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Successful Implementation of an Over Target Baseline/Schedule from a Government Perspective

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Agenda



n Over Target Baseline (OTB)/Over Target Schedule (OTS)

- Background Information
- Implementation
- Examples/Lessons Learned
- Summary
- Backup
 - Resources
 - Acronyms



What is an OTB & OTS?

Before Overrun	
Total Allocated Budget (TAB)	
Contract Budget Base (CBB)	
Performance Measurement Baseline (PMB)	Management Reserve
After Overrun	
Total Allocated Budget (TAB)	
Contract Budget Base (CBB)	Over Target Budget
Performance Measurement Baseline (PMB)	Management Reserve
Source: DoD Earned Value Management Implementation Guide, October 2006	

- n **OTB—An established performance budget that exceeds the value of the negotiated contract**
- n **OTS—An established schedule that extends beyond the contract milestones or delivery dates**
- n **Earned Value Management (EVM) analysis performed on adjusted baseline**
- n **Contract compliance, fee assessments based on original BAC**



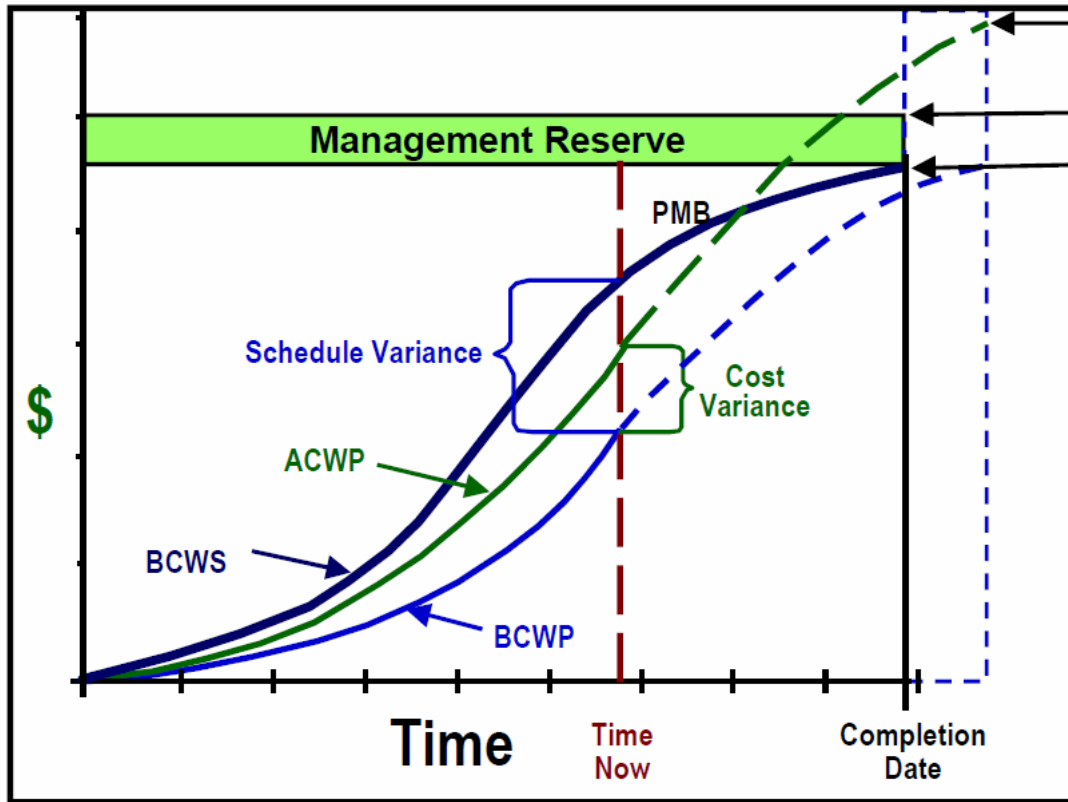
Why Do an OTB/OTS?

- n The budget and schedule for performing the remaining work is unrealistic





When Should an OTB/OTS be Done?



