

Air Force Materiel Command



Weapon System Enterprise Review (WSER)

Bob Eardley
HQ AFMC/A4F
June 2015

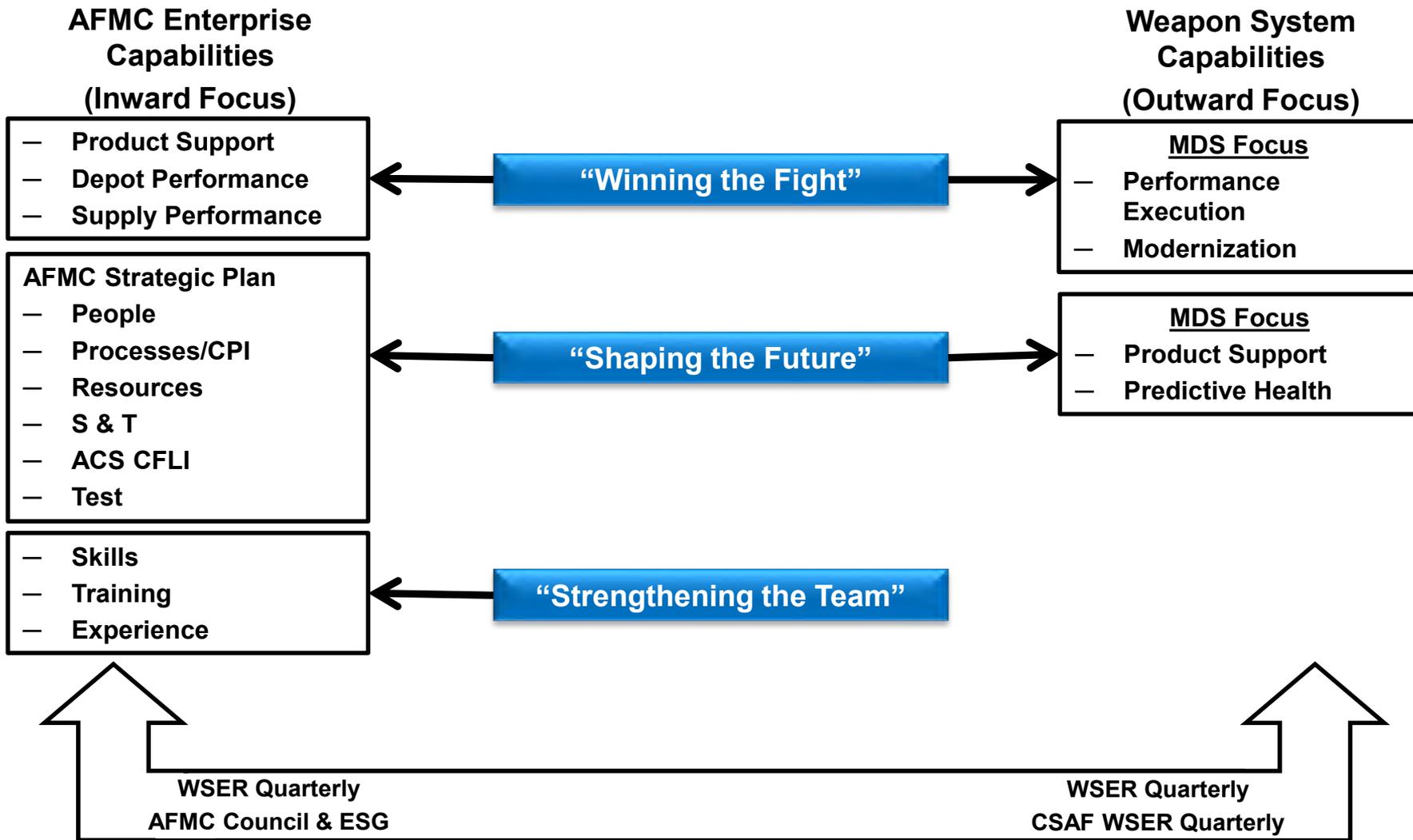


Agenda

- **Air Force Priorities**
- **Weapon System Enterprise Review (WSER) History**
- **Current WSER**
- **Way-Forward**



Alignment to CSAF Priorities and AFMC/CC Strategic Plan





WSER History

- **Purpose:**
 - **Increase and improve Weapon System Health insight;**
 - Utilizes synergy from 5CC reorganization
 - Need for increased insight of Life Cycle processes
- **Background**
 - **Multiple related briefings compressed into single integrated process**
 - Depot performance, Modernization, Product Support, Cost and Service Life
 - Previous focus on “Trailing” Indicators
- **Benefits**
 - **Provides timely, actionable data**
 - **Focuses on areas requiring attention (REDs)**
 - **Covered all non-space weapon systems in a single review**
 - Added Munitions, ICBM, and Space Systems
- **Growing slowly, all changes approved by AFMC/CC**



