

# ***Headquarters U.S. Air Force***

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*Integrity - Service - Excellence*

## **USAF Maintenance Metrics: Looking Forward with Aircraft Availability (AA)**



*Lt Col Jeff Meserve, USAF*  
*Chief, Congressionals, Studies & Analysis Branch*  
*Directorate of Maintenance*  
*DCS/Logistics, Installations and Mission Support*

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# Overview

- **Leadership Vision:**
  - **Defining the problem**
  - **Supporting metrics**
- **Aircraft Availability (AA) vs. Mission Capable (MC)**
- **Aircraft Availability Improvement Program (AAIP)**





# USAF Priorities



***Our priorities are clear:***

- Winning the Global War on Terrorism***
- Developing and caring for our Airmen***
- Modernizing and recapitalizing our aircraft and equipment***

***- 2007 Air Force Posture Statement***

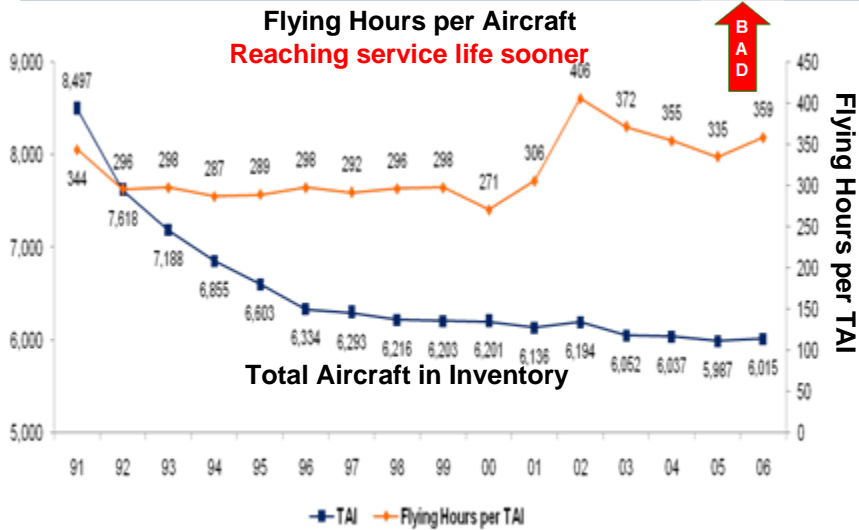


***The U.S. Air Force must remain ready to Fly and Fight***



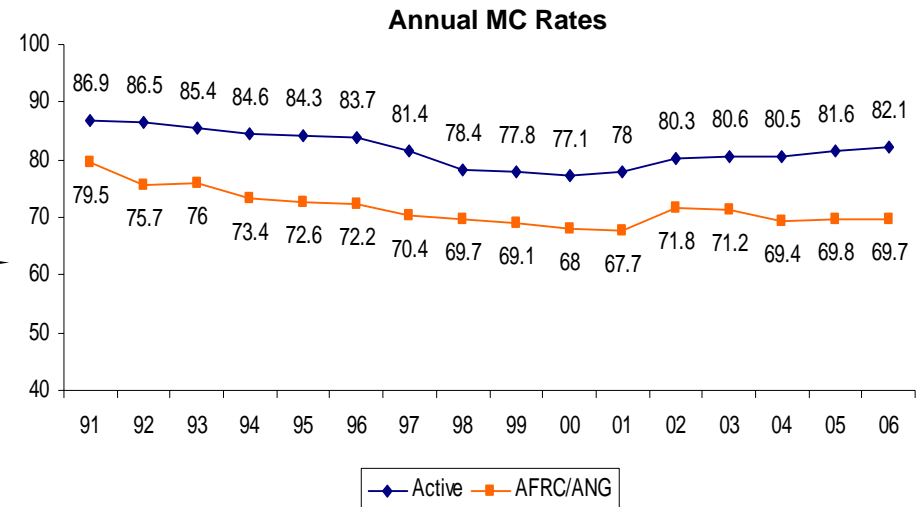


# Increasing Stress (*how to describe?*)



Stress well articulated

However...MC doesn't support it

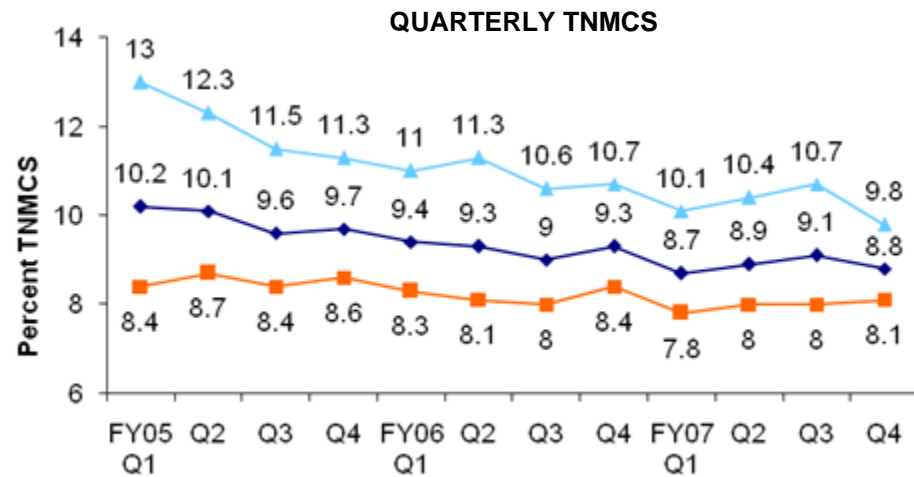
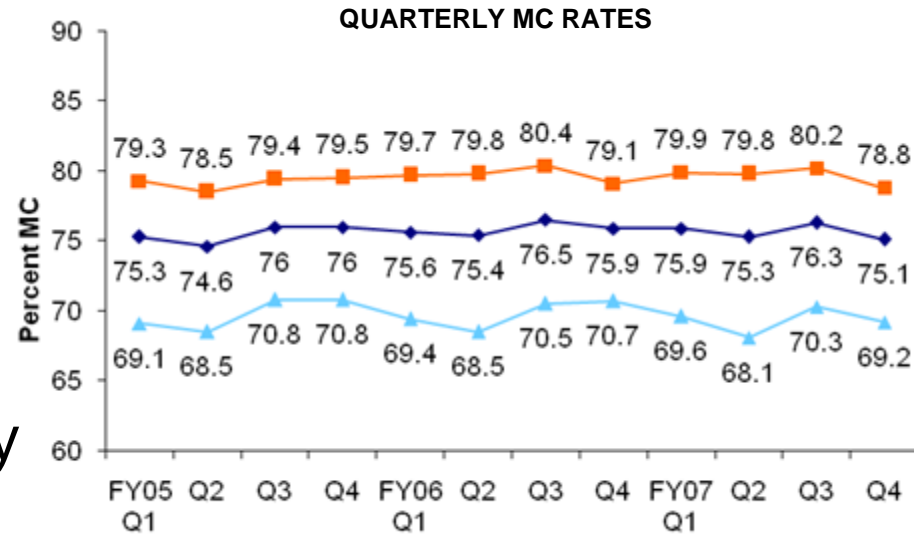
