



2015 Armament Systems Forum

State of Surface Ship Weapons

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Major Program Manager
Surface Ships Weapons
PEO IWS 3.0**

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Program Executive Office Integrated Warfare Systems



Our Mission



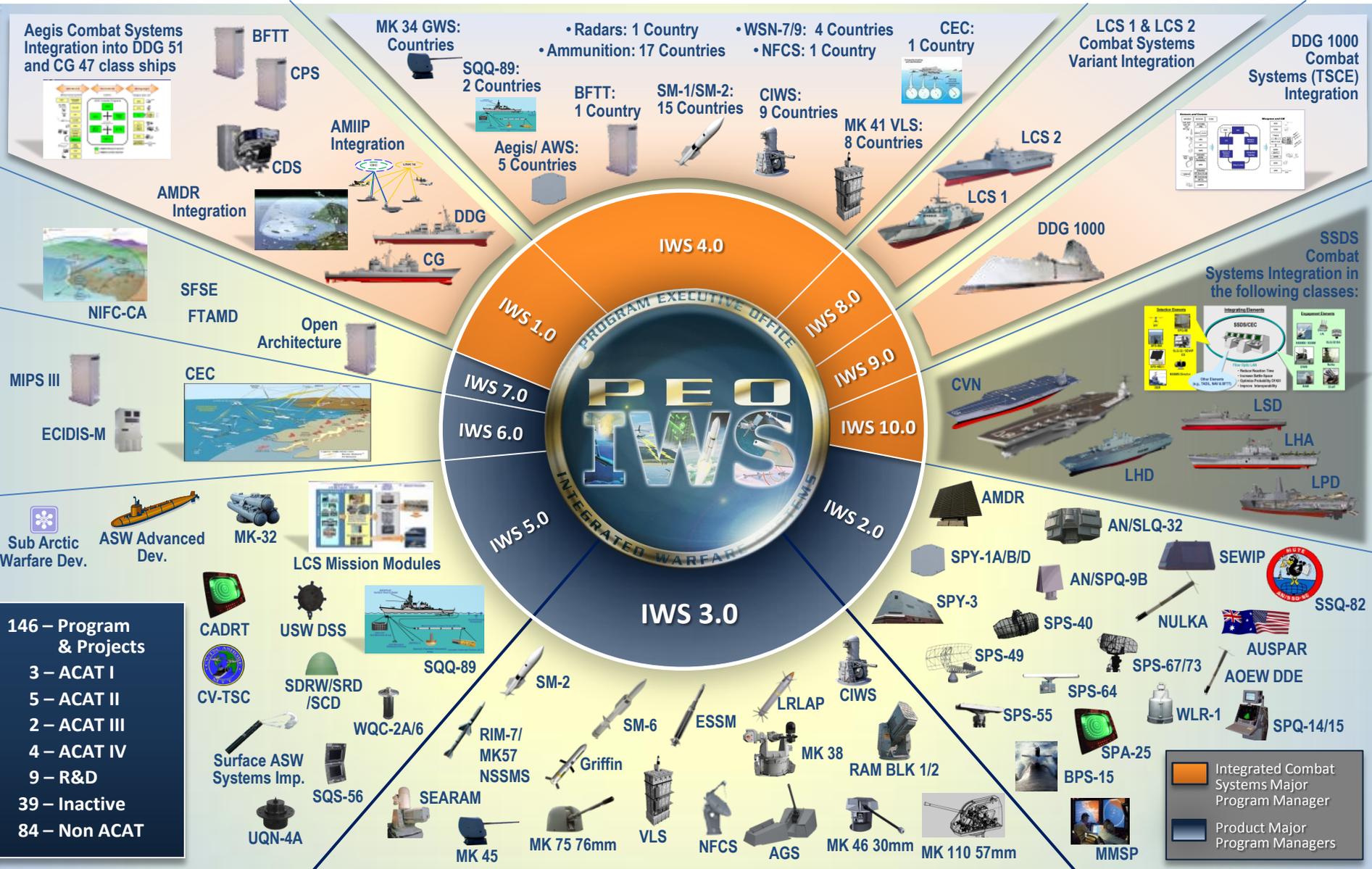
PEO IWS Video.wmv

*To develop, deliver, and sustain operationally
dominant combat systems to Sailors*

“Sea Power to the Hands of Our Sailors”



PEO IWS Portfolio



146 – Program & Projects

- 3 – ACAT I
- 5 – ACAT II
- 2 – ACAT III
- 4 – ACAT IV
- 9 – R&D
- 39 – Inactive
- 84 – Non ACAT

Legend:

- Integrated Combat Systems Major Program Manager (Orange)
- Product Major Program Managers (Blue)



Program Executive Officer Integrated Warfare Systems

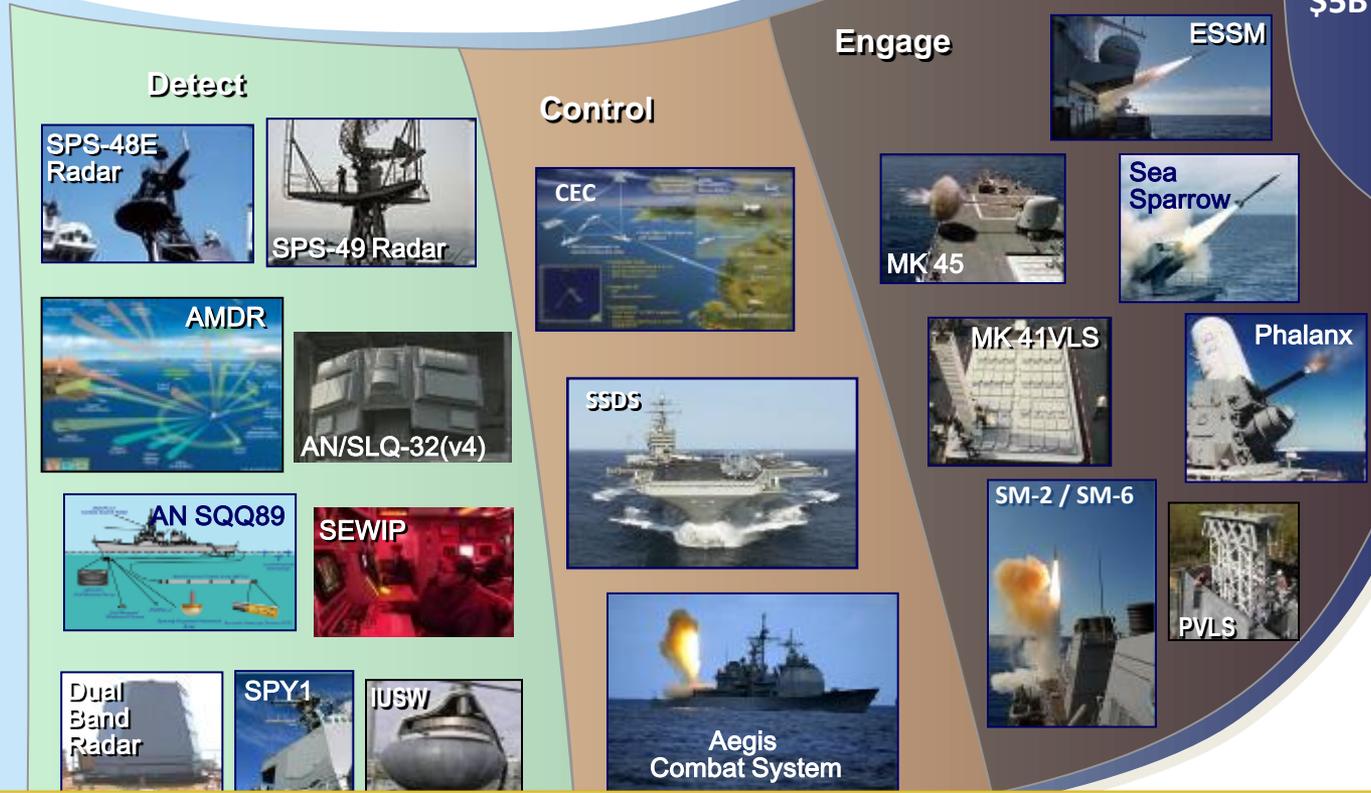


- ◆ The PEO IWS organization is aligned to develop, procure and deliver Enterprise Warfighting Solutions for Surface Ships
- ◆ PEO IWS has life cycle responsibilities for combat system performance, design management, systems engineering, installation, integration, test, maintenance and disposal

