



**AFPEO Weapons
Armament Directorate**



Mission:

Equip Warfighters By Acquiring and Supporting War-Winning Capabilities

**NDIA Air Armament Symposium
AFPEO for Weapons Perspective
28 March 2017**



Colonel W. Scott Bell

Distribution A: Approval for public release; distribution is unlimited

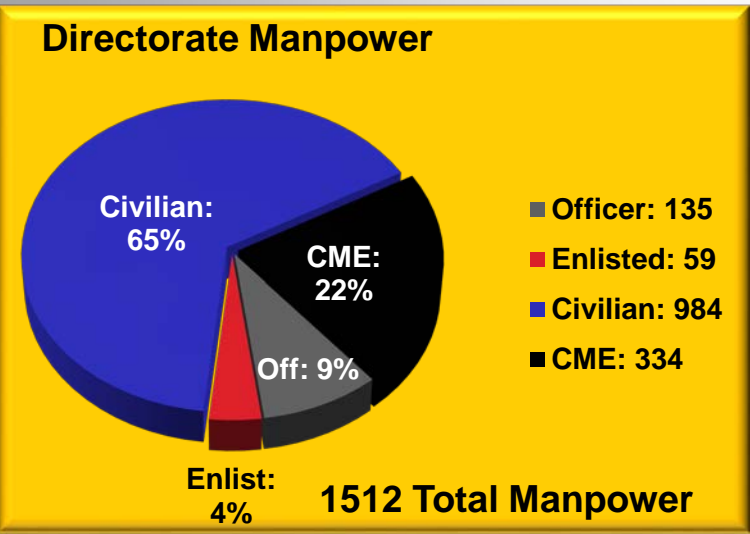
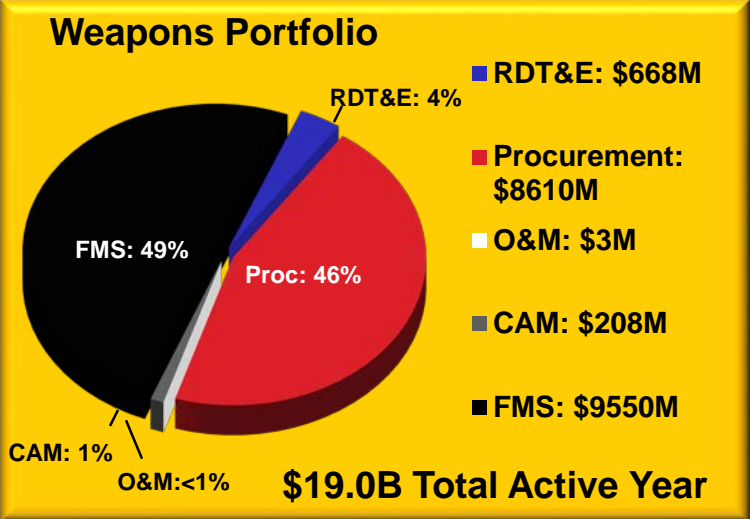
Vision:

Deliver Affordable World-Dominant Armament Capabilities...On Time, On Target



Armament at a Glance

DELIVERING AFFORDABLE WORLD-DOMINANT ARMAMENT CAPABILITIES...ON TIME, ON TARGET



| | Directorate | AFPEOWP |
|-----------|--------------------------|---------------------|
| Total WML | 89 | N/A |
| Total AML | N/A | 27 |
| ACAT I | 7 | 7 |
| ACAT II | 3 | 3 |
| ACAT III | 14 (including WPS, Navy) | 17 (HBZ, WLD, Navy) |
| Pre-MDAP | 1 | 1 |
| QRC | 4 | 2 |



