Thinking Outside of the Hull

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Brian J. Persons
Executive Director
Naval Sea Systems Command
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NAVSEA Product Lines

A. Surface Warfare
   - Surface Combatants
   - Amphibious Ships/Auxiliaries
   - Small Boats and Crafts

B. Undersea Warfare
   - Submarines
   - USW Systems
   - Torpedoes

C. Naval Aviation
   - Aircraft Carriers
   - CVN 78 Class
   - Carrier-based Systems

D. Naval/NETWAR/FORCE net
   - Integrated Warfare Systems (including Joint/Allied Interoperability)
   - Surface & Air Command & Control, Sensors, Comms, Weapons
   - Surface & Air Electronic Warfare Systems
   - Networks, C4I & Space

E. Naval Expeditionary Combat
   - Diving and Salvage
   - Littoral & Mine Warfare Systems
   - Special Warfare & MARCOR Systems
   - Unmanned Vehicles
   - C-IEDs

F. Energetic
   - Energetic Systems RDT&E & Material Scale-up, Manufacture
   - Cartridge Actuated Devices, Cutters, Sounding & Specialty Devices

G. National Response Missions
   - ATFP
   - Homeland Defense / Security
   - Strategic Programs
   - NRC

H. Naval Nuclear Propulsion

NAVSEA core technical capabilities support all five Enterprises and National needs

Shown is a percentage of FY 08 dollars executed
NAVSEA Key Success Factors

War-Fighter Focus
Innovation
Talent
Stewardship
Technical Excellence
Lean Thinking
Execution Excellence
Key Success Factor: Innovation

Innovation Leadership: Developing the ability for an organization and its people to adapt to waves of disruptive change brought on by new business models, demographic and geopolitical shifts, and by new and emerging technologies.
What Does That Mean for Expeditionary Warfare??

- Agile
- Reliable
- Lethal
- Durable
- Light
- Ease of Use
- Repairable

Product versus Process: What is Good Enough?
Do We Understand the Environment?

- Non-State Actors
- Terrorism
- Failed States
- Weapons Proliferation
- Weapons of Mass Destruction
- Transnational Actors
- Peacekeeping
- Information Security
DoD Acquisition Process Life Cycle

- Process entry at Milestones A, B, or C
- Entrance criteria met before entering phase
- Evolutionary Acquisition or Single Step to Full Capability

- DoD Instruction 5000.2 (2003)
Integrated Defense AT&L Life Cycle Management Framework
IMPROVED SYSTEM ENGINEERING PROCESS

AS IS

- ENTER MS-B WITH AN IMMATURE SYSTEM SPECIFICATION
- RESULTS IN LESS INFORMED MILESTONE DECISIONS
- FOSTERS POORLY DEFINED PROGRAM ASSUMPTIONS & BASELINES
- LEADS TO COST / SCHEDULE GROWTH DURING EXECUTION

TO BE...

- OUTPUT OF EACH PHASE MEETS INPUT CRITERIA FOR GATE REVIEWS
- GREATER OPPORTUNITY FOR MATURING CRITICAL TECHNOLOGIES
- ALLOWS FOR COMPETITIVE PRESSURES TO BETTER OPTIMIZE COST/SCHED/PERFORMANCE
- GREATLY IMPROVED LIKELIHOOD OF MEETING COST/SCHED

START “SLOW” TO GO FAST!
IMPROVEMENT OPPORTUNITIES

PROGRAM STARTUP TEAMS

LESSONS LEARNED

PLANNING

REQUIREMENTS DEFINITION

TECHNICAL UNDERPINNINGS

SOLID UNDERSTANDING OF REQUIREMENTS

PARTNERING WITH INDUSTRY

COLLABORATIVE PROCESS

IMPROVEMENT ACTIVITY "LEAN SIX SIGMA"

CONTINUOUS IMPROVEMENT

GREEN TEAMS

LESSONS LEARNED

EXECUTION

PROGRAM BASELINE

COST RISK ASSESSMENT

SCHEDULE RISK ASSESSMENT

TECHNICAL RISK ASSESSMENT

REALISTIC BASELINE

INFORMATION VISIBILITY

BURNING PLATFORM

COCKPIT CHART

LEADING INDICATORS

TRANSFORM DATA INTO INFORMATION

GREEN TEAMS

LESSONS LEARNED