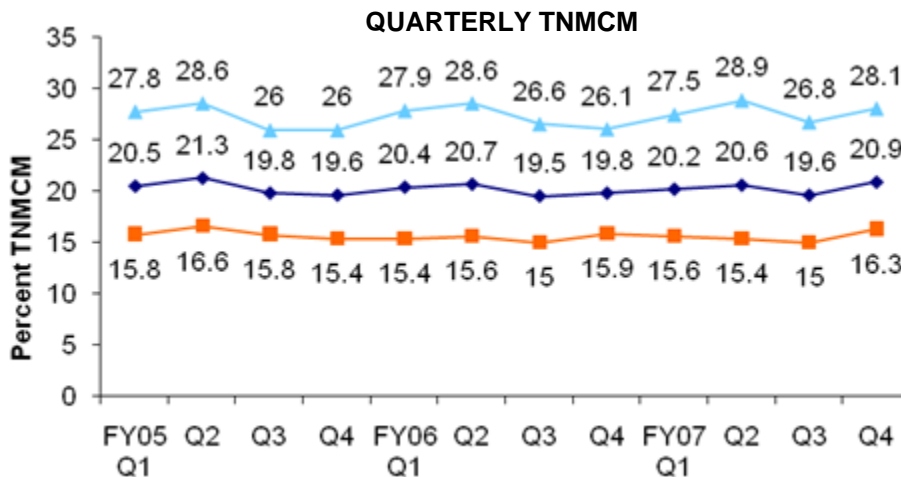






# MC Centric History

- The 'metric': not entire fleet
- The 'methodology':
  - Focus on historical trends
  - Reactive: what happened?
- New metric...new methodology





# The Metric (AA vs. MC)

- **What is MC?** (AFI 21-101, Para 1.15.3.14)

**MC Rate = MC hours / Unit Possessed hours**

- All acft that are possessed by unit (poss portions of PAI, BAI, AR)

- **What is AA?** (AFI 21-101, Para 1.15.3.3)

**AA Rate = MC hours / TAI hours**

- All PAI, BAI, AR acft hours (entire fleet)

- **Categories of non-availability (Five)**

- NMCM, NMCS, NMCB, UPNR (B\$, X\$), Depot (D\$)

**MC 'great' at unit level – 'not good' for fleet  
AA is the metric for 'Health of the Inventory'**



# Focus on Aircraft Availability

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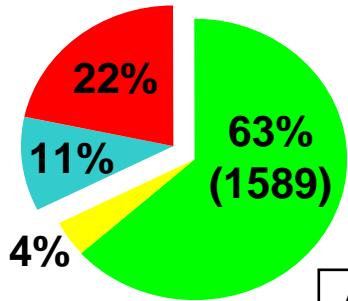
- **At enterprise level, forward looking approach needed**
  - Teaming of lead commands and programs managers
  - Maximize resource allocation
- **Addresses combat capability—“how many jets are ready?”**
  - Drivers include MC, NMCM and NMCS rates
  - Includes all factors to include Depot, Mod, TCTO, and other fleet management factors
  - AA Standard is ‘requirements based’