Alignment with Air Force Core Functions



DELIVERING AFFORDABLE WORLD-DOMINANT ARMAMENT CAPABILITIES...ON TIME, ON TARGET

Air Dominance

- AMRAAM
- HCSM
- AIM-9X (Navy-led)
- HTS



Direct Attack

- HTVSF
- MOP
- JPF
- BLU-129/B
- M-Code
- Med Cal Ammo
- ILW
- LWIP



Specialized Management



Armament / Munitions Sustainment

- JDAM
- Paveway
- Flares
- CAD/PAD
- Small Arms
- Maverick
- Hellfire

Proven Aircraft

- QF-4



Miniature Munitions

- SDB II
- JMM BRU
- SDB I
- BRU-61/A



Test & Training

- QF-16
- TCS
- CRIIS
- AFSAT



Advanced Programs



Long Range Systems

- JASSM
- JASSM-ER
- MALD
- MALD-J



Combat & Mission Support

- JTE
- UMTE
- Legacy Threat Systems
- P5CTS
- ARTS



Nuclear Deterrence Ops

Air Superiority

Space Superiority

Cyberspace Superiority

Global Precision Attack

Rapid Global Mobility

Special Operations

Global Integrated ISR

Command and Control

Personnel Recovery

Building Partnerships

Agile Combat Support

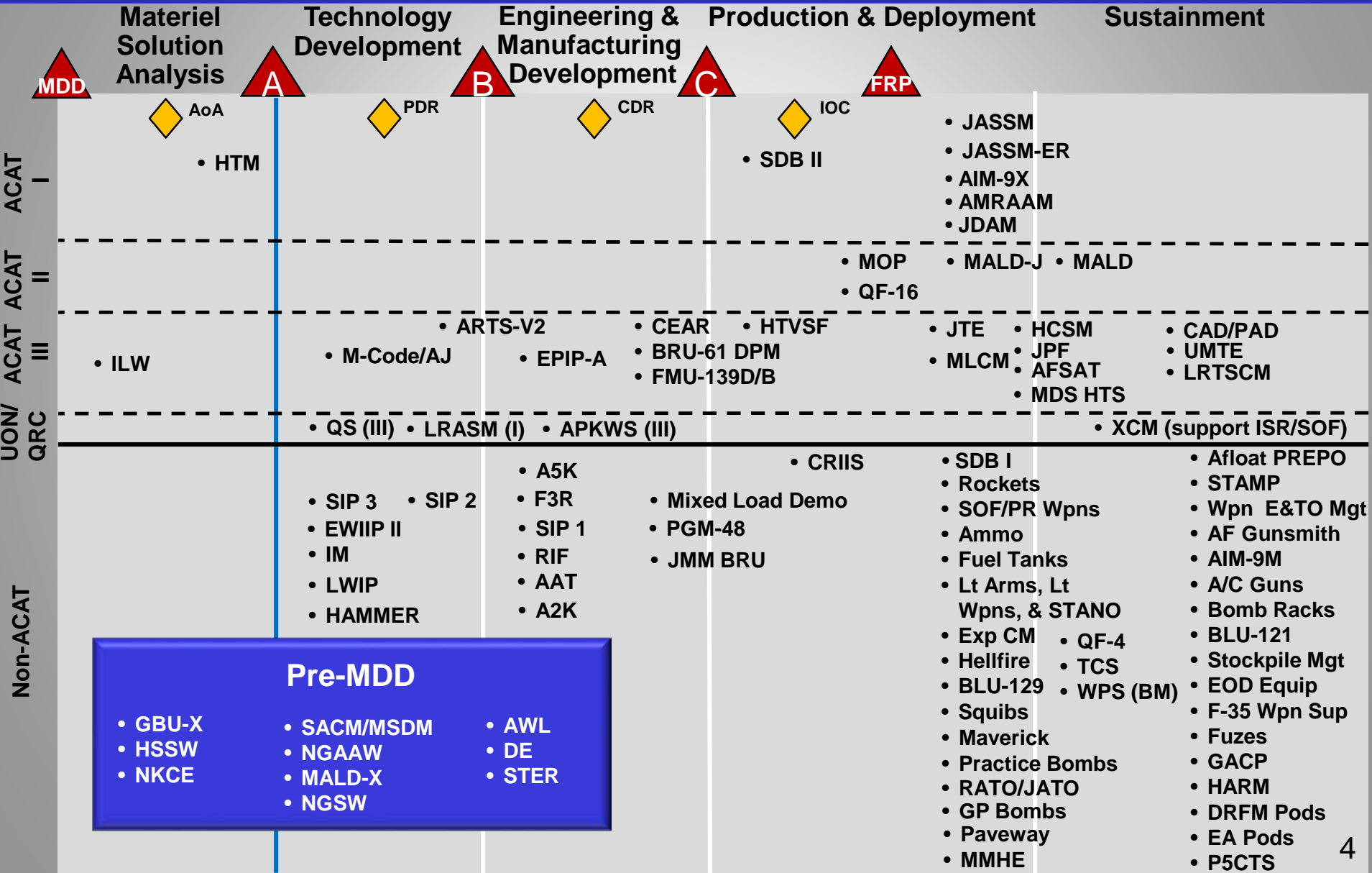
Education and Training

- ACAT I
- ACAT II
- ACAT III or other



AFPEO (W) Acquisition Portfolio

U.S. AIR FORCE





AFPEO Weapons In Today's Fight



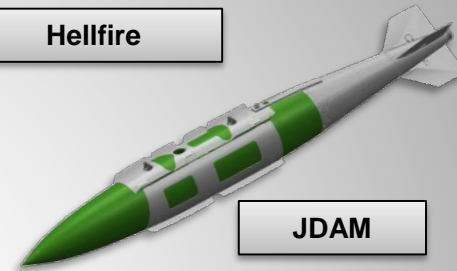
DELIVERING AFFORDABLE WORLD-DOMINANT ARMAMENT CAPABILITIES...ON TIME, ON TARGET



SDB-I



Hellfire



JDAM

400,000+ weapons expended by US in current Overseas Contingency Operations

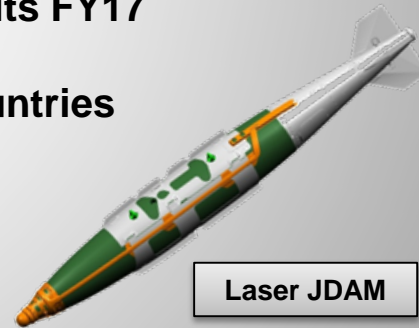
Production expected to exceed 65,000 units FY17

