Naval Surface and Mine Warfighting Development Center (SMWDC)

West 2018

THE OVERALL CLASSIFICATION OF THIS BRIEF IS:

UNCLASSIFIED

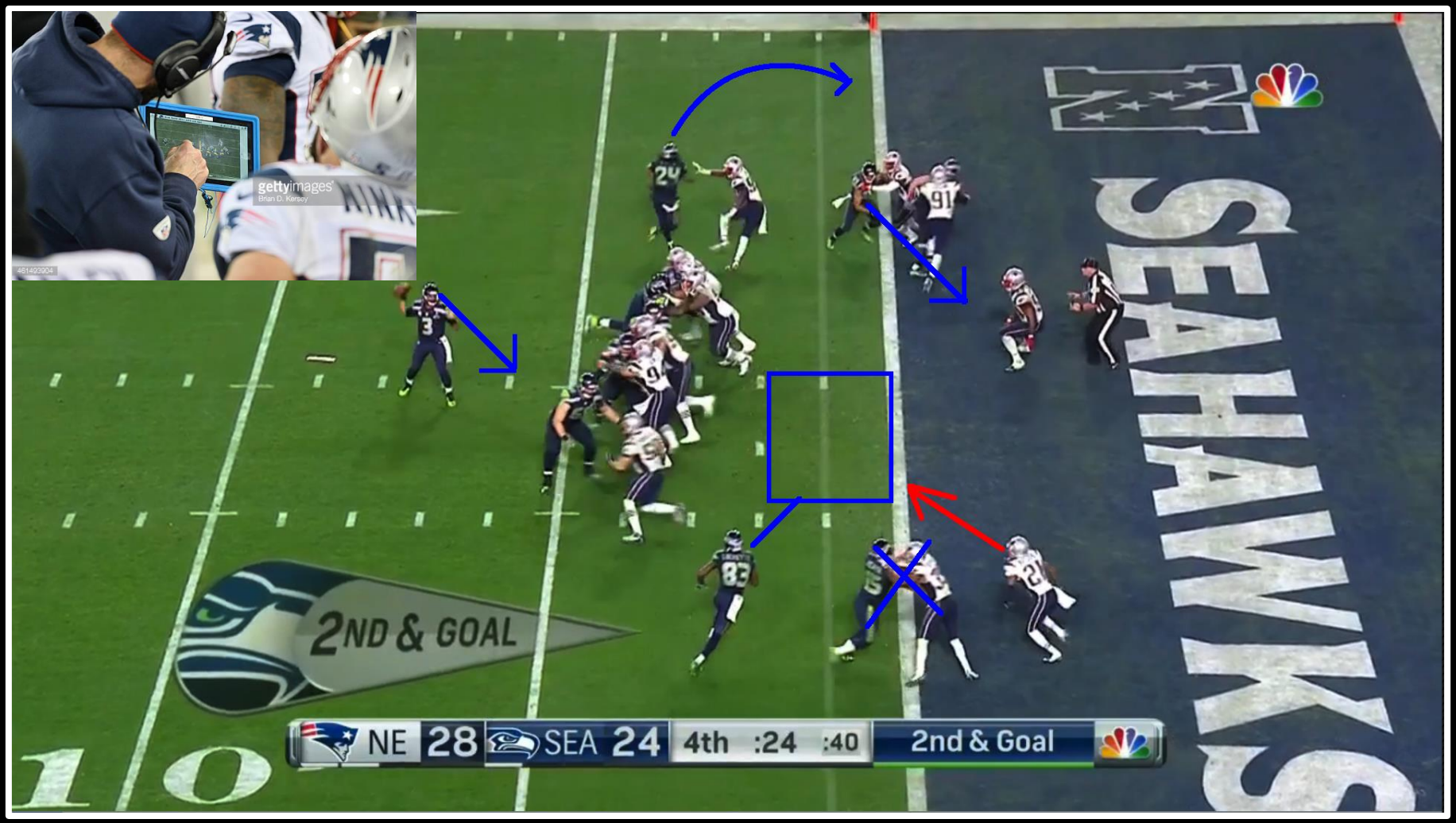
.

