

# ***Air Force Reserve Command***

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*Integrity - Service - Excellence*



## **AFRC Simulator Roadmap**

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AFRC/XPR OL-S  
APBI, 25 Feb 2004**



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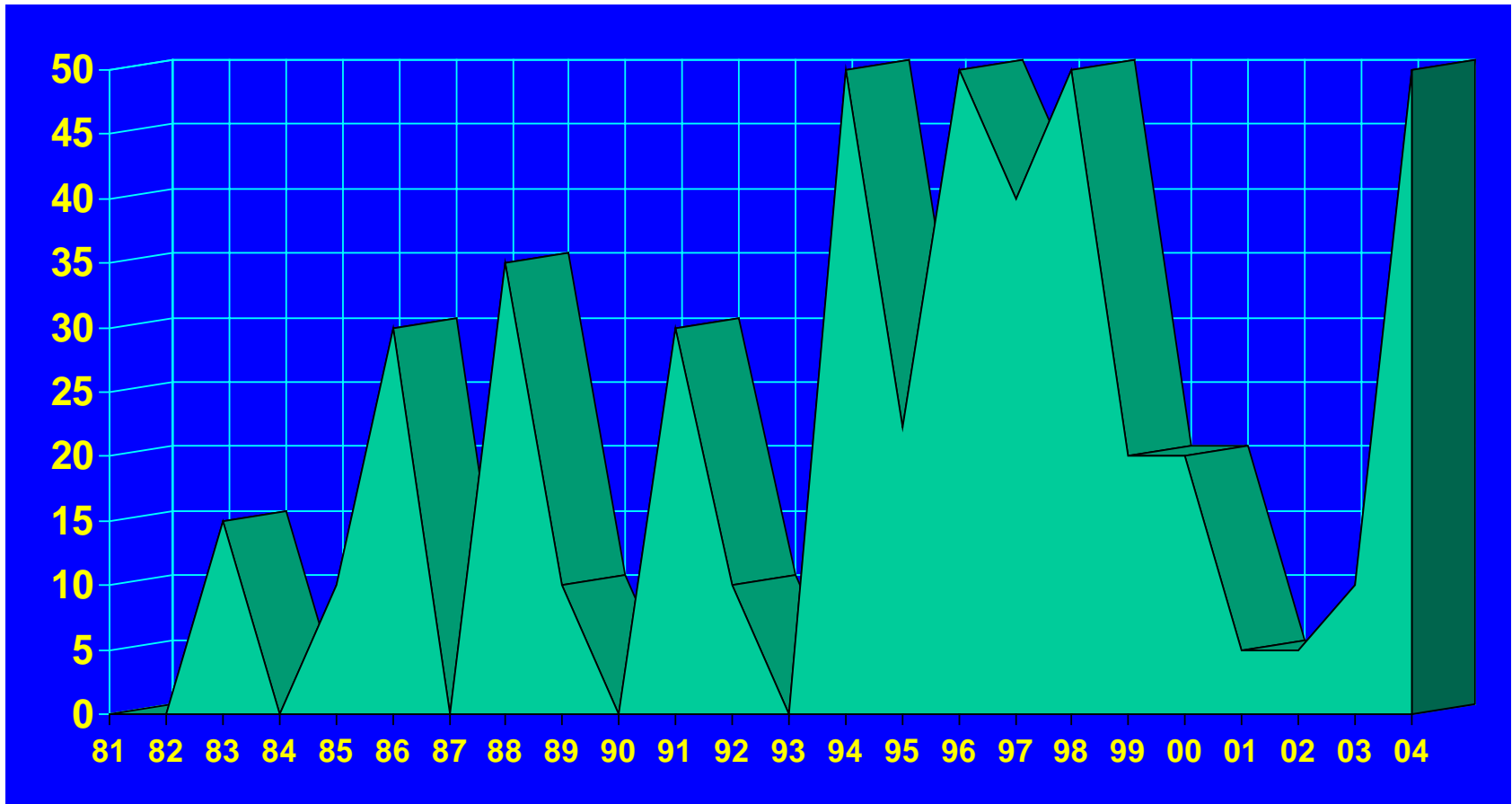
# Outline