Work/Percent Complete
> 20-85%
Remaining Schedule
> OTB + 1 year

Projected Cost Growth
↑ 15%
Benefit Analysis
Benefit > Cost _{Time + Resources}

Source: DAU Earned Value Management 'Gold Card', February 2012

Source: OTB/OTS Handbook (May 7, 2003)



Considerations/Expectations



- n **What problems caused the contractor's performance-to-date leading to the need for OTB?**
 - Have they been fixed?
- n **How good is the contractor's system discipline to maintain baseline integrity and compliance with the intent of the industry/government guidelines and the contractor's EVM system/system description?**

Resolve Contractor performance/EVMS discipline issues prior to finalizing OTB/OTS



OTB/OTS Indicators

Cost



Significant difference between ETC, BCWR, CPI_{CUM}, TCPI_{EAC}, VAC, CV_{CUM}

TOTAL PROJECT						
CUM BCWS	CUM BCWP	CUM ACWP	SV	CV	CPI	TCPI
515,000	450,685	750,250	-64,315	-299,565	0.601	2.039
	BAC	EAC	VAC	BCWR	ETC	
	985,575	1,012,565	-26,990	534,890	262,315	
TOTAL PROJECT (ADJUSTED BASELINE)						
CUM BCWS	CUM BCWP	CUM ACWP	SV	CV	CPI	TCPI
750,250	750,250	750,250	0	0	1.000	1.000
	BAC	EAC	VAC	BCWR	ETC	
	1,985,675	1,985,675	0	1,235,425	1,235,425	

