



NAVAIR S&T

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PEO(T) APEO's for S&T





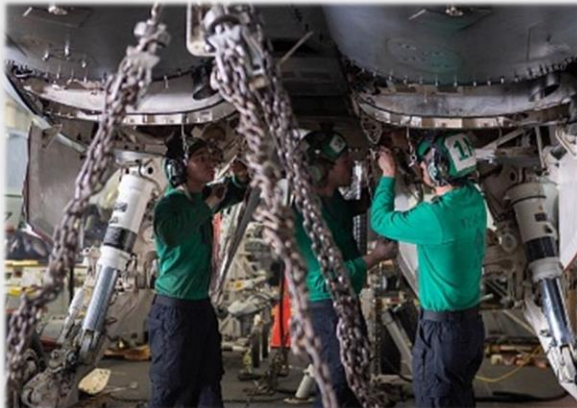
NAVAIR Chief Technology Office

The Naval Air System Command CTO shapes Science & Technology policies, initiatives, and helps to develop capacity/capability and influence investments to support the NAE Mission to “sustain required current readiness and advance future warfighting capabilities at the best cost.”



Naval Aviation Strategic Imperatives

Increase Material Readiness
(Current & Future)



Deliver New Capabilities with
Increase Speed

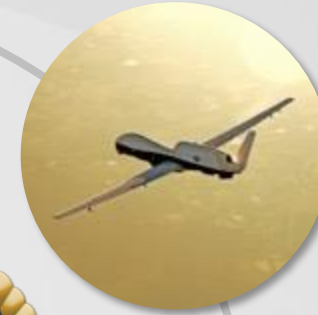




Rotorcraft



Unmanned Air Systems



Fixed Wing



Weapons



Aviation Systems

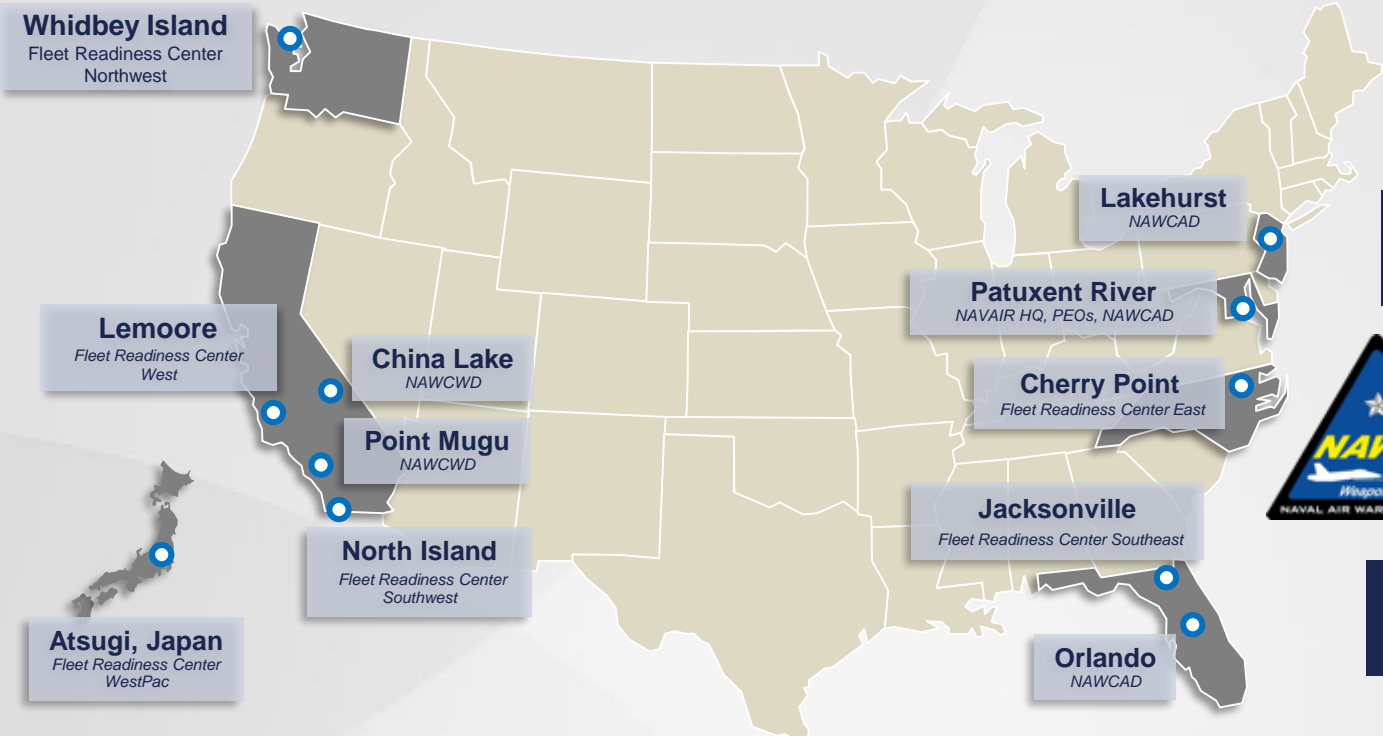


**NAVAIR
PRODUCTS**



NAVAIR Snapshot

Full Life-Cycle Management



NAWCAD
East Coast Hub

NAWCWD
West Coast Hub

COMFRC
Fleet Readiness Centers

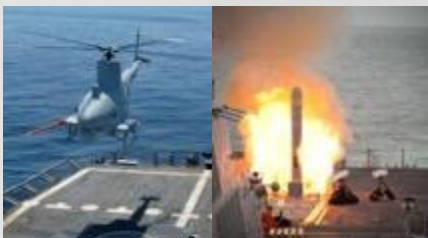
Products



Tactical Aircraft



Air ASW, Assault & Special Mission



Unmanned Aircraft & Strike Weapons



Common Systems, Mission Systems, Training, ALRE

PEOs



43,500 FY23 Workforce	29,700 Civilians	1,600 Military	12,200 Contractors
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PEO(T) PROGRAMS