- Money/Requirements
- Training Concept
- Training Programs
- Simulator Roadmap
- Summary

# *Reserve Funding (0350 Misc Equipment)*

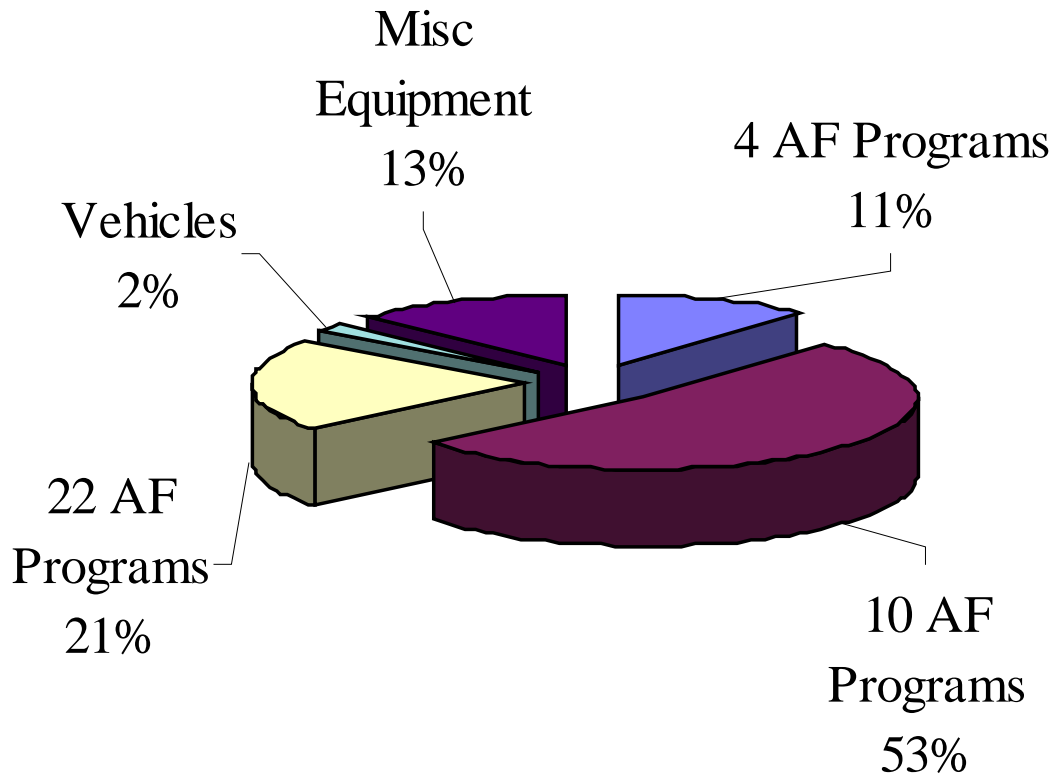