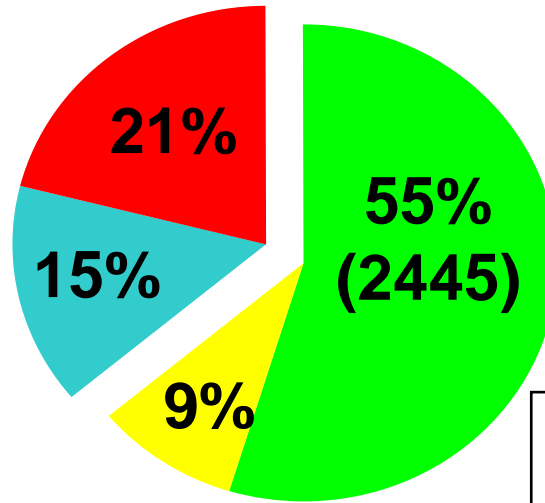


# CSAF Question: How many jets are ready?



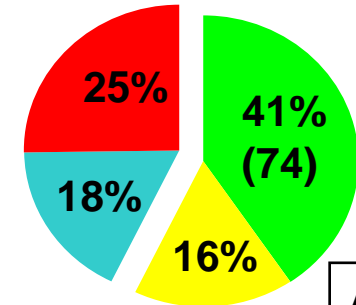
**Fighters**  
(2506)

Able to Launch  
67% (1691)



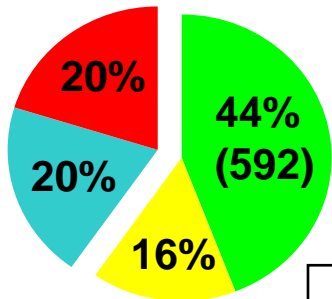
**Aggregate**  
(4465)

Able to Launch  
64% (2856)



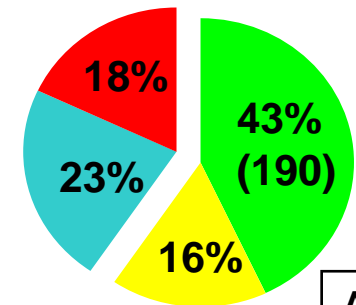
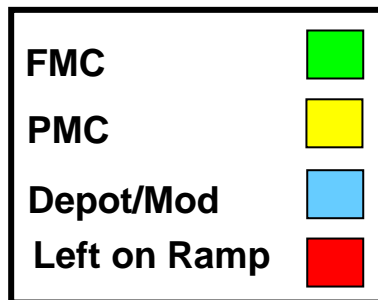
**Bombers**  
(182)

Able to Launch  
57% (104)



**Mobility**  
(1337)

Able to Launch  
60% (800)



**Other**  
(440)

Able to Launch  
59% (261)

