



NAWCAD Science & Technology

25 October 2023

NAWCAD Industry Day

Dr. Theresa C. Shafer, SSTM
NAWCAD Chief Technology Officer



NAWCAD S&T AT-A-GLANCE



“A Commitment to Deliver”

NAWCAD CTSO VISION: “... advancing superior technological alternatives to enhance warfighter capabilities ...”

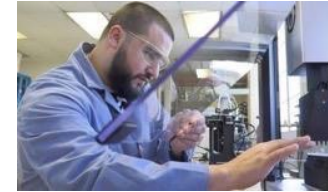
NAWCAD CTSO MISSION: “... to deliver emergent disruptive capabilities for sustained readiness and future warfighting capabilities ...”

CTSO = Chief Technology and Strategic Operations

Enable technological superiority

S&T Workforce

- Scientists and Engineers
- S&T Investments influenced by Command’s SSTMs, Fellows, Senior SMEs and PhD
- Training, Upskilling, Education
- Pipeline recruitment & development



Accelerate technology development & delivery

Technology Solutions

- Industry/Academia Engagement:
 - Partnership Intermediary Agreements (PIAs)
 - Educ. Partnership Agreements (EPAs)
 - Cooperative Research and Development Agreements
 - Other Transaction Agreements (OTAs)
- DoD Ecosystem
 - Strategic Rotations (e.g. Nat Labs, ONRG)
 - Fleet Experiments

Enables agile & effective scientific discoveries

- Patuxent River & Webster Field, Lakehurst, and Orlando ~ State-of-the Art R&D Labs
- Rapid Prototyping & Experimentation Venues (Ground/Air Labs, ANTX, and FLEX)
- Digital Range (LVC, JSE)