$$BCWR = BAC - BCWP_{CUM}$$

$$TCPI_{EAC} = (BAC - BCWP_{CUM}) / (EAC - ACWP_{CUM})$$

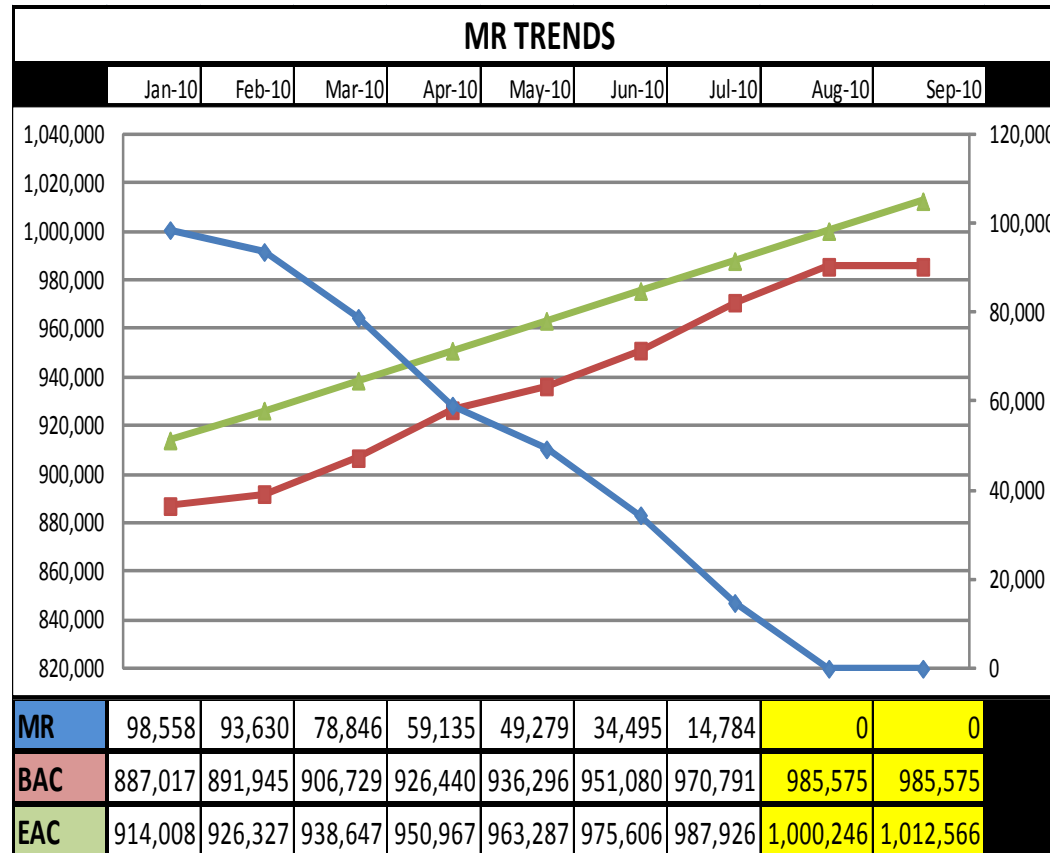


OTB/OTS Indicators

Cost



Lack of confidence in EAC due to frequent MR allocations





OTB/OTS Indicators

Cost



1. Control account budgets for work remaining that do not represent a reasonable chance of success

2. The existence of zero-budget control account

		CUM BCWS	CUM BCWP	CUM ACWP	BAC	EAC	CPI CUM	TCPI EAC
1	TOTAL PROJECT	515,000	450,685	750,250	985,575	1,012,566	0.601	2.039
1.2	BUS	206,000	315,480	187,563	394,230	253,141	1.682	1.201
1.2.1	BUS INT	206,000	315,480	150,050	394,230	202,513	2.102	1.501
1.2.2	BUS TEST	0	0	37,513	0	50,628	0.000	0.000
1.3	PAYLOAD	309,000	135,206	562,688	591,345	759,424	0.240	2.319
1.3.1	PAYLOAD INT	309,000	135,206	525,175	591,345	708,796	0.257	2.484
1.3.2	PAYLOAD TEST	0	0	37,513	0	50,628	0.000	0.000