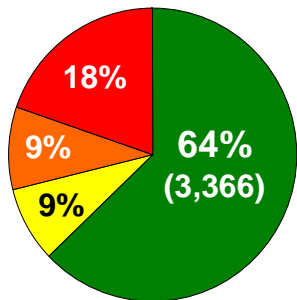


# Declining Aircraft Availability

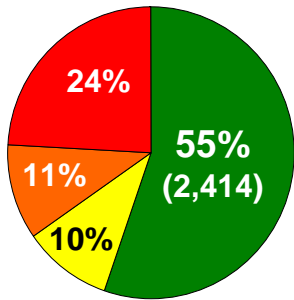


FY93-Q3

FY07-Q3

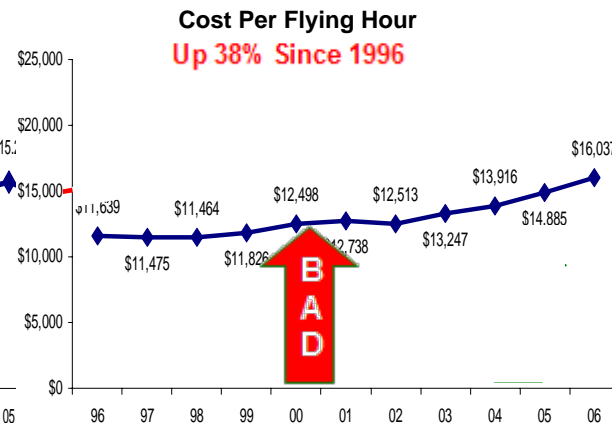
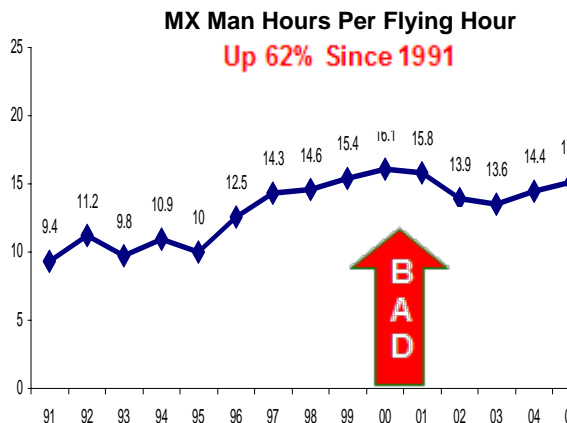
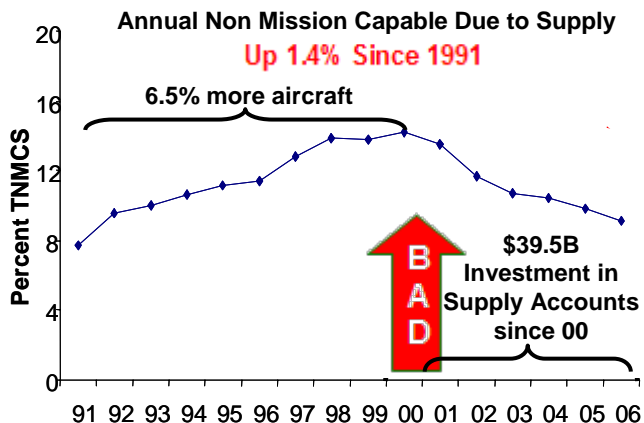
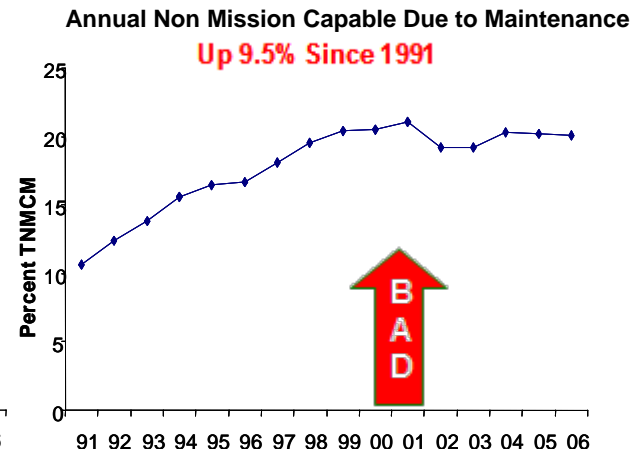
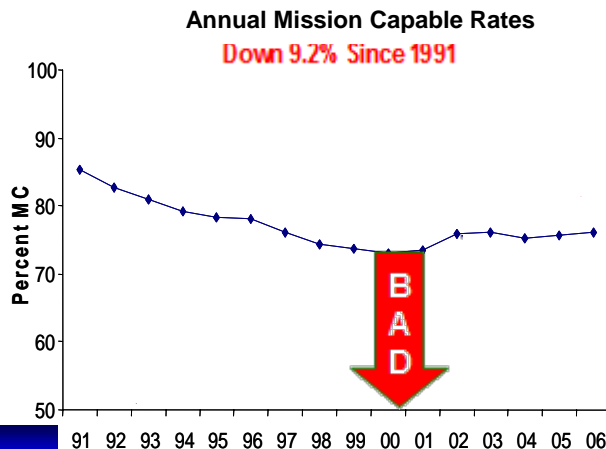


Aggregate  
(5,242)



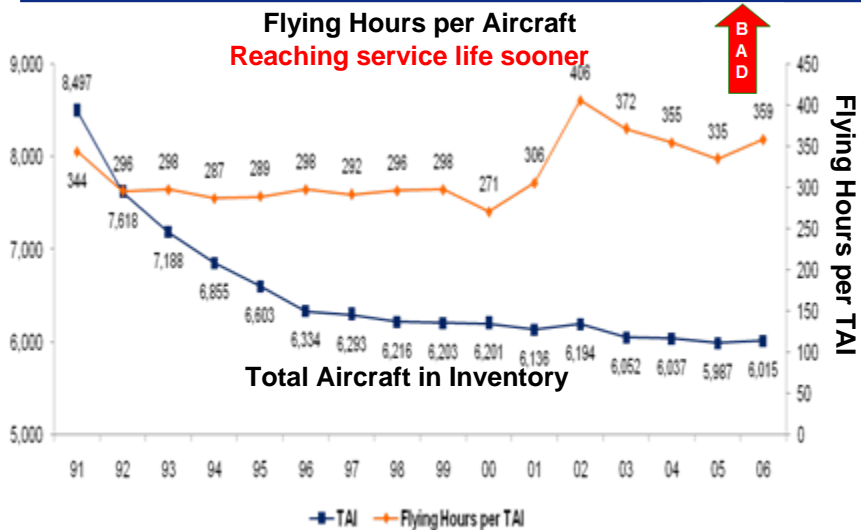
Aggregate  
(4,364)

