LOCKHEED MARTIN MISSILES AND FIRE CONTROL

PPM AND EVM ONE TEAM, ONE PROCESS

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AGENDA

- EVMS System Progression
- LMMFC Best Practices
 - Keys to Success
 - Evolution of a Culture Change
- PPM/EVMS Maintenance Strategy
- PPM/EVMS Steering Committee
 - Program Self Assessments
- Evolution to Data Driven Metrics



EVMS SYSTEM PROGRESSION - LMMFC

- Pre 2007
 - Site Certification. Each program subject to SAR Subsequent Application Review with local DCMA annual review
- Oct 2007
 - Initial DCMA EV Center field audit conducted
 - 104 Discrepancy Reports (DRs) issued
- Oct 2007 2009
 - Established Executive Steering Committee
 - Processes upgraded
 - Tools upgraded (CASPER to COBRA)
 - Training program established
- Nov 2009
 - Second DCMA EV Center Audit
 - 33 DRs issued
 - Added Humphries and Associates Consulting / Independent Audits
 - Major improvement demonstrated in people, processes and tools. MFC then further refined its EV System
- Nov 2010
 - Third DCMA EV Center Audit
 - 3 DRs all minor
- April 2011
 - All DRs formally resolved by April 2011
 - DCMA EV Center declared MFC "low risk" recommends DACO deem MFC system compliant
- July 2012
 - Letter of Compliance received from the Divisional Administrative Contracting Officer (DACO)

MFC EV System Maintained Compliant Rating Since Reinstatement



MFC PPM/EV BEST PRACTICES

- Secured Executive Leadership Commitment
- Program Management share leadership of the EVMS process with Finance and Planning
- Established EVMS Change Control Board
- Managed the review like a Program
- Adopted Common Tools for Cost and Schedule
- Engaged with DCMA
- Obtained independent assessments \ outside eyes as necessary



KEYS TO SUCCESS – THEN AND NOW

THEN (2007)

- No mock interviews, Minimal internal surveillance reviews, No steering committee, Minimal CAM EVMS training
- Inadequate \ incomplete EVMS processes
- EVMS was considered a Business Operations only process minimal to no Program Management involvement

• NOW (2018)

- EVMS CCB, Mock interviews, Internal Surveillance Reviews, Steering Committee, CAM 101, CAM Readiness Matrix, Self Assessment Scorecard, Joint System Surveillance Reviews (With DCMA)
- Improved Tools:
 - 14 Point IMS Health Check, EFS Cost System, Enhanced EFS/wInsight integration, eCAM Notebook, Cost Schedule Integration Tool (Milestone Comparison Tool), MEDIC IMS Tool, and Planning Toolbar



MFC EVMS "DNA" CHANGE

PROCESS

- Documented and Controlled
- Common Processes
- Recurring Program Self Assessment
- Program Management Accountability

PEOPLE

- Steering Committee Leadership
- Documented CAM Role
- CAM Qualification and Recurring Training
- Support Personnel Training
- Program Management Ownership



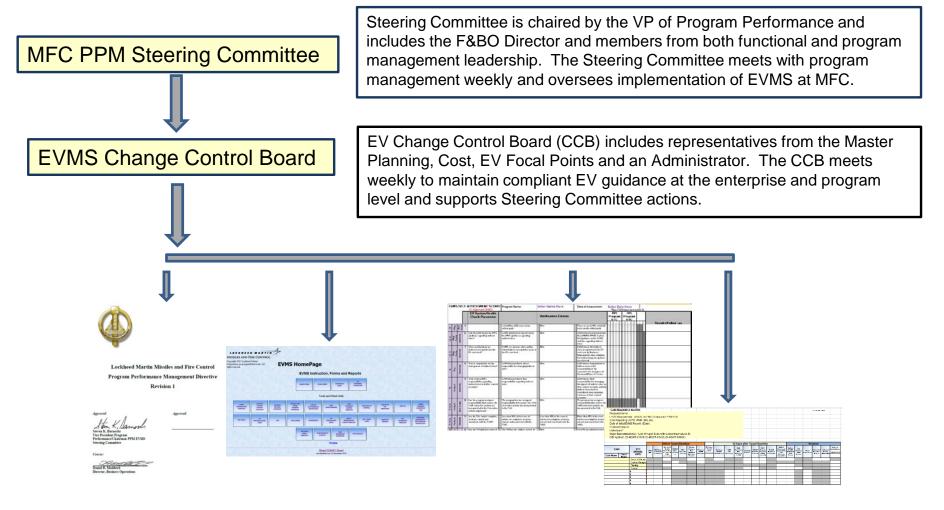
TOOLS

- EFS
- Enhanced winsight Capability
- Schedule Health Checks
- Automated Cost/Schedule Integration Checks
- Common E-CAM Notebook