1

2



OTB/OTS Indicators

Schedule



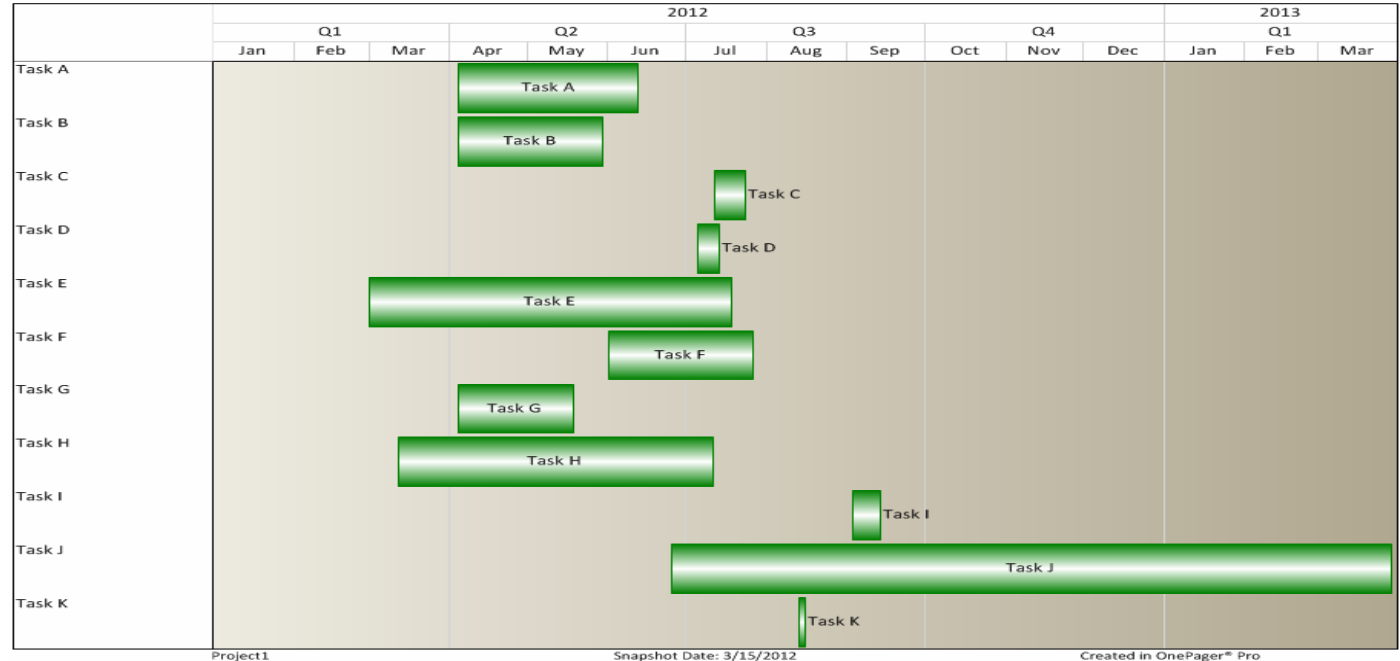
High level concurrency

Significant negative float in critical path

Unrealistic relationship logic and activity duration

Fixed start/finish dates and frequent reserve reductions

Significant difference between BEI and SPI





OTB/OTS Indicators

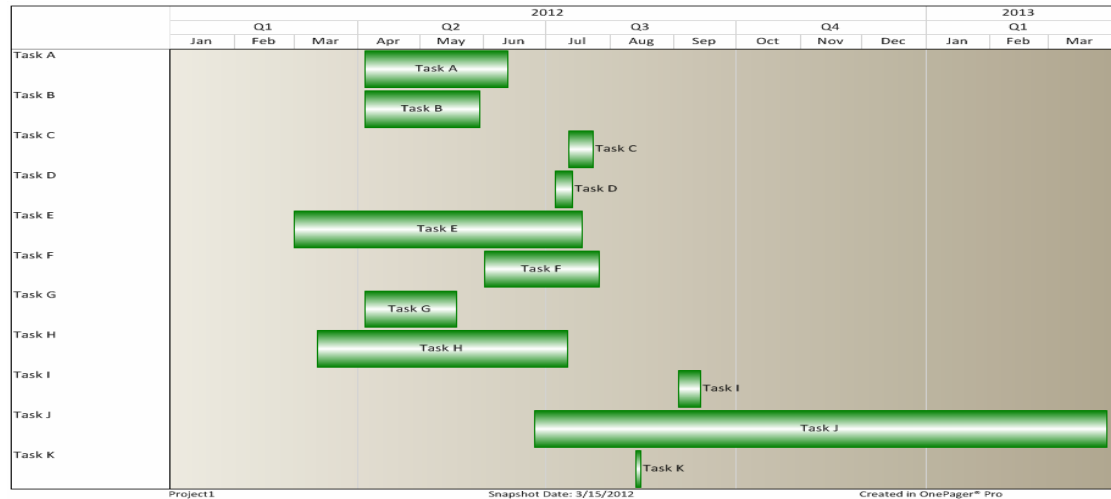


Risk

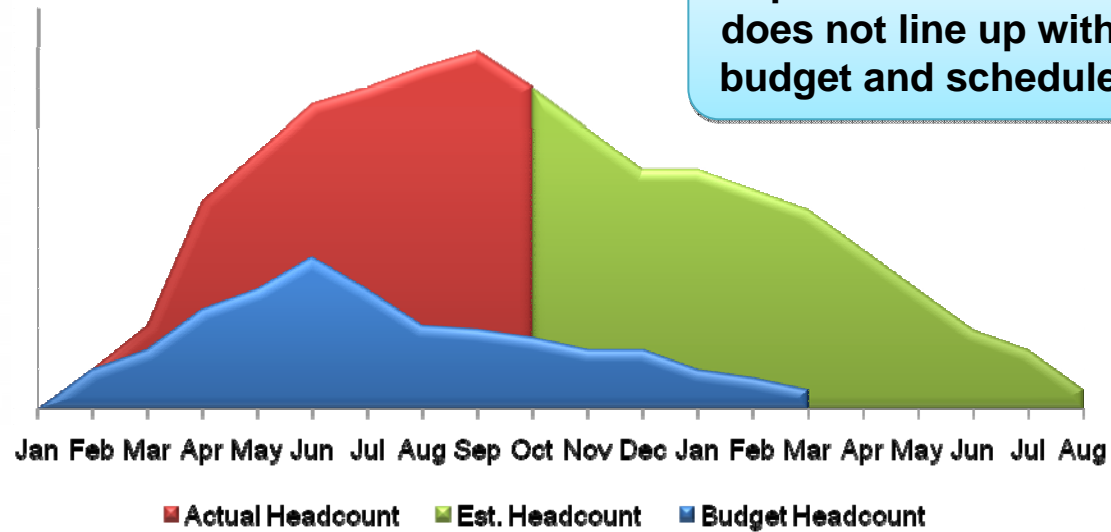
Increasing levels of risk indicated by project's risk management analyses