- DELIVERY**
- 238 USN Ships
 - 78 USCG Ships
 - 29 Nations
 - PEO IWS executes \$5B - \$6B annually

INNOVATION

- APLs
- Industry
- NSWC
- NUWC
- ONR
- SBIR/SST
- DARPA
- Aegis BMD



- 124 – Program & Projects
- 3 – ACAT I
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- 2 – ACAT III
- 3 – ACAT IV
- 4 – R&D
- 30 – Inactive
- 77 – Non ACAT

Develop, Deliver, and Sustain Operationally Dominant Combat Systems



Surface Ship Weapons - Focus Areas



- **Portfolio Accomplishments**
 - Technology Insertion
 - Rapid Deployment
 - Acquisition Approach
 - Affordability

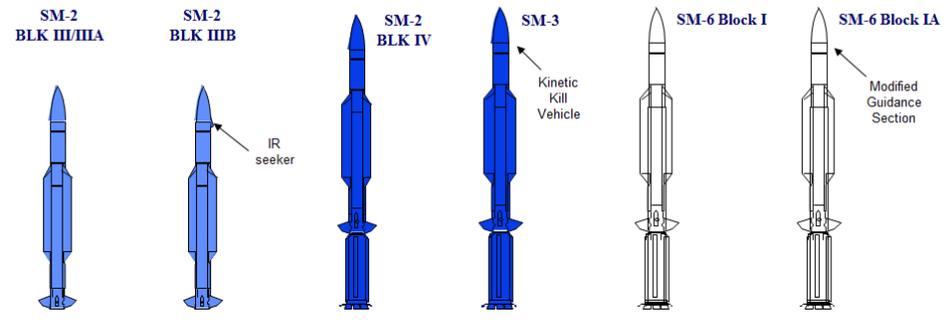
- **Future Trends**

STANDARD Missile

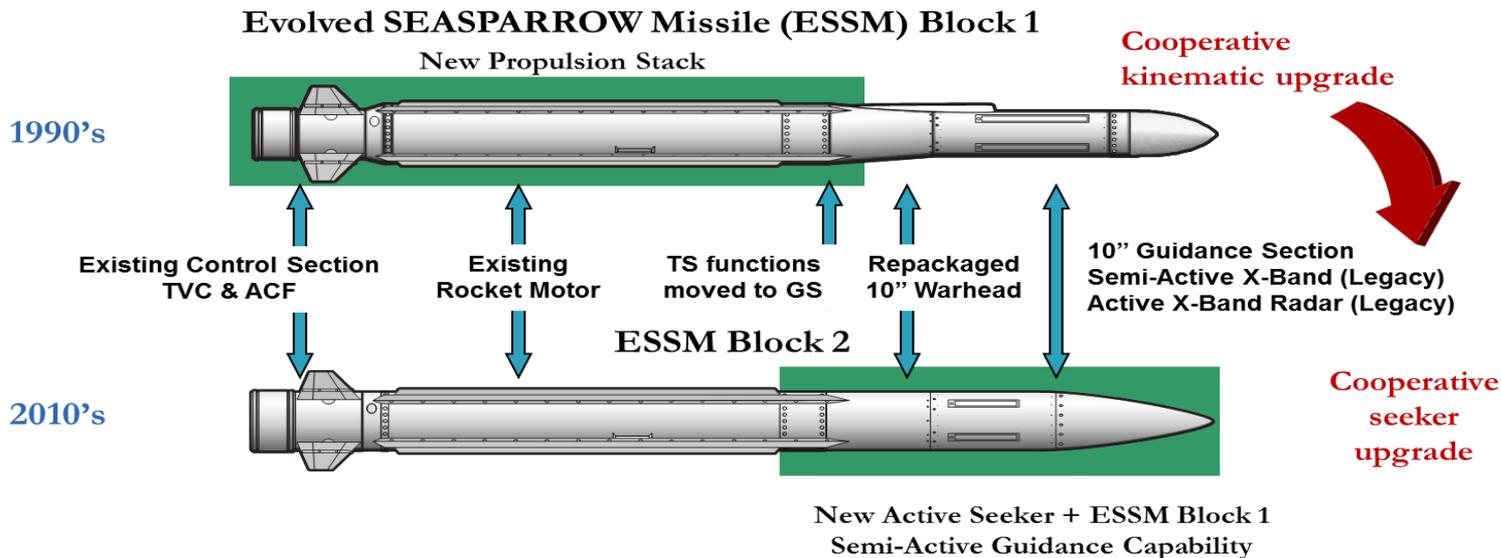
STANDARD Missile Family A Tradition of Spiral Development