Received 2012 Malcolm Baldrige National Quality Award



MFC PPM/EVMS MAINTENANCE STRATEGY



MFC PPM/EVMS STEERING COMMITTEE WEEKLY MEETING

MFC PPM Steering Committee

VP, Program Management

Dir. Estimating and Cost Mgmt

Program Management Executives

- VP Fire Control
- VP Tactical Weapons
- VP Air and Missile Defense
- PPM POCs for Each LOB

Functional Management Executives

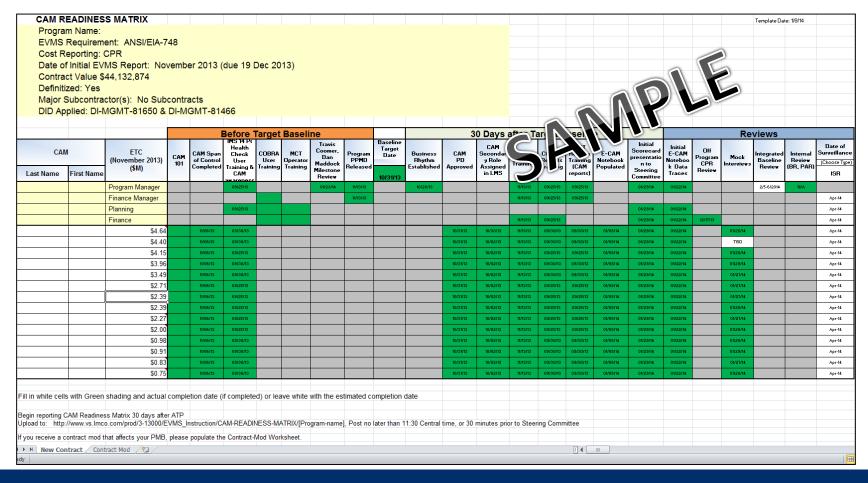
- Engineering
- Manufacturing
- Planning
- Contracts
- Compliance
- Procurement
- Corporate PPM POC

- MFC Steering Committee
 - Demonstrates executive commitment to PPM
 - Oversight of all aspects of PPM
 - Membership supports
 Corporate PPM Committees
- Embraces PPM Implementation
 - Includes executive functional, program and LOB leadership
 - Establishes PPM best practices and drives training, process and tool adaptation



CONTROL ACCOUNT MANAGER (CAM) READINESS MATRIX (FOR NEW PROGRAMS)

Presented to Steering Committee weekly until ALL Baselining requirements are complete



EVMS SELF-ASSESSMENT SCORECARD

- Completed monthly by all programs and presented to the Steering Committee.
- 105 Self-Assessment questions covers the 32 EIA guidelines

1	EVMS Self Assessment Scorecard Steering Committee Approval:					Program Name:	Enter Name Here															
2						Date of Assessment: Enter Date Here					New CAM (see instruction 3)											
3	10 August 2011		11	EV System Health Check Parameter		Verification Criteria			Pro TC	0% gra Val VMS	m ue	Pr ETC	20% ogra Va AM:	am Ilue								
4	ANSI Guideli ne	G L #	Process Area			Red	Yellow		Green	CAM1	CAM 2	CAM 3	CAM 6	CAM 6	CAM 0	CAM 9	PM	Fin Mgr Planner	Flanner	Results	:/Follow-u	,
5	2.1.a	1	Organization	1	Has the program effectively decomposed and sequenced the scope of work?	There is no SOW-to-WBS mapping document or it is not available via WBS button on E-CAM Notebook.	A complete SOW-to-WBS document exists but it cannot be accessed via WBS button on E-CAM Notebook.		A complete SOW-to-WBS mapping document can be accessed via WBS button on E-CAM Notebook.								V	WV	d.			
6	2.2.a	6	Planning	2		CAM IMS effort has incomplete or missing logic.	CAM has provided all missing logic to planner for input into IMS.		CAM has no missing logic in IMS or has provided justification to planner.	W	×	۷		V	$\overline{\lambda}$			$\bigg) \bigg($				
7	2.2.a	6	Planning	3		CAMs and planners have not decomposed or validated and documented the high duration tasks.	CAMs and planners are in the process of decomposition or validation and documentation of high duration tasks.		CAMs and planners have decomposed or validated tasks with high du							<u> </u>	7	7	w			
8	2.2.a	6	Planning	4		Program has no critical path through period of performance.	Critical path thru PoP exists but has tasks w/ excessively long durations that have not been validated and documented.		Program has a critic through period of performance.	٦							>	V	w'			
9	2.2.a	6	Planning	5		A CAM has LOE tasks on the critical path.	N/A	\blacksquare	There are no CAMs with LOE tasks on the critical path.	W	W	WN	/ W	WW		VV		/	d			
10	2.1.c	3	Organization		Do the resources align with the schedule?	MCT results indicate that there are unresolved cost/schedule integration issues for 2 EV cycles.	MCT results indicate that there are unresolved cost/schedule issues to be fixed by next EV cycle.		MCT results indicate that there are no cost/schedule integration issues.	W	V	W	/ W	WW	V	VV		W	ul'			