PMA-234

Airborne Electronic
Attack Systems



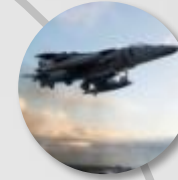
PMA-251

Aircraft Launch
& Recovery Equipment



PMA-257

AV-8B



PMA-265

F/A-18 and EA-18G



PMA-272

Advanced Tactical
Aircraft Protection Systems



PMA-273

Naval Undergraduate
Flight Training Systems



PMA-231

E-2/C-2 Airborne Command
& Control Systems



PMA-230

Next Generation Air Dominance



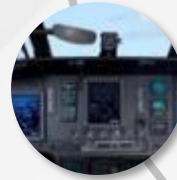
PMA-226

Specialized & Proven Aircraft



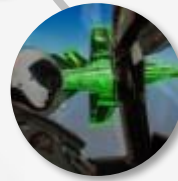
PMA-213

Naval Air Traffic
Management Systems



PMA-209

Air Combat Electronics



PMA-205

Naval Aviation Training
Systems & Ranges



PMA-274

Presidential Helicopters



PMA-275

V-22 Joint Program Office



PMA-276

Light/Attack Helicopters



PMA-290

Maritime Patrol & Reconnaissance Aircraft



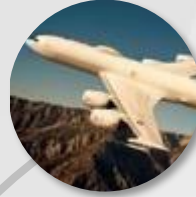
PMA-299

H-60 Multi-Mission Helicopters



PMA-271

Airborne Strategic Command, Control & Communications



PMA-264

Air Anti-Submarine Warfare Systems



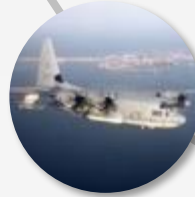
PMA-261

H-53 Heavy Lift Helicopters



PMA-207

Tactical Airlift

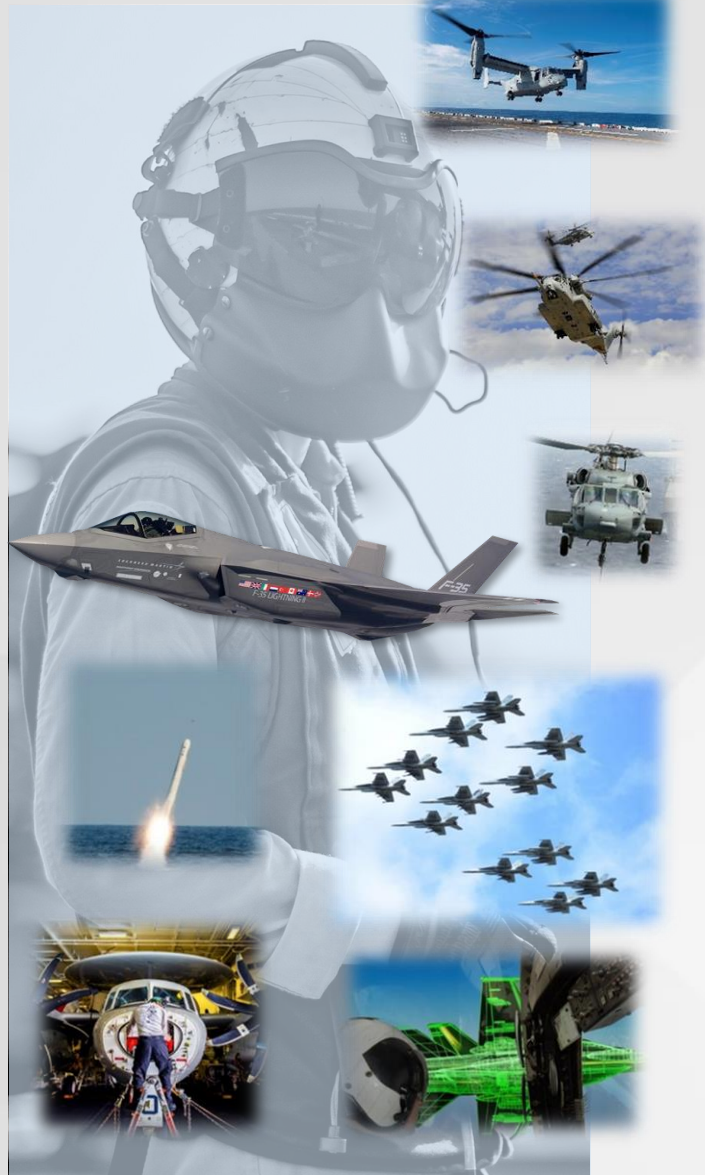


PEO(A) PROGRAMS





Naval Aviation Research Areas of Interest



Enabling technologies:

- Improve materials and manufacturing processes
- Reduce dependence on global positioning systems
- Advanced electronics with reduced size, weight and power requirements and expanded capabilities in high-temperature environments
- Artificial intelligence, machine learning, autonomy, human systems interface, network and sensor technologies to enable manned and unmanned systems to operate as an effective hybrid team
- Quantum sensors, computers and networks

Technologies to improve readiness and sustainment:

- Next-generation repair technologies for metals and composites (i.e., particle deposition/cold spray)
- Advanced manufacturing technology and 3D technical data
- Corrosion prevention, prediction, detection and removal technology
- Physiological episode protection and aeromedical/man-machine interface challenges
- New fuel bladder materials and advanced manufacturing processes
- Improved maintenance capabilities
- Next-generation metrology
- Improved supply chain management through data analytics
- Prognostics and health management enabled by machine learning and artificial intelligence
- Distance support/remote training of fleet maintainers and operators
- Automate current and future flight deck operations, increasing deck efficiencies and aircraft readiness in all weather conditions to enable round-the-clock operations

Technologies to improve warfighter performance:

- Training and education instructional technologies and strategies that support the requirements of forward-deployed warfighters and training environments
- Human performance modeling, assessment and ergonomic design
- Human system design to reduce manned and unmanned operator workload, enhance decision-making and improve situational awareness
- Life-support technologies and personal protective equipment spanning from physiological state monitoring, to hearing/eye protection, to helmet-mounted displays, to crashworthy seating systems that optimize warfighters' physical and cognitive performance, effectiveness, safety and survival

Technologies to improve warfighting capability:

- Shared battlespace awareness
- Fully networked command, control and communications
- Flight controls, handling qualities, propulsion, materials and aerodynamic technologies to improve maneuverability and agility
- Transportation and employment of personnel, internal and external cargo, weapons and sensors
- Range, speed and endurance of naval aircraft and weapons
- Protection of all manned and unmanned aircraft, including passive and active susceptibility reduction, aircraft countermeasures, electronic protection and increased crashworthiness
- Projection of aeronautical-based lethal and directed energy effects against air, surface, surfaced submarine and land targets in any operational theater
- Dynamic mission planning and execution technologies
- Networked and collaborative electronic attack technologies
- Hypersonic technology, including thermal management, lightweight/resilient materials, sensors/subsystems, flight separation and propulsion systems