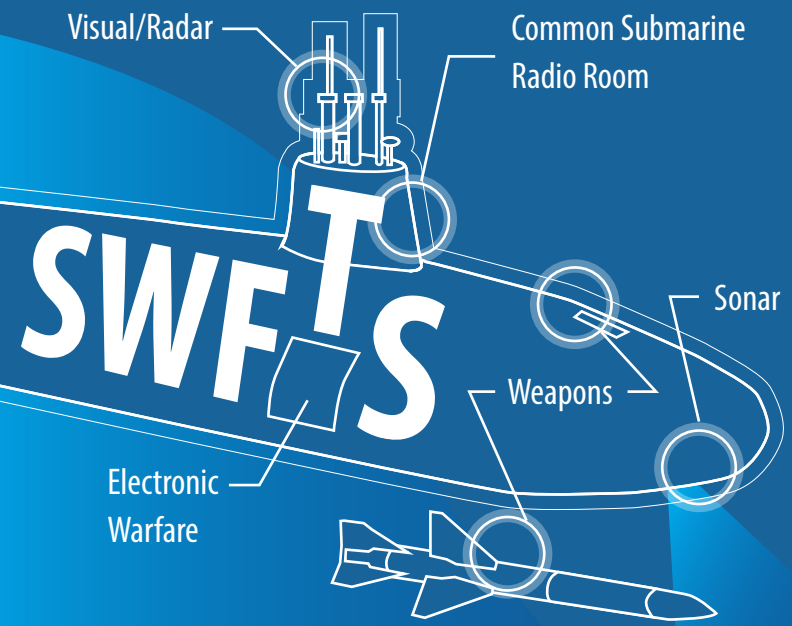
MBSE Solution for LOCKHEED MARTIN

Submarine Warfare Federated Tactical System (SWFTS)



- A Common Combat System Deployed Across Multiple Fleets
  - USN:
    - Los Angeles (SSN 688),
    - Ohio (SSGN 726),
    - Seawolf (SSN 21),
    - Virginia (SSN 774),
    - Ohio Replacement (SSBN)
  - RAN:
    - Collins (SSG 73)
- Federates Multiple Subsystems from Multiple Program Offices and Vendors
- SWFTS Manages Subsystem Interfaces and System I&T

Challenges

- Manage The Complexity Faced by Systems engineers
- Manage High Variability Between SWFTS Platforms
- Maximize Reuse Between Baselines
- Improve the Quality and Efficiency of the Baseline Configuration Process

Solutions

- Adopt MBSE to Enable a More Efficient System Engineering Process
- Provide Intuitive MBSE tools for Engineers to Develop Complex Systems with Maximum Reuse
- Train Systems Engineers in MBSE Technologies and Tools

Results

- Hierarchy of Models Supporting TEAM SUBMARINE Engineering
- Reduced Duplication and Inconsistency of Element Definitions
- Developed Libraries and Catalogs to Improve the Quality and Efficiency of The Baseline Configuration Process

ROI

13% Savings to SE from MBSE

25% in Capability Definition

10% over DOORS in Baseline Management

Savings Seen in 4th Year:

2 Years to Implement Model

1 Year Transition Overlap with Current Process