MFC E-CAM NOTEBOOK

Program Logo

MFC E-CAM Notebook - (CAM Name)



Logo	IVI	FC E-CAM NOTE	DOOK - (CAWI Na	me)
Program Au 1 Contract 2 Contract 3 Program 4 Program 5 Corporate 6 Reserved 7 MFC Org 8 Program 9 EV Forms 10 PPMP 111 EV Guida 12 EV Tools	Authorization Level PDs PPMD tion Charts e Org Chart Charts OBS ides & Misc s	Program References 14 Business Rhythm 15 SOW 16 WBS/Dictionary 17 RAM 18 HRL 19 IMP 20 Pgm Sum Master Schedule 21 IMS and Related Docs 22 Critical Path 23 CBB Log 24 Reserved 25 CPR/IPMR 26 Corrective Action Log 27 Risk Register 28 LOB VP Presentations 29 Other Program Docs	CAM Specific Organization 30 CAM Bio 31 CAM Organization Planning, Scheduling, Budgeting 32 CAM Responsibilities 33 CAM PDs 34 Charge # Open / Close 35 Control Account Plan Revisions & Data Maintenance 36 SBCRs 37 Reserved 38 ECRs 39 CAM CEAC	Analysis & Reports 40 Manpower 41 Performance Report 42 EV Detail Report 43 Variance Analysis 44 Time-phased Report 45 Reserved CAM Custom 46 EV Objective Criteria 47 Subcontract 48 CAM Custom 49 CAM Custom
	FVM Pro	cess F_CAM Note	book Program Administrator	TEMPLATE APPROVED 6341445



EVOLUTION TO DATA DRIVEN METRICS

Programs will begin presenting the results of the Data Driven Metrics
 Monthly and provide RTG plan for each metric that is red or yellow

Metric Ta										
cords: 13	31									
GL	Metric	Type	Frequency	Test Step	Test Metric	Х	Υ	Threshold	Result	Comment
06	06A205a	Automated	Monthly	Are lags used in the schedule?	X = Count of incomplete activities (tasks and milestones) with at least one lag in the predecessor logic in the IMS Y = Total count of incomplete activities (tasks and milestones) in the	32	1,753	X/Y = 10%	Passed	
06	06A206a	Automated	Monthly	Are leads used in the schedule?	X = Count of incomplete activities (tasks and milestones) with at least one lead in the predecessor logic in the IMS Y = Total count of incomplete activities (tasks and milestones) in the	0	1,753	X/Y = 2%	Passed	
06	06A208a	Automated	Monthly	Do summary tasks in the schedule have logic applied?	X = Count of summary tasks with logic applied (# predecessors > 0 or # successors > 0) Y = Total count of summary tasks			X/Y = 0% X/Y = 0%	Passed	
06	06A209a	Automated	Monthly	Are schedule network constraints limited?	X = Count of incomplete activities (tasks and milestones) with hard constraints Y = Total count of incomplete activities (tasks and milestones)	SF.	1,753	X/Y = 0%	Failed	
06	06A210a	Automated	Monthly	Do LOE activities have discrete	X = Count of LOE activities in the IMS	0	100	X/Y = 0%	Passed	

SUMMARY

- EMVS fully evolved into the MFC culture
 - Fully supported by leadership
 - Multiple Audits / Training
 - Policies and procedures (LMC and LMMFC)
 - Business Rhythm
 - Compliance and maintenance structure
 - Always leaning forward
- Ready for DDM

EVM is truly part of the MFC DNA



QUESTIONS?

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