**\$ Million**



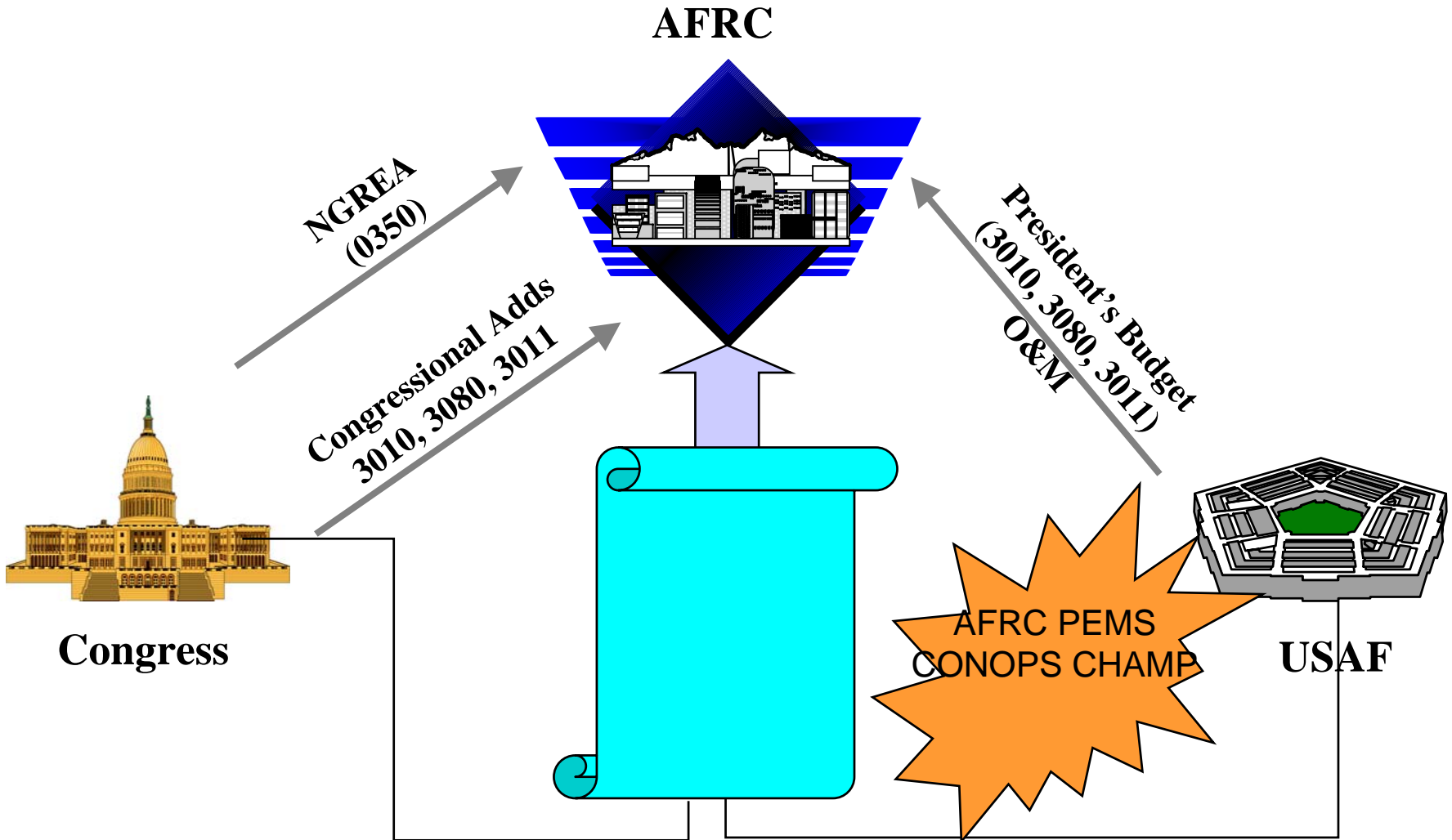
**Fiscal Year**

# *FY91-04 NGREA History by NAF* *(\$374M)*

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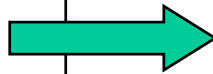