Schedule does not correlate to budget or ETC phasing

Project Manager unable to effectively use performance data



Expected Headcount does not line up with budget and schedule





OTB/OTS Indicators

Data Accuracy



Baseline Movements

Unstable EAC

Lack of Corrective Action Plan

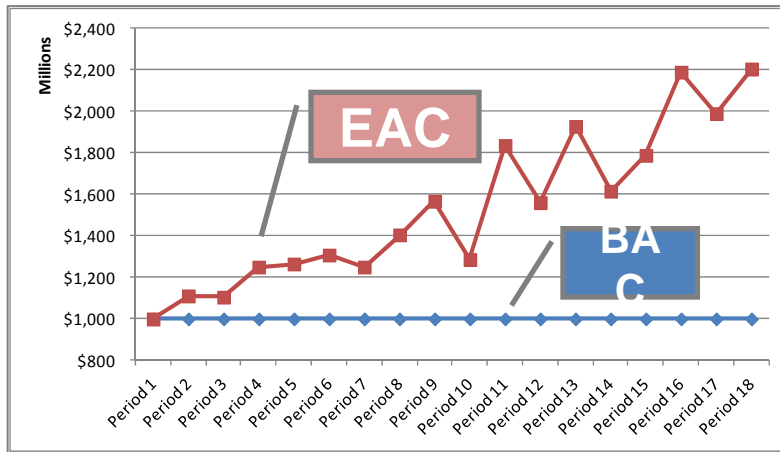
Unexplained Variances

Management Challenges

EV ≠ Actual Progress

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE							
1. CONTRACTOR		2. CONTRACT					
6. PERFORMANCE DATA							
ITEM (1)	BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	BUDGETED				Jul-XX (7)
			Apr-XX (4)	May-XX (5)	Jun-XX (6)		
a. PERFORMANCE MEASUREMENT BASELINE AS OF:							
Beginning of Period	1,500,000	25,000	17,000	17,001	17,002		14
b. BASELINE CHANGES							
Current Month's changes.							
Change 1							
Change 2							
Change 3							
Change 4							
Change 5							
Misc. Changes							
c. PERFORMANCE MEASUREMENT BASELINE AS OF:							
End of Period	1,550,000	50,000	13,000	13,500	25,000		15
Management Reserve							
8. TOTAL							
CHANGES FROM PREVIOUS MONTH TO CURRENT MONTH							
	50,000	25,000	(4,000)	(3,501)	7,998		1,000

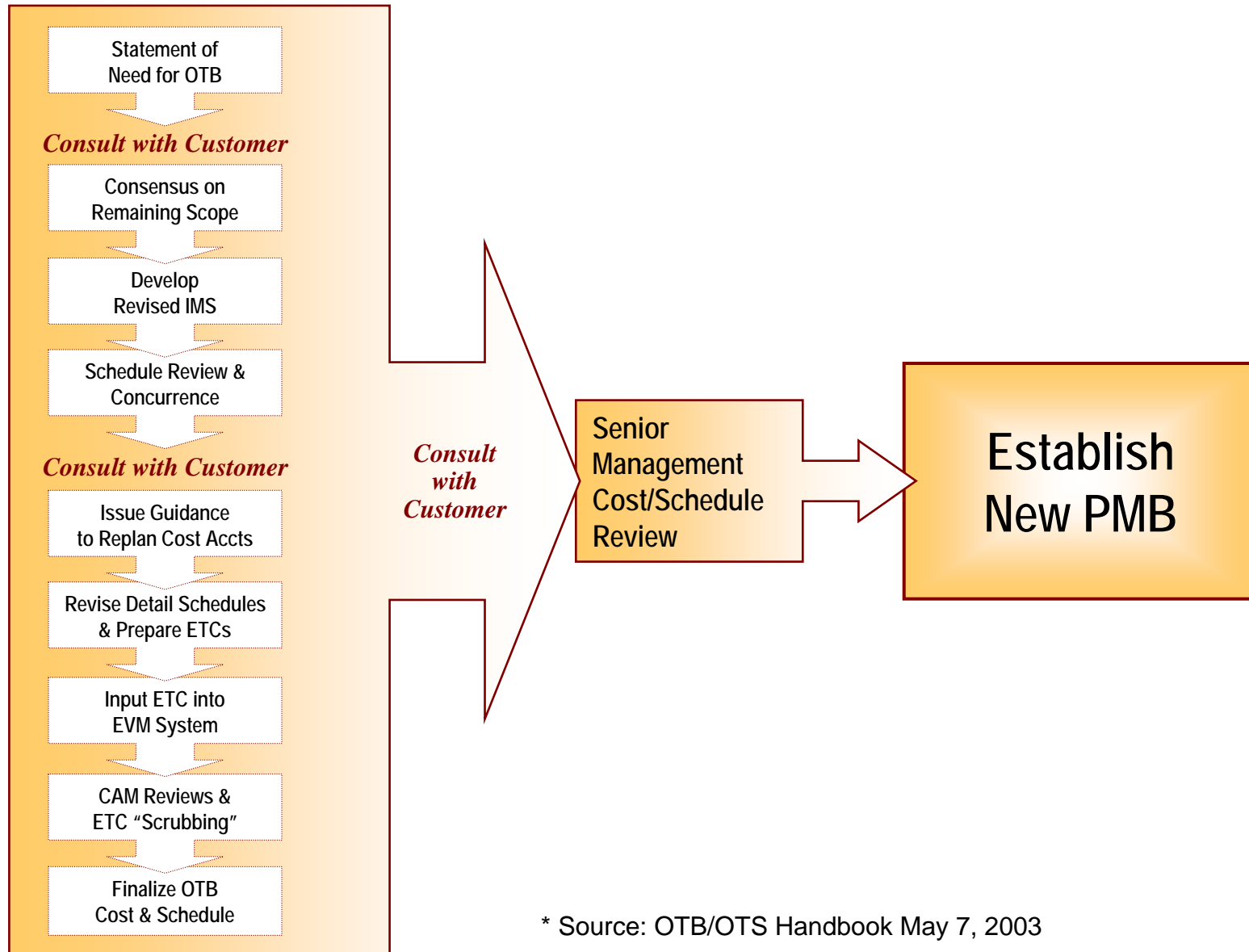
Example 1
Frequent changes to Baseline (Fmt 3) can warp the SPI



