



Global T&E Environment in 2025 and Beyond

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Keeping our Navy Underway, Combat Ready and Effective



NAVAL SURFACE WARFARE CENTER
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Test and Evaluation

- **Combat System Ship Qualification Trials (CSSQT) – *just completed USS Abraham Lincoln CSSQT on 07 DEC 18***
- **Fleet missile firings / test events**
- **Radar testing: AMDR, EASR**
- **DDG 1000, CVN-78 Dual Band Radar, ESSM on Self Defense Test Ship on 07 DEC 18**
- **FIT-03 on 10 DEC 18**



➤ NSWC PHD's Role in T&E for Surface Combatants

- Core equities include T&E, In-Service Engineering, and Product Support
- Support development of Test and Evaluation Master Plans (TEMPs)
- Lead T&E through planning, executing and reporting
- Provide ISEA Support for development of requirements, system assessments and grooms, analyzing results
- Improve T&E processes and policy collaborating with NAVSEA and the Warfare Centers (WFC) as an enterprise

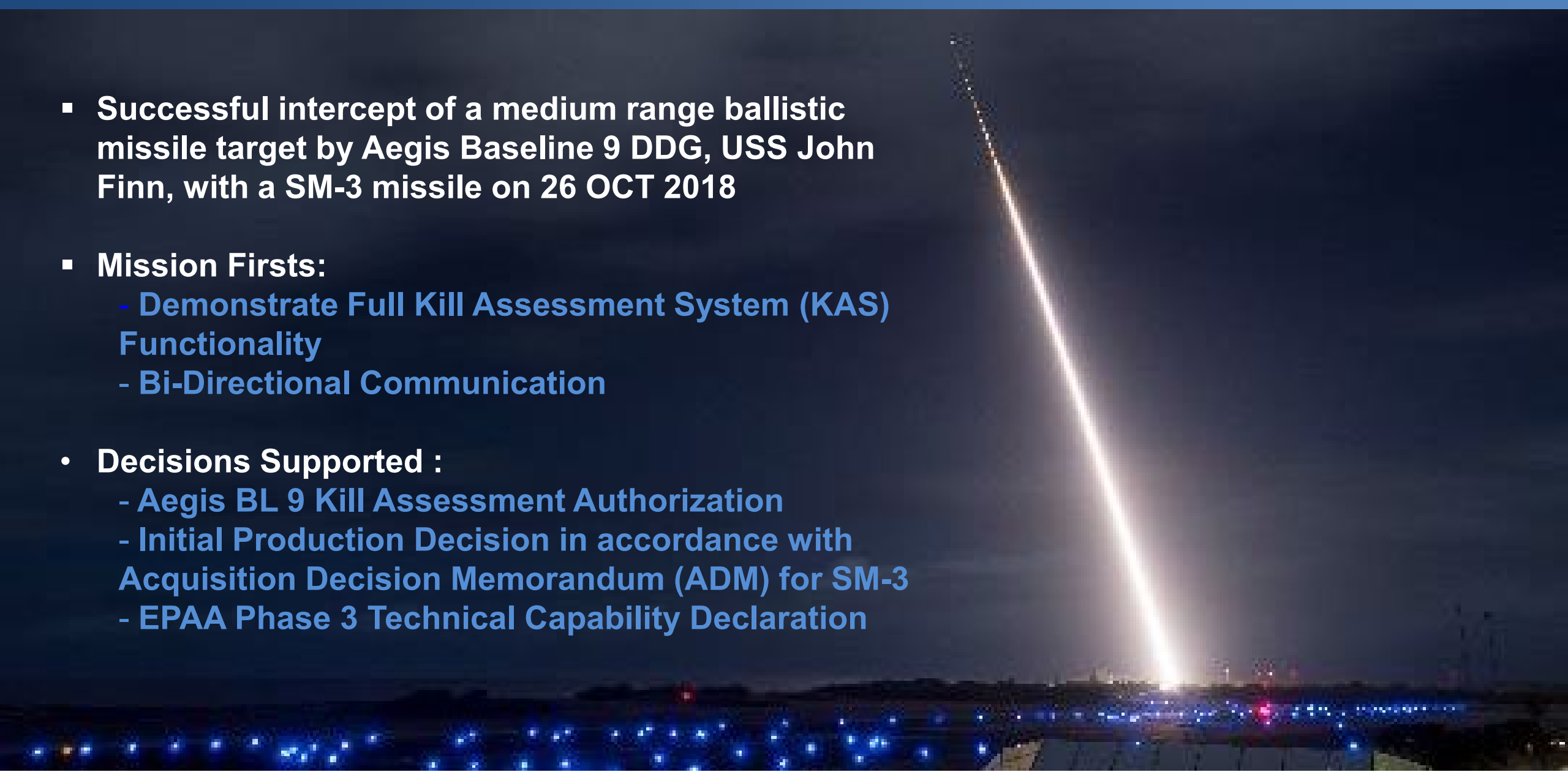
➤ WFC T&E Executive

- Improving the velocity in which T&E professionals learn, deliver, invest, and innovate while maintaining a high level of T&E rigor in our processes
- Improving the execution and effectiveness of T&E functions, processes, and products
- Maintain connection with ISEA of the Future initiative
- Developed and initiated the T&E Renaissance Campaign, a bold campaign focused on expanding the advantage in light of our operational imperative



