

***S&T AFFORDABILITY CONFERENCE  
TRANSITION OF TECHNOLOGY TO ACQUISITION***



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Office of Naval Research***

# ***ENHANCING TECHNOLOGY TRANSITION***

- **Two Pronged Approach**
  - **Future Naval Capabilities (FNCs) Establishment**
  - **Science and Technology (S&T) Program Manager Training**

# *DoN SCIENCE & TECHNOLOGY (S&T) VISION*

- **Inspire and guide innovation**
- **Provide technology-based capabilities**
- **Future Navy and Marine Corps**
- **Focused S&T program**

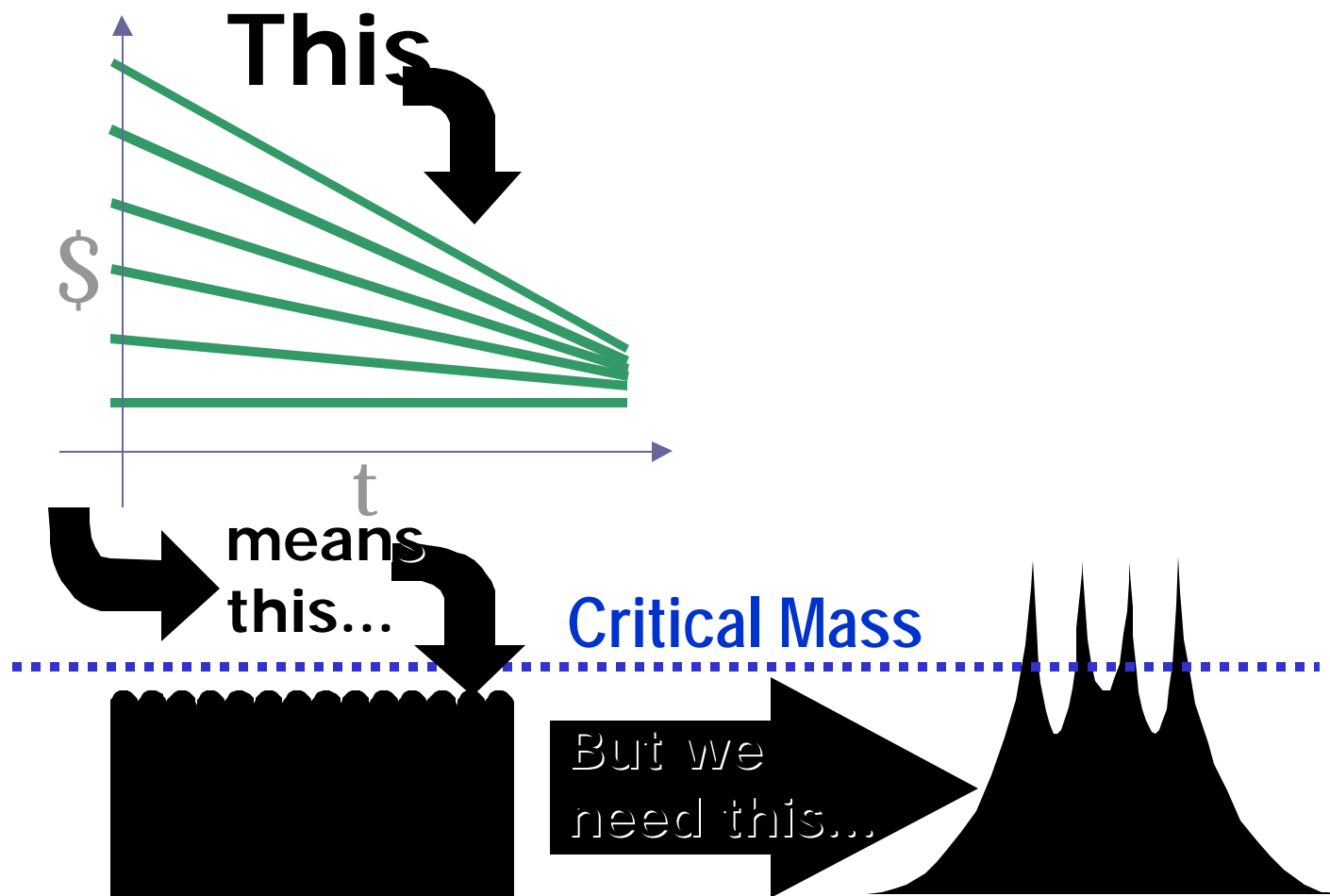
# ***DoN SCIENCE & TECHNOLOGY (S&T) FOCUSED S&T PROGRAM***