314 active FMS cases supporting 55 countries

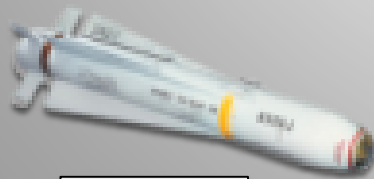


Paveway II

AGR-20/A-
APKWS



Laser JDAM



Maverick

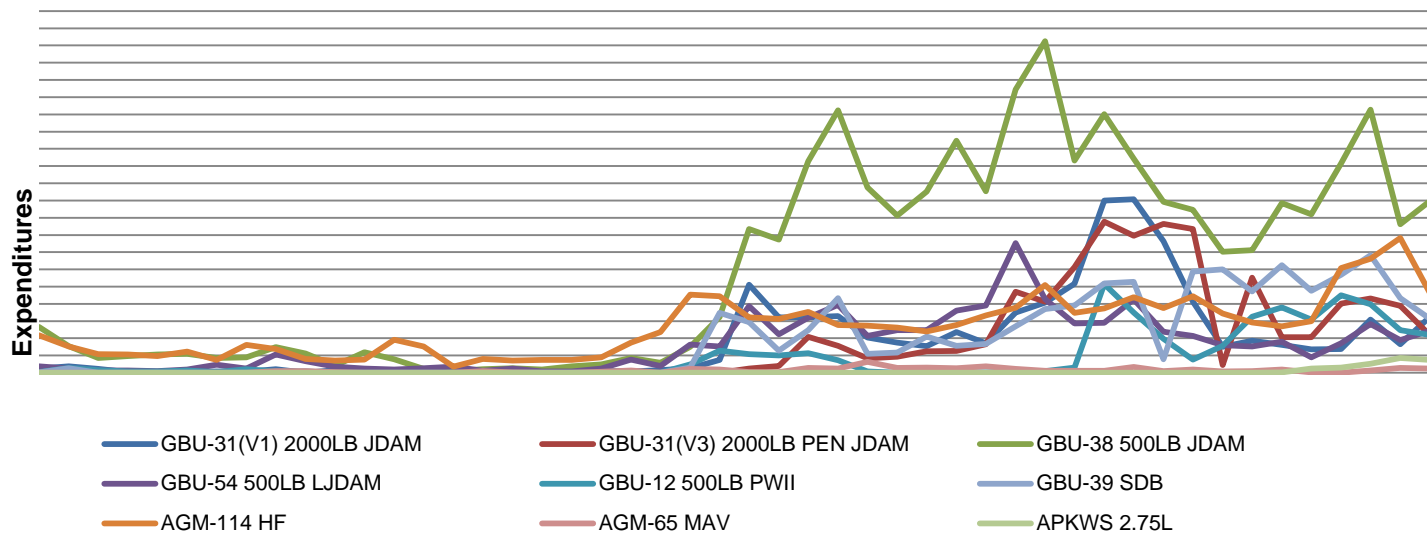


25MM Ammo

Integrity ★ Service ★ Excellence



Operational Expenditures



- Surging today, but need to sustain tomorrow
- Managing “Weapon System” inventory as a whole
- Full teaming effort...Services, Industry, OSD, Congressional Alignment



PEO Priorities

Resource, Develop, & Care for a Mission-Driven Workforce

Disciplined Program Execution

Should Cost

Increase Competition

Reduce Sole Source Costs (Prices)

Increase Contract Flexibility

Hold Contractors Accountable

Improve Stakeholder Relationships

Integrated Life Cycle Management

Integrated Armament Enterprise

Build Capacity (NOW)

- Must address current inventory challenges (legacy program)
- UONs – rapid field critical capability (APKWS)

Provide Capability (TOMORROW)

- Improve legacy weapons (M-Code, CryptoMod)
- Field next generation weapons (SDB II, A2K, A5K)

Posture for the FUTURE

- Third Off-Set – identify, partner, accelerate and field game-changing technologies



Addressing Inventory Shortfalls

Three-Pronged Strategy



- **Re-aligning to Address Current Contingency Operations**
 - Redistributing pre-positioned stock to meet theater demands
 - Managing munitions stockpiles

- **Increasing Procurements & Production Capacity**
 - Facilitization
 - Addressing component shelf-life
 - Approved IM waiver
 - Evaluating investment plans to reshape delivery schedules

- **Alternate Solutions Where Feasible**
 - APKWS RW+
 - GBU-12 Paveway II
 - Maverick



Stockpile Resupply Management



- **Theater to Theater**
 - Multiple theaters have provided assets to support Overseas Contingency Operations in FY16
 - First-in-First Out (FIFO) principles feed older stocks to Warfighter and resupply with newer production
 - Lengthy logistics process for movements (90-120 days) and costly vs. direct support from depot and production

- **Intra-theater – AFCENT**
 - AFCENT resupplies units on a weekly basis from centralized storage locations within theater (C-17/C-130)

- **CONUS to Theater**
 - GACP works with JMC to ensure AS vessel schedule is conducive to AFCENT's demand (typically 2 vessels per FY)
 - Next AS resupply vessel already planned/positioned
 - CONUS units also relinquished older non-anti-jam tailkits in FY16 to Warfighter



GP Bombs/Penetrators



Efforts to expand bombs production capacity:

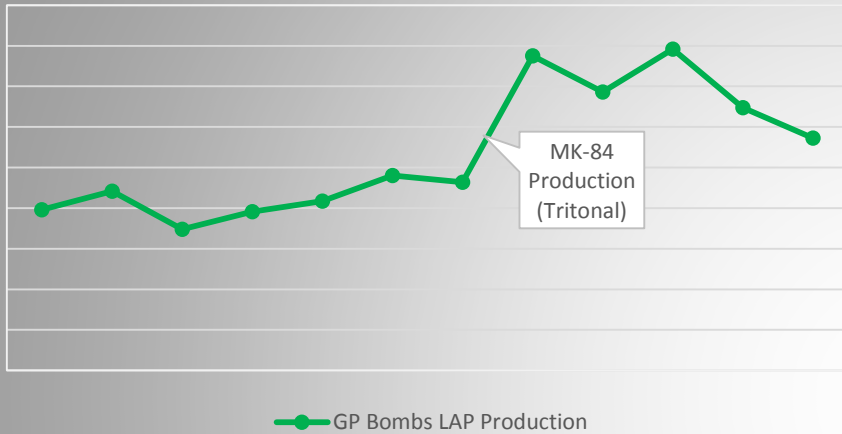
- Realigning funding from programs near IO requirements to critical low weapons systems
- Investing in existing industrial base to increase capacity
- Pursued IM Waiver to produce 2,000 lbs GP Tritonal bombs to supplement IM production
- FMS strategy to sell Tritonal bombs vs IM filled bombs to FMS customers