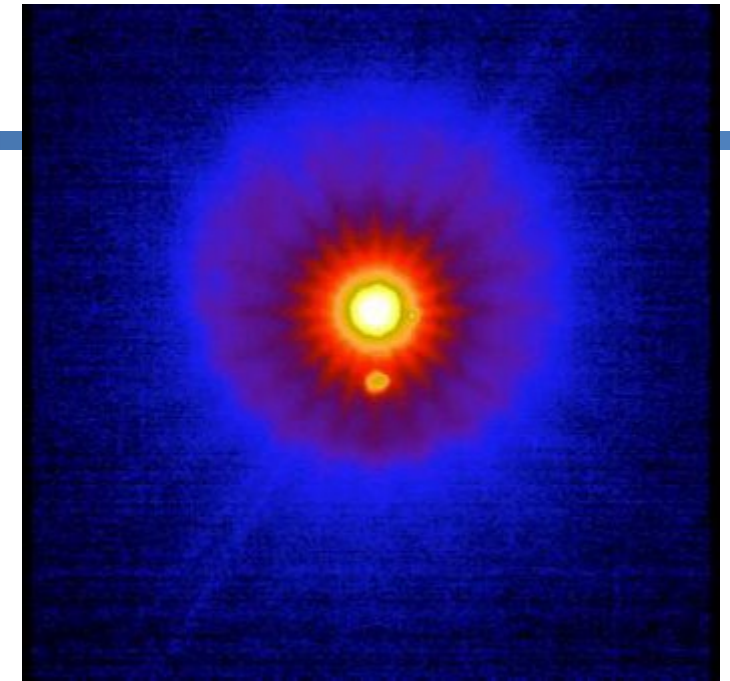
Flight Test Mission 45

- **Successful intercept of a medium range ballistic missile target by Aegis Baseline 9 DDG, USS John Finn, with a SM-3 missile on 26 OCT 2018**
- **Mission Firsts:**
 - Demonstrate Full Kill Assessment System (KAS) Functionality
 - Bi-Directional Communication
- **Decisions Supported :**
 - Aegis BL 9 Kill Assessment Authorization
 - Initial Production Decision in accordance with Acquisition Decision Memorandum (ADM) for SM-3
 - EPAA Phase 3 Technical Capability Declaration



Flight Test Integrated-03

- **Successful intercept of an intermediate range ballistic missile target by Aegis Ashore with a SM-3 in an Operational Test**
- **Mission Firsts:**
 - 10th AAMDC sensor managers executing from 603rd AOC consoles
 - NATO observation in a PACOM AOR test event
 - Use of BMDS Overhead Architecture (BOA) 6.1 in a flight test
 - Mission Early Launch Tracking System (MELTS) as an input to SAS
 - Use of TEVAS for live video of target extraction
- **Decisions Supported:**
 - European Phased Adaptive Approach (EPAA) Phase 3 TCD (MDA)
 - DOT&E Operational Assessment of EPAA Phase 3
 - EPAA Phase 3 Operational Acceptance (US Navy & EUCOM)
 - SM-3 Initial Production Decision ADM
 - COMOPTEVFOR M&S accreditation for SM-3 engagements
 - Aegis Ashore Romania Upgrade
 - MDA OCB Decisions: AN/TPY-2, Aegis BL 9, SM-3