# AFRC Modernization Funding Wiring Diagram



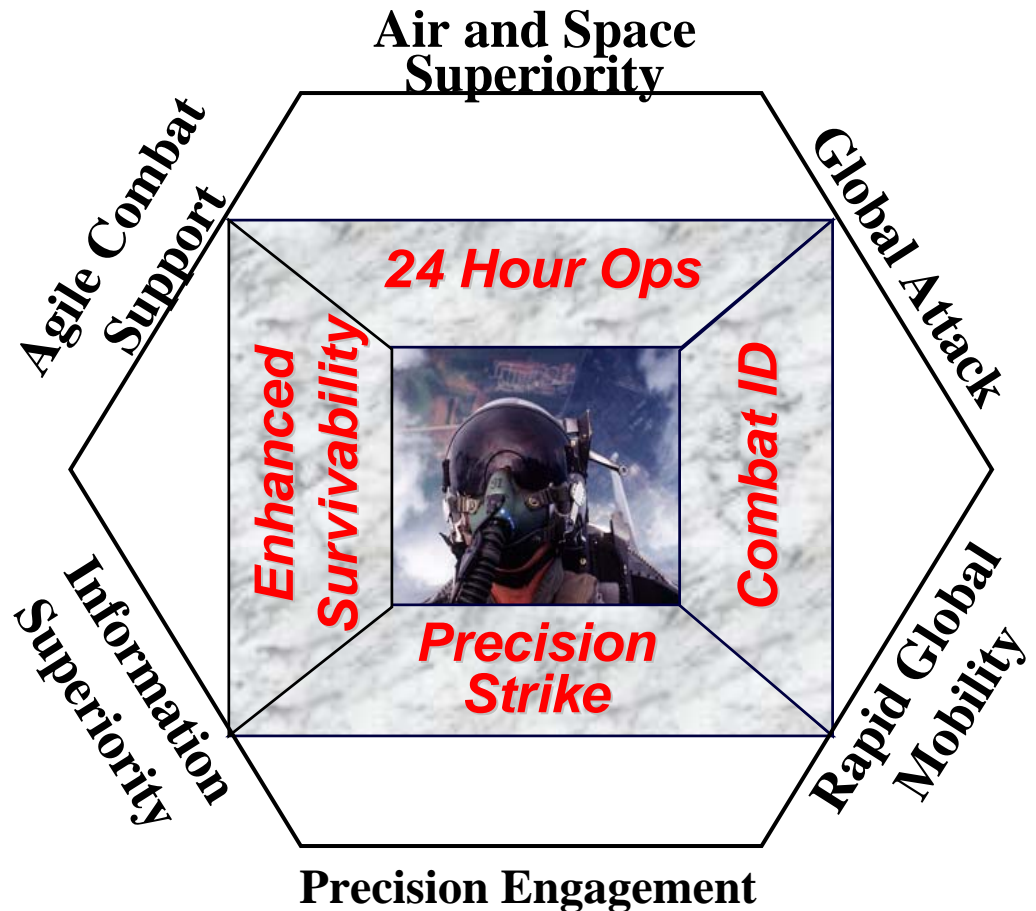
# Transitioning to Capabilities-Based Requirements

Air Force CONOPS



Distinctive Capabilities

- Integration (Overarching)
- Global Mobility
- Global Response
- Global Strike
- Homeland Security
- Nuclear Response
- Space & Command, Control Computers & Communications Intelligence, Surveillance & Reconnaissance (S&C4ISR)





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# *Training Concept*



- **Training in Aircraft and Simulators combines to produce an end capability**
  - **Total Force Approach**
  - **Adding DMO (DMT) where/when it makes sense**
- **AFRC is assuming more of a leadership role**
  - **Owning & modifying simulators**
  - **Initial Qual**
  - **More to be done**
- **Multiple Weapon Systems gained from distinctly different MAJCOMs**



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# *Training Concept (cont)*



- **ACC, AMC & AFSOC Active Duty Partners**
  - **AFRC operates many modern weapon systems with active duty**
    - No longer has assets comprised principally of retired aircraft
    - Some danger of divergence (F-16 Blk 30/50, C-130)
    - AOC to be trained as a weapon system
  - **Each command has a different approach to training**
  - **AFRC supports the training philosophy of the gaining command**
    - Some differences
    - Unique aircrew scheduling & availability
- **AFSPACE also gains AFRC operators**
  - **Training & Simulator requirements under development**