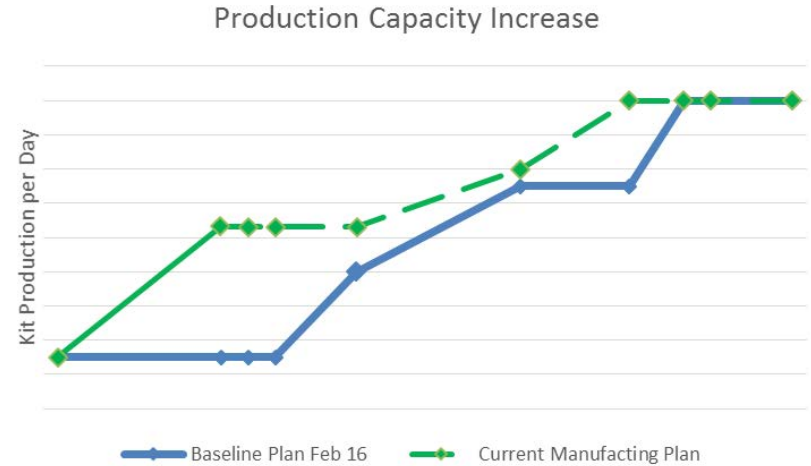
Production Ramp-Up



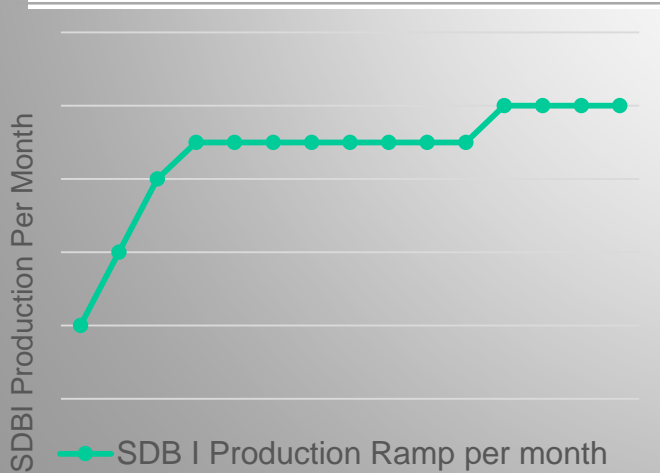
GP Bombs Production Capacity Increase



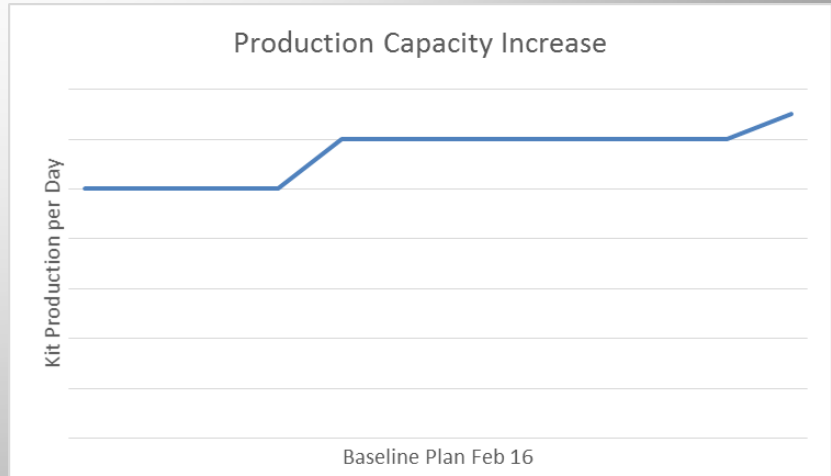
JDAM Tailkit Production Capacity Increase



SDBI Production Capacity Increase



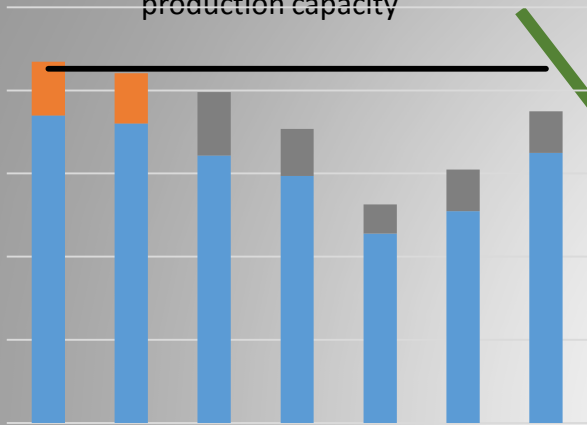
HELLFIRE Production Capacity Increase



GBU-38 JDAM

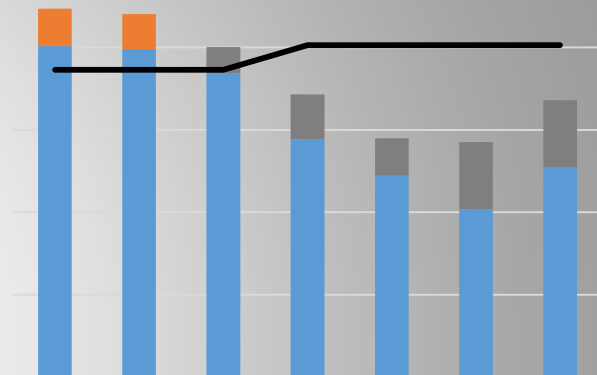
Bomb Bodies, Lugs, & Lanyards

Issue: Industrial base has reached maximum production capacity



Fuzes

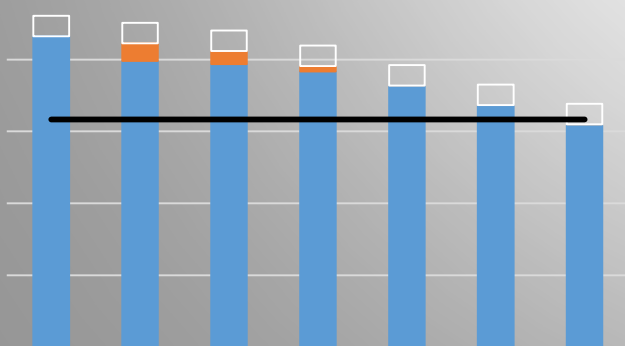
Issue: Legacy FMU-139A/B fuzes expiring, FMU-152 production is ending, FMU-139D/B version in development



Sensor / Nose Plugs

Issue: DSU-33 Sensor - Diminishing materiel and manufacturing sources (DMSMS)

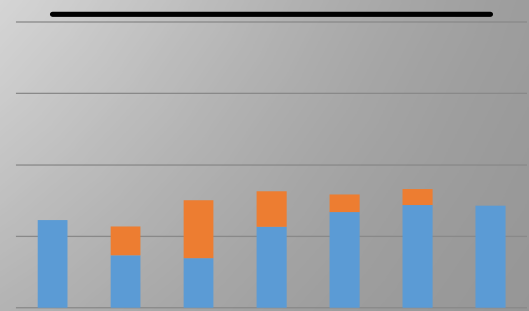
MK-82 / BLU-111 500 LB



Tail kits & Strakes

Issue: Tail Kit production deliveries not keeping pace with increased usage

KMU-572 (JDAM Kit)



- Inventory Objective
- Inventory
- On-contract deliveries
- Funded deliveries

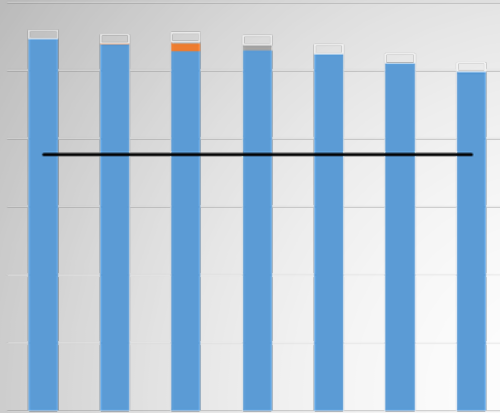


Alternate Weapons Inventory

AGM-65 Maverick Missile



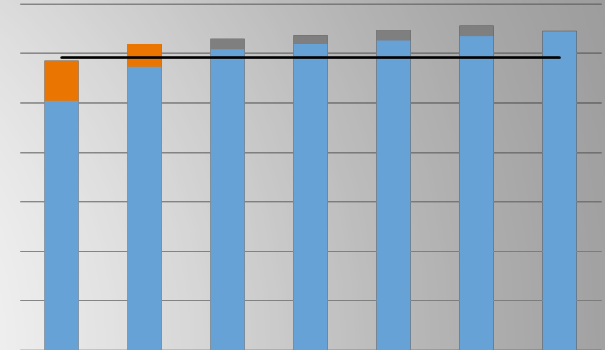
- Inventory Objective
- Inventory
- On-contract deliveries
- Funded deliveries



GBU-10 Paveway II Laser Guided Bomb



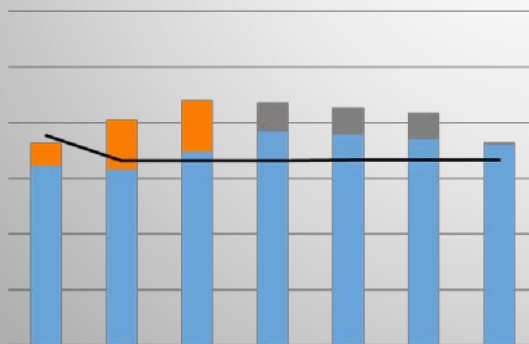
- Inventory Objective
- Inventory
- On-contract deliveries
- Funded deliveries



GBU-12 Paveway Laser Guided Bomb



- Inventory Objective
- Inventory
- On-contract deliveries
- Funded deliveries



Current Status

- Inventory available for us
- Sunk cost
- Capability Δ , sufficient for today's fight? Low usage in today's operations, placing strain on replenishment and logistics



FW APKWS System Description



DELIVERING AFFORDABLE WORLD-DOMINANT ARMAMENT CAPABILITIES... ON TIME, ON TARGET

■ APKWS II adds a Guidance and Control Section to Legacy 2.75-inch Rocket System

■ FW APKWS II modifies Helo G&C section

- HW and SW modification to handle fast movers
- Launcher extended 11" for increased stability
- JCTD MUA on AV-8B, A-10, F-16

7-Tube LAU-131A/A
Extended Length
Launcher





Advanced Precision Kill Weapon System (APKWS) Urgent Operational Need



- **Quick and tailored acquisition**
 - Initial Fielding Capability (IFC) 3 months ahead of schedule
 - First successful combat shot within 11 days of delivering system

- **Mutual cooperation with Navy/Army/Marines and Contractor**
 - Shared AF fielding strategy w/ Navy; accel'd ECP approval
 - Borrowed Launchers from Navy/Marines to complete system

- **Successful RDT&E Program**
 - Executed Captive Flight Profile in 2 weeks
 - Used Quick Reaction Capability Plan 70; #1 test priority at Eglin
 - Met flight clearance critical requirement

- **Incremental data feed/plus post-board actions to Non-Nuclear Munitions Safety Board**
 - Gained board's initial fielding approval

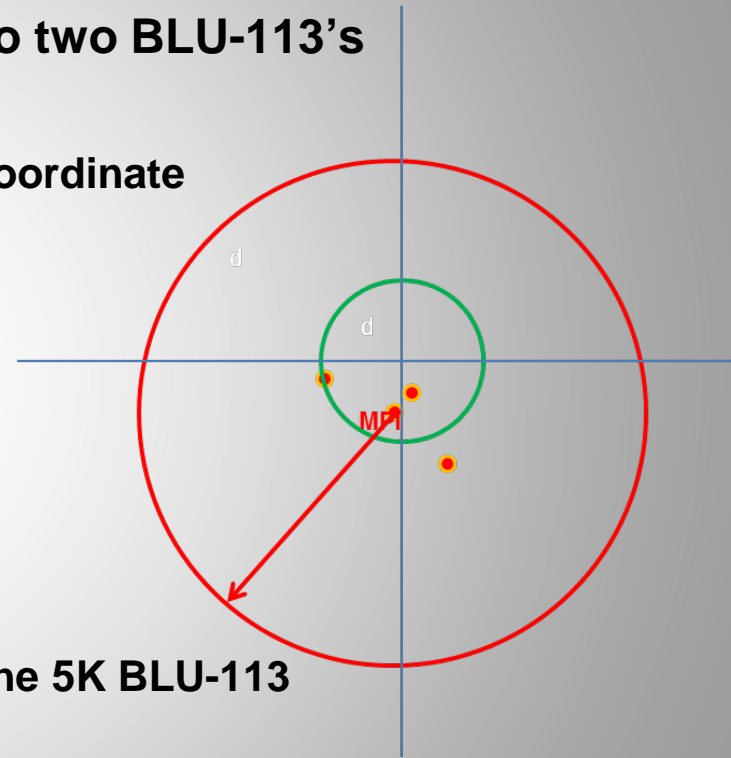




Dual Mixed Loads Demonstration



- Place multiple impacts of BLU-109 & BLU-113 in same penetration path
- Release up to three BLU-109's followed by up to two BLU-113's
 - ✓ Within radius of the Mean Point of Impact (MPI)
 - ✓ Accuracy of CEP from the designated impact coordinate
 - ✓ Impact angles of attack
 - ✓ Impact angles
- Competitively awarded
- Period of Performance: 18 months
- Successfully demonstrated:
 - Ability to adapt the JDAM 2K BLU-109 tail kit to the 5K BLU-113
 - CEP and dispersion requirements
 - Synergistic penetration benefit of “mixed load” (2000lb/5000lb) “multi-hit” capability





SDB II



■ Latest Test Successes

- 18 tests were conducted since May 16

■ Upcoming Tests

- 28-shot Government Confidence Testing (GCT) starting Wk of 17 Oct 16

■ Milestone Events

- Lot 2 Production contract awarded 8 Sep 16
- Lot 3 Production contract award projected NLT Jan 17
- OTRR projected Jun 17
 - Accelerate fielding

■ Production Schedule

- Production of test assets is on-going
- LRIP Lots 1 (144) and 2 (250) are on contract
 - Lot 1 deliveries – production ongoing in FY17





Key Take-Aways

- **Surging today, but need to sustain tomorrow**
 - Leverage full spectrum of weapons capabilities
- **Managing “Weapon System” Inventory as a whole**
 - Tailkits by themselves ≠ Capability
- **Full teaming effort...Services, Industry, OSD, Congressional Alignment**