Infrastructure

Partnerships

Decisive Warfighting Advantage for our Navy & Marine Corps

Transformational Technologies

Current & Future Readiness

Enabling Technologies

Near, mid, and far term warfighting capabilities





NAWCAD's Strategic Plan



READINESS CAPABILITIES CAPACITY SAILORS

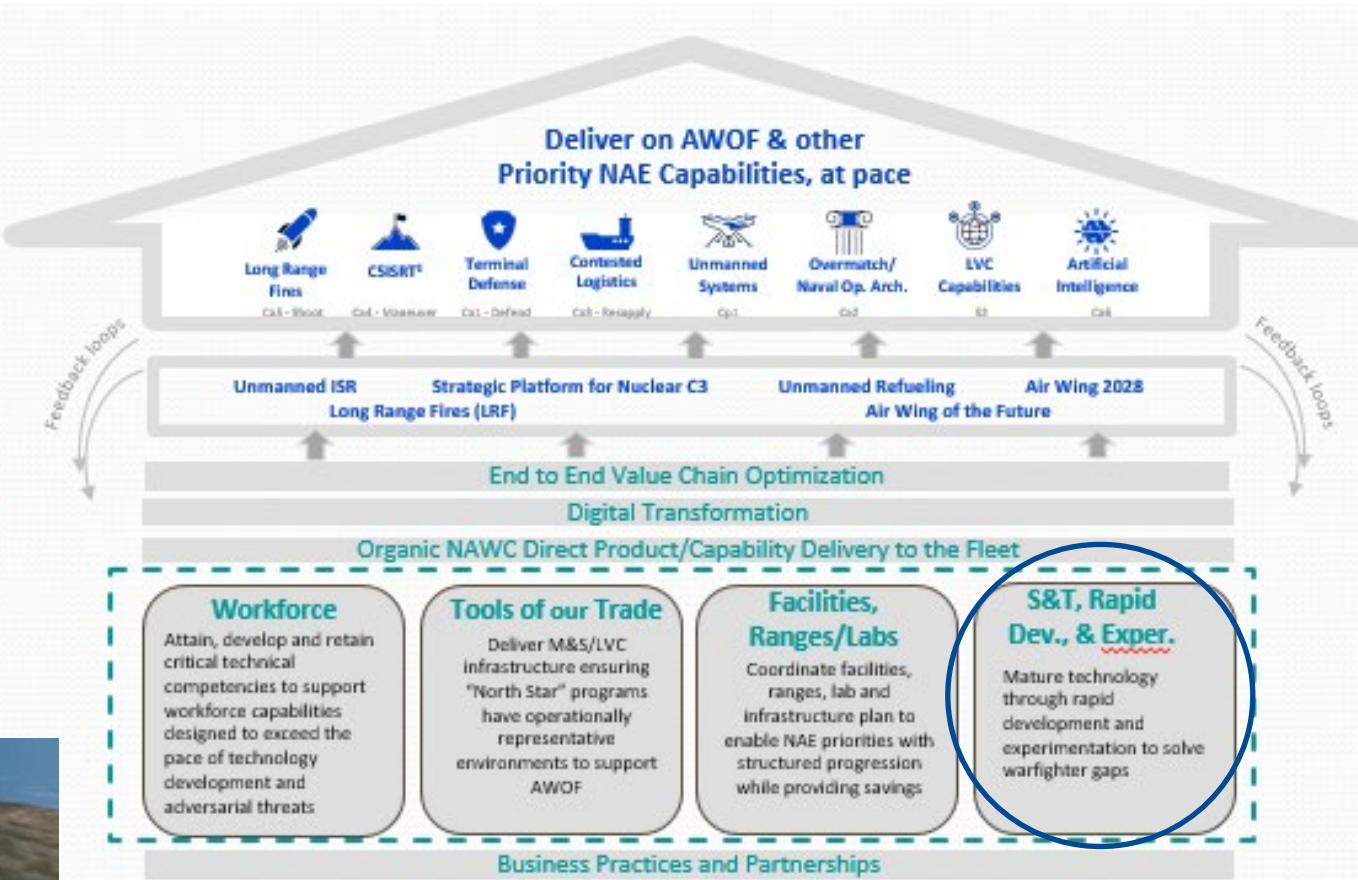


NAWC enables Integrated Warfighting Capabilities...
Informed by the NIF 4+4

...& North Star Program objectives...

...which will require NAWC to transform our business...

...and to mature key enabling capabilities...



S&T, Rapid Development, & Experimentation "Room"

Accelerate Technology Development And Deliver Capability

Keep pace with rapid technological advancement

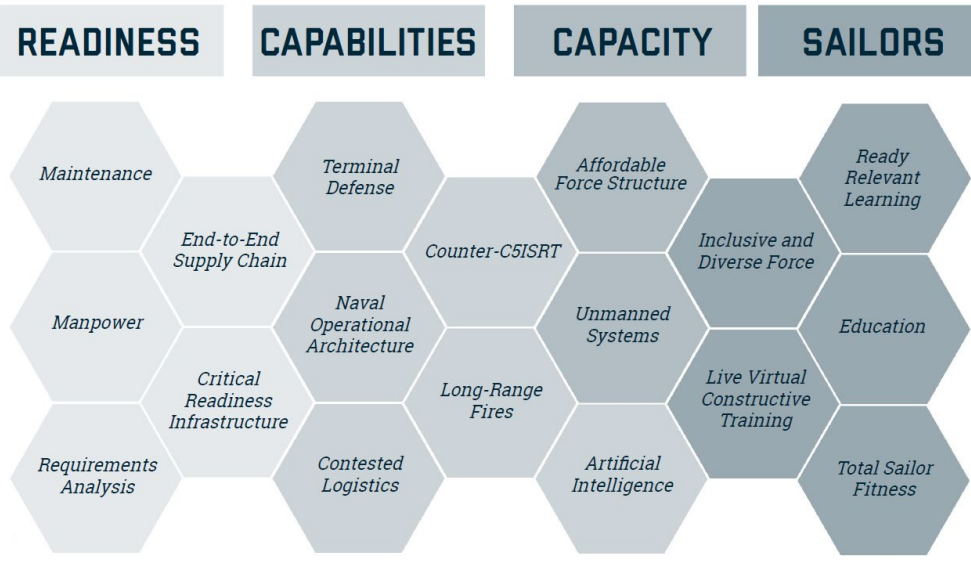
To maintain

Enduring Advantage

Navy Priorities and Alignment

- **Strategic Alignment**
- **Prioritization**
- **Maximize Collaboration & Partnerships**
- **Fight Tonight:** Rapidly provide relevant S&T capabilities to meet warfighter needs
- **Future Fight:** Accelerate discovery, development and delivery of relevant S&T

NAVIGATION PLAN PRIORITIES AND OBJECTIVES



- READINESS & SUSTAINMENT
- Counter-C5ISR
- RESILIENT COMMS & NETWORKS
- LONG RANGE FIRES
- CONTESTED LOGISTICS
- ANTI-SUBMARINE WARFARE



NAWCAD S&T Strategic Initiative Portfolios

NAWCAD S&T Focus Area

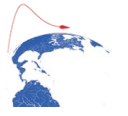
Emergent Technologies to Enable Transformational Capabilities

- Intelligent Autonomous Systems & Trusted AI
- Secure Communications & Future Networks
- Cyber
- Quantum
- Hypersonic Air Systems



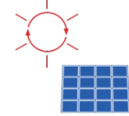
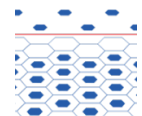
Advanced Mission Capability Improvement Areas

- Mission Capabilities
- Readiness & Sustainment
- Contested Logistics



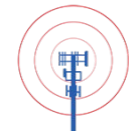
Capability Enhancements in Domain Technology Areas

- Human Systems & Integration
- Avionics, Sensors, and Electronic Warfare
- Air Vehicle
- Propulsion & Power
- Air Ship Integration
- Advanced Training Systems



Other Enabler Initiatives

- Process Enablers
- Rapid Prototyping and Experimentation
- Air Traffic Control & Combat Systems
- Live Virtual Constructive



“Maritime superiority is enabled by technological superiority.”

NAWCAD relies on research unique to naval aviation and scientific discoveries across the entire Research & Development ecosystem to address key Naval Aviation challenges necessary to deter and win.