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# *Training Programs*

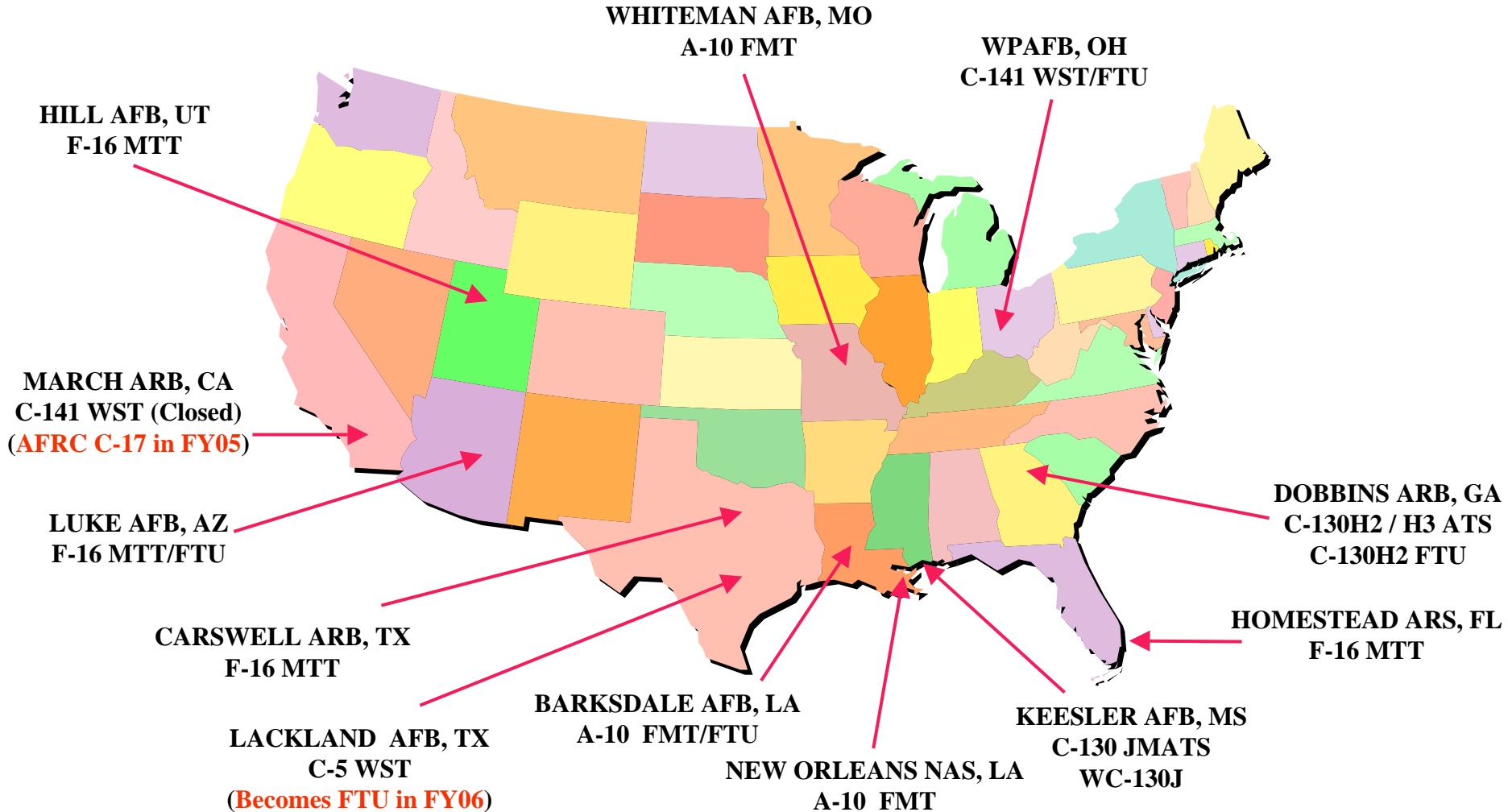


- **F-16 (role in FTU at Luke AFB)**
- **A-10 (FTU at Barksdale AFB)**
- **C-130 (H-2 FTU/CT, H3 CT at Dobbins ARB)**
  - **JMATS**
  - **AMP**
- **C-5 (FTU at Lackland AFB, FY06)**
- **C-141 (FTU at WPAFB, closes FY05)**
- **C-17 (WST at March ARB in FY05)**
- **KC-135**



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# Training Program Locations





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# *F-16 MTT Current Status*



- An F-16 Multi-Task Trainer (MTT) exists at each AFRC F-16 operational unit (Carswell, Luke, Hill, and Homestead)
- 302 FS (AFRC) is part of FTU at Luke
  - Trains Active, AFRC and ANG crews
  - Retains C Status
- Current F-16 MTT capability supports:
  - Normal and Emergency Procedures Training
  - Instrument Procedures Training
  - Weapons and Tactical Procedures Training
  - NVG Familiarization