$$R = f(W, T, P)^{*}$$

R= Warfighting Readiness
W= Weapon & Sensor Capability
T= TTP Effectiveness
P= People (Training Effectiveness)

***General Paul Gorman, USA (Ret)**

THE SURFACE NAVY CONDUCTS ANOTHER SUCCESSFUL ANTI-SUBMARINE WARFARE EXERCISE
OH, HE'S OUT THERE ALL RIGHT. HE PROBABLY WENT DEEP TO AVOID OUR SONAR.
NAVY
Bacon ©2015
BROADSIDE .NET



TRUTH DATA LEARNING

Plan Brief Execute Debrief (PBED) Impacts

- **Prior to SWATT, no disciplined Surface Warfare PBED Process:**
  - Formalized tactical planning and debriefing were non-standard
- **Shifting focus to tactical mission planning and event debriefing**
  - Mentoring Unit, SAG, and Warfare Commanders
  - Adds rigorous process to event planning
  - Integrate replay tools and post-event analysis
    - Work with Range Ops Centers, Corona (SIMDIS), and NUWC (Vista-4)
- **What we have learned:**
  - Debriefs increase SA and lead to improved performance
  - Robust debrief replay identify performance deficiencies
  - Align the PBED process across the continuum

PBED Execution Increases Tactical Proficiency

MSLEX / Live Fire With a Purpose (LFWAP)

- **LFWAP restarted in Mar '12:**
  - CSG / ARG / SAG / Independent Deployers
  - Move from scripted events to scenarios
- **Support to OCE / OTC and Firing Units:**
  - Mission Planning
  - TTP, Firing Train, and PBED Training
  - Debrief
  - Data collection to support post firing analysis
- **33 firings / 31 ships in '17**
- **Collaboration with NSWC Corona**
  - Data Analysis Working Group (DAWG)

$$R = f(W, T, P)$$

- **What we've learned / done:**
  - Material issues feedback to NAVSEA / IWS
  - TTP revision and development
  - Training feedback to TYCOM / ATG / CSCS / SWOS

USS SAMPSON SM2 launch from both forward and aft launchers during TRSG MSLEX

SWATT – Surface Warfare Advanced Tactical Training

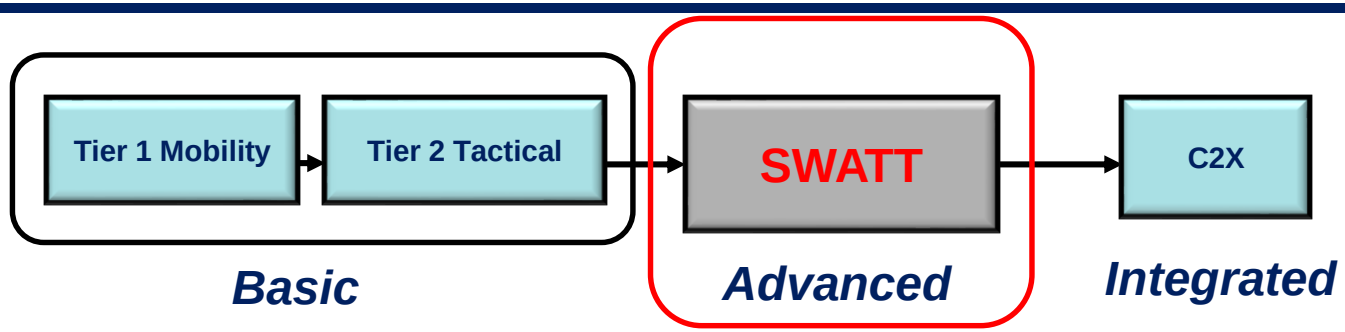
Background:

- Improve tactical proficiency of the Surface Force
- Dedicated tactical training…. Unit and Warfare Commander Staff
- Iterative development
  - Feedback: TYCOM / ATG, CSG 4/15, real world ops

Impacts:

$$R = f\,(W, T, P)$$

- PBED
- MSLEX… more realistic & complex
- Improvements in AD, ASW, SUW and IW
- Improved MIW performance
- System, TTP, Training and Human Factors discoveries



