

Perspectives on ANTX of the Future

K. Todd Holland, Ph.D. (SSTM)

NSWC Prototyping Director for Mine Warfare

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Get Solutions Into Warfighter's Hands – Better, FASTER



RAPID PROTOTYPING

Streamlined approach to prototyping emerging technologies and engineering innovation in response to Force & Fleet needs

Accelerates fielding of advanced warfighting capabilities

Influences design and build processes

Partner with vendors “outside of the gate”



EXPERIMENTATION / DEMONSTRATION

Informs the acquisition and capability development process

Enables connections with other Warfare Centers and Laboratories on new capabilities

Rapidly assess operational utility through end-user feedback



ACCELERATED ACQUISITION

“RPED” Director is a dual hatted position aligned to DASN (RDT&E) for accelerated acquisition

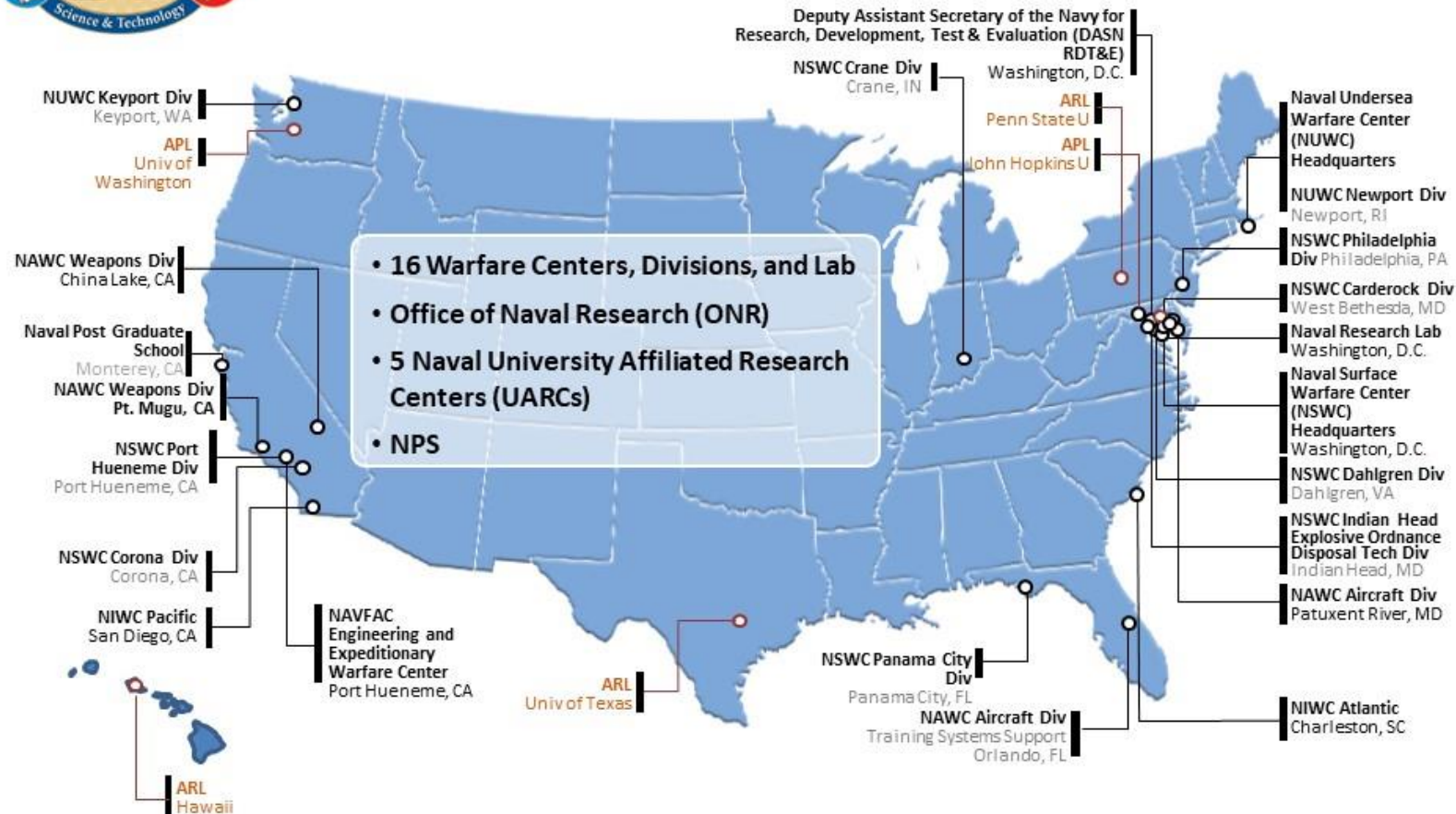
RPED events influence the overall fielding strategy and how experimentation can advance technology and deliver capability faster

National leadership of eight SSTMs across Naval Warfare Centers, provide NR&DE interface to DASN (RDT&E)

Get Solutions Into Warfighter's Hands – Better, FASTER



Naval Research & Development Establishment (NR&DE)



Aggressive Research, Development, Test & Evaluation for reliable real world solutions

Tools in the Tool Box



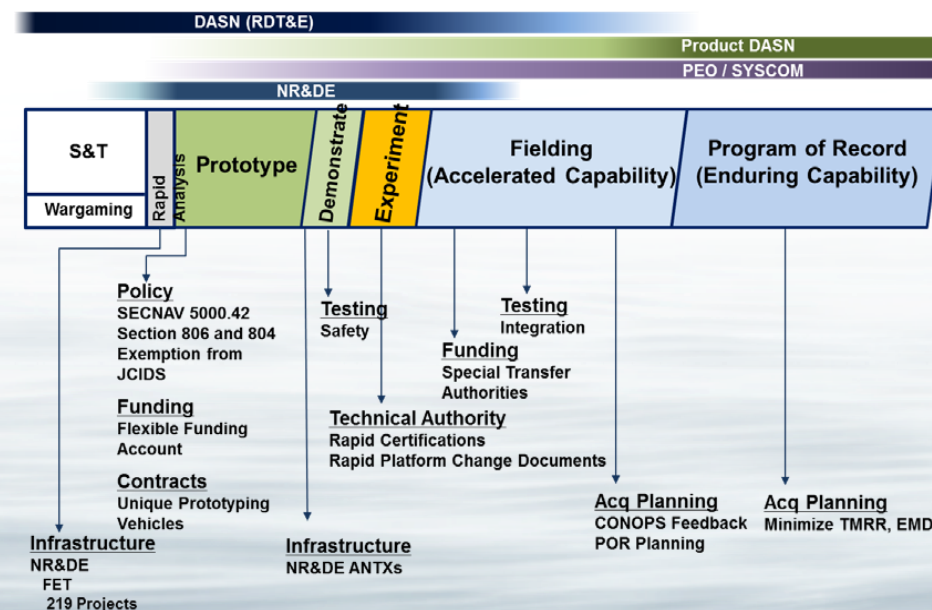
To encourage innovation with industry, NSWPCD utilizes several non-FAR-based tools and other methods to engage with industry and academia

Non-FAR Based Tools

- Partnership Intermediary Agreements (PIAs)
- The NavalX Gulf Coast Tech Bridge
- Small Business Innovation Research (SBIR) and Small Business Technology Transfer Research (STTR)
- Commercial Service Agreements (CSAs) which provides industry access to Navy ranges, labs, and resources
- Education Partnership Agreements (EPAs)

Contracting Tools

- Cooperative Research and Development Agreement (CRADA)
- Other Transaction Authority (OTA) for Prototype Projects – Sec 2371
- Procurement for Experimental Purposes – Sec 2373
- Prize Challenges – Sec 2374a

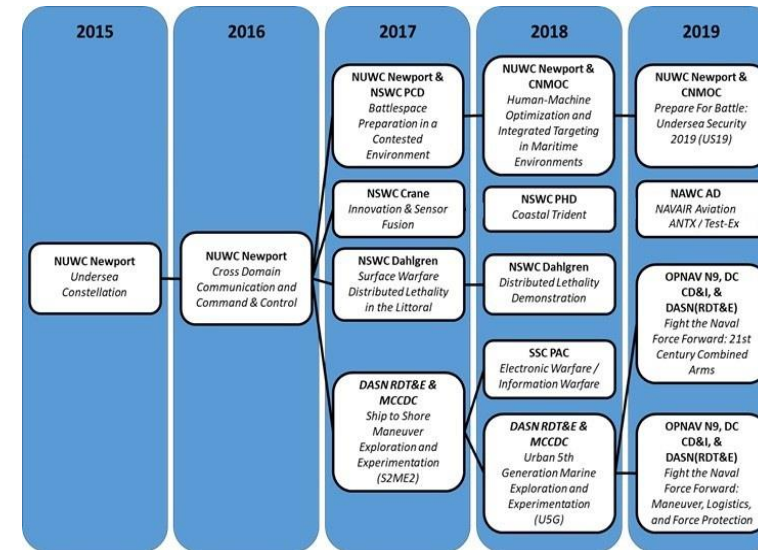


Advanced Naval Technology Exercise (ANTX) History



Key operating elements and models of ANTXs:

- ANTX does not provide funding for any government, academic, or industry attendees/providers participation.
 - Event and exercise is funded by the Naval host/sponsor.
 - Technology providers participate under their own resources.
- Providers support their own cost to travel/participate, no major development period, bring “what you have” technologies.
 - Non-Government Technology providers enter into flexible and adaptable partnerships through Other Transaction Authorities (OTA), cooperative research and development agreement (CRADA), or other non-traditional methods that allows for them to participate with government entities in low risk environments.
- Government gains first hand interaction/observations of emerging technology.
 - Potential to guide and shape technology development or inform potential concept of employment (CONEMPs) without spending or contracting acquisition funds.
 - Engineers and Scientists are provided a forum to develop operational context and network with peers in uniform, industry and academia.
- Providers gain insight in how to work with government and shape technology based on direct warfighter/SME feedback.
 - Environment promotes collaboration to teach engineers/industry/academia and government workforce practical experience with government contracts and military exercises. All providers gain product marketing, feedback, and potential for consideration of follow-on contracts or transactions.
- Events have ranged in size from as little as 10 to as many as 100 products observed and exercised in a week (or shorter) event. With 10-20% of demonstrated tech seeing some type of further exploration or transition (higher returns on the more targeted smaller events).



MCWL & NR&DE Model = Exercise

- Gets to the answer “how would we?”
- Typical Targeted Transition Exit: Requirements and Larger Fleet Exercises
- + Deep warfighter involvement. - Resource intensive effort.
- Explores both technology and tactics. Refines, informs and applies technology to new/existing CONOPs and validated with hands on war fighter involvement. Intelligence and threat informed scenarios.



NUWC Model = Exploratory Exercise

- Gets to the answer of “what is possible?”
- Typical Targeted Transition Exit: S&T maturation efforts (Labs and Warfare Centers)
- + Widest net cast for emerging technology. - Typically lower TRL in comparison.
- Demonstrates wide range of technology in a controlled mission environment. Gets both Uniformed and Technical SMEs to observe operations and assess utility and maturity.



NAWC AD Model = Experiment

- Gets to the answer “will this work?”
- Typical Targeted Transition Exit: PEOs and Program Offices into existing programs
- + High success to rapid transition. + Short timeline to execute. - Tight targeted focus.
- Poses a very defined problem and leverages cooperation to speed a solution to delivery in a near term focus. Event often held in parallel with a test exercise.

Office of Naval Research - SCOUT



- *A pathfinder for alternative ways of bringing technologies to problems, operationalizing them, and getting them to scale*
- *Problem Driven, Warfighter Partnership, Teamwork - Discover & Learn, Deliver Faster Decision Points*
- *Experimentation with Warfighter Purpose*
- A collaboration of Industry; Naval Research Enterprise (NRE); and Naval Research and Development Establishment (NR&DE) communities, capabilities, and enterprise tools to solve warfighter problems
- Execute ***Sprint discovery events on the way to the main experimentation event***
 - Warfighter Driven Challenges, Prize Challenges, Design Thinking Events
 - S&T, R&D, Engineering, Test & Evaluation approach in partnership with warfighting operational commands, resource sponsors and acquisition community – ***building the bridge across the technology valley of death***
 - includes COTS/GOTS solutions (e.g., data / sensing as a service), alternatives to large exquisite platforms (e.g., the "small, fast, & many"), and different means for reaching a broad & non-traditional performer base
- ***Provide a deeper value added analysis of discovered Warfighter capabilities of interest; build, highlight, and streamline the planning to fielding; working with leadership, resource sponsor, and acquisition community for transition***





Gulf Coast Tech Bridge Focus



OVERALL
FOCUS

ACCELERATING SOLUTIONS TO THE NAVY'S COASTAL
SCIENCE AND UNMANNED SYSTEMS CHALLENGES THROUGH
PARTNERSHIP AND INNOVATION

INNOVATION
PILLARS

AI/MACHINE
LEARNING

UNMANNED
SYSTEMS

GEOSPATIAL
DATA
SCIENCE

SENSING &
PREDICTION

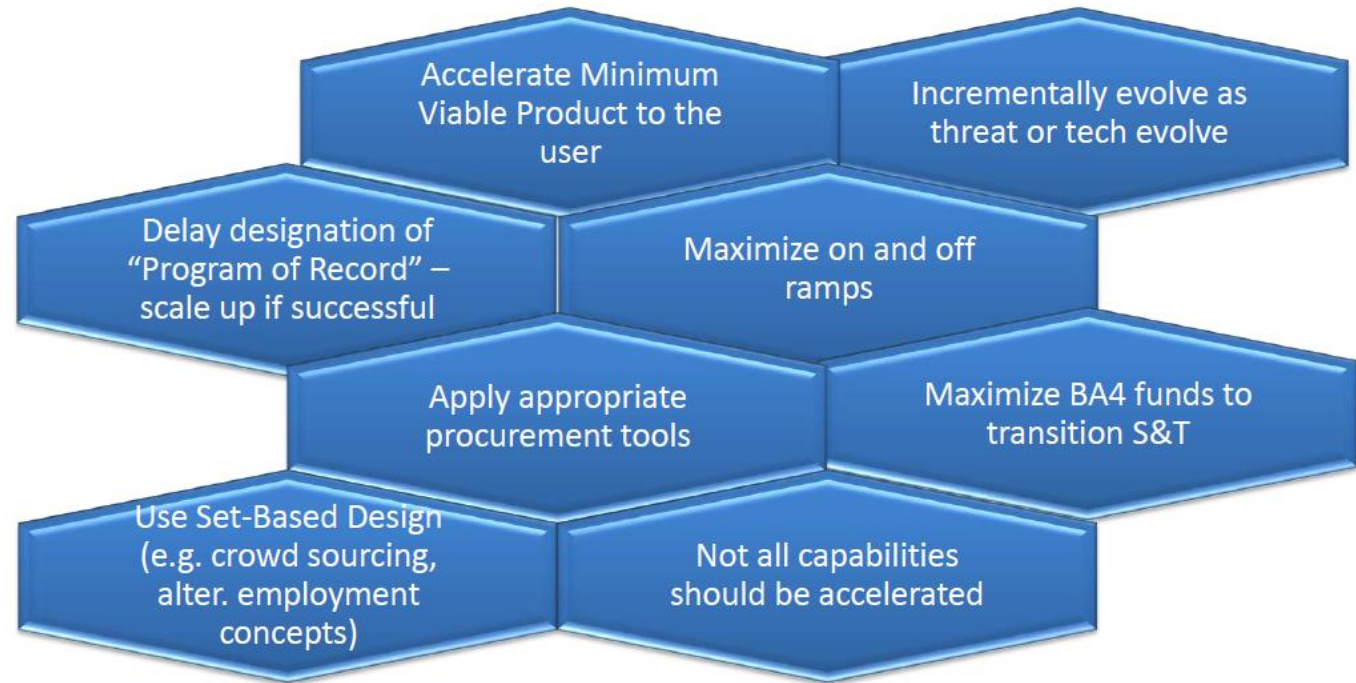
APPLICATIONS

- Mine Warfare
- Naval Special Warfare
- Environmental Intelligence
- Coastal Science & Technology
- Coastal & Maritime Security
- Environmental Resilience
- Diving & EOD
- Resource Protection
- Command & Control
- Decision Support
- Underwater Unexploded Ordnance

The Future of ANTX

- LOTS and LOTS of newly named but related approaches (IBP, IMX, Scout, ...)
- What is the specific operational problem we are going after?
- Maintain low barrier for entry for experimentation in a relevant environment
- Improve assessment and feedback to industry (RDT&E)
- Link with Tech Bridges

Accelerated Acquisition Principles



<https://seapowermagazine.org/forecasting-for-the-fleet-naval-meteorology-and-oceanography-command-monitors-weather-ocean-and-atmospheric-conditions-to-keep-the-navy-in-the-fight>



Backup

Alternative Acquisition Pathways and Authorities



Objective - Accelerate development and fielding of capabilities required or Naval Forces to achieve mission success

- Policy on Accelerated Acquisition governance
 - Urgent and emergent needs
 - Accelerated Acquisition
 - Policies to accelerate decision making
- Leverage nascent NDAA authorities and reforms
 - Mid-Tier Acquisition (FY16 NDAA, Section 804)
 - Acquisition Agility (FY17 NDAA, Section 806)
- Other Transaction Authorities (OTA)
 - 2371, R&D OTA authority
 - 2373, Purchase of items of military utility
 - 2374a, prize authority
- 3rd Party Financing (3PF)
- FY2022 NISE 219 Investment Strategy
- Advanced Naval Technical Exercise (ANTX)