**FMC availability dropped 9 points**



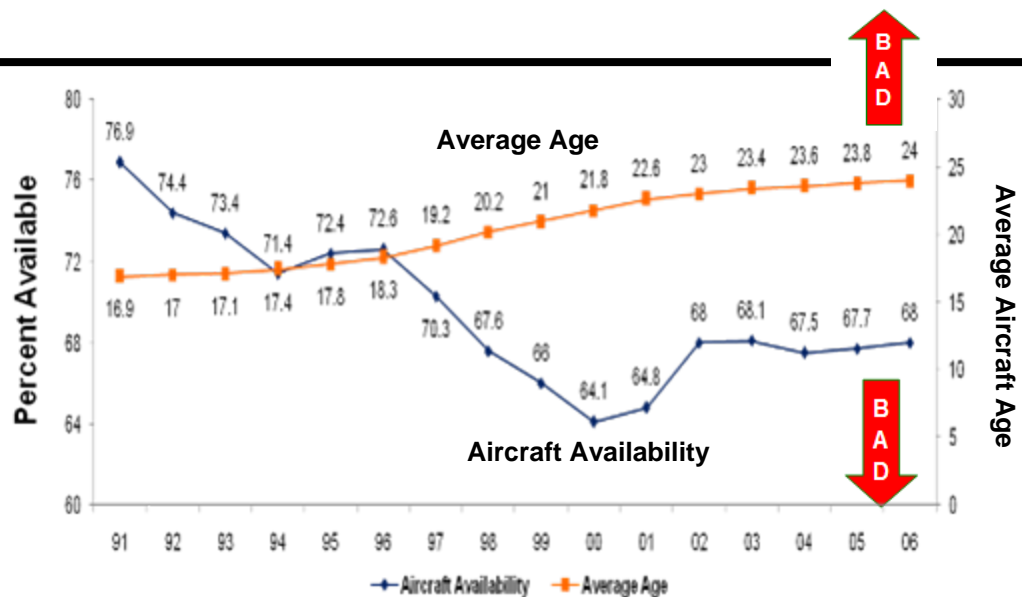


# Increasing Stress (*how to describe?*)



Stress well articulated

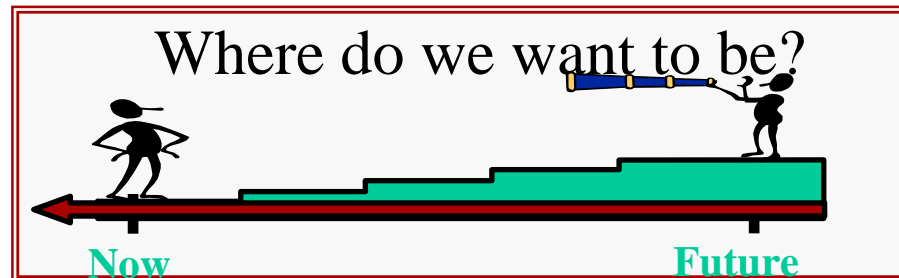
AA better articulates





# AAIP...Systemic Way Ahead

- **Aircraft Availability Improvement Plans (AAIP)**
  - Forward looking (FYDP)...by Weapon System
  - SPMs & Lead MAJCOMs jointly develop plans
  - Governance & standardized formats for consistency
  - Include improvements/initiatives at unit level, MAJCOM, depot, supply chain, contractors, etc.
  - Annual targets toward Weapon System (AAIP) Goal
  - Goal → requirements-based AA Standard





# Review Performance & Look Forward

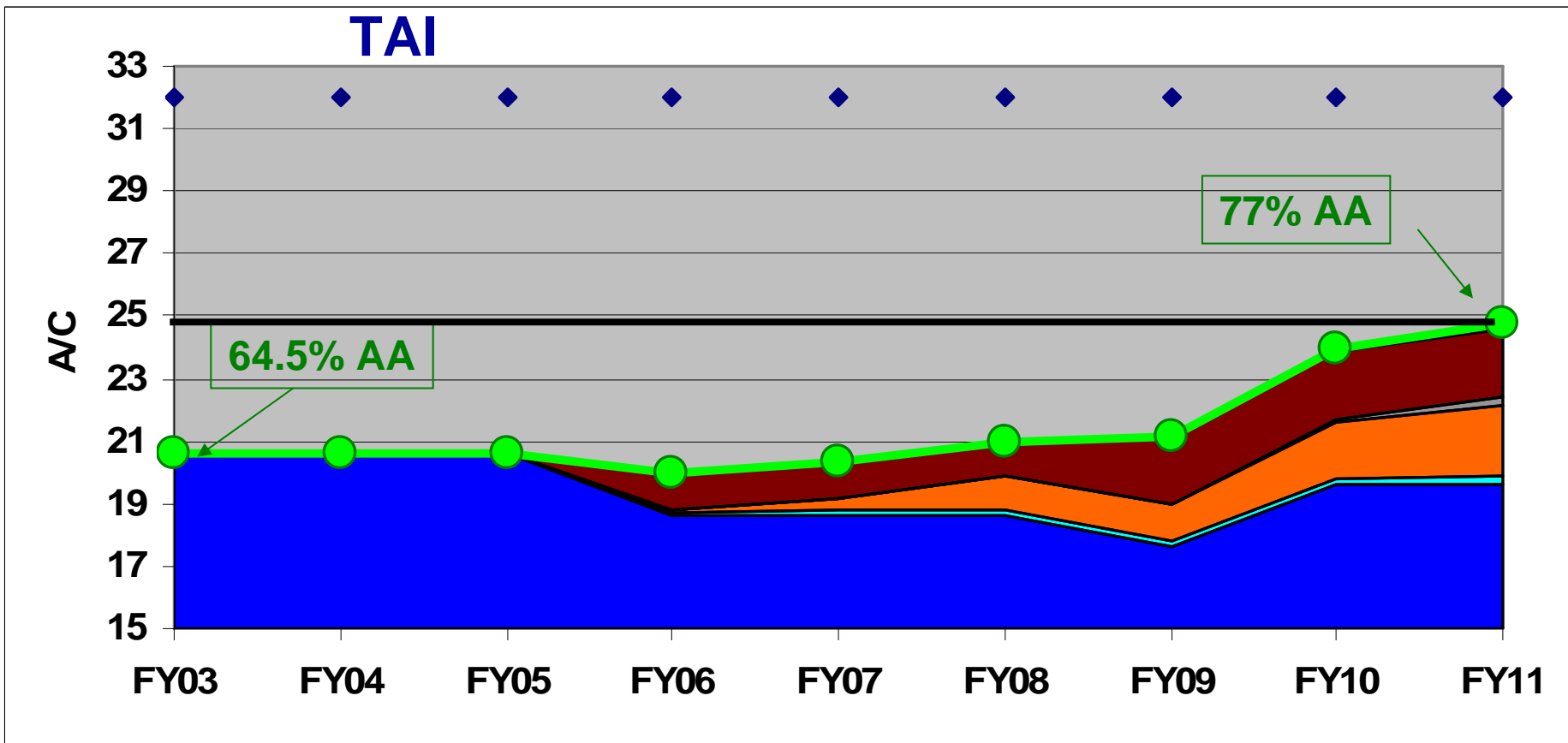
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- **AAIP's are dynamic...Identifying best practices and then sharing...across organizations and weapon systems**
  - **Unifying efforts across all the Centers and standardize the reporting of AAIP Metrics**
  - **New focus on cost reduction and Total Ownership Cost**
  - **Senior level review and status updates to CSAF**