2017

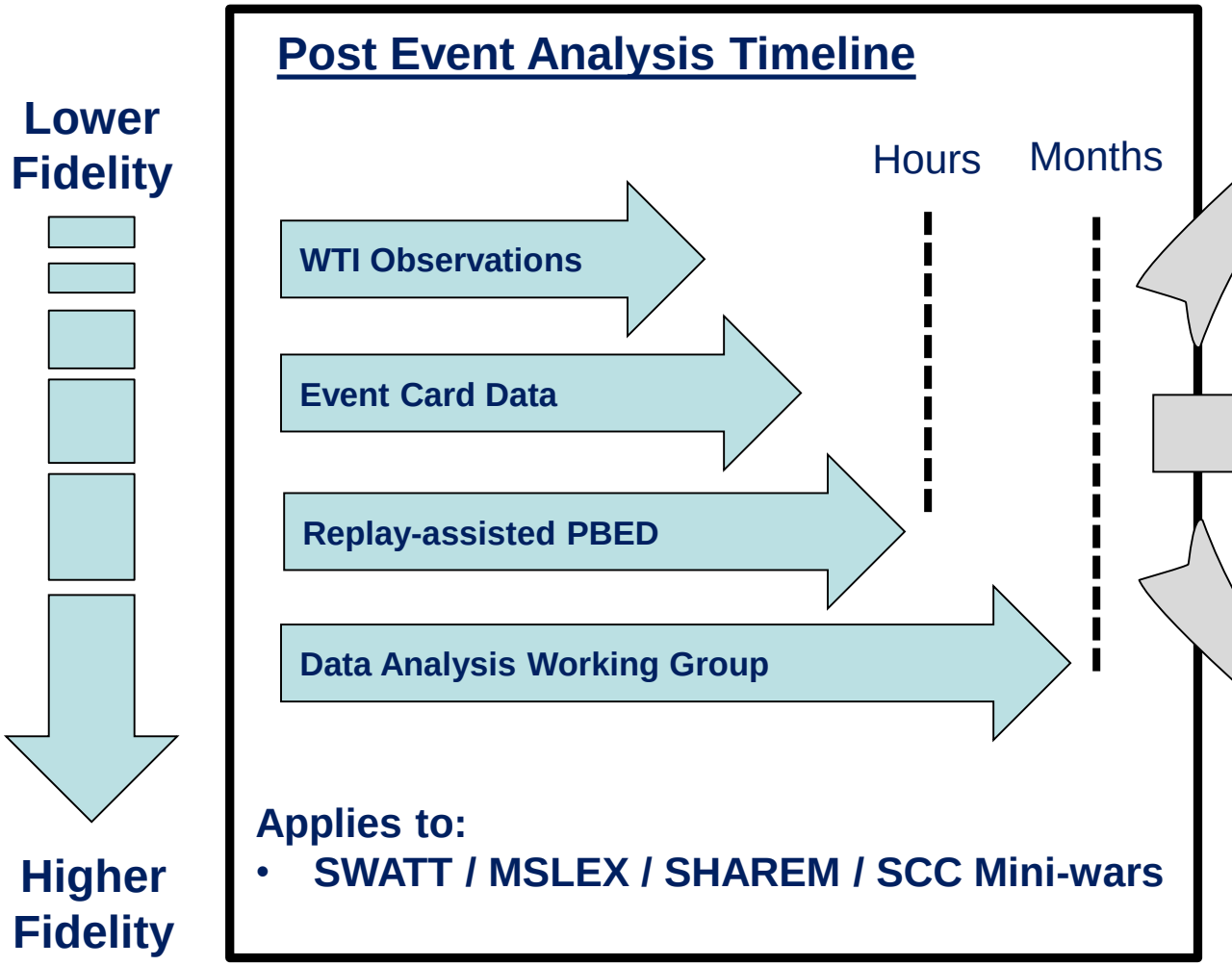
NIMSG	*TRSG*
AMA ARG	*HSTSG*
	CDS-15
	IWO ARG

