Lessons Learned in Planning and Executing F-35 Full Weapon Systems Testing

Mr. Brendan Rhatigan
NDIA Test and Evaluation Conference 2017
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Planning For Success

• Briefed WDA range demand signal to Point Mugu/China Lake leadership Jan 16 resulted in Ear Marking Surge schedule (21 Jul – 16 Aug 2016) - JSF owned the water
• Developed Weapon Delivery Accuracy events to Capabilities
• Ensured must fix problems addressed by development team
• Coordinated extra Range Clearing and Drone Air Launch Aircraft
• Assured back-up Range Clearing Aircraft for Point Mugu and doubled number of presentations/drone
• Pre-positioned inert munitions at EDW ITF and live munitions at EDW Ammo
• AMRAAM Eglin Weapon build shop priority - Immediate response
• Critical Aircraft Spares Were Delivered Before Surge
• All spares moved to EDW
• Trained/Certified additional manpower - resulted in 6 Integrated Weapon Loading Teams
Range Statistics

- **Total Range Availability – Weapons Related Missions Only**
  - 98% Available – Only 1 of 47 Weapons Missions Scheduled During Surge Were Not Executed Due to Range (Drone Issues)
  - 47% of Range Requested was Used – 22 of 47 Mission Scheduled Were Used
  - **Reason for Not Using 25 Range Scheduled Missions**
    - 11 Were Backups and No Longer Required
    - 5 Cancelled for Aircraft Maintenance Issues (Instrumented EHA R/R)
    - 3 Cancelled for Late Eglin Weapon Certs to the Range
    - 2 Cancelled Due to Chase Aircraft Problems
    - 2 Cancelled for Weapons Telemetry (TM) Issues
    - 1 Cancelled for Instrumentation Issues
    - 1 Other

- **Surge Conops Changes that Contributed to Success**
  - Allowed to Schedule Multiple Backups for Each Primary
  - Allowed to Flex to Different Mission if Primary was Successful
  - Range Support Assets (Clearing Aircraft, Drones, Control Rooms) Were Pre-coordinated Weeks Prior to Surge
  - Day of Range Flexibility

*Data Shows That Dedicated Range Allocation Contributed Significantly to Success*

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Lessons Learned

- 1st Quick Release s/w drop executed – non airworthiness changes
- Received s/w in 2 weeks - 6 Critical Deficiency Reports fixed opened 7 WDA’s
- Weapon Ground checks verified correct configuration prior to msn
- Delivered Weapon Configuration different from request (Conflicting FTS tones)
- Pulled missions left when Primary mission was successful
- Reached max capacity of Eglin missile build shop
- Certification FTS paperwork trailed missiles
- Weapons FTS Recertified twice on Site by PMSR Personnel
- Saved ~ 5 days each time vs routing weapon back to Eglin
Lessons Applied

• Range Coordination
  – Brief WDA Demand Signal to Ranges
  – Request Flex scheduling transitions (back-up to primary)
  – Pay for RCA and Drone Redundancy
  – Hard Schedule back up ranges dates at risk

• Continue WDA/Capability Mapping with JPO/FW/ITF
• Continue utilizing Quick Release Capability process when able
• Spare parts priority
• Ground check weapon configuration prior to mission day
• Minimize alternate sources of priorities influencing ITF execution