- **SM-2 Family**
 - Sustainment of USN and Allies SM-2 Inventory into 2030's and beyond

- **SM-6 Family**
 - Introduction of Active Missile Seeker Technology
 - Built In Test (BIT)
 - Portable AUR BIT Tester



ESSM Block 2



- Threat Driven Requirements Stress Need for Advanced Capability Dual Mode Seeker; Leverages existing active US seeker technology
- Evolutionary upgrade to Block 1; improving capability against the most stressing ASCM threats in challenging environments

- Allows Functional Compatibility Integration as a Block 1, and Optimization to Maximize Capability
- Entering Development Phase
- IOC 2020
- ESSM Block 2 development is funded by the Participating Nations of the NATO Seasparrow Consortium
 - 60% International / 40% US

RAM and Griffin



- **Rolling Airframe Missile (RAM)**
 - Block 2 missile provides significant kinematic & detection capability improvements
 - Block 2 ready for Fleet delivery- IOC planned for April 2015 on USS ARLINGTON (LPD 24)
 - Excluding MSST, RAM Block 2 has tested against all threat targets with unprecedented success - 27 for 28 Successful DT/OT Firings
- **PC Griffin Missile System**
 - Rapid Deployment Capability
 - Met Operational Requirements
 - Achieved Initial Operating Capability

CIWS/SeaRAM/LPWS



- **Sustained Capability**
 - Pace the Threat
 - Total Ownership Cost Focus
 - Commonality
 - RM&A Roadmap



- **Rapid Capability Deployment**
 - Land Based Phalanx System
 - SeaRAM to Rota DDGs



Vertical Launching System



- In production 20+ years
- SM-2, SM-3, SM-6, and ESSM, Tomahawk, VLA
- Platforms
 - Aegis Cruisers
 - Aegis Destroyers





Naval Gunnery Weapon Systems



- **Advanced Gun System and Long Range Attack Projectile for DDG-1000**
- **Improve MK34 5" GWS to Support upgrades for AEGIS Modernization and DDG-51 New Construction**
- **Enhance MK 38 25mm Gun System to Counter Fast In-Shore Craft (FIAC)**
- **Improve Conventional Ammunition Fuzes to Effectively Support SUW/AAW Missions**
- **Cooperative with ONR to Develop Guided Munition Technologies**



MK 45 5" GWS
Platform: DDG, CG

MK 110 57mm GWS
Platform: LCS, USCG
WMSL



MK 75 76mm GWS
Platform: FFG, USCG
Cutters



**370
FIELDED
GUN
WEAPON
SYSTEMS**



MK 46 30mm GWS
Platform: LPD-17, LCS SUW MM,
DDG 1000



MK 38 Mod 2 25mm GWS
Platform: Surface Combatants,
L Classes, Aircraft Carriers



Looking Forward



- **Mission Growth**
 - Expanding offensive capability of existing weapons

- **Affordability**
 - Judicious use of resources

- **Technology Leaps**
 - Electromagnetic Railgun
 - Lasers

On Target – Delivering Affordable and Effective Firepower