2018/2019

ESX ARG	BOX ARG	*CDS-15*
JCSSG	ABESG	*CTF-76*
KSG ARG	BAT ARG	

Bridge from Basic to Integrated … Reps and Sets

Performance Analysis



Feedback

(W) Systems
- Fleet WSPR

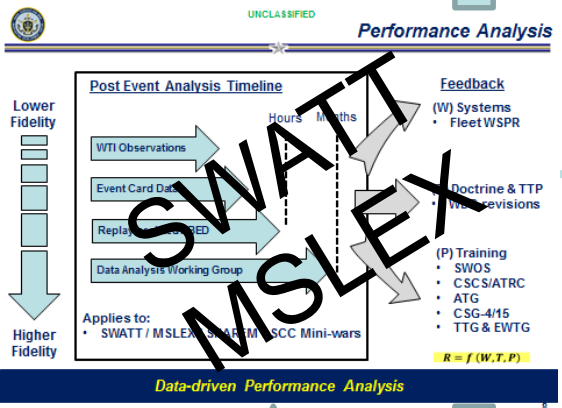
(T) Doctrine & TTP
- WDC revisions

(P) Training
- SWOS
- CSCS/ATRC
- ATG
- CSG-4/15
- TTG & EWTG

$$R = f(W, T, P)$$

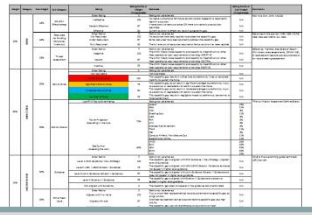
Data-driven Performance Analysis

Supporting the Needs of the Future



Warfare Assessment

- AMW WIP
- IAMD WIP
- MIW WIP
- SUW WIP



- FFC Led Integration & Interoperability (I&I)
- OPNAV N96 Led NCWG – From the Sea
- OPNAV Led NCWG -- From the Air
- Real World Post Event Analysis/ Exercises & Ops

Experimentation

"Potential Gap Solutions"

EMW & Future Systems

UxS/OTH-T

C-UAS

Requirements

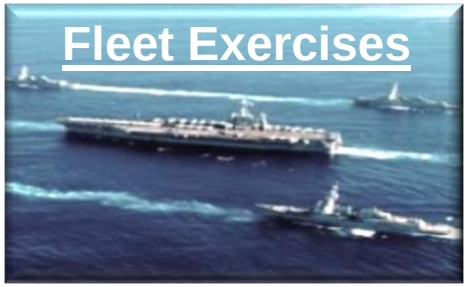
- Surface & Expeditionary Warfare Training Committee (SEWTC)
- Fleet Training Wholeness (FTW)
- Input to Program Offices & OPNAV via CNSF, FFC, PACFLT