# E-3 Aircraft Availability Glide Slope

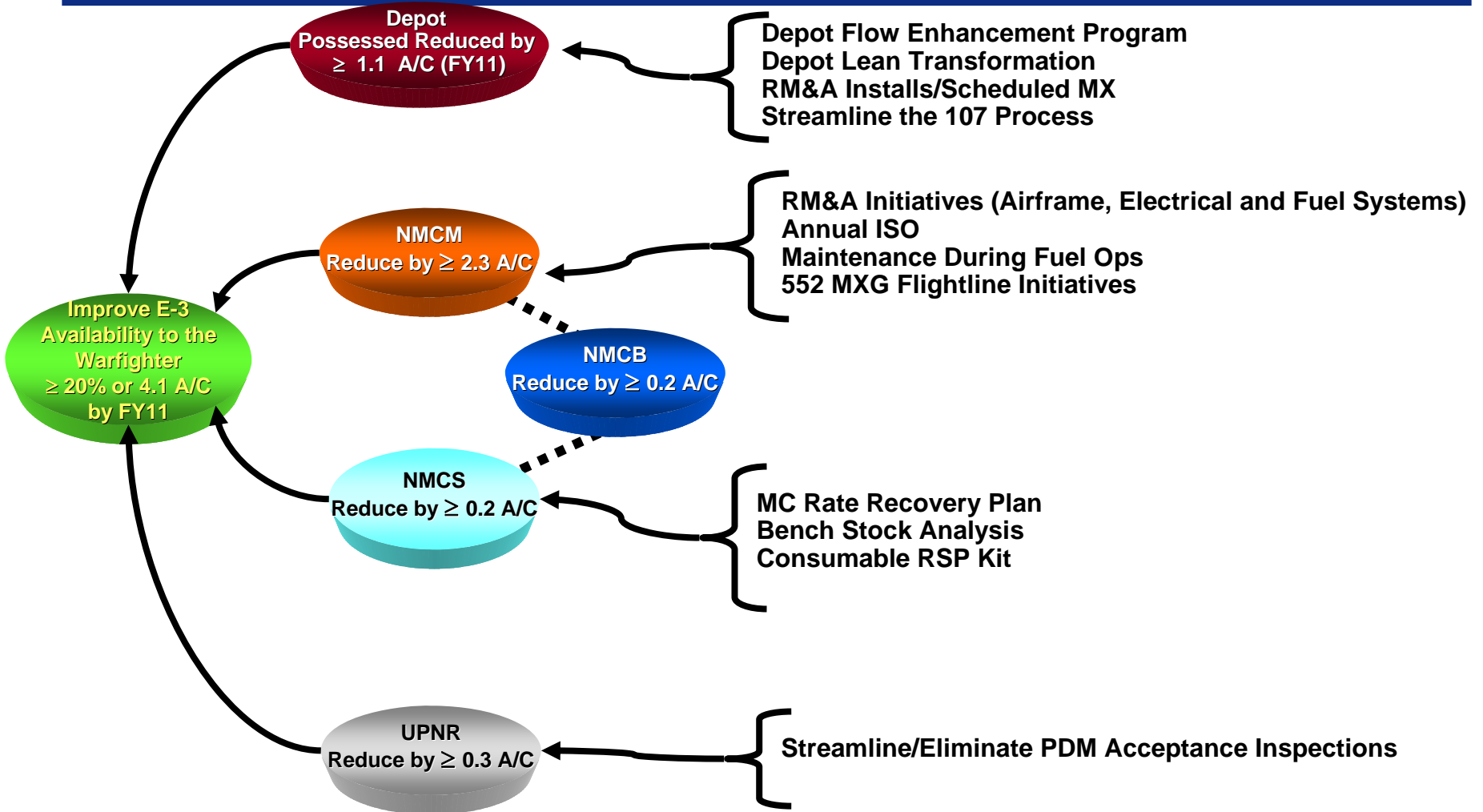


	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
<b>TAI</b>	32	32	32	32	32	32	32	32	32
<b>Planned</b>	20.64	20.64	20.64	19.94	20.30	21.00	21.19	23.93	24.76





# E-3 Availability Initiatives





# Future of AA and AAIP

- Annual refresh & approval based on new FY AA Stds
- O&S Cost reduction incorporated into AAIP
- Status briefed semi-annually to CSAF
- Link AAIP to budget/resourcing decisions [CAM]
- Addition of non-aircraft systems (ICBM, Space, Comm...)



