



Integrated Baseline Review

*How To Achieve Project Success
by
Establishing a Realistic Baseline
and Involving your Customer*

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Why IBRs?

Have you ever run a project where:

- There were misunderstandings about the project scope between you and the customer?
- The customer gave you the schedule
 - And it was unrealistic...
 - And it was incomplete,,,
 - And you were dependent on the customer for some resources?
- You had to replan frequently due to poor work definition?

*Are most of your
projects like this?*

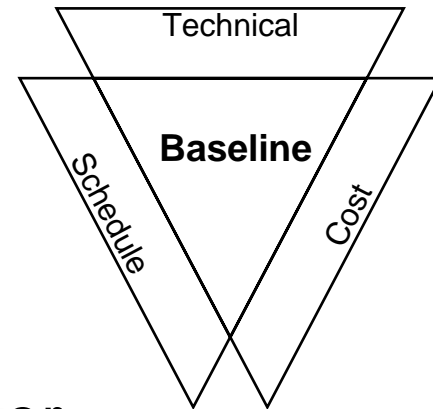


Purpose of the IBR

To establish and maintain a
mutual understanding of
the **risks**
inherent in the
Performance Measurement Baseline
and
management processes
that operate during project execution

What is an IBR?

- Evaluation of performance measurement baseline
 - Assessment of baseline realism
 - Identification of inherent risks
- Joint assessment by government & contractor
 - Informal discussions
- Continuous
 - Part of integrated project management (govt & ctr)
 - Should be seen as "Process"
 - Not a stand alone "Event"





The IBR is NOT . . .

- Not an audit
- Not a checklist review of process
- Not demonstration of EVMS compliance
 - However, as a “management process risk”, system issues should be included in the risk management plan
- Not a pass/fail event
 - work issues with contractor until resolved
- Not a redirection of contract
 - work with contractor to gain mutual understanding of baseline
- Not a formal review with lots of slides
- Not an “Event” but a “Process”

Specific Objectives of the IBR

- #1 Ensure the technical scope of work is fully included and is consistent with authorizing documents**

- #2 Ensure that key schedule milestones are identified and reflect a logical flow**

- #3 Ensure that resources are available and adequate**

- #4 Ensure that tasks can be objectively measured**

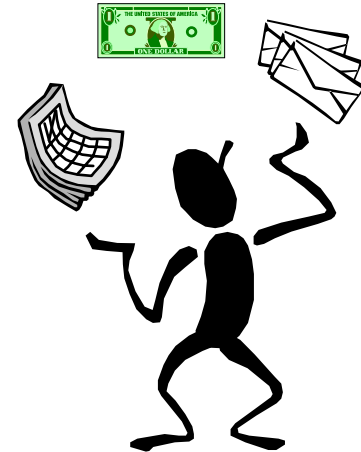
- #5 Ensure that management processes support successful execution of the project**



Outcome of the IBR

We will jointly answer this basic question at the outbriefing.....

Can we execute this contract
(technical work scope),
given the available
schedule and budget
resources?