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# *F-16 MTT Initiatives*



- Upgrade all MTTs to SCU 5.0 (Sep 04)
  - Maintains currency with aircraft – funded
  - SCU 5.E-1 prototyped at Luke, installed all sites Aug 03
- Replaced Luke MTT Image Generator (Dec 02)
  - PC-based IG (same as new A-10 FMTs)
  - To be installed at Luke CY04 (required for DMO)
- CASNET Program Phase I in FY04
  - Follows successful A-10 Phase I on FY03
  - Networking starts in FY05 (Phase II)
- Two DMO-capable MTTs at each site
  - Existing MTTs upgraded to DMO-capable – UFR
  - Validation by 10 AF required
  - Includes same PC-IG as Luke MTT
  - Could execute FY04 – FY07



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# ***F-16 MTT Future***



- **Merge F-16 MTT & A-10 FMT into Common Core Support in FY04 – Legacy system migration to DMO, No FFS expected**
- **Upgrade all MTTs to SCU 6.0 (Apr 06)**
- **Continue phased entry into USAF DMO arena**
  - **CASNET Phases II & III (follows A-10)**
  - **ACC DMT ORD, DMO CONOPS approved**
    - **DMO ICD under development**
    - **ACC training requirements/value still maturing**
- **Planned network of AFRC F-16 MTTs & A-10 FMTs**
  - **Enhances Weapons and Tactical Procedures Training**
- **Radar ground map simulation (DRLMS)**
- **360 degree visual systems (DMO)**



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# *A-10 FMT Current Status*



- **An A-10 Full Mission Trainer (FMT) exists at each AFRC A-10 operational unit (Whiteman and New Orleans); 2 FMTs at Barksdale (FTU)**
  - **Differing visual systems, cockpit configurations**
- **Current A-10 FMT capability supports:**
  - **Normal and Emergency Procedures Training**
  - **Instrument Procedures Training**
  - **Weapons and Tactical Procedures Training**
  - **NVG Familiarization (Whiteman and New Orleans only)**



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# *A-10 FMT Initiatives*



- Replaced Whiteman FMT IG (Dec 02)
  - PC-based IG (same as New Orleans)
- Upgraded Barksdale FMTs with NVG compatible panels and instruments (Aug 03)
- CASNET Program (Phase II)
  - H/W & S/W (Net installs and training scenarios ongoing)
  - Planned network of AFRC/ANG/ACC A-10 FMTs to conduct CSAR/CAS missions
    - Will extend to AFRC F-16 MTTs in CY04 (Phase I)
    - AFSOC training assets would be a logical addition
  - Will measure training value of networked simulation
  - Risk mitigation for phased AFRC entry into USAF DMO



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# A-10 FMT Future



- Merge A-10 FMT & F-16 MTT into Common Core Support in FY04
- Phased entry into USAF DMO arena
  - Planned network of AFRC/ANG/ACC A-10 FMTs
  - Migrate legacy devices – no FFS anticipated
- CAS/CSAR networked training effectiveness studies (FY05) (CASNET Phase III)
- Upgrade Whiteman and Barksdale to full 360 degree visual systems (same as New Orleans)
- Additional device at Whiteman and New Orleans (FY04 – FY07) & DMO Upgrades
  - Currently unfunded





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# C-130 Current Status



- **Actively managing AFRC training program**
  - **C-130 ATS contract managed through AMC (LC)**
  - **Acquisition Agency – OO-ALC/YWS (Ogden)**
- **AFRC training at Dobbins**
  - **H2 FTU/Continuation Training**
    - **Current H2 WST cannot support FTU/CT training objectives**
    - **Need more throughput capability**
  - **H3 Continuation/Conversion Training**
  - **NVG-compatible WSTs**
  - **Trained active-duty crews for OEF deployment**
- **H2 Aero Data provided to USSOCOM/LC**
  - **Current ECP on C-130 ATS (starting at LRAFB)**