Weapon System Enterprise Review (WSER) Areas

- **Performance Execution**
 - **Availability, Engine and Aircraft Quality**
 - Computed annual availability targets
 - Engine WRE targets
 - Aircraft Depot Quality below Command standard
- **Modernization**
 - **Monthly Acquisition Reports (MARs)**
 - Cost, Schedule, Performance, Funding
- **Product Support**
 - **Logistics Health Assessment (LHA) (aircraft)**
 - **Leading Health Indicators (LHI) (engines)**
- **Predictive Health**
 - **Safety, Service Life, WSS Risk, and Mission Effectiveness**
- **Cost Element**
 - **Ownership costs, except hardware modifications**

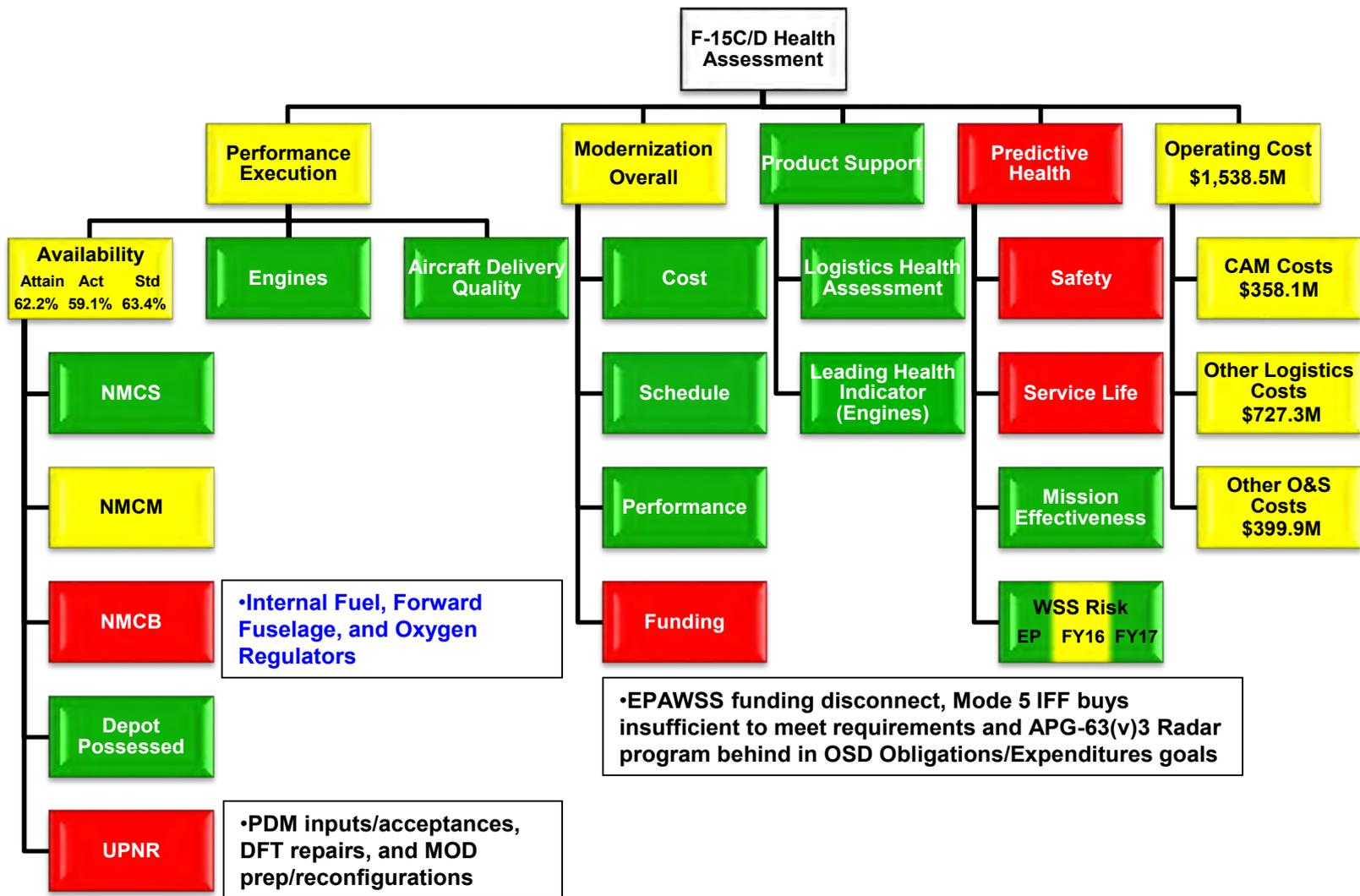


WSER Business Rules

- **Performance Execution**
 - **Availability, Engine and Aircraft Quality**
 - Measure against Blue, Red, Yellow and Green to Attainable
 - **Engine WRE below 70%**
 - **Aircraft Depot Quality below Command standard**
 - Set annually by AFMC/A4F (12 month rolling average)
- **Modernization**
 - **Most discussed area**
- **Product Support**
 - **Logistics Health Assessment (LHA) (AFLCMC/LG)**
 - **Leading Health Indicators (LHI) (engines) (AFLCMC/LP)**
- **Predictive Health**
 - **Safety, Service Life, WSS Risk, and Mission Effectiveness**
- **Cost Element**
 - **Air Force Total Ownership Cost (AFTOC) CAIG elements**
 - **CAM Costs, Other Logistics Costs, Other O&S Costs**