- **Bridge gap**
  - Short-term needs
  - Long-term commitments
- **Move program closer to customer (warfighter)**
- **Vertically integrate S&T (6.1, 6.2, & 6.3)**
- **Retain historic connections**
  - High quality
  - World-class foundation research

# *DoN SCIENCE & TECHNOLOGY (S&T) HISTORICAL PERSPECTIVE*

- **Multitude of projects**
- **Relatively small (\$500K - \$1500K)**
- **Affordability improvement opportunity minimal**
- **Declining budgets**
- **Few transitions**

# DoN SCIENCE & TECHNOLOGY (S&T) PROBLEM/SOLUTION



**Programs below critical mass were never ready for transition**

# *DoN SCIENCE & TECHNOLOGY (S&T) PROGRAM OBJECTIVES*

- **High visibility options**
- **Healthy technical fields**
  - National naval responsibilities
- **Broad S&T awareness**
  - No technological surprises

# *DoN SCIENCE & TECHNOLOGY (S&T) NEW APPROACH*

- **Established Future Naval Capabilities**
- **Set-up Integrated Product Teams (IPTs)**

# ***12 FUTURE NAVAL CAPABILITIES***

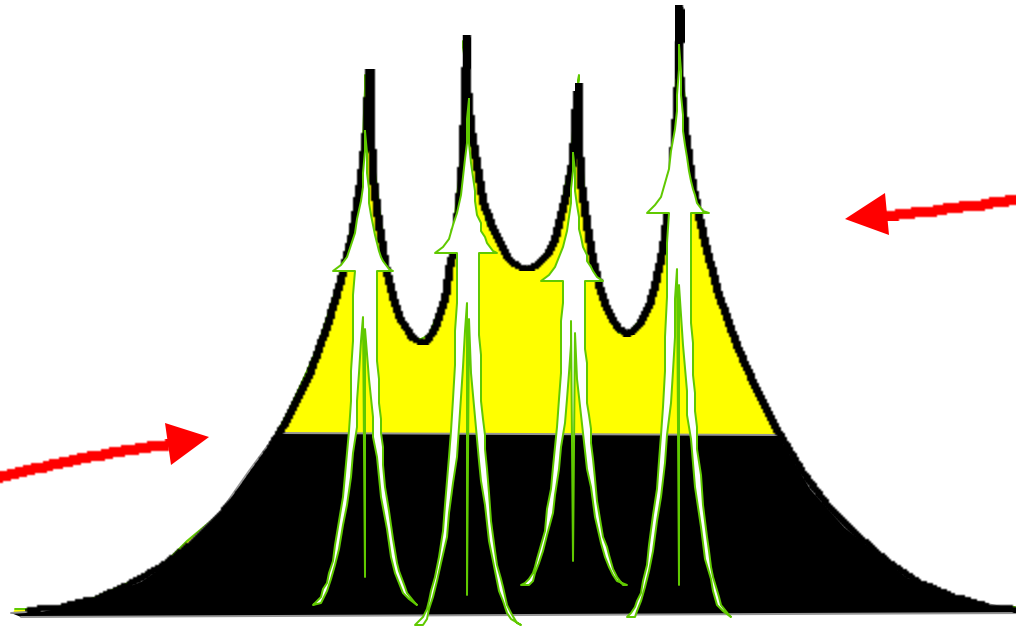
- **Information Distribution**
- **Time Critical Strike**
- **Decision Support System**
- **Organic Mine Countermeasures (MCM)**
- **Autonomous Operations**
- **Littoral Anti-Submarine Warfare (ASW)**
- **Total Ownership Cost**
- **Platform Protection**
- **Missile Defense**
- **Expeditionary Logistics**
- **Capable Manpower**
- **Warfighter Protection**

# ***IPT APPROACH***

- **Industry Board of Directors Model**
- **Consensus Process**
- **Principal Members:**
  - **Chair -- Requirements community -- Office of Chief of Naval Operations (OPNAV)/Marine Corp Combat Development Center (MCCDC)/Fleet/Force rep.**
  - **Transition Lead -- Acquisition community -- Systems Command (SYSCOM)/Program Executive Officer (PEO) rep.**
  - **Execution Manager/Technical Working Group Leader -- S&T community rep.**
  - **Executive Secretary -- S&T Resource Sponsor Rep.**
- **Alternate/Supporting membership as needed**

# DoN SCIENCE & TECHNOLOGY (S&T) REQUIREMENTS PULL

Department of the Navy (DoN) requirements setters propose **capabilities** in priority order for the DoN S&T Corporate Board



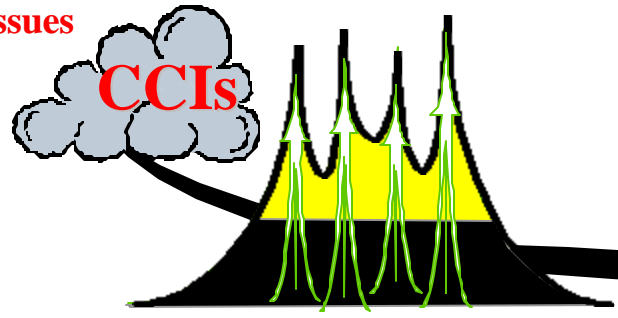
IPTs generate **technology** investment plans:

- OPNAV to program in Program Objective Memorandum (POM)
- ONR to execute
- Acquisition to plan transitions

# DoN SCIENCE & TECHNOLOGY (S&T) NEW PROCESS

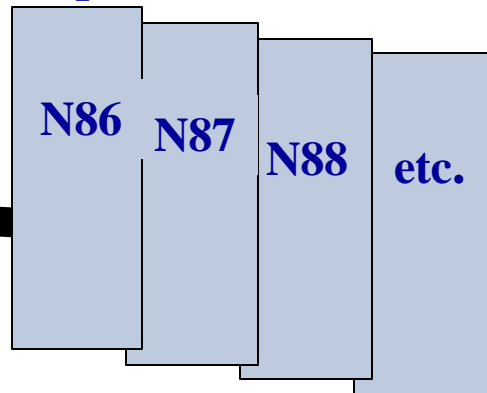
Critical Capability  
Issues

N-Codes



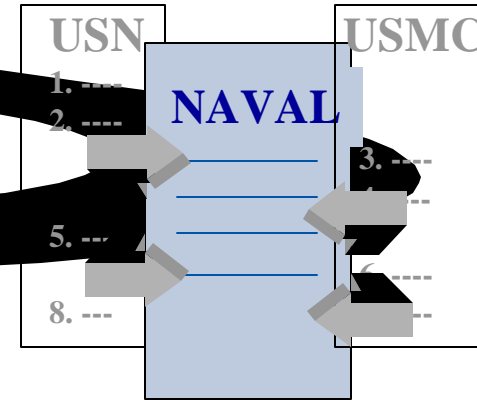
Prioritized Capabilities

Vice Chief of Naval  
Operations (VCNO)



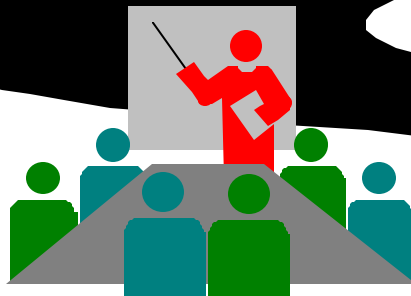
Navy Balance

VCNO/Assistant Commandant of the  
Marine Corps (ACMC)



DoN Balance

ONR/SYSCOM/  
N-Code Staff



IPT -- Continuing  
Program Improvement

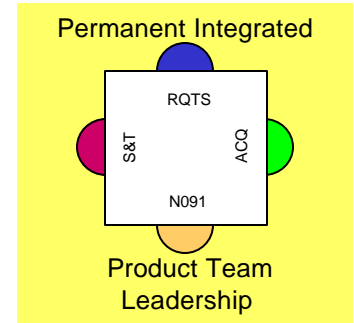
ONR

Naval Options  
Demos

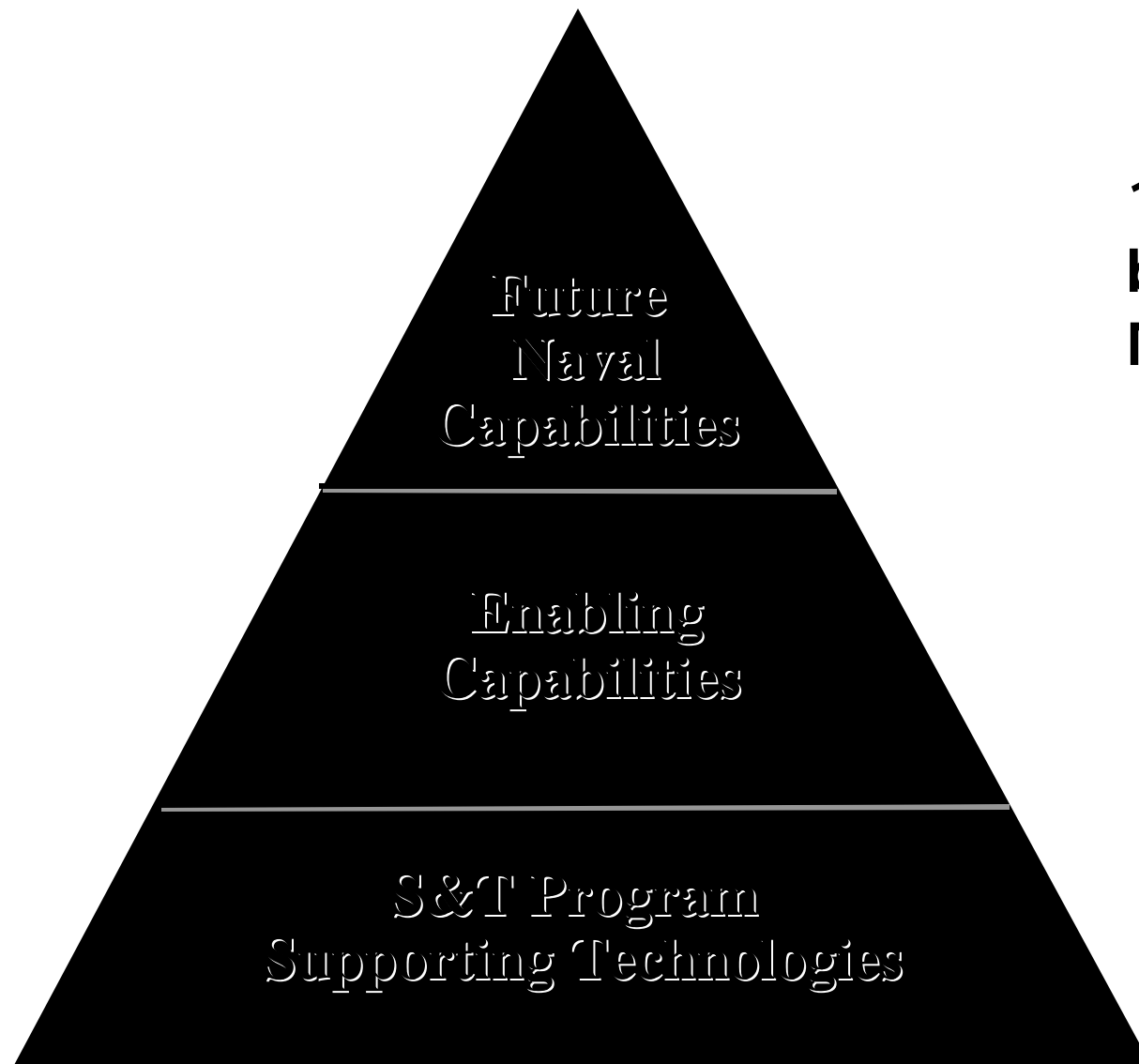
Navy Essential  
National Resource

Broad Awareness

Program Execution



# *DoN SCIENCE & TECHNOLOGY (S&T) RESPONSE TO FNCs*



**12 FNCs designated based on OPNAV N-Code input**

**Sub-capabilities designated by IPTs for each of 12 FNCs**

**Programs plans developed by IPTs to provide Enabling Capabilities**

# ***DoN SCIENCE & TECHNOLOGY (S&T) SPIKE CHARACTERISTICS***

- **Provides significant technology options and operating concepts**
  - **Has significant budget**
  - **Has definite milestones and objectives**
  - **Has concrete deliverables and finite end state**
  - **Culminates in well-defined demonstrations**

# ***DoN FNC/S&T SPIKE PROCESS TIMETABLE***

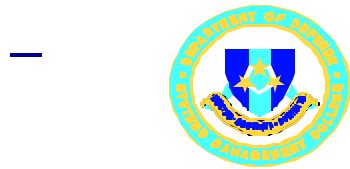
- **Desired future military capabilities solicited from individual OPNAV N-Codes** **Fall 98**
- **OPNAV inputs consolidated into 12 FNCs** **Jun 99**
- **IPTs established for each FNC** **Jul 99**
- **Current (FY00) 6.3 Program reviewed** **Aug 99**
- **FNC IPTs identify Sub-capabilities for each FNC** **Sep 99**
- **FNC IPTs outline S&T Programs (FY02 to FY07)** **Oct 99**
- **Presentation to the DoN S&T Corporate Board** **Nov 99**
- **Development of detailed program plans for POM 02 cycle based on DoN S&T Corporate Board approvals**

# *DoN SCIENCE & TECHNOLOGY (S&T) ACQUISITION TRAINING*

- **Jointly developed**



**Office of Naval Research**



**Defense Systems Management  
College**

- **Objectives**

- **Educate and train S&T professionals**
- **Include S&T personnel in acquisition workforce**

# ***COURSE OUTLINE (20 JUNE - 1 JULY)*** ***TECHNOLOGY INSERTION IN SYSTEMS ACQUISITION***

- **Keynote address - Executive Director (ED)/Technical Director (TD), ONR**
- **Defense Acq. Workforce Improvement Act**
- **Guest Lecturer - Direct Reporting Program Manager (DRPM) for Strategic Systems**
- **How DoN S&T plays in the acquisition process**
- **Fundamentals of systems acquisition management (CD-ROM)**
- **Integrated product and process development (CD-ROM)**
- **Legal/Ethical Issues Re: Industry Interface**
- **Integrated product teams (CD-ROM)**
- **S&T transition to acquisition: success stories/lessons learned (S&T & acquisition managers' perspectives)**

# ***DoN SCIENCE & TECHNOLOGY (S&T) TRAINING IMPLEMENTATION***

- **First class conducted 29 Jun - 1 Jul 99**
- **Second class conducted 5-7 October 99**
- **Third class planned for December 99**
- **Modifications to create a “purple” curriculum**
- **Hand-off to Department of Defense (DoD) in 2000 for Defense Acquisition University training of appropriate portion of S&T community**