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# *C-130 Initiatives*



- **Awarded H2 FTU Ops for FY03-05 only**
  - **Short term award rationale – need another device and AMP impacts**
- **Converting H3 ULT to an H2 Flight Training Device**
  - **RFT June 05**
- **Revise Syllabi and Courseware**
- **pDRLMS replacement/New PC-based IGs**
- **AMP Planning**
  - **AMC “Training Way Ahead”**
  - **PTTs for early AFRC training**



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# C-130 Future



- **Implement AMP conversion**
- **Evaluate training capabilities to support requirements**
  - **Increase throughput production**
  - **FTU Tiger Team**
- **Let new ATS contract – Current expiration FY09**
- **Fuselage Trainer (FuT) bed down**
- **Additional H2 WST at Dobbins**
  - **FY05 NGREA**
  - **FY06 POM Action**



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# ***C-130 JMATS Current Status***



- **WST #1 (AFRC \$) accepted by SPO**
  - **Certification**
  - **WST #2 (provides simulation of C-130J-30)**
  - **Certification as WST #1**
  - **Govt acceptance anticipated late Feb 04**
- **Courseware**
  - **LGTO on WST #2 scheduled 1 Mar – 1 Jul 04**
- **Follow-on Devices**
  - **WST #3, CPT, lower level devices and MTDs on contract**



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# ***C-130 JMATS Initiatives***



- **Continue to support AMC to achieve Level D status**
  - **Provide ex-FAA technical expertise**
  - **Potential for conduct of limited flight test/data gathering**



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# *C-130 JMATS Future*



- **Assure WSTs certification at Level D**
- **Provide C-130J Maintainers for ARC & active forces to 3C GO Level (TBD)**
- **Maintain concurrency with aircraft**



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# C-130 AMP Current Status



- **Several AFRC MDS affected by AMP**
  - **Combat Delivery (AMC-gained)**
  - **Combat Talon (AFSOC-gained)**
  - **Tanker (AFSOC-gained, moved from ACC 1 Oct 03)**
- **AMP Funding Delay (12 – 18 months)**
  - **Delays TSRA, AFRC modernization**
  - **AMC/A5 approved “Training Way Ahead”**
    - **Dobbins WSTs not AMP-modified until beyond FY06 POM years**
    - **AFRC request for early funding of PTTs not approved**
- **SPO/AMC conducting IBR Feb 24-26**
  - **Plans first flight of partial AMP capability in FY06**
  - **“Core Complete” aircraft flies in FY07**
  - **First AFRC unit starts conversion in FY08 (Maxwell)**



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# ***C-130 AMP Initiatives***



- **Planning PTT to address AFRC training needs**
  - Differences training for qualified crewmembers
  - MTD for maintainer familiarization
  - Leverage cost with AFSOC
- **Strong participation in TSRA Process**
  - AFRC position maintained in Training IPT
  - AFRC SMEs review/comment on documents





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# *C-130 AMP Future*



- **Need funding stability**
- **Need schedule stability**
- **Need requirements stability**
- **SPO/AMC conducting IBR Feb 04**
- **Procure AFRC AMP PTTs**
  - **FY05 NGREA**
  - **FY06 POM Action**
- **Upgrade current training assets**



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# *C-5 Current Status*



- **Actively managing AFRC training program**
  - **C-5 WST contract managed through AMC**
  - **Acquisition Agency – OO-ALC/YWA (Ogden)**
- **AFRC training at Lackland**
  - **C-5 Continuation Training**
    - **Level D WST**
    - **Simulator is compatible with Stewart ANG**



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# *C-5 Initiatives*



- **A-TCAS WST modification**
  - **Complete and ahead of aircraft modification**
- **Block 1 OFP integration**
  - **WST delivered in July 02**
- **AMP Courseware**
  - **Difference courses Feb 04**
  - **Continuation courses Jun 04**
  - **Upgrade courses Jun 04**
  - **IQ courses Aug 04**
- **C-5 AMP**
  - **ARINC 610 hooks Sep 03**
  - **WST IOC Jun 04**