Defining Requirements for the Budgetary Process

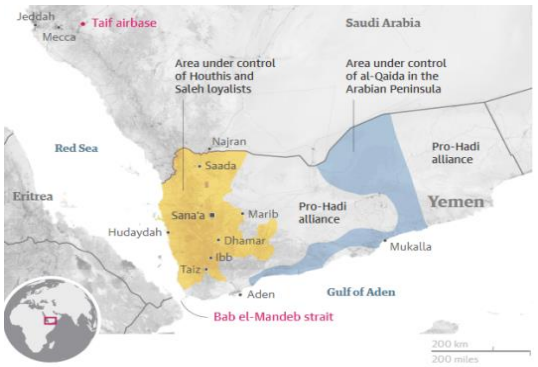
Warfare Assessment Support

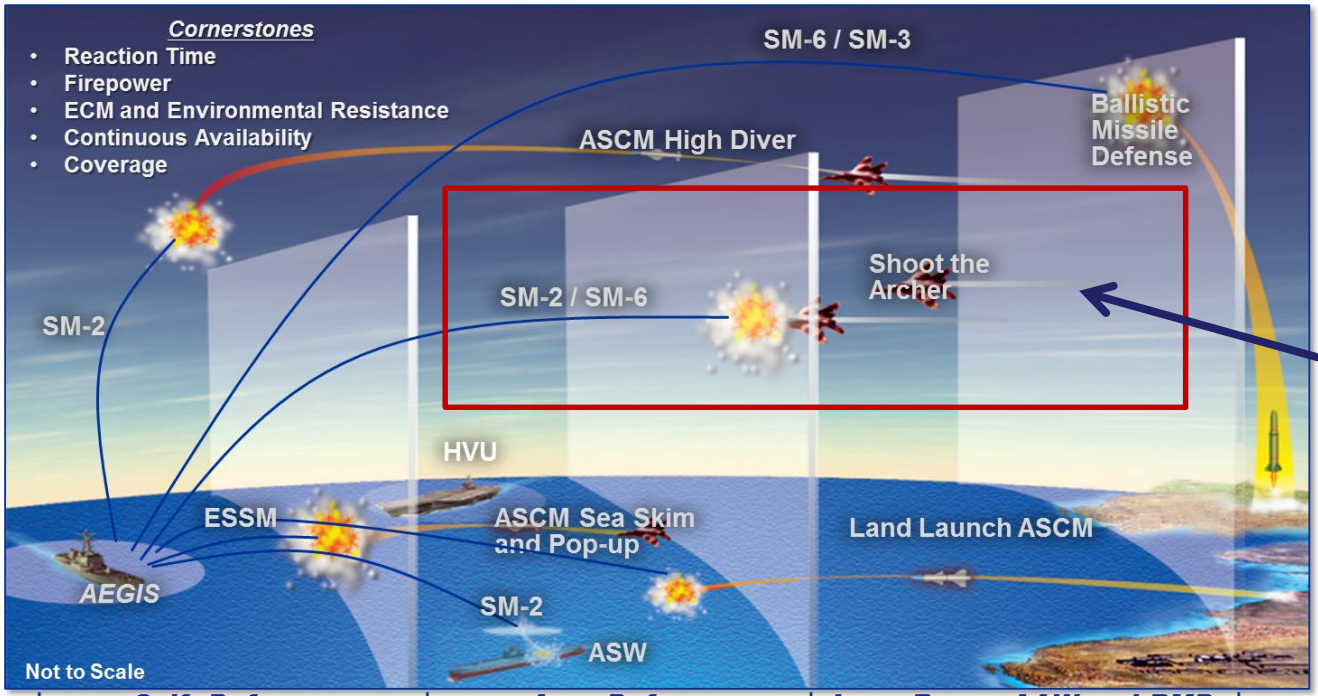
Navy CONEMPS Working Group
- Kill Web focus
- Force on Force
- 8 – 10 Year timeframe

Fleet Exercises



Real World Operations



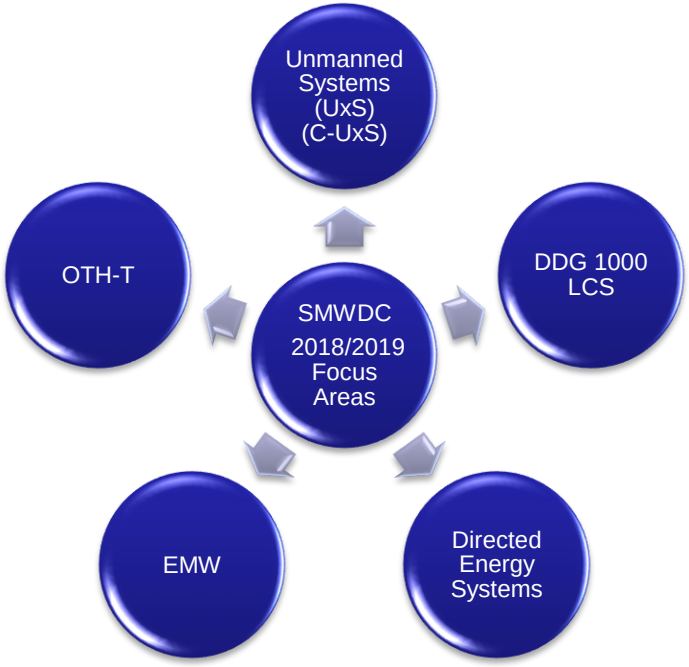


Integration & Interoperability
- Kill Chain focus
- Weapon-Target Pairing
- 1 – 3 Year timeframe

Experimentation

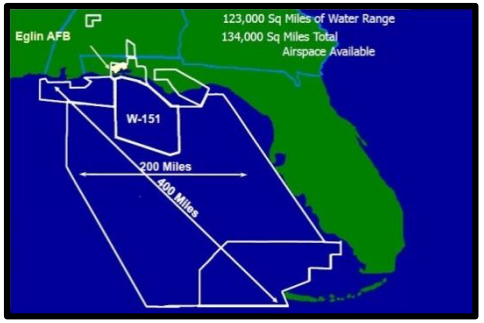
➢ Identify and prioritize innovative solutions

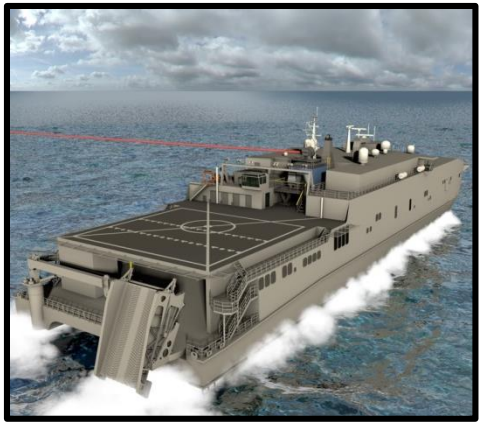
- Maintain awareness of threat systems
- Develop tactics, techniques, and procedures (TTPs), doctrine, and fleet concepts
- Conduct experimentation with emerging technologies to:
  - Close identified capability gaps
  - Enhance tactical capability
  - Enhance lethality of the Surface Force



2017 Experimentation outside SWATT

- **Operation Sea Eagle:**
  - Expeditionary XLUUV testing
- **Black Dart 2017:**
  - Demonstration of C-UAS capabilities
- **Red Nitrum 2017:**
  - Evaluation of AEGIS, SSDS, and E-2 performance in Advanced EA environments
- **Trident Warrior 2017:**
  - Evaluation of Tactical Data Link Risk Reduction Tactics
- **Solid State Laser SIMEX 17-5:**
  - Development of Helios and ODIN





2017 Experiments during SWATT

Sea Hunter Control from DDG

Experimentation increased awareness on the Medium Displacement Unmanned Surface Vehicle (MDUSV) capabilities and achieved seamless C2 at >70 nm.

Helped focus future experimentation efforts:

- TALON UAV tethered to Sea Hunter
- Integrated Maritime Picture
- Multi-ship controlling event (swap control)

Low Probability of Counter Detection (LPCD)

Experimentation to provide the warfighter with techniques to conduct effective EMW operations within a potential adversaries kill chain

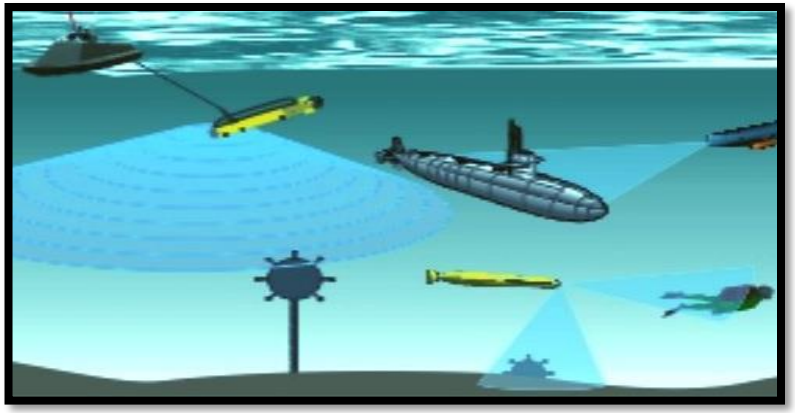
Helped focus 2018/19 SWATT follow on LPCD testing

2018/2019 – UxS and C-UxS

Unmanned Mine Neutralization

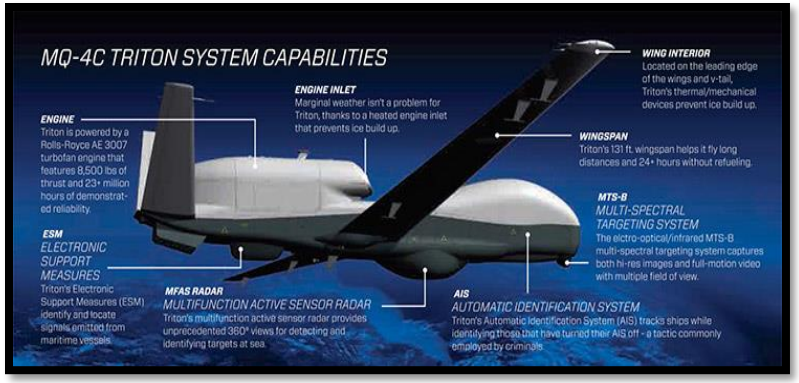
Experiment will leverage the combination of USVs and ROVs to alleviate requirements to place human operators in danger areas

- End-to-end UxS MCM operations



UAS and UXS

Experimentation to evaluate new UxS systems which help close gaps and validate new variants of MQ-8C Firescout and MQ-4C Triton.



Black Dart Maritime 2018

Experiment will examine near-term C-UAS capabilities in response to urgent operational needs and current events in the maritime environment:

- Validation of C-UAS TTP

2018/2019 – EMW & OTH-T

LPCD

Experimentation to continue refining capabilities and techniques for radar employment to support EMW operations.

Spectral Tsunami 2018

Testing warfighting capability with emphasis on non-kinetic effects and EMW.

- Forum for operators, program managers and S&T developers to collaborate on EMW imperatives.

Data provided OTH using LOS

Experiment will provide enhanced OTH capabilities and promote use of Group 1 & 2 UAS:

- Establish the foundation for 3+ UAS to conduct “daisy chain” coordinated operations

2018/2019 - Future Capabilities

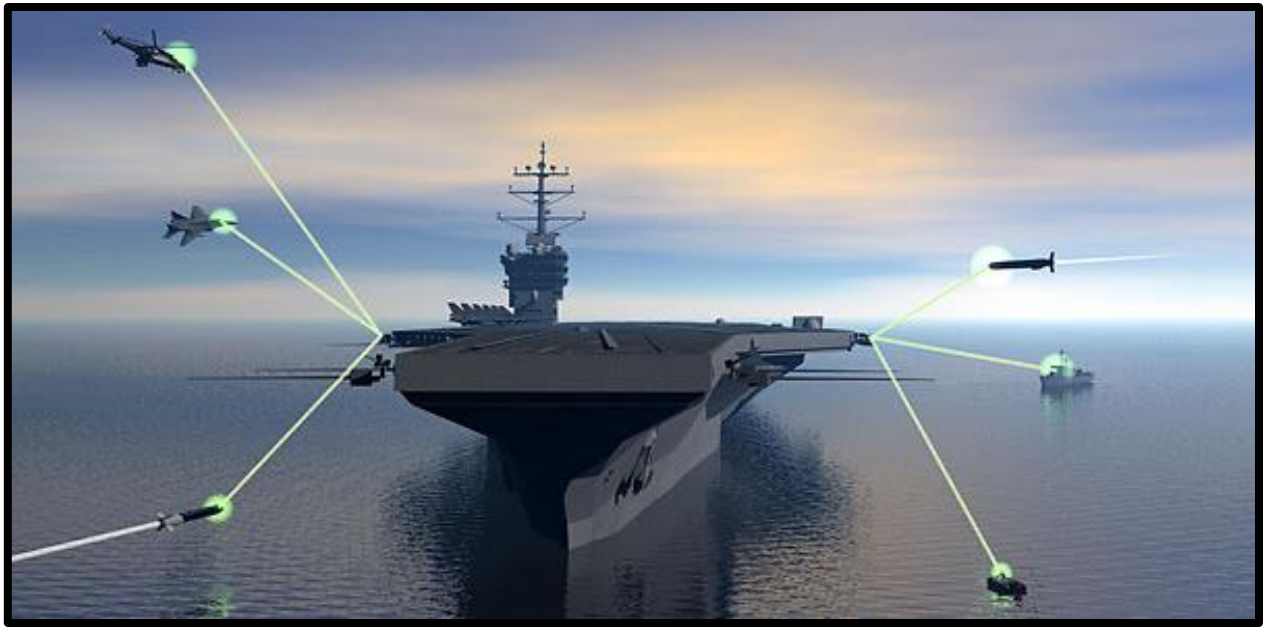
DDG 1000

Experimentation with Saildrone, Stratollite, and Latitdue will provide BLOS ISR.

- Establish experimentation efforts aboard DDG 1000

Directed Energy Systems

Experimentation will evaluate the use of DES and LAWS and provide the foundation for concept development.



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