# *AA and AAIP*

*Enterprise view of fleet health  
to support Air Force Goals/Vision*





# CSAF Aircraft Availability Dashboard

CAF	A-10	F-15A/B	F-15C/D	F-15E	F-16
	F-22	F-117	B-1	B-2	B-52
	HC-130	HH-60	MQ-1	E-3	E-4
	E-8	U-2	RC-135	EC-130H	

MAF	C-5	C-17	C-130	KC-10	KC-135R/T
	C-9	C-12	C-21	C-32A	C-37
	C-38	C-40			

SOF	AC-130	CV-22	EC-130J	MC-130	MH-53
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Trainers	T-1	T-6	T-37	T-38	T-43
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Space	UH-1N	MM-III
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*\*Note: Actual rates for current period are compared with AA targets. The color gradient (AA) for the Tier I Dashboard will be comparing the number of Aircraft of actuals and Targets that are carried out to the third decimal place. The Tier II charts will display figures out to only one decimal.*

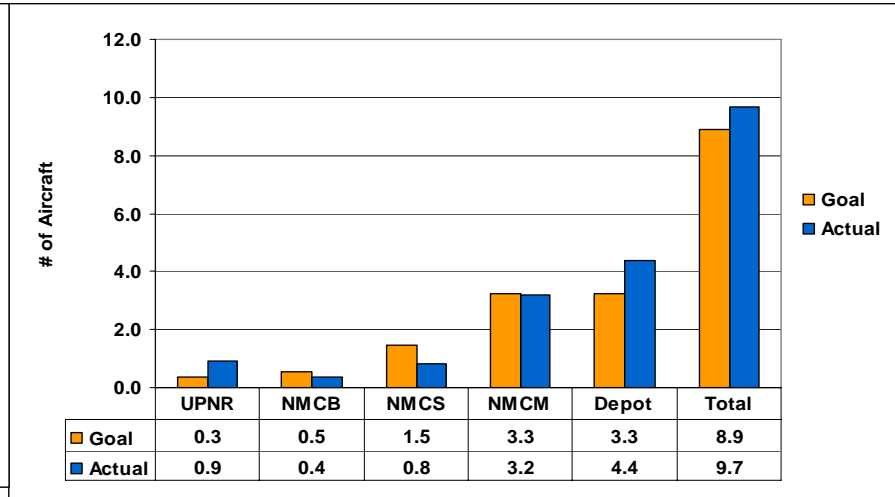
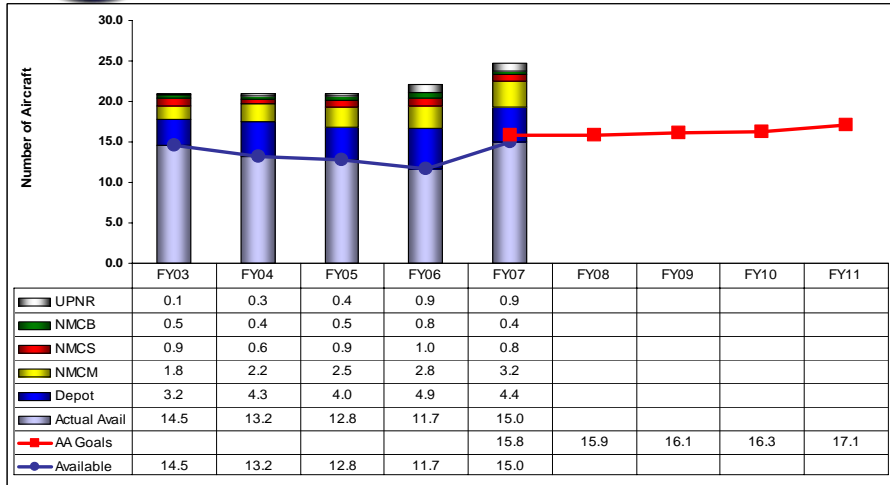


<u>AA Color Gradient Legend</u>			
Small Fleet: ≤10 A/C		Large Fleet: >10 A/C	
	Within .5 Std Dev of AA Target		Within 2.5% of AA Target
	-.5 Std Dev to -1 Std Dev of AA Target		-2.5% to -5.0% of AA Target
	> -1 Std Dev of AA Target		> -5.0% of AA Target
	No Data Available		No Data Available



# AC-130 Aircraft Availability

## AAIP Based AA Goals



### ■ Constraints

- High volume of MODs/PDMs/UDLMs
- Drivers – Cracks/corrosion, engine nacelles, IR tubs/tracks, Inspections
- War time OPS tempo driving increased ISO changes; added rainbow fitting inspections

### ■ Action Plan

- Continue progress in implementing High Velocity Maintenance initiatives
- Initiative to conduct Corrosion Control Inspections aimed at reducing over/above UDLM work
- Implementing minor mod in tracks/tubs design; expect reduction in maintenance hours
  - Working complete re-design of IR tub/track system
- Contract maintenance team performing ISO inspections in 9 days
  - FY08 projected fly days saved = 118 Days