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# *C-5 Future*



- **FTU move in design phase**
  - **Applied lessons learned from C-141 FTU**
- **RERP**
  - **WST RFP sent to FSSC in Jul 03**
- **TF39 engine high pressure turbine replacement**
  - **WST impact under study**
- **Unfunded C-5 modification**
  - **Airlift Defensive System**



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# ***C-141 Current Status***



- **Actively managing AFRC training program**
  - **C-141 WST contract managed through AMC**
  - **Acquisition Agency – OO-ALC/YW (Ogden)**
- **FTU at Wright-Patterson AFB**
  - **Trains all C-141C aircrew members (AFRC/ANG)**
  - **CT at operational AFRC units**
    - **March (WST closed Jun 03; learning center remains)**
    - **WPAFB**
- **Trains Initial Qualification, Mission Qualification, Upgrade, Continuation & Maintenance Engine Run**



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# ***C-141 Initiatives***



- **Final upgrades completed in 2003**
  - **Auto-throttle**
  - **OFP-3**
  - **OFP-4 in test (unlikely WST upgrade)**
- **AFRC support to SIMCERT activities**
  - **Courseware reviews**
  - **Pilot supported Auto-throttle and OFP acceptance**
    - **Now full time as lead at AMC SIMCERT Det**
  - **AFRC Flt Eng added in FY04**



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# C-141 Future



- **Drawdown in progress (FY06)**
  - **Active C-141B only at McGuire until FY05**
  - **Remaining C-141C fleet entirely in ARC**
  - **AFRC-run FTU remains at WPAFB**
- **No further initiatives planned/anticipated**



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# *C-17 Current Status*



- **Actively managing AFRC entry into C-17 training**
  - **C-17 WST contract managed through AMC**
  - **Acquisition Agency – OO-ALC/YW (WPAFB)**
- **First AFRC-only unit at March ARB**
  - **Modification of prior C-141 facility in progress**
  - **WST #14 on contract**
    - **Delivery scheduled for Oct 04**
    - **RFT set for Mar 05**





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# *C-17 Initiatives*



- **FSI has proposed electric motion base for WST**
  - **First planned install would be on WST #14**
  - **Goal is to retrofit original 13 WSTs and follow-on**
  - **Working with SPO to understand issues**
    - **AFRC/CE aware of facility issues (HVAC)**
- **AMC & SPO reinvigorating TPT**
  - **STP is years old**
  - **Addition of AFRC and ANG as Operating Commands**
    - **March ARB will be AFRC-only**
    - **Current Associate status with Charleston and McChord**
  - **Continuing changes to C-17 fleet size, requirements**
  - **AFRC/DO, XP, and LG reps are key members**



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# C-17 Future



- Continued growth in C-17 fleet size nearly certain
  - Each additional 10 aircraft gains a WST
  - Training nearly all in WST
  - Supports 5.0 crew ratio
- AFRC remains a key member of the airlift force



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# ***KC-135 Current Status***



- **Actively managing AFRC increase in KC-135**
  - **KC-135 WST contract managed through AMC**
  - **Acquisition Agency – OO-ALC/YW**
- **Move of KC-135R to AFRC**
  - **Andrews in conversion from C-141C**
  - **Other 135 unit conversions to “R” in progress**
  - **FTU decision after “Future Tanker” decision**
- **Future dependent on Tanker lease/buy issue**



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# Summary



- Initiatives underway to migrate A-10/F-16 Trainer to DMO – No FFS devices anticipated
  - More work to come – ARC partnership (DTOC)
- AFRC F-16 community baseline behind Active
  - ACC buying F-16 Sims with wraparound visual and Networked – AFRC has none
- C-130 JMATS
  - Certification
- C-130 AMP Program delay
  - Requirements stability
- Dobbins H2 FTU/CT throughput production goals
  - New H2 WST



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# Summary



- Database sharing/commonality
- Training device concurrency with aircraft
- AFRC role as MAJCOM in Training
  - Control FTUs, funding, SIMCERT
- A-10 FMT Re compete
  - Current contract expires Jul 04
- Other DMO initiatives
- Acquisition/business model
  - Best Support to User's
  - ROI (return on "our" investment)

# *Air Force Reserve Command*

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## **Comments/Questions**

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