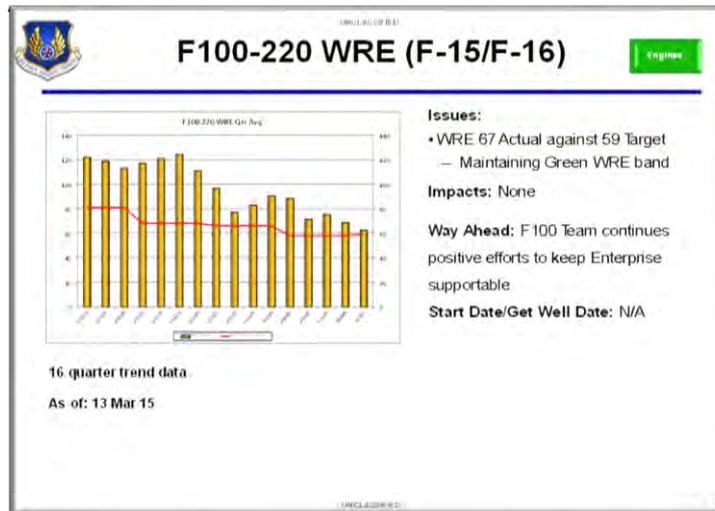
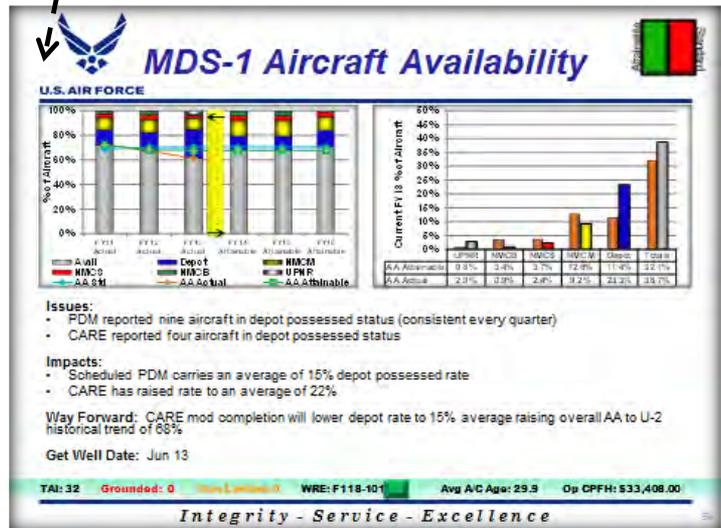
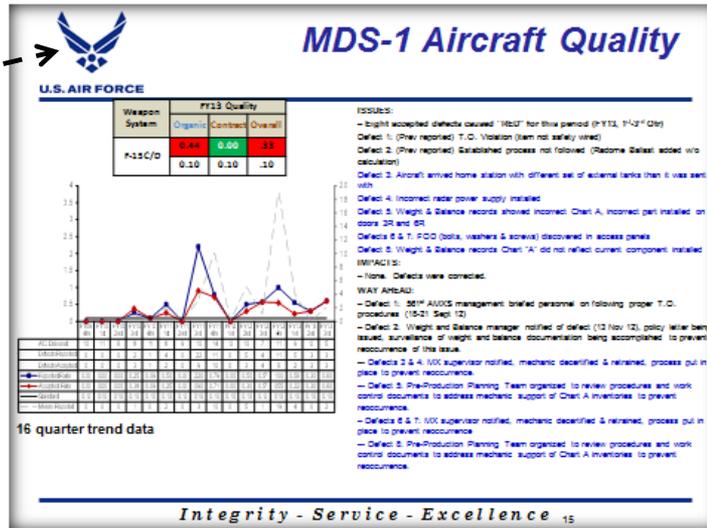
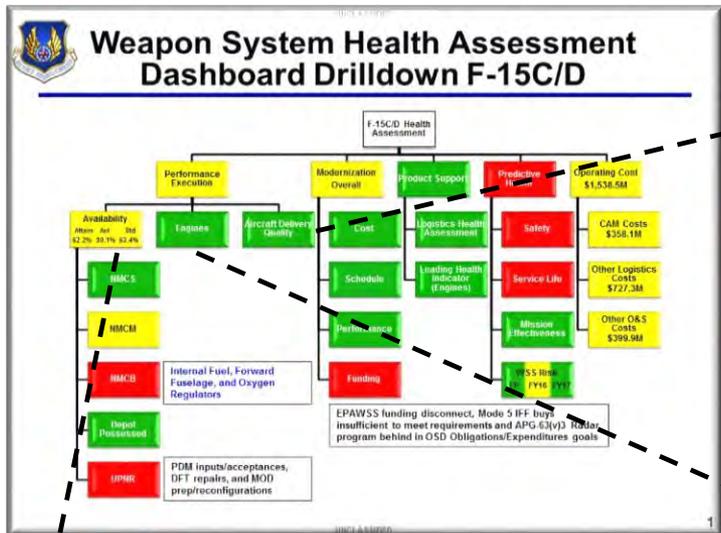


