Aging Aircraft & New Weapons

Brig Gen Michael Schmidt
Program Executive Officer
Fighters and Bombers
**FIGHTERS**

- A-10 (WWA)
- F-15 (WWQ)
- F-16 (WWM)
- F-22 (WWU)

**BOMBERS**

- B-1 (WWD)
- B-2 (WWZ)
- B-52 (WWD)

**INTERNATIONAL PARTNERS**

- F-15 Saudi Arabia (WWQ)
- A-29 Afghanistan (WWB)
- F-16 Iraq (WWM)
- And many more…

**FIGHTER/BOMBER SNAPSHOT**

<table>
<thead>
<tr>
<th>Aircraft</th>
<th>Country/Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-10 (WWA)</td>
<td>Afghanistan</td>
</tr>
<tr>
<td>F-15 (WWQ)</td>
<td>Saudi Arabia</td>
</tr>
<tr>
<td>F-16 (WWM)</td>
<td>Iraq</td>
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<tr>
<td>F-22 (WWU)</td>
<td></td>
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<tr>
<td>*F-35 (WWJ)</td>
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</tbody>
</table>

*OT&E Only

**INTERNATIONAL PARTNERS**

- A-29 Afghanistan
- F-16 Iraq
- And many more…

Flags of participating countries:

- Saudi Arabia
- Afghanistan
- Iraq
- And many more…
The Many Faces of F/B
Recent Achievements (FY 16)

**INNOVATION**

New Ideas
- Additive Manufacturing
- Laser Depaint
- Data Transfer Device
- Open Mission Systems
- SAFe/Agile

Quick Fixes
- A-10 Canopy Lug
- F-15 Cabin Pressure Monitor
- F-16 Canopy SIL Longeron
- B-2 Wind Screen
- A-29 Bent Fuel Tubes

Long Term Fixes
- SLEP/FSFT (F-15, F-16, B-1)
- Radar upgrades (F-16, F-15)
- A-10 Wing Replacement
- Communications Upgrades

**CAPABILITY DELIVERIES**

**FIGHTER AND BOMBER AIRCRAFT**
- 6 A-29
- 17 F-16

**AIRCRAFT MODIFICATIONS**
- 99 B-1 Mods
- 197 A-10 Mods
- 151 F-22 Mods
- 76 B-2 Mods
- 29 F-15 Mods
- 9 A-29 Mods
- 70 B-52 Mods
- 231 F-16 Mods

**DEPOT THROUGH-PUT**
- 13 B-1
- 41 A-10
- 27 F-22
- 2 B-2
- 84 F-15
- 16 B-52
- 222 F-16

~31,626 Combat Mission Flying Hours Last Year
Fighters and Bombers Portfolio

- **Military:** 10%
- **Civilian:** 74%
- **Contractor:** 16%
- **Total Manpower:** 3,052

**Portfolio Breakdown**
- RDT&E: 3%
- Procurement: 5%
- Maintenance: 2%
- FMS: 87%

**Total Active Year:** $69.8B

**FMS Costs**
- RDT&E: $2.4B
- Procurement: $3.5B
- O&M: $2.9B
- FMS: $61B

**Total Active Year:** $69.8B

**A&AS:** 16%

**ACAT**
- ACAT I - 4
- ACAT II - 14
- ACAT III - 66
- FMS - 72
- AML Exempt - 14

**Fighting and Bombers Mission:** Develop, produce, modernize and support US and coalition partner fighter and bomber aircraft weapons systems and subsystems.

**Location**
- Wright Patterson AFB
- Hill AFB
- Tinker AFB
- Robins AFB
- Crystal City, VA

**Location Map**

UNCLASSIFIED
Annual Funding by Appropriation

Year

Funding ($M)

3010
3600
3400
B-52

IOC 1952
B-52 Weapons Integration

- Common Rotary Launcher
F-15

IOC 1975
F-15 Weapons Integration

- AIM-9X Block II
- SDB-II
- AMBER Demo
- JASSM-ER
- B-61
A-10

IOC 1977
A-10 Weapons Integration

- APKWS
F-16 Weapons Integration

- APKWS II
- AIM 9X Block II
- Laser SDB
- MALD-J Mod 7
B-1

IOC 1986
B-1 Weapons Integration

- LRASM
- IBS
B-2

IOC 1997
B-2 Weapons Integration

- Flex Strike
- GBU-57 A/B
- B61-12
- JASSM-ER
F-22

IOC 2005
F-22 Weapons Integration

• AIM-9X
• AIM-120D
A-29 Super Tucano

IOC 2016
A-29 Weapons Integration

- APKWS
- GBU-58
Standard Interfaces

**Universal Armament Interface**
- Common data requirements
- Limited hardware changes
- OFPs won’t have to embed weapon or display data

**Open Mission Systems**
- Standard hardware and software interface for aircraft capability upgrades
- New electronics plug into standard hardware rack with minimal hardware or software mods to aircraft
Toward The Third Offset....

- UAI
- SAFe/Agile
- Open Mission Systems
- Additive Manufacturing
- RDIF

Changing Threats
Multiple Adversaries
Distant Theaters
Diverse Allies & Partnerships
Questions?
Rapid Development Integration Facility

29 Past Projects
B-1 Safe/Release Consent Switch
  B-1 Bomb Switch
  B-1 Antenna Plate
B-2 Electronic Flight Bag
  B-2 Cable Kits
  B-2 LRU Tool
B-2 AEB Power Study
B-2 Antenna Brackets
B-2 Amplifier Bracket
B-2 Bomb Lanyard
B-2 Equipment Rack
B-2 COLT Interface Box
  B-2 DAGR
B-2 Special Project #4
B-52 Munitions Kit
B-52 Lightening Arrestor Bracket
  B-52 HIS Cable Set
  B-52 AWIP Cable Set
F-15 Model
F-15 ANG Display
F-15 Universal Pod
F-15E UON
F-22 Oxygen Sensor
F-22 Air Valve
F-22 QD Valve
F-22 Pass-Through Valve
F-22 ARC-210 Trays
COLT
Special Project #6

Mission
Provide rapid adaptive engineering solutions for urgent Warfighter needs - Instill an innovative aircraft development, integration and prototyping culture back into the workforce

11 Current Projects
B-1 Sniper Displays
B-2 AEB Power Box
B-2 Antenna Travel Limiter
B-2 Multi-Position Lifting Beam
B-52 Anti-Skid Panel
B-52 Channel Splice
B-52 CONECT Ground Station
B-52 Tail Cone Cover
F-15 Cabin Pressure Monitor
F-15 IBS Re-work
F-22 Oxygen Depleter
Competition/Small Business

- Sole Source vs Competition
  - Often an OEM is the single responsible source for modifications but can compete major components with Gov’t oversight/insight
    - F-15 EPAWSS
    - F-15 IRST
    - B-2 DMS-M
  - Drives down costs
  - Compensates for insufficient SPO manpower for full competition
  - Provides opportunities beyond vendors’ favorite suppliers

Small Business
Fighters and Bombers Small Business Set-asides are approximately $44M/year, but...

- Over $370M subcontracted to small businesses per year through larger primes