Example 2
Month-to-month changes in the EAC



The OTB Process Flow



* Source: OTB/OTS Handbook May 7, 2003



Ground Rules & Assumptions (GR&A)



- n **80% confidence level needs to be established on cost and schedule**
 - Schedule and Basis of Estimate jointly agreed to
- n **Government and Contractor need to agree up front on project scope to go and duration for execution**
- n **Top level cost/schedule growth estimates may be generated up front, but should not be used to constrain the final OTB/OTS results**
- n **OTB implementation training for government and contractor**
- n **Establish joint weekly tag up meetings**
- n **Establish realistic OTB/OTS implementation schedule ...**
- n **Do not suspend EVM reporting against original baseline**
- n **Government and Contractor agree to method for adjusting variances**
- n **Establish culture of teamwork, realism, and open communication**
- n **OTB/OTS goal is one time implementation with CPI/Schedule Performance Index (SPI) greater than 1.0**



Shoulder-to-Shoulder (STS)



n Basis of Estimates (BOE)

- Description of work and products
- Estimate of the resources required
- Expenditure profile of estimated resources

n STS Evaluations

- Scope, Schedule, Resources, Government-Furnished Equipment (GFE), Remaining Work, & Margin Span are assessed for definition and achievability

n Risk Assessment (allocated to MR)

- List any risks to the EAC
- Determine dollar value
- Recommend BOE or MR add
- Summarize for STS Agreement

OTB Shoulder to Shoulder Control Account Manager Evaluation Sheet		
Control Account Manager: _____		
Control Account _____		
Control Account Description _____		
Team Lead: _____		Date: _____
<hr/>		
1. Is the remaining scope completely defined?	Yes	No
2. Are the schedules and time spans achievable?	Yes	No
3. Did the CAM consider all schedule constraints (vertical and horizontal)	Yes	No
4. Are resources (including staffing) properly time phased within the control accounts to support schedule requirements?	Yes	No
5. Has the CAM considered the impact of GFE/GFP (If applicable)?	Yes	No
6. Based on discussions with the CAM, are you confident that the remaining work is comprised of the appropriate SOW tasks; has adequate resources to achieve the program's schedule; provides management timely insight into deviations to the plan; and has a process to evaluate both technical and cost impacts when determining corrective actions?	Yes	No
7. Based on discussions with the CAM, how was the margin priced, what were the CAM's assumptions for this time period (ie team member shift to other vehicles, or other control accounts). Do you agree with the CAM's approach for the margin span?		
Comments: _____ _____		
Submitted by: _____		

Example: STS Evaluation Sheet



Shoulder-to-Shoulder Agreement



Over Target Baseline
Shoulder to Shoulder Agreement

Date:
Summary (Labor Hours)

Control Account	Control Account Description	BOE Hours Reviewed	Agreed to Labor Hours	Comments

Summary Non Labor

Control Account	Control Account Description	Non-Labor \$ Reviewed	Agreed to Non Labor Dollars	Comments

Summary Threat Assessment

Control Account	Control Account Description	Threat value in Hours	POC	Comment

- Signatures indicate that the basis-of-estimate review took place and that tasks described in the basis-of-estimate are technically correct and are consistent with the hours and non labor dollars. This document is not contractually binding.
- This document was generated and the above hours and dollars recommended by a government/LMCO IPT consisting of the following members:

Control Account Manager Names Signature	Action Officer Names Signature
---	--------------------------------------

n STS Agreement

- Signature of CAM and Government Action Officer indicates that the basis-of-estimate review took place
- The tasks described in the BOE are technically correct and are consistent with the hours and non labor dollars



Example: Letter of Declaration



Prime Contractor

To: Program/Project Contracting Officer

Contract ABD 123-12-12345

Program/Project Formal Re-programming Over
Target Baseline Request for Approval

USA

Phone: 310-555-5555

Contracting Officer:

The Program/Project remaining baseline budget and schedule are no longer adequate to provide valid performance measurement information relative to the remaining work. Consistent with DFAR 252.234-7002, herein this letter indicates the Prime Contractor's intension to perform a formal re-programming to the Program/Project baseline.

The Prime Contractor expects the re-programming efforts to be collaborative, Shoulder-to-Shoulder team approach across all Integrated Product Teams with joint Customer/Government participation. A thorough review of resulting data should verify that the value and associated schedule agreed to in the re-programming process has been established as the new baseline.

Upon examining the remaining work under contract, it is apparent that the baseline adjustments for the scope of work in the current baseline will result in a total budget increase of \$X,XXX,XXX and schedule extension of XX months. Additionally, the performance variances will not be retained. The total re-programming effort should take approximately X months to achieve optimal results.

This formal re-programming of the baseline will enable the Program/Project manager to effectively manage performance for the remainder of the contract. We hereby request approval to implement an Over-Target Baseline and Over-Target Schedule.

Prime Contractor

Contracts Office



Example: OTB Implementation Schedule Comparison



Good

FY20XX											
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG				
GR&A/Joint Training & Prep/ OTB Kick-Off		Draft BOE & STS Reviews	Joint Review of Draft OTB Values	Stage Two BOE & STS Scrub	Comp. Joint Scrub Updates/ Draft MR Review/ STS Outbrief	Joint Preliminary Schedule Wall Walks	Joint Finalization of MR Reviews	Perform SPA for OTB/Cost & Schedule Adjustments Jointly Approved		Contractor Delivery of Performance Report with OTB Adjustments	Variance Proposal Complete