### ■ 6 Mos Projection & Resources Needed:

- Expect current upward AA trend to stabilize
- Continued emphasis on obtaining reliable gun system for plus 4 aircraft; Expedite fielding GMS2 MOD
- Continue working CWB procurement and schedule to maximize AA
- High Velocity Maintenance initiatives to reduce downtime

Grounded: 0

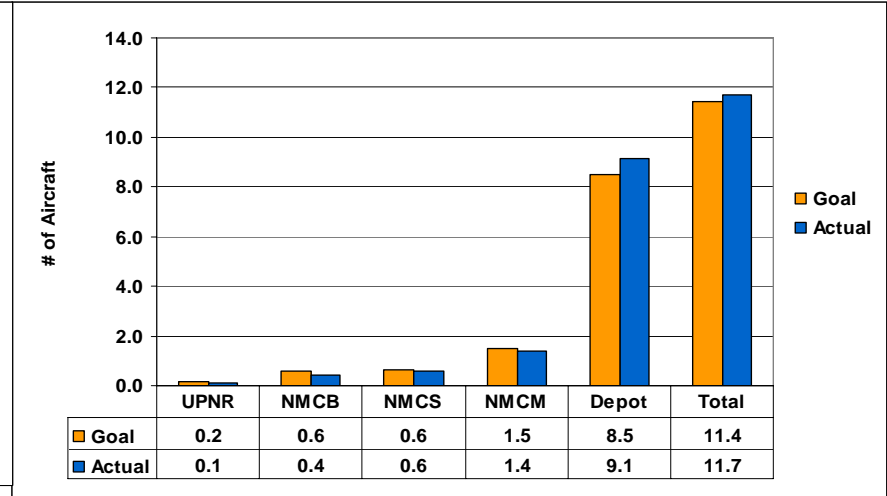
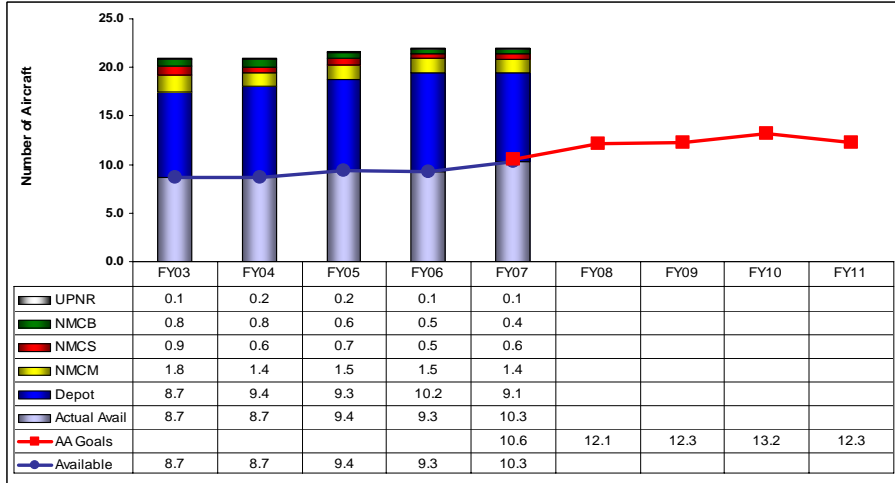
Msn Limited: 4

Return to Dashboard  
Deep Look  
CSAF WSR Part 2



# RC-135 Aircraft Availability

## AAIP Based AA Goals



- **Constraints**

- Currently exceeding overall goal

- **Action Plan**

- Contractor implemented lean PDM and Modification initiatives in Apr 07
    - Contractor senior leadership conducting monthly progress meeting with the program manager

- **6 Mos Projection & Resources Needed:**

- Continue execution of AAIP initiatives
  - Current trend indicate FY07 AAIP goal will be achieved

Grounded: 0

Msn Limited: 0

[Return to Dashboard](#)





# How we used to look at fleet health

MD Active/ARC	Active			AFRC/NGB		
	MC	TNMCM	TNMCS	MC	TNMCM	TNMCS
A-10 203/153 Std	75.0 ↓ 81	19.3 ↑ 17	10.7 ↑ 8	69.1 ↑ 71	26.8 ↓ 29	12.2 ↑ 8
F-15A/B 94 Std	N/A	N/A	N/A	72.6 ↑ 73	24.7 ↓ 27	9.8 ↑ 8
F-15C/D 344/47 Std	80.3 ↑ 81	14.5 ↓ 14	8.0 ↓ 8	70.4 ↓ 75	24.8 ↑ 25	11.2 ↑ 8
F-15E 223 Std	75.4 ↓ 80	17.0 ↑ 14	10.9 ↑ 10	N/A	N/A	N/A
F-16A/B 49 Std	N/A	N/A	N/A	81.0 ↑ 71	16.3 ↓ 26	5.1 ↓ 10
F-16C/D 713/542 Std	82.6 ↓ 82	12.6 ↔ 11	7.6 ↑ 10	71.8 ↔ 73	24.9 ↓ 27	10.9 ↑ 10
F-22 73 ACC Goal	59.4 ↓ 74	26.8 ↑ 19	21.1 ↑ 16	N/A	N/A	N/A
F-117 52 Std	85.6 ↑ 76	13.2 ↓ 22	2.1 ↓ 5	N/A	N/A	N/A