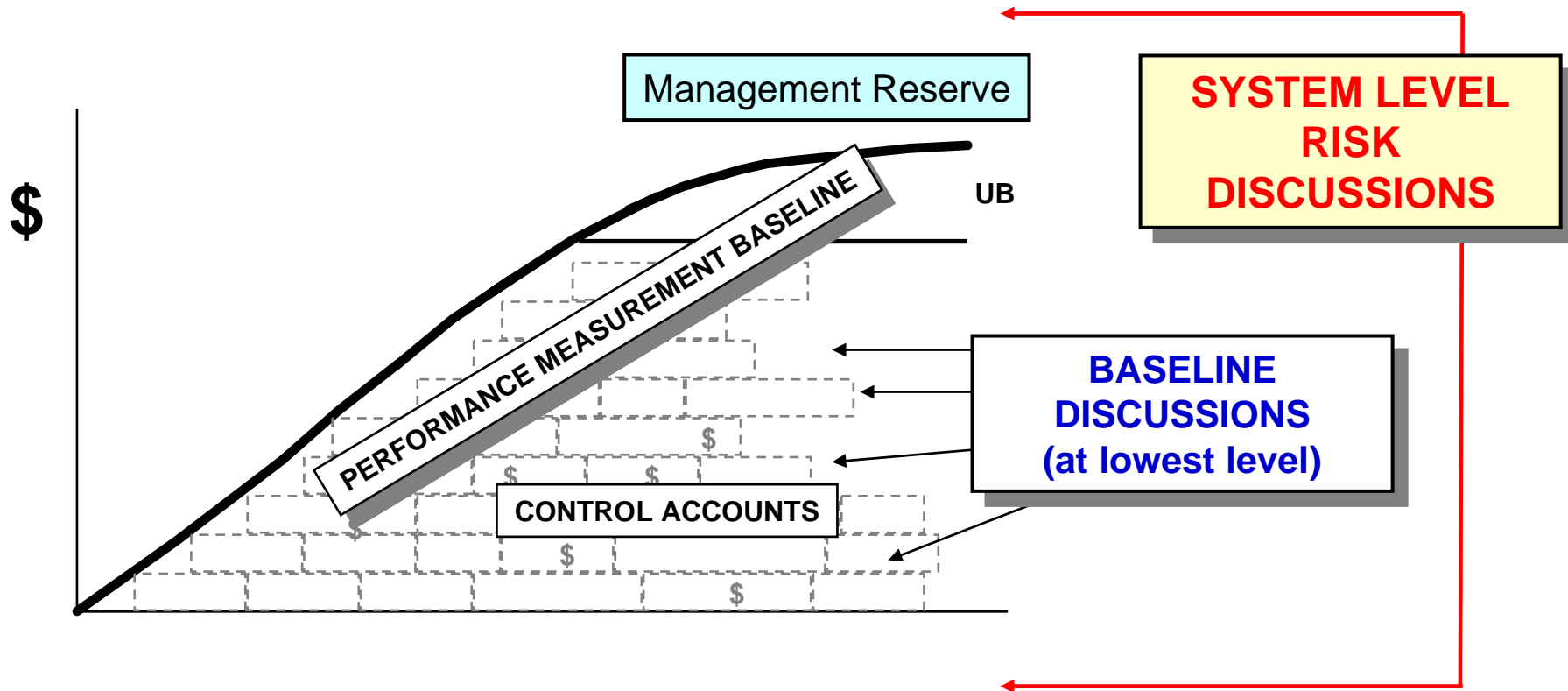
Benefits

- Benefits of the review
 - Understand project risks
 - Comparison of expectations
 - Address differences early
 - Correction of baseline planning errors
- Benefits after the review
 - Management insight
 - Early warning
 - Targeting of resources to address challenges
 - Mutual commitment to manage to the baseline
 - Team approach
 - **More executable programs!!**

What do we look at?

- **Baseline control account plans**
 - Assess realism at lowest level
 - “Rule of thumb”
 - Strive to review ~80% of contract value
 - Review
 - significant elements
 - risk areas
 - elements on critical path
 - May eliminate low dollar elements, or level of effort
 - Technical team and contractor should agree on coverage
- **System level assessment**
 - Assess realism and completeness at baseline level

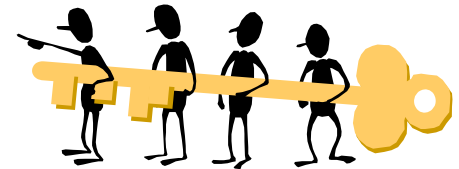
Reviewing the Baseline during the IBR





Who's Got the Responsibility?

- Customer project manager and technical staff are responsible for IBR
 - Key beneficiaries
- Joint Project Managers (customer/contractor) have the sole responsibility
 - Plan the IBR
 - training
 - membership
 - Agenda
 - Give inbriefing and outbriefing
 - Ensure that appropriate technical managers lead the discussions
 - Must be present and highly visible throughout IBR **(KEY!!)**
 - Send a clear signal to all team members that this is vital to project success
 - Establish plans to incorporate IBR results into everyday management of the project



Customer Team Members

Primary

- Project Manager, Team Chief
- System Engineer, Deputy
- Technical Staff and IPT Leads

Support

- EVMS support personnel
- schedule analysts
- financial managers
- cost analysts
- contracting officer
- surveillance activities

Responsibility: Technical Staff & IPT Leads

- Attend all training
- Prepare for IBR
- Lead/conduct IBR baseline discussions
- Achieve mutual understanding of baseline with contractor counterpart (CAM)
- Resolve differences: document any concerns or issues
- Participate in daily team meetings
- Document results of discussions for future action

Role of Support Team

- **Primary:**
 - support technical staff/CAM review of control accounts
 - assist their assessment of
 - schedule realism
 - cost realism
 - earned value methods
- Assist Program Manager with **overall *risk*** assessments
 - integrated management processes
 - resource constraints
 - overall funding constraints
 - assess completeness of work allocation
 - indirect cost & business base assumptions
 - current vs. negotiated rates

Role of Contractor

- Plan, develop, and establish the performance management baseline
 - “Scrub the baseline” to assure accuracy of planning
- Provide government team with an overview of their EVM system
- Participate in joint training
- Discuss adequacy of baseline and risks during IBR
- Documentation
 - make available for pre-IBR review
 - provide during baseline discussions
- Use EVMS to manage program per the baseline



Roadmap

- **Pre IBR: Prepare the IBR Plan**
 - Identify risk areas
 - Choose IBR team
 - Train the joint team
 - Review documents
- **IBR: The Review**
 - In-briefing
 - Joint look at baseline
 - Document findings (action items, discussions)
 - Outbriefing
- **Post IBR: Manage the Findings**
 - Document findings (IBR memo, risk plan)
 - Incorporate IBR results into management of program



Customer Team Preparation

- Project manager should develop an IBR Plan
 - Start immediately after contract award

- Establish dialogue with contractor

- Obtain support as needed from EVM staff offices

- Contact DCMA team or surveillance activities
 - Any system discipline issues that would preclude a successful IBR?

The IBR Plan

- Assess readiness of contractor
- Develop IBR schedule
- Identify ***Risk areas*** for review
 - **System** level (assess overall risk)
 - **Detail** level (control account risk)
 - Review contractor RAM (see next slide)
 - ***Jointly*** select significant control accounts for review (see Slide 20)
 - Determine subcontractor involvement
- Establish team and responsibilities
 - Add customer “CAMs” and DCMA experts to matrix
 - Selection of control accounts drives selection of IBR team members
- Conduct joint training
 - **All** team members must have training

Responsibility Assignment Matrix

Contractor prepares

Govt prepares

WBS	Element	Control Accounts	Budget	Contractor CAM	Govt CAM	DCMA
1.1.1.1	Air Vehicle	AV IPT Labor	✓ \$2,134,000	Madia	Vancheri	Banks
		Plant 1 Fabrication	✓ \$6,355,000	Jones	Vancheri	Banks
		Bldg 90 Assembly	✓ \$3,813,000	Madia	Vancheri	Banks
		Bldg 90 QA	✓ \$266,010	Madia	Vancheri	Banks
		Bldg 90 Final Delivery	✓ \$473,000	Madia	Vancheri	Banks
		Bldg 2 Paint	\$57,500	Smith	Vancheri	Banks
1.1.1.2	Wing	Upper Skin - material	✓ \$28,775	Harrison	Klein	Edwards
		Lower Skin - material	✓ \$32,941	Harrison	Klein	Edwards
		Spars - material	✓ \$165,211	Harrison	Klein	Edwards
		Allocated material	\$8,741	Harrison	Klein	Edwards
		Assembly Labor	✓ \$65,412	Harrison	Klein	Edwards

✓ Control account selected for review

Note: all data notional



Contractor Team Preparation

- Begin early planning
- Establish dialogue with customer
- Provide responsibility assignment matrix (RAM) to customer
- Assess readiness for IBR – *“Scrub the Baseline”*
 - Invite DCMA team to participate
 - Validate vertical integration of schedule, integration with control accounts
 - Validate schedule logic
 - Validate completeness of work authorization
 - Validate correct budget allocations
 - Ensure objective measures for earned value
- Address planning system issues or baseline errors
- Jointly select control accounts for review with customer
- Make necessary arrangements (rooms, personnel availability, etc.)
- Conduct joint training



Assessing Readiness for an IBR

- **IBRs should be conducted as soon as possible after the integrated baseline has been fully planned and laid in**
- **Maturity indicators:**
 - Adequate work definition
 - WBS
 - specifications and flow down to subcontractors
 - internal statement of work or work package definitions
 - Integrated schedule
 - vertically integrated between lowest level and master level
 - horizontally integrated between functions or tasks
 - product handoffs identified
 - subcontractor schedules fully integrated
 - Adequate resources
 - labor and material resources fully planned for all tasks
 - constrained resources identified and elevated or rescheduled as appropriate
 - manpower resources leveled as appropriate
 - subcontractor baselines fully integrated
 - Adequate work performance measures
 - Baseline validated at lowest levels and signed off by management

***Don't
schedule the
IBR just
because the
calendar says
so!***

The Review

- IBR in a nutshell
 - Joint in-briefing (keep short!)
 - “Mock” baseline discussion
 - Joint daily team meetings
 - no customer only meetings
 - Joint baseline discussions (summary & detail)
 - review Scope for completeness & disconnects
 - assess Resource totals and phasing
 - assess Schedules for contract milestone support
 - review Earned Value methods for measuring performance
 - Joint final out-brief to both project managers
 - agree on risk areas
 - agree on closure plan (action items)
 - agree to jointly manage program within baseline

Generic Agenda

In-Briefing

Mock baseline discussion

AS MANY DAYS
AS NECESSARY

Detail Risk

- Control Account level
- CAM / Technical Staff
- Concurrent Baseline Discussions
- Document

Summary Risk

- Contract level
- Support team
- Document

Daily Team Meetings

Final Outbriefing

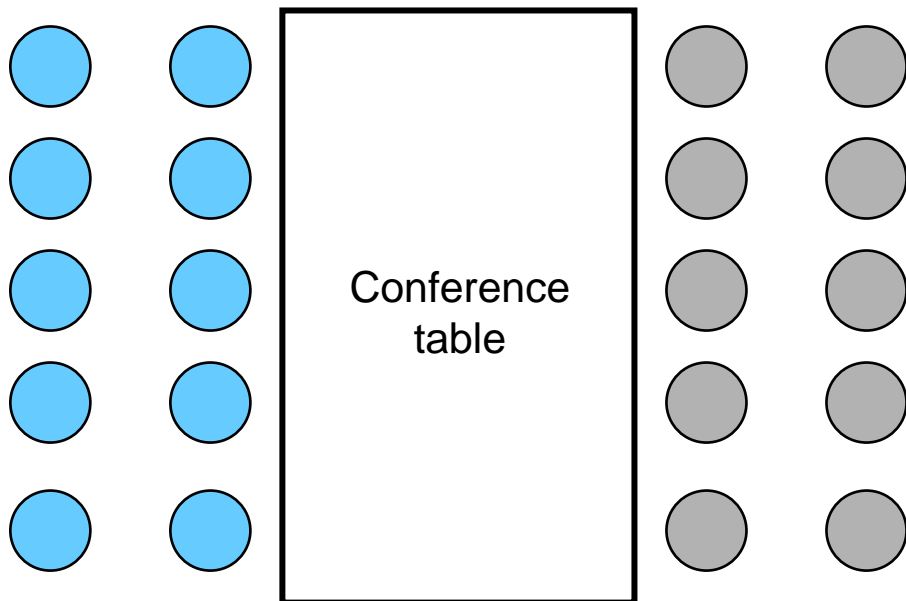


“Typical Baseline Discussion”

- Personnel
 - single control account manager
 - customer counterpart (technical lead)
 - others
- Control account coverage
 - one to several control accounts
- Time
 - no less than 2 hours
 - Allow 3 hours for first baseline discussion
- Format
 - informal discussion
 - follow the flow in which the baseline was planned
 - evaluate risks
 - jointly prepared documentation

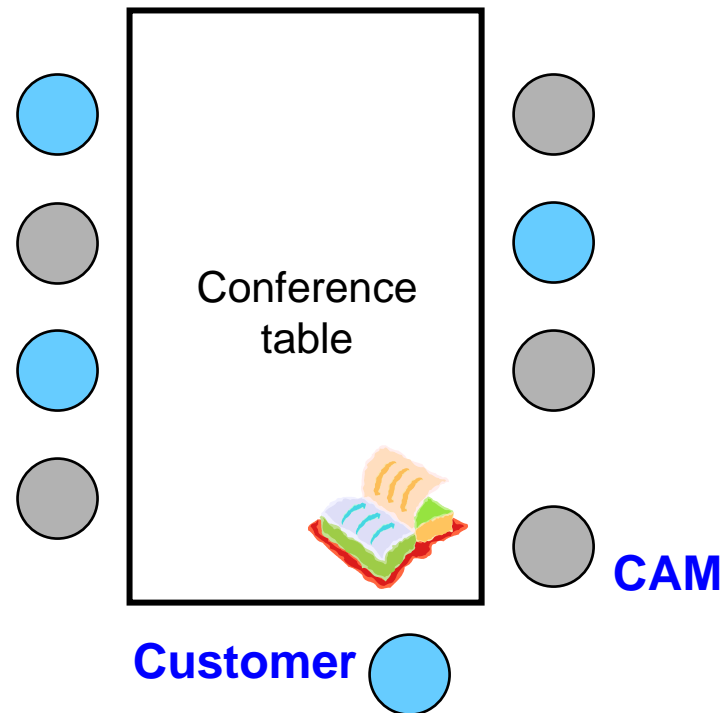
How to put the Joint ness in the IBR

Customer vs. Ctr.



WRONG!

Joint



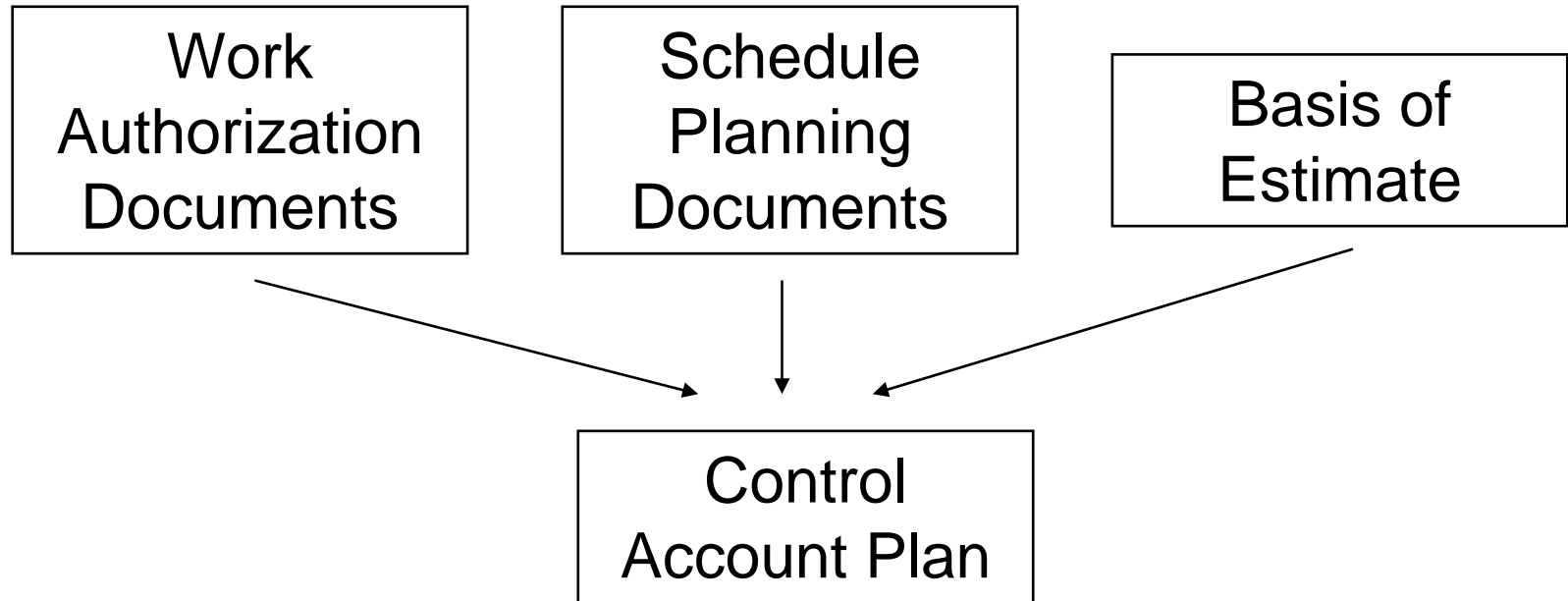
RIGHT!



What do we discuss?

- **Ensure that planning is adequate at the control account level**
 - Understand how risks were incorporated into the planning
- **Examples of past discussions from real IBRs:**
 - Compared budget in control account plan to schedule. Found disconnect - there were five months of scheduled activity at the end without budget.
 - Discussed basis for cost estimate for spares per flying hour. When compared to actual history on prior contract, new estimate was aggressive (~10% less). Discussed assumptions and documented as budget risk.
 - Discussed earned value technique and came to conclusion that a different technique was warranted. Contractor agreed and fixed the control account the next day.

Show me the Baseline!



Discussions should follow the flow of how the baseline was planned



If you can only remember one thing...

How to start the baseline discussion...

- Show me how you planned the baseline for this control account
- Please address where you see risks as we discuss work content, schedule, and cost
- Please show me how the cost and schedule baselines are integrated



Baseline Discussion Starter

- Used to help guide IBR discussions
- Contractor should prepare sheets in advance
 - One sheet for each control account
 - List all work packages, value, etc.
- Allows joint team to focus discussion on significant efforts

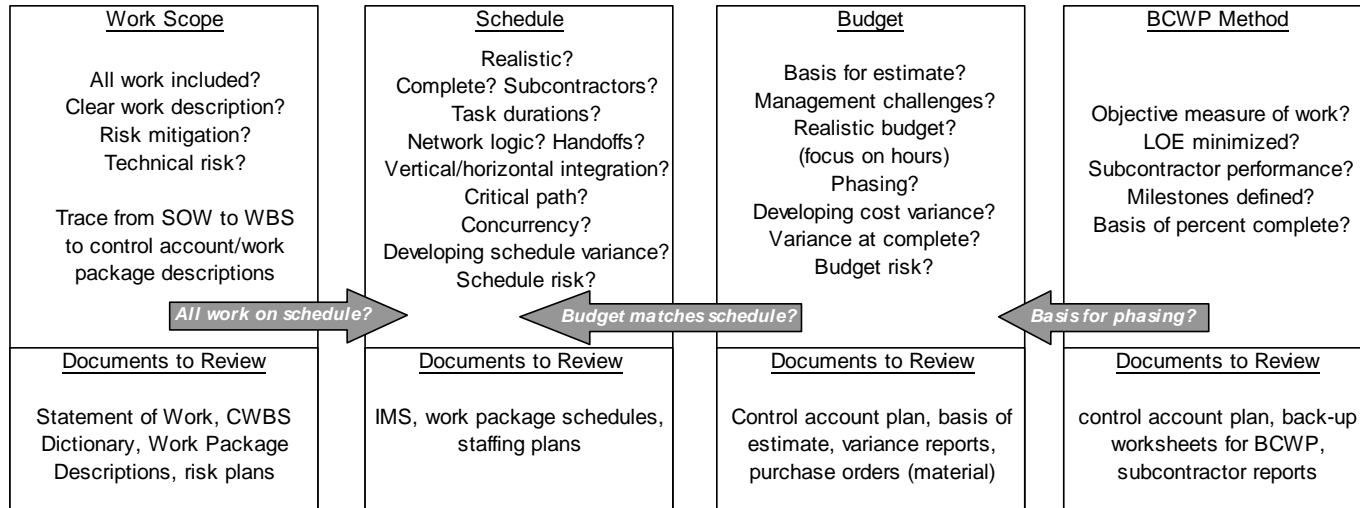
BASELINE DISCUSSION STARTER						
						Minutes
Step 1	Introductions (CAMs should briefly discuss organization)					5
Step 2	Overview of Control Account(s) - General description, work content					5
Step 3	Describe Control Account or Work Packages, briefly describe performance to date					5
#	Title	Budget at Completion	% Complete	BCWP Method	Discuss?	
Step 4	Evaluate Baseline for each Work Package					95
Work Scope All work included? Clear work description? Risk mitigation? Technical risk? Trace from SOW to WBS to control account/work package descriptions		Schedule Realistic? Complete? Subcontractors? Task durations? Network logic? Handoffs? Vertical/horizontal integration? Critical path? Concurrency? Developing schedule variance? Schedule risk?		Budget Basis for estimate? Management challenges? Realistic budget? (focus on hours) Phasing? Developing cost variance? Variance at complete? Budget risk?		BCWP Method Objective measure of work? LOE minimized? Subcontractor performance? Milestones defined? Basis of percent complete?
Documents to Review Statement of Work, CWBS Dictionary, Work Package Descriptions, risk plans		Documents to Review IMS, work package schedules, staffing plans		Documents to Review Control account plan, basis of estimate, variance reports, purchase orders (material)		Documents to Review control account plan, back-up worksheets for BCWP, subcontractor reports
All work on schedule?		Budget matches schedule?		Basis for phasing?		
Step 5	Document. Complete CA Risk Evaluation sheet, reach concurrence on risk and action items.					10

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Control Account Evaluation

- Purpose
 - document risk evaluation for each control account
- Definitions
 - High risk: high probability, major to critical consequences
 - Moderate risk: less probability
 - Low risk: lowest probability and consequences

CONSEQUENCE

	NEGLIGIBLE	MINOR	MAJOR	SERIOUS	CRITICAL
91 - 100%	Yellow	Red	Red	Red	Red
61 - 90%	Green	Yellow	Red	Red	Red
41 - 60%	Green	Yellow	Yellow	Red	Red
11 - 40%	Green	Green	Yellow	Yellow	Red
0 - 10%	Green	Green	Green	Green	Yellow

PROBABILITY

WBS #	Control Account #	CAM	Title	
1.3.1.1	1311-651	Haupt	Avionics software modification	SAMPLE
BAC (Hrs or \$)	EAC (Hrs or \$)	Government CAM	Items in Risk Plan?	
2.132M	2.132M	Brown	#25, Limited experience of software design engineers with F-36 avionics	
Risk Evaluation			Remarks	
Technical	High	Moderate	Low	Technical risk is moderate, based on heavy reliance on modification of existing code. Additionally, contractor has had limited experience with the F-36 aircraft avionics, partially offset by the hiring of software experts from the original vendor. Refer to Risk item #25 in the formal Risk Plan.
Schedule	High	Moderate	Low	Schedule has only 2 weeks of float in a critical area. Schedule is achievable, but leaves little room for rework.
Budget	High	Moderate	Low	Management challenges forced CAM to offset labor rate cost of high priced software engineers with reduced hours. Although only 6 months into project, this control account is already experiencing a -15% cost variance, primarily due to hours, and has no apparent plan to mitigate future cost growth. Future schedule constraints may worsen this variance. This cost growth (past and projected) is not reflected in EAC.
BCWP Measurement Technique <u>Milestone</u>	Poor	Adequate	Excellent	Detailed planning of milestones as basis for earned value is excellent and should accurately portray performance.
Ownership and Management Use of EVM				CAM is very knowledgeable of control account planning and communicates frequently with government counterpart.
Action Items Prepared	AI #9 (Update EAC)			

System Level Risk

- **Lead engineer should assess**
 - Has all work in the SOW been allocated to the managers?
 - Impact of GFE/GFP, test ranges, etc., on contractor's ability to perform
 - Has all work been included in the formal schedule?
- **Schedule analyst should assess**
 - What is critical path? Float?
 - Is overall schedule success oriented?
 - Are there “resource bottlenecks” at company level that could affect their performance?
- **Financial analyst should assess**
 - Overall funding constraints
 - Stability of indirect rates and underlying business base assumptions
- **EV analysts should assess**
 - Ongoing risks and problems in system discipline and impact to baseline
- **Project manager should assess**
 - Overall level of management reserve vs. level of risk

The Results

- Outbriefing
- Document findings (IBR memo, risk)
- Incorporate risks into **Risk Plan**
- Incorporate IBR results into management of project

Keys to IBR Success

- Program Manager leads IBR team
 - Technical managers are the key members and baseline reviewers
 - Support personnel are there to support
- Team members must be thoroughly trained
 - Training must emphasize what makes a good baseline, not how to judge compliance
 - how to judge risk
 - Must understand basics of contractor's system
- Technical staff must be highly motivated
 - Understand role in managing to baseline
 - Program manager support is key

Keys to IBR Success (cont'd)

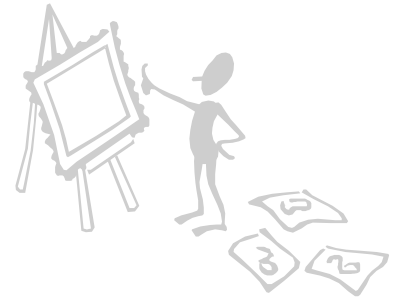
- Data made available prior to IBR
 - Technical staff should review as much as possible prior to review
- Emphasize baseline content, not EVMS compliance
 - Don't use term "interview" - sounds like an audit!
 - Preferred term is baseline discussion
- 80% control account coverage
 - Cover all risk areas, critical path items
- Joint approach with contractor
 - Open dialogue as soon as contract is awarded

The Baseline is now the plan to manage the program



Summary

- **Project managers assume ownership of the integrated baseline**
- **Increases the customer technical staff's understanding and confidence of the contractor's performance data**
- **Improves the use of earned value data by contractor and customer managers**
- ***Improved chance for project success!!***



“It forces you to plan, then to manage to the plan.”
Lt Col Paul Vancheri