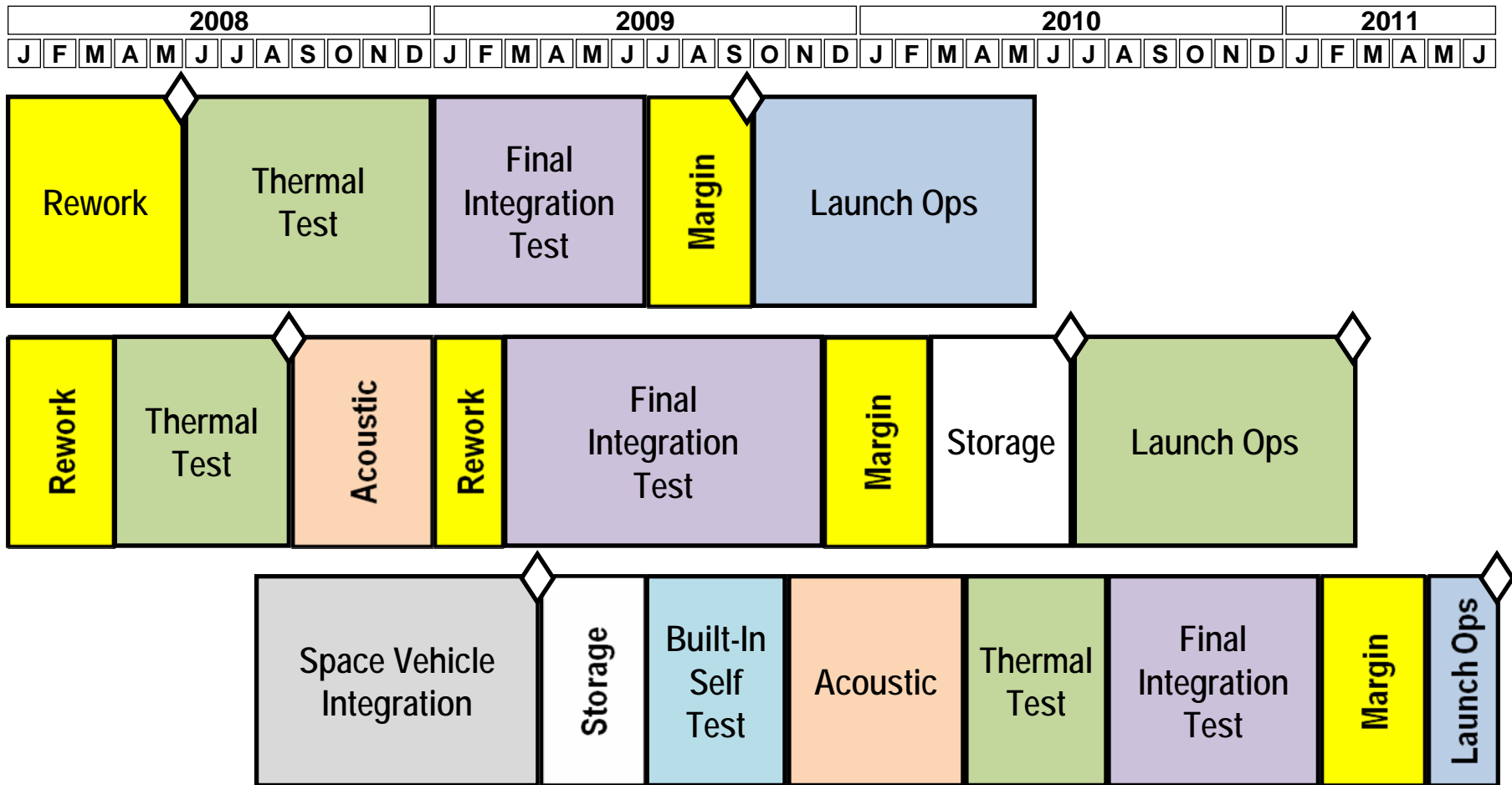
Bad

FY20XX									
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		
Contractor-Developed BOEs, Schedule Extensions, and MR Adjustments Proposed to the Customer			Customer OTB Kick-Off/ Contractor OTB Plan Reviewed/ Accept or Reject			OTB Updates Baseline			



Example: Schedule Adjusted for OTB

Scheduled Rework and Margin—Realistic and Achievable Baseline





Key Points

- n OTB/OTS—improve managerial control over execution of remaining work**
- n Culture of teamwork, realism, and open communication continues through execution**
- n Establish strong GR&As up front and hold to them**
- n Resolve previous performance/systemic issues prior to implementation**
- n Shoulder-to-shoulder process to reach agreement on technical, schedule, cost**



Resources



- n **OTB and OTS Handbook ,May 7, 2003**
 - <https://acc.dau.mil/CommunityBrowser.aspx?id=19576&lang=en-US>
- n **Department of Defense Earned Value Management Implementation Guide, October 2006**
 - <http://guidebook.dema.mil/79/EVMIG.doc><https://acc.dau.mil/CommunityBrowser.aspx?id=22907&lang=en-US>
- n **Defense Acquisition Guidebook, January 10, 2012**
 - <http://at.dod.mil/docs/DefenseAcquisitionGuidebook.pdf>
- n **Defense Acquisition University 'Gold Card', February 2012**
 - <https://acc.dau.mil/CommunityBrowser.aspx?id=19577>
- n **DFARS 252.234-7002 Earned Value Management System**
 - <http://www.acq.osd.mil/dpap/dars/dfars/html/current/252234.htm>



Acronyms

Acronym	Definition
ACWP	Actual Cost Work Performed
BAC	Budget at Complete
BCWP	Budgeted Cost Work Performed
BCWR	Budgeted Cost Work Remaining
BCWS	Budgeted Cost Work Scheduled
BEI	Baseline Execution Index
BOE	Basis of Estimate
CAM	Control Account Manager
CBB	Contract Budget Base
CPI	Cost Performance Index
CV	Cost Variance
ETC	Estimate to Complete
EVM	Earned Value Management

Acronym	Definition
GFE	Government-Furnished Equipment
GR&A	Ground Rules & Assumptions
IMS	Integrated Master Schedule
MR	Management Reserve
OTB	Over Target Baseline
OTS	Over Target Schedule
PMB	Performance Management Baseline
SPI	Schedule Performance Index
STS	Shoulder-to-Shoulder
SV	Schedule Variance
TAB	Total Allocated Budget
TCPI	To Complete Performance Index
VAC	Variance at Complete