Weapon System Health Assessment Dashboard Drilldown F-15C/D





WSER Template Performance Execution





FY15 Total Force WSS

RQ-4 – Global Hawk Systems

As of: 5 Sep 14, All figures in \$K

Funding

Funds Holder	Requirement CAFDEx	Baseline Funded	OCO Funded	MILAUG Funded	Total Funded	% Funded
CAM - Active Duty	\$387,472	\$283,010	\$22,272		\$305,282	79%
ANG						
AFRC						
AFSA						
AFWA						
AFSPC						
TWCF						
TOTAL	\$387,472	\$283,010	\$22,272	\$0	\$305,282	79%

• FY15 Funded Position

• Based upon the new CLS contract proposal currently being evaluated for FY15 execution, the FY15 Funded Position enables the program to achieve mission accomplishment with a high probability of success.

• There may still be requirements to move approved funding between EEICs, which may impact (positive or negative) the applicable Risk Categories, but the adjustments cannot be finalized until contract negotiation & definitization is completed third quarter FY15.

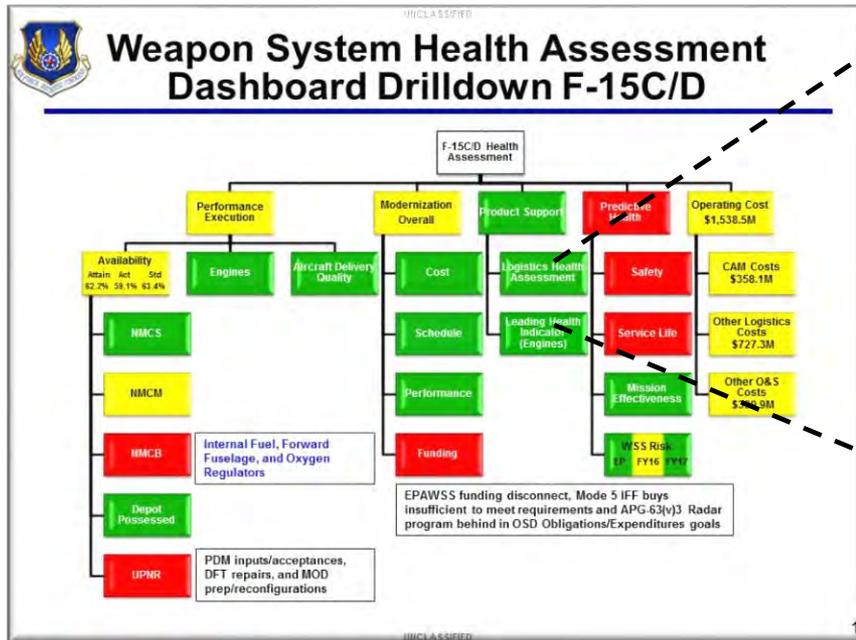
Impacts

Risk

FY15 TF WSS Rqmt		FY15 TF WSS Funding		FY15 Model TF WSS Overall Risk Assessment		FY15 SPM TF WSS Overall Risk Assessment			
\$387,472		\$305,282		Red		Green			
Risk Categories	FY15 TF Risk (color)	FY15 TF Success	FY15 TF Fund (BL + OCO)	Buybacks/Cuts					
A/B/M									
Aircraft Depot/Hvy MX									
CLS Mgmt Support	Red	\$102,749	\$87,005	\$12,595	\$7,871	\$3,146	(\$4)	(\$87,005)	
CLS Spares	Yellow	\$61,067	\$57,308	\$554	(\$4,256)	(\$9,066)	(\$12,272)	(\$57,308)	
Engines	Yellow	\$21,656	\$17,743	\$1,863	(\$1,214)	(\$4,291)	(\$6,342)	(\$17,743)	
Exchangeables									
Missiles									
OME									
Software	Black	\$7,124	\$1,314	\$5,086	\$3,999	\$2,912	\$2,187	(\$1,314)	
Storage									
Sustaining Engineering	Red	\$184,775	\$132,050	\$41,881	\$25,614	\$9,346	(\$1,499)	(\$132,050)	
Tech Orders	Orange	\$15,557	\$9,862	\$4,092	\$1,685	(\$722)	(\$2,326)	(\$9,862)	
Training									



WSER Template Product Support



F-15C/D Logistics Health Assessment

UNCLASSIFIED

Based on 30 Sept 2014 LHA

Program	LHA Score	PS Mgmt	Design Reviews	Sustaining Engineer	Supply Support	Mt Plan & Mgmt	PHS&T	Tech Data	Support Equip	Training & Steep Support	Manpower & Personnel	Facilities	Computer Resources Support
Current System	99	G	G	G	G	G	G	G	G	G	G	G	G
F-15 AOCIP II	99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F-15 Avionics Replacement	99	G	G	G	G	G	G	G	G	G	G	G	G
F-15DORS	99	G	G	G	G	G	G	G	G	G	G	G	G
F-15 EPAWSS	99	G	G	G	G	G	G	G	G	G	G	G	G
F-15 Mode 5 IFF	99	G	G	G	G	Y	G	G	G	G	G	G	Y
F-15BMS/MSD Phase II	100	G	G	G	G	G	G	G	NA	G	G	G	G
F-15 Suite III Only	100	G	G	G	G	G	NA	G	G	G	NA	G	G
F-15C/APC-85VD	99	G	G	G	G	G	G	G	G	G	G	G	NA
F-15C/D-BCS Communication II	100	G	G	G	G	G	G	G	G	G	G	G	G
F-15C/D DVR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F-15C/D FSR	100	G	G	G	G	G	G	G	G	G	G	G	G
F-15C/D FASE	94	Y	G	G	Y	G	G	G	Y	G	G	G	G
F-15C/D SPS	99	G	G	G	G	G	G	G	G	G	G	G	G

Issue: None

UNCLASSIFIED

F-15/F-16 Leading Health Indicator Assessment (Engines)

UNCLASSIFIED

F100-220

Requirements	Production	Supportability	Safety/Quality	Operational Trends	Funding / Resources
Green	Green	Green	Green	Green	Green
Projected Risk to WRE:		6 mos: mos:	12	Green	36 mos: Green

Issue: None

Impact:

Way Ahead:

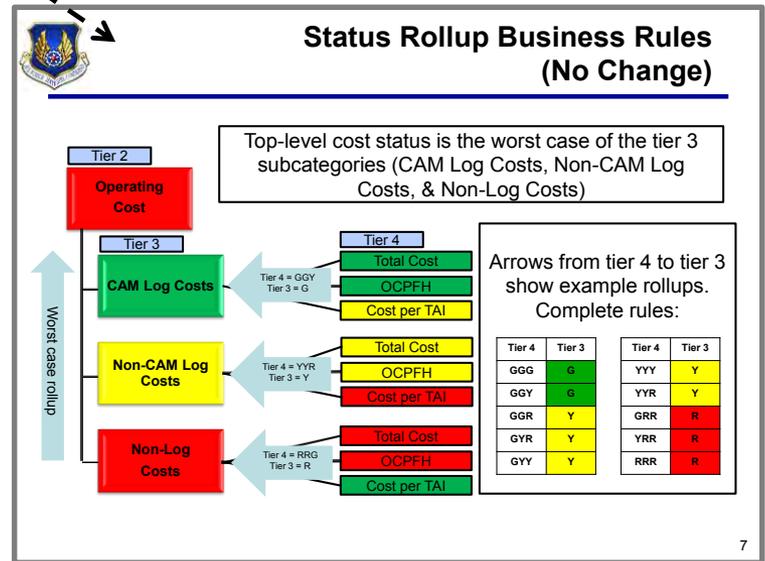
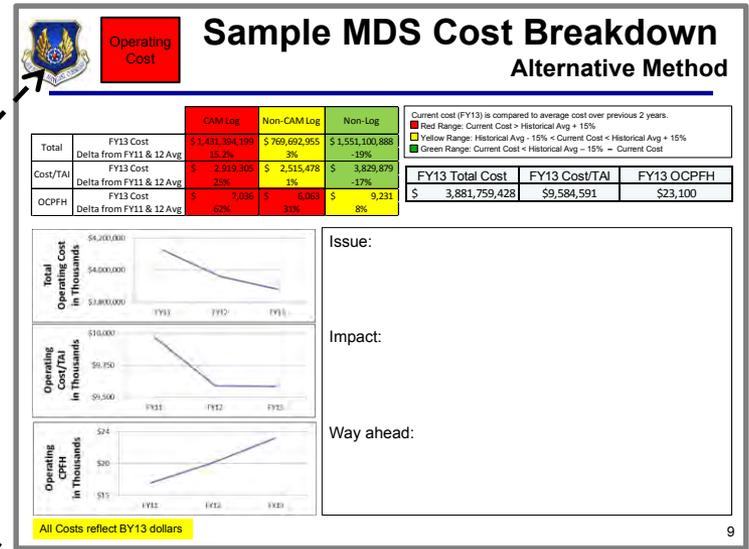
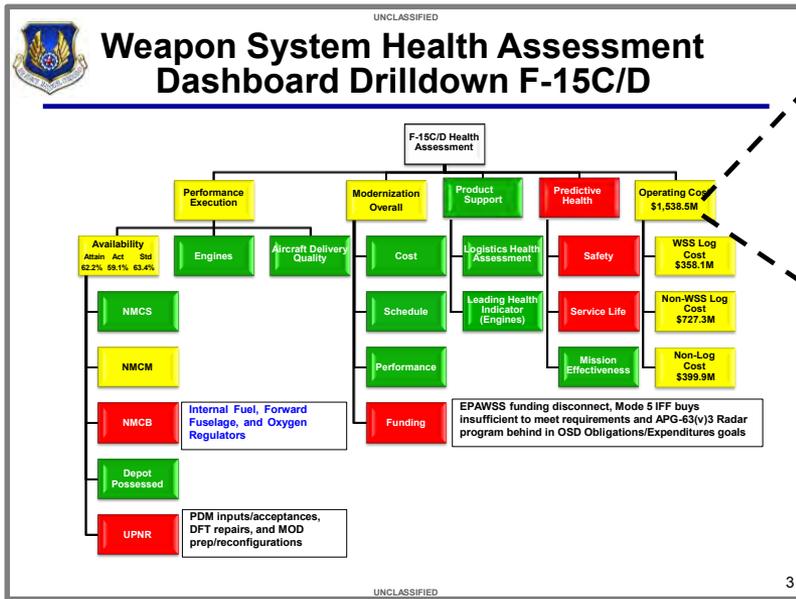
Get Well Date:

As of: 13 Mar 15

UNCLASSIFIED



WSER Template Cost





WSER Categories Current vs. Proposed

X's represent current WSER Cost buckets. Colors reflect proposed new WSER Cost buckets.

	WSS Log	Non WSS Log	Non Log Costs	Indirect Costs
1.0 - Unit Personnel				
1.1 - Operations Personnel			X	
1.1.1 - Pilot			X	
1.1.2 - Aircrew			X	
1.1.3 - Crew Technician			X	
1.1.4 - Command & Control			X	
1.2 - Maintenance Personnel		X		
1.2.1 - Organizational		X		
1.2.2 - Intermediate		X		
1.2.3 - Ordnance		X		
1.2.4 - Other Maintenance		X		
1.3 - Other Direct Support Personnel			X	
1.3.1 - Unit Staff			X	
1.3.2 - Security			X	
1.3.4 - Other Support			X	
2.0 - Unit Operations				
2.1 - Operating Material				
2.1.1 - Energy (Fuel, POL, Electricity)			X	
2.1.1.1 - AV Fuel			X	
2.1.1.2 - POL			X	
2.1.1.3 - Electricity			X	
2.1.2 - Training Munitions & Expendable Stores			X	
2.1.2.1 - Ammunition			X	
2.1.2.2 - Bombs			X	
2.1.2.3 - Rockets			X	
2.1.2.4 - Training Missiles			X	
2.1.2.6 - Pyrotechnics			X	
2.1.3 - Other Operational Material			X	
2.2 - Support Services		X		
2.2.1 - Purchased Services		X		
2.2.2 - Transportation		X		
2.2.3 - Other		X		
2.3 - TDY		X		

	WSS Log	Non WSS Log	Non Log Costs	Indirect Costs
3.0 - Maintenance				
3.1 - Organizational Maintenance & Support				
3.1.1 - Consumables		X		
3.1.2 - Repair Parts		X		
3.1.3 - Depot Level Repairables (DLR)				
3.1.3.1 - Flying DLR		X		
3.1.3.2 - Non-Flying DLR		X		
3.1.4.1 - Interim Contractor Support		X		
3.1.4.2 - Contractor Logistics Support	X			
3.1.4.3 - Other Contractor Support	X			
3.3 - Depot Maintenance - Overhaul/Rework	X			
3.3.1 - Aircraft Overhaul/Rework Depot Repair	X			
3.3.2 - Missile Overhaul/Rework Depot Repair	X			
3.3.3 - Engine Overhaul/Rework Depot Repair	X			
3.3.4 - Other Overhaul/Rework Depot Repair	X			
3.3.5 - Other Non-Overhaul Depot Repair	X			
4.0 - Sustaining Support				
4.1.1 - System Specific Operator Training	X			
4.1.2 - System Specific Non-Operator Training	X			
4.1.3 - Simulator Operations	X			
4.2 - Support Equipment Replacement		X		
4.3 - Operating Equipment Replacement		X		
4.4.1 - Sustaining Engineering	X			
4.4.2 - Program Management	X			
4.5 - Other Sustaining Support		X		
5.0 - Continuing System Improvements				
5.1 - Hardware Modifications				
5.2 - Software Modifications	X			
6.0 - Indirect Support				
6.1 - Installation Support				X
6.1.1 - Base Operating Support				X
6.1.2 - Real Property Maintenance				X
6.2 - Personnel Support				X
6.2.1 - Personnel Administration				X
6.2.3 - Medical Support				X
6.3 - General Training & Education				X

CAM Log

Non-CAM Log

Non-Log

Hardware mods not part of operating costs

Indirect Costs are not included in the WSER Cost Metric;



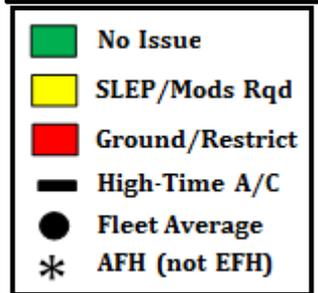
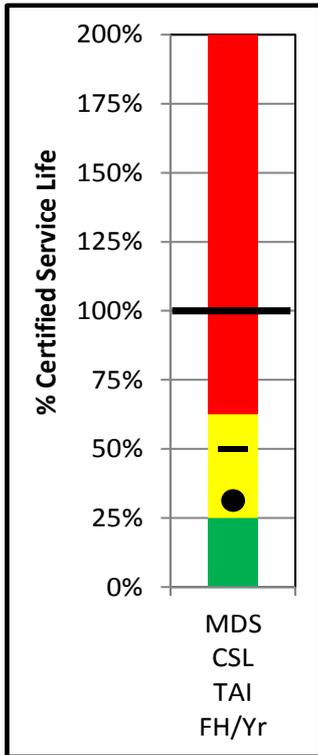
Way-Forward

- **AFMC/A4 keeps policy**
 - Schedules AFMC/CC
- **AFLCMC/LG builds briefing**
 - 1 Jul 15 starts process
 - 17 Jul 15 Briefs AFLCMC/CC
 - End of month with AFMC/CC
- **Future:**
 - Continue adding non aircraft weapon systems
 - Work with AFSPC on joint briefing
 - Refinements
 - Never Static





Predictive Health Service Life (Structures) Template



CSL >= ESL?	Normal MX Sufficient?	Metric	Notes
No	Yes	Red	Corrective actions funded

Business rules (see next chart)
 • used to establish metric

Lifespan metric depicts current state (not a measure of ability to achieve force structure requirement)

↑
 Metric shown on dashboard (depicts ability to achieve force structure planning requirement)

↑
 Metric shown as half-Green on dashboard if corrective actions are funded or programmed



Business Rules: Service Life (Structures)

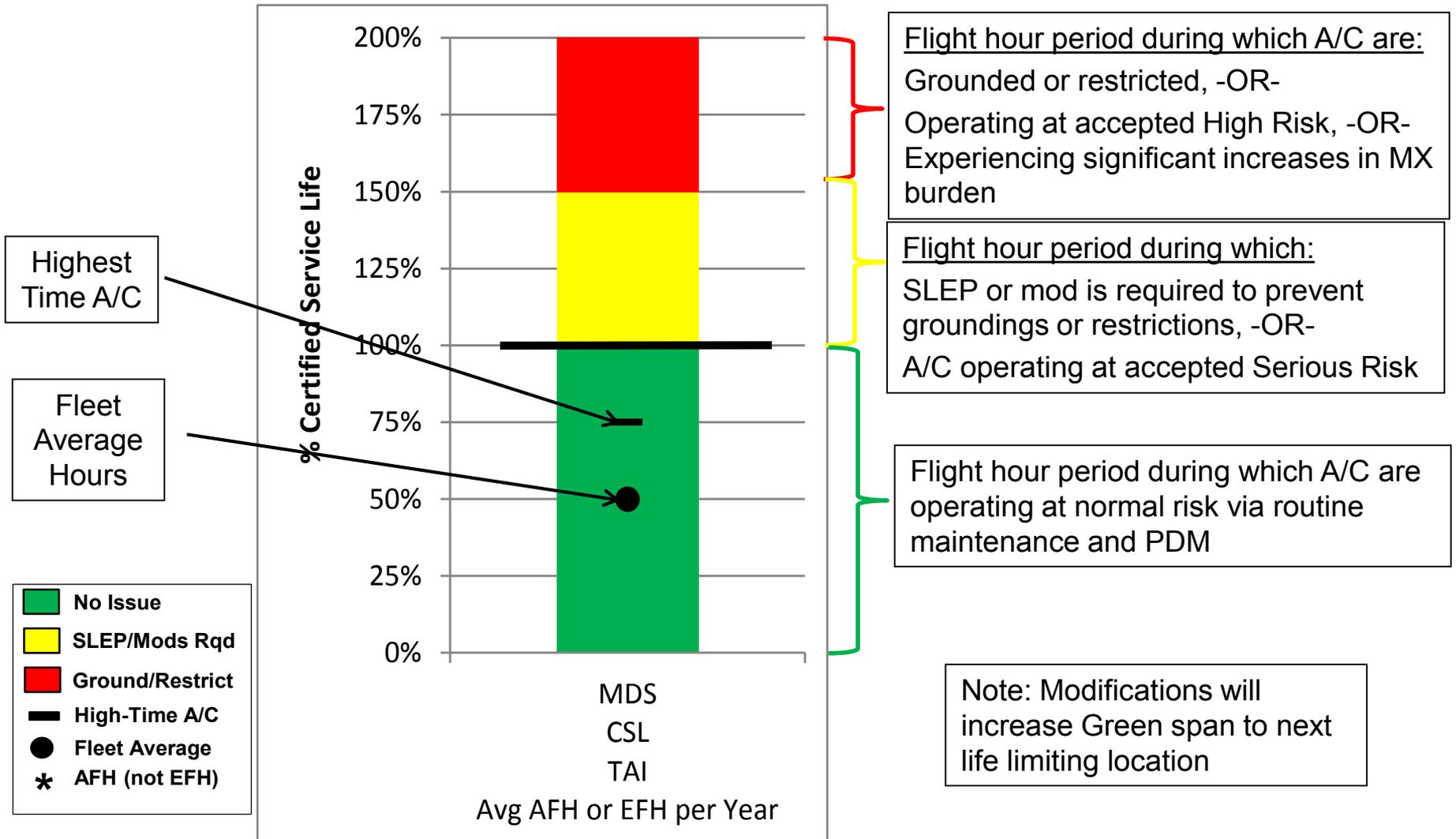
CSL > or = ESL?	Normal MX Sufficient?	Metric
Yes	Yes	Green
Yes	No	Red
No	Yes	Yellow
No	No	Red

- **CSL (Certified Service Life) is the service life limit included in each aircraft's Airworthiness Certificate**
 - SAF/AQ memo dated 11 May 09 “directs the inclusion of service life limits as a mandatory element of aircraft airworthiness certificates”
- **ESL (Economic Service Life) is the value used in force structure planning**
 - HQ USAF/CV memo dated 15 Dec 09 states “ESL is to be used for the purpose of force structure planning and outside agency engagement”
- **Normal Maintenance (MX) “Yes”:** inspections, repairs and occasional component replacements are sufficient to achieve ESL
- **Normal MX “No”:** modification program or fleet-wide component replacements are required to achieve ESL



Structures Lifespan Metrics

“How to Read the Chart”





•B-1B CAIG Element Breakdown

Cost Elements	CAM Log		Other Log Costs		Other O&S Costs	
	Current Year	%	Current Year	%	Current Year	%
1.0 Mission Personnel						
1.1 - Operations Personnel					57,935,195	-2.83%
1.2 - Maintenance Personnel			202,393,251	-8.01%		
1.3 - Other Direct Support Personnel					28,696,324	-4.07%
Missing Manpower Costs					-	
2.0 Unit Operations						
2.1 - Operating Material					302,426,699	-19.91%
2.1.1 - Energy (POL, Electricity)					290,342,382	-20.22%
2.1.1.1 - AV Fuel					289,302,439	-20.30%
2.1.1.2 - POL					1,039,943	12.45%
2.1.1.3 - Electricity					-	
2.1.2 - Training Munitions & Expendable Stores					7,139,377	-1.00%
2.1.3 - Other Operational Material					4,944,940	-23.48%
2.2 - Support Services			11,496,917	-29.05%		
2.3 - TDY			1,739,535	-27.57%		



B-1B CAIG Element Breakdown Continued

Cost Elements	CAM Log		Other Log Costs		Other O&S Costs	
	Current Year	%	Current Year	%	Current Year	%
3.0 Maintenance						
3.1 Organizational Maintenance & Support						
3.1.1 - Consumables (SDT Data FY08+)			-			
3.1.2 - Repair Parts	76,471,658	-5.92%				
3.1.3 - Organizational-Level DLRs						
3.1.3.1 - Flying DLRs (SDT Data FY08+)	291,273,756	-25.48%				
3.1.3.2 - Non-Flying DLRs			(3,900)	-87.60%		
3.1.4 - Contract Maintenance Services						
3.1.4.1 - Interim Contractor Support			-			
Missing ICS			-			
3.1.4.2 - Contractor Logistics Support	10,658,721	20.34%				
3.1.4.3 - Other Contractor Support	-					
3.2 Intermediate Maintenance	1					
3.3 Depot Maintenance	110,186,598	-1.65%				
3.3.1 - Aircraft	108,885,912	-0.86%				
3.3.2 - Missile	-					
3.3.3 - Engine	428,337	-29.01%				



B-1B CAIG Element Breakdown Continued

Cost Elements	CAM Log		Other Log		Other O&S Costs	
	Current Year	%	Current Year	%	Current Year	%
4.0 Sustaining Support						
4.1 - System Specific Training	378,959	30.28%				
4.2 - Support Equipment Replacement			-			
4.3 - Operating Equipment Replacement			-			
4.4 - Sustaining Engineering & Program Mgmt	39,963,445	-16.96%				
4.5 - Other Sustaining Support			1,613,579	-31.71%		
5.0 Continuing System Improvements						
Modifications, Total						
5.2 - Software Maintenance & Modifications	116,731,961	0.40%				



•B-1B CAIG Element Breakdown

CAM Log

Other Log Costs

Other O&S Costs

Cost Elements	CAM Log				
	Prior Year 1	Prior Year 2	Historical Avg	Current Year	%
3.1.2 - Repair Parts	\$87,881,506	\$74,680,160	\$81,280,833	76,471,658	-5.92%
3.1.3.1 - Flying DLRs (SDT Data FY08+)	\$388,634,407	\$393,106,535	\$390,870,471	291,273,756	-25.48%
3.1.4.2 - Contractor Logistics Support	10,853,490	6,860,308	8,856,899	10,658,721	20.34%
3.1.4.3 - Other Contractor Support	-	-		-	
3.2 Intermediate Maintenance	-	-		1	
3.3 Depot Maintenance	111,137,994	112,940,489	112,039,241	110,186,598	-1.65%
3.3.1 - Aircraft	108,842,191	110,808,080	109,825,135	108,885,912	-0.86%
3.3.2 - Missile	-	-		-	
3.3.3 - Engine	417,387	789,366	603,377	428,337	-29.01%
3.3.4 - Other	1,655,165	1,313,405	1,484,285	872,348	-41.23%
3.3.5 - Other Non-Overhaul Depot Repair	223,251	29,638	126,444	-	
4.1 - System Specific Training	256,986	324,778	290,882	378,959	30.28%
4.4 - Sustaining Engineering & Program Mgmt	69,562,105	26,688,169	48,125,137	39,963,445	-16.96%
5.2 - Software Maintenance & Modifications	191,750,982	40,789,952	116,270,467	116,731,961	0.40%

•Issues:

•Impact: