Accelerating Acquisition through Rapid Prototyping and Rapid Fielding

Presented by:
Denise Crimmins
Director, USW Rapid Prototyping
"Deliver performance at the speed of relevance. Success no longer goes to the country that develops a new technology first, but rather to the one that better integrates it and adapts its way of fighting."


NDS Implementation requires integrated and focused teams of Operators, Technologists, and Acquisition Professionals

- TnTE2 method integrates Operators and Technologists
- New Accelerated Acquisition authorities from NDAA 16/17

TnTE2 and new Acquisition Authorities enable delivery of performance at the speed of relevance
Quick Wins, Throw Deep

S&T

RAPID PROTOTYPING

Accelerated Acquisition Authorities
Flexible Funding Constructs
Set Based Design Methods
Live, Virtual, Constructive Environments
Strategic Planning
NR&DE Facilities and Resources

Autonomy and Unmanned Systems
CYBER, Big Data Analysis, Advanced Computing
Advanced Communications and Connectivity, Advanced Sensing
Advanced Power Systems, Directed Energy, Railgun, High Velocity Projectiles
Micro/Nano Satellite Technology, Nanotechnology and Meta Materials, Synthetic Biology

Distribution A: Approved for Public Release.
### Traditional Acquisition (5000.02)

<table>
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<tr>
<th>Stage</th>
<th>Description</th>
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<tr>
<td>Pre-Concept (Inc. JCIDS)</td>
<td>Wargames, Experimentation, Hackathons, Tech Scouting, Advanced Naval Tech Exercises, Challenge Competitions, etc.</td>
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<tr>
<td>Material Solution Analysis</td>
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<tr>
<td>Technology Maturation &amp; Risk Reduction</td>
<td>Prototyping, Testing &amp; Evaluation, Refining, Developing CONOPs, etc.</td>
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<td>Engineering &amp; Manufacturing Development</td>
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<td>Production and Deployment</td>
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<td>Sustainment &amp; Disposal</td>
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### Accelerated Acquisition

**Alternate Pathway(s)**

- **Problem Identification & Definition**
  - Wargames, Experimentation, Tech Scouting, Advanced Naval Tech Exercises, Challenge Competitions, etc.

- **Limited Trials**
  - Prototyping, Testing & Evaluation, Refining, Developing CONOPs, etc.

- **Decision Point**
  - Scale Up
  - Cancel
  - Harvest Technology
  - Understand Operational Needs
  - Continue Limited Production

**Rapid Acquisition Authority (RAA) Determination**

**FY16 NDAA Section 804**
- Middle Tier Acquisitions
- Rapid Prototyping – Rapid Fielding

**FY17 NDAA Section 806**
- Acquisition Agility
- MOSA – Component Prototyping

**Key Enablers to Accelerate**
- Technical Authority
- Contracts
- Financing
- Legal
Accelerated Acquisition Principles

- Accelerate Minimum Viable Product to the user
- Incrementally evolve as threat or tech evolve
- Delay designation of “Program of Record” – scale up if successful
- Maximize on and off ramps
- Apply appropriate procurement tools
- Maximize BA4 funds to transition S&T
- Use Set-Based Design (e.g. crowd sourcing, alter. employment concepts)
- Not all capabilities should be accelerated
Maintaining the Edge

Naval Research and Development Establishment

Defense Industry

Commercial Industry

Academia

Capitalizing on the Best and Brightest our Nation has to Offer

Distribution Statement A: Approved for public release
Advanced Naval Technology Exercises (ANTX) are a series of exercises led by the Naval Research and Development Establishment (NR&DE) where industry, academia, and Government R&D organizations are invited to demonstrate emerging tech/engineering innovations that address priority USN and USMC missions.

- Demonstrate emerging technologies and innovations to address Navy and Marine Corps mission priorities and gaps
- Allow collaboration of industry, academia, and Government R&D organizations
- Provide an environment for the warfighters to assess the operational utility of technological innovations before these technologies become militarized and integrated at the operational level
- Provide a forum for informational exchanges and innovations where the naval technology community can review new technologies, exchange ideas, and foster collaboration
TnTE2 Continuum

**Exploration**

Capability based tactics/technology demos in field representative environments

**Rapid Prototyping**

Highly-valued and mature tactics/tech are ruggedized and integrated based on user inputs

**Fleet Experimentation**

Tactics/tech are integrated for Fleet experimentation and limited user evaluations

**Rapid Fielding**

Tactics/tech fielded for extended user evaluations
QUESTIONS?