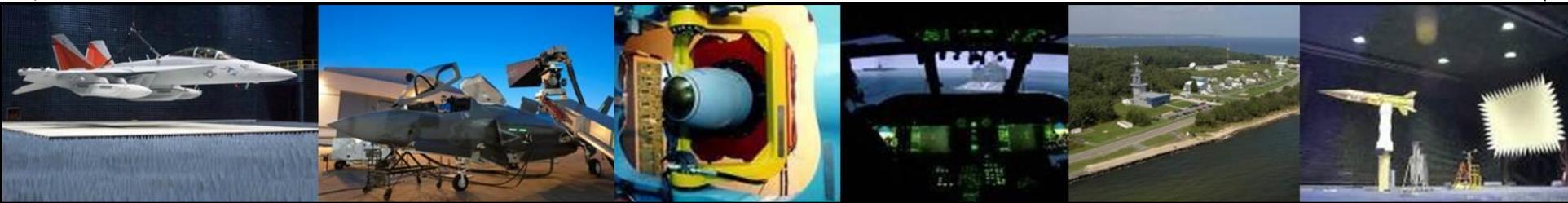
Airborne Threat Simulation

Design, development and operational support of electronic attack and radar airborne threat emitter systems





Integrated Battlespace Systems Test (AIR-5.4)



Air Combat Environment Test and Evaluation Facility (ACETEF)

Electromagnetic Environmental Effects (E3)

Integrated Battlespace Arena (IBAR)

Manned Flight Simulator (MFS)

Surface/Aviation Interoperability Lab (SAIL)

Radar Reflectivity Lab (RRL)



RDT&E Networks

Broad Spectrum of Capability Supporting T&E

Sensor Test, Avionics Test, Weapons Test, Modeling and Simulation

Ship Simulation & Interoperability Test, Datalinks and LAMPS

Radar Cross Section, Electromagnetic Environmental Effects (E3)

EMC, EMV, EMP, TEMPEST, Lightning, P-Static

Laboratory/Bench, Installed/Chamber, Flight



T&E Workforce

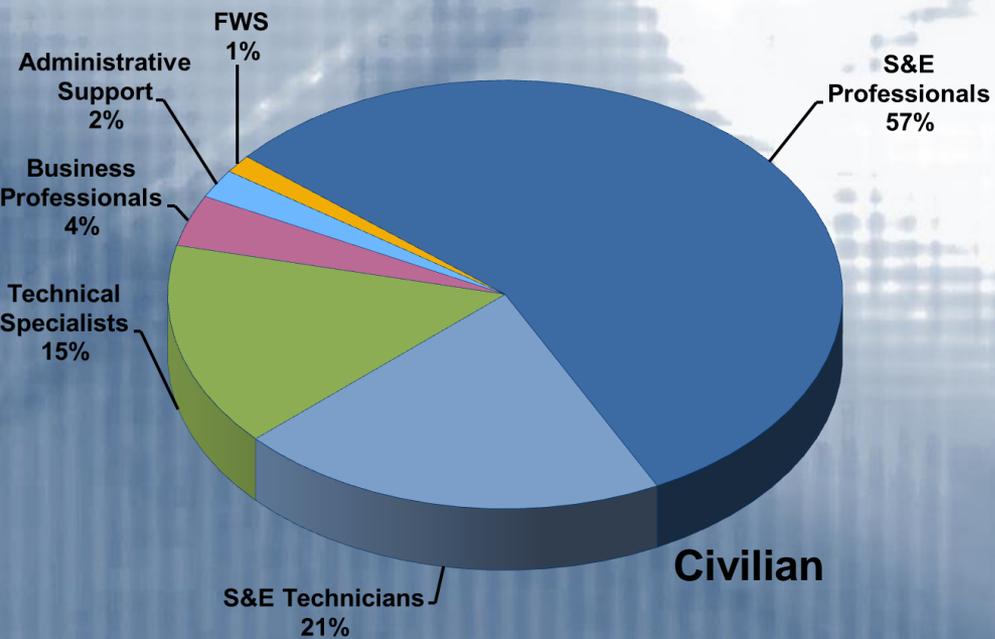
Civilians 2,744

Military 648

Contractor work years 2,404

Total 5,796

*Civ DCPDS 30 Sep 14
Mil Authorized E/S FY14
KTR NOD a/o 30 Sep 14*





AIR-5.0 Major Focus Areas

PEOPLE

INVEST IN OUR PEOPLE

Accelerate Development of Emergent Competency Capability

Develop competence required to successfully test & evaluate emerging warfighting capabilities, e.g. IWC, Cyber

- Trained workforce sufficient to meet demand
- Capable and available infrastructure
- Investments to sustain and build infrastructure and workforce

SPEED

INTEGRATED WARFIGHTING CAPABILITY

DELIVER INTEGRATED & INTEROPERABLE WARFIGHTING CAPABILITIES

Provide Robust LVC capabilities that support IWC Requirements

Affordable, capable, routine warfare mission-capable environments & architectures

- Support frameworks, tools, scenarios and environments to allow cost effective, routine use of LVC assets.
- LVC architecture support to programs

AFFORDABILITY

IMPROVE AFFORDABILITY ACROSS THE FULL LIFE CYCLE

Accelerate Mission-Focused Capabilities-Based T&E

Efficient and Cost Effective System & Mission-Oriented Testing

- Knowledge – CBTE Skills
- Processes – Verifies mission capabilities
- Facilities – agile IA, routinely networked distributed environments

OTHER SUPPORTING ACTIONS

- Rapid Response to Urgent Warfighter Request via Effective Tailoring to T&E Acquisition & Execution Processes
- Technical Authorities, Standards & Processes
- Improved Warfighter Collaboration & Engagement
- T&E Transformation: Early Collaboration
- Agile, Efficient T&E Execution
- College of Test & Evaluation



T&E Contracting Opportunities

- T&E Uses Multiple Contracting Strategies

| T&E LRAF Planned Contracting Actions | | | |
|---|---------------|---------------|--------------|
| Type of Contracting Actions | NAWCAD | NAWCWD | Total |
| Full and Open Competition | 13 | 14 | 27 |
| Small Business Set Aside | 3 | 6 | 9 |
| Sole Source to Large Business | 8 | 13 | 21 |
| Sole Source to Small Business | | 2 | 2 |
| TBD after Market Research | 1 | 1 | 2 |
| Total | 25 | 36 | 61 |
| T&E LRAF Planned Contract Values | | | |
| Potential Contract Values | NAWCAD | NAWCWD | Total |
| >= \$150K but < \$649K | | 4 | 4 |
| >= \$650K but < \$5M | 10 | 11 | 21 |
| >= \$5M but < \$10M | | 6 | 6 |
| >= \$10M but < \$50M | 9 | 9 | 18 |
| >= \$50M but < \$100M | 1 | 1 | 2 |
| >= \$100M but < \$250M | 3 | 2 | 5 |
| >= \$250M but < \$1B | 2 | 3 | 5 |
| Total | 25 | 36 | 61 |



T&E NAWCAD Opportunities

- Opportunities with T&E POCs in attendance
 - MFS O&M Contract Break Out
 - NTWL Maintenance
 - Air Vehicle Support Services
 - IBST Engineering and Technical Support
- Other Future Opportunities
 - Mission Systems T&E
 - Prototyping & production
 - Range Support



Summary

- Dedicated NAVAIR T&E Workforce and T&E Capability Management
- National Capabilities and Infrastructure
- Continuing Partnership with Industry