Operational Imperative

➤ Evolving Threats from near peer adversaries

- Building to a 355-Ship Navy from 287 ships (*commissioned USS Thomas Hudner, DDG 116, on 01 Dec. 18*)
 - Adding 46 Ships in 5 years
 - Modernizing warfighters to meet evolving threats
 - Pushing new capability to the fleet
 - » Over The Horizon (OTH) ASCM for FFG(X) and LCS
 - » DDG-51 Flight III with AWS B/L 10 and AMDR
 - » Directed Energy System Integration Lab (DESIL) at Point Mugu 2021
- New Technologies are changing our T&E approach
 - Cyber Warfare (*DOT&E #1 focus are*)
 - Hypersonics
 - Directed Energy
 - Low Observable Threats



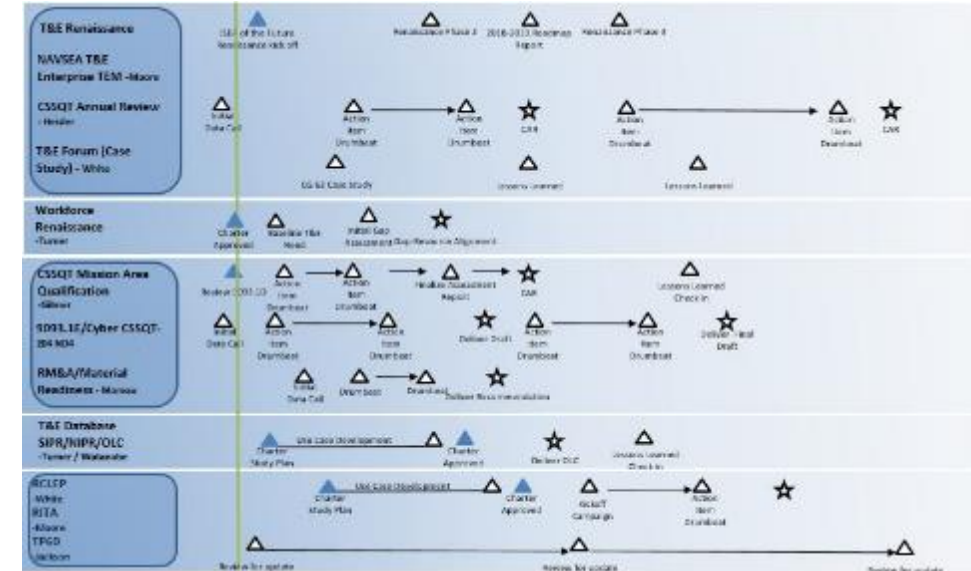
➤ Obstacles

- Workforce Proficiency and Sufficiency
- Education and Training Opportunities
- Success-oriented testing and scheduling impacting independent technical authority
- Culture of Resource Constraints (*resources spent in E&MD priority over T&E*)

T&E Strategic Initiatives

➤ NSWC PHD kicked off the T&E Renaissance in August 2018 to address current and future requirements

- T&E Workforce Development, Qualification, and Proficiency
- Process Technical Rigor, Best Practices, High Velocity Learning
- Clear Guidance and Policy (TQS, SOP)
- T&E Advocate for Acquisition/T&E planning
 - Engaged in early TEMP development to streamline execution of DT/OT
- Collaboration with Fleet training and Readiness Groups
- T&E Roadmap – Technologies, Methodologies, Resources, Ranges, Targets
- Focused on rapidly executing T&E to deliver capability to the fleet
- Discussed near term and long term Cyber hygiene for the fleet (*Cyber Assessment Framework, Cyber resilience methodology in the design of CSSQT events, and include Cyber Mission Area in next revision of NAVSEAINST 9093.1 and outline testing requirements*)





This is an All Hands Evolution!

**"Build a little, test
a little, learn a lot"**

**"We ain't
done yet!!"**

Questions?

