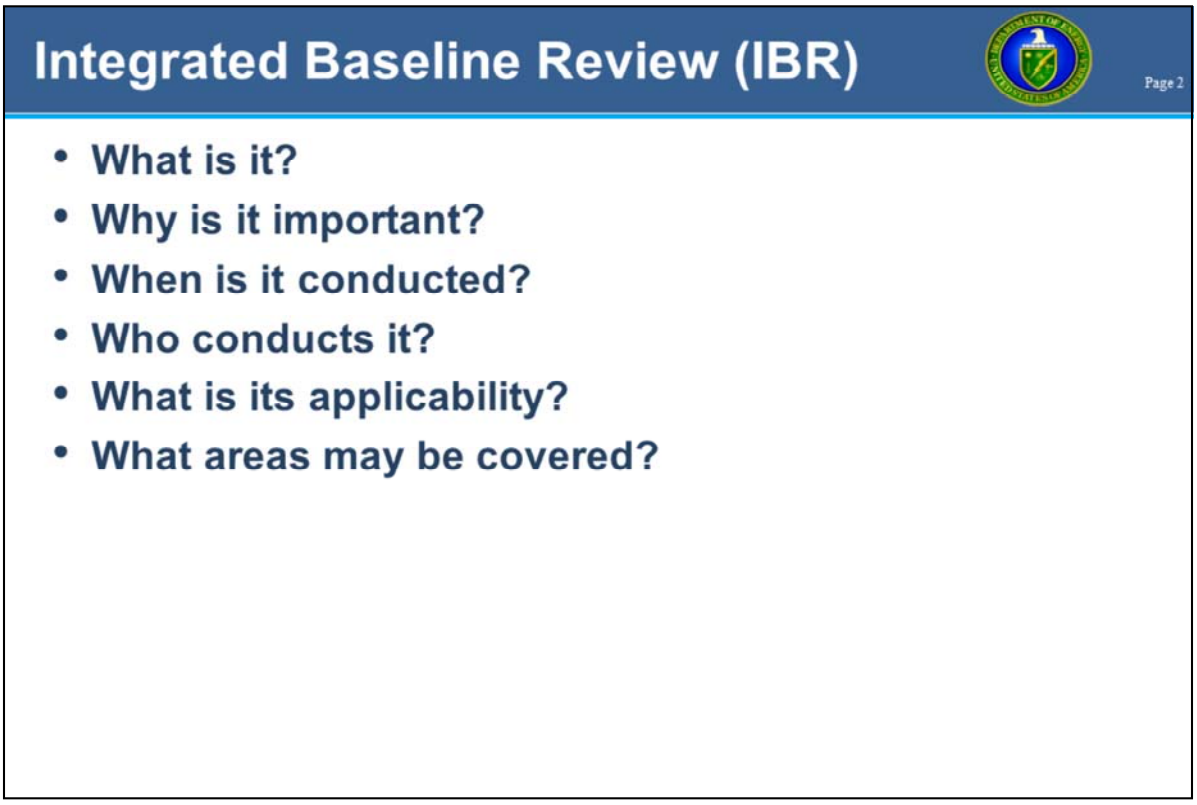
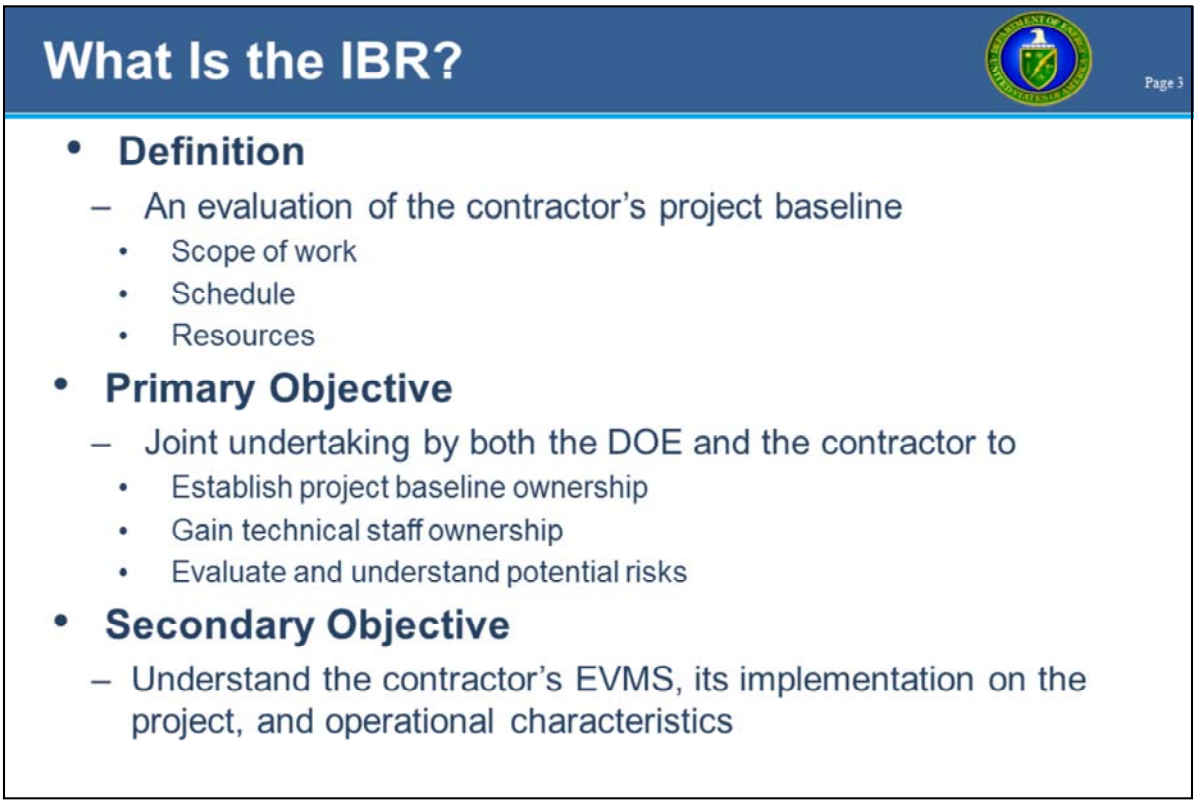
This EVMS Training Snippet sponsored by the Office of Acquisition and Project Management (OAPM) covers the Integrated Baseline Review (IBR) process.



This snippet provides an overview of the IBR Process and will explain what it is, why it is required, when it should be conducted, who should conduct it, its applicability, and what areas may be covered during an IBR. In short, the purpose of an IBR is to achieve a mutual understanding of the baseline plan and its relationship to the underlying Earned Value Management (EVM) systems and processes that will operate during the life cycle of the project.

The objectives are to gain insight into cost, schedule, technical, resource, and management process risk areas, as well as develop confidence in the project's operating plans. This will be accomplished by evaluating the performance measurement baseline to ensure it captures the entire technical scope of work, is consistent with schedule requirements, has adequate resources assigned, and has sound management processes.

At completion of the IBR, both the DOE and the contractor should have joint ownership of the project baseline, gain what is called technical staff ownership, understand the risks, and have confidence in the implementation of the contractor's EVM system on the project.



As noted on the prior slide, an Integrated Baseline Review (IBR) is a review of a project's Performance Measurement Baseline (PMB). It is conducted by both Federal and contractor Program and Project Managers and their technical staffs on contracts and projects where application of an Earned Value Management System (EVMS) compliant with ANSI/EIA-748 is required in accordance with the Federal Acquisition Regulation (FAR) Parts 34.202 and 52.234. While risks may be identified and actions tracked as a result of the IBR, it is important to note that an IBR cannot be failed.

The objective of the IBR is to confirm the following:

The technical scope of work is fully included and consistent with authorizing documents

Key schedule milestones are identified

Supporting schedules reflect a logical flow to accomplish the technical work scope

Resources (to include budgets, facilities, personnel, skills, et cetera) are adequate and available for the assigned tasks

Tasks are planned and can be measured objectively, relative to technical progress

Underlying PMB rationales are reasonable

Managers have appropriately implemented required management processes

An assessment that management reserve with respect to risk is sufficient.

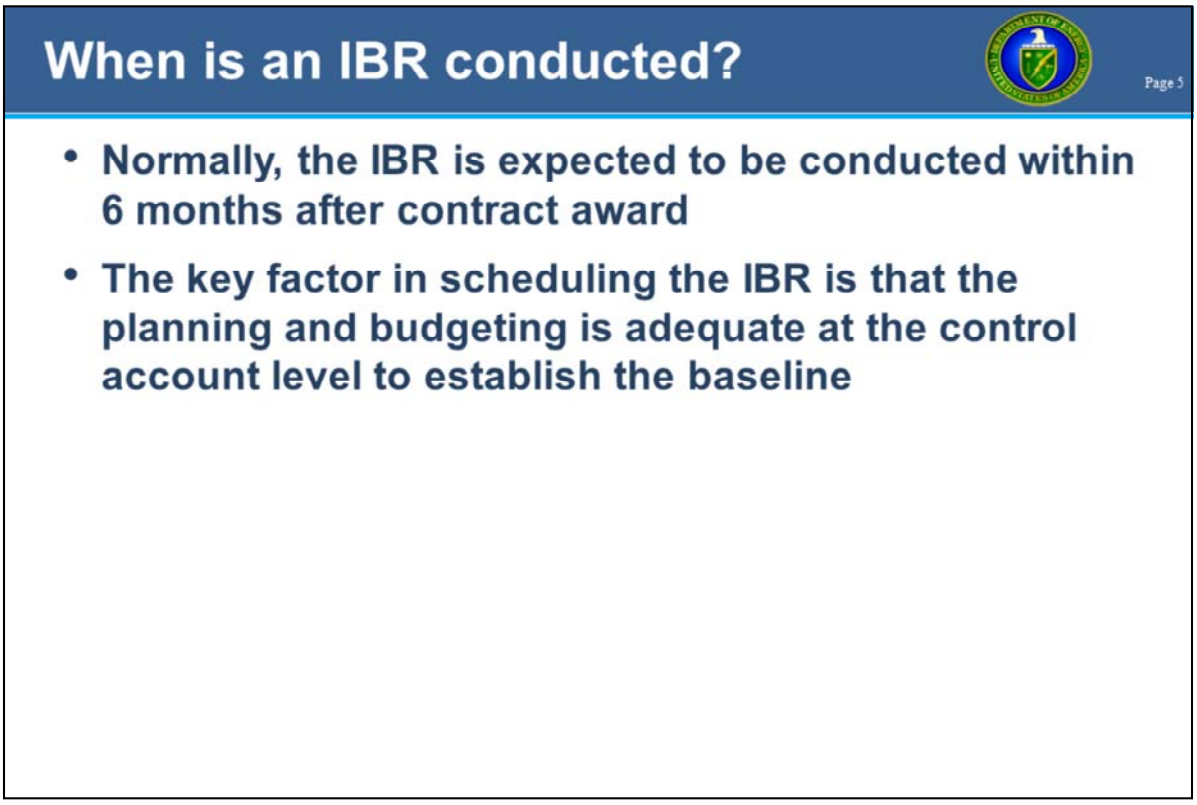
An IBR is intended to be an extension of the supplier's existing management practices. Anything that does not support the intent of the IBR should be moved outside the review. Risks associated with Technical, Schedule, Cost, Resource, and Management Processes that are identified during the IBR should be reviewed and incorporated into the project's existing risk management process.

There are already many required reviews during the lifecycle of a contract and project, and some of these reviews share common goals and objectives with the IBR. Therefore, when possible, the IBR can be combined with these other reviews. It is important, however, to ensure that the intent of the IBR still be met and supported by key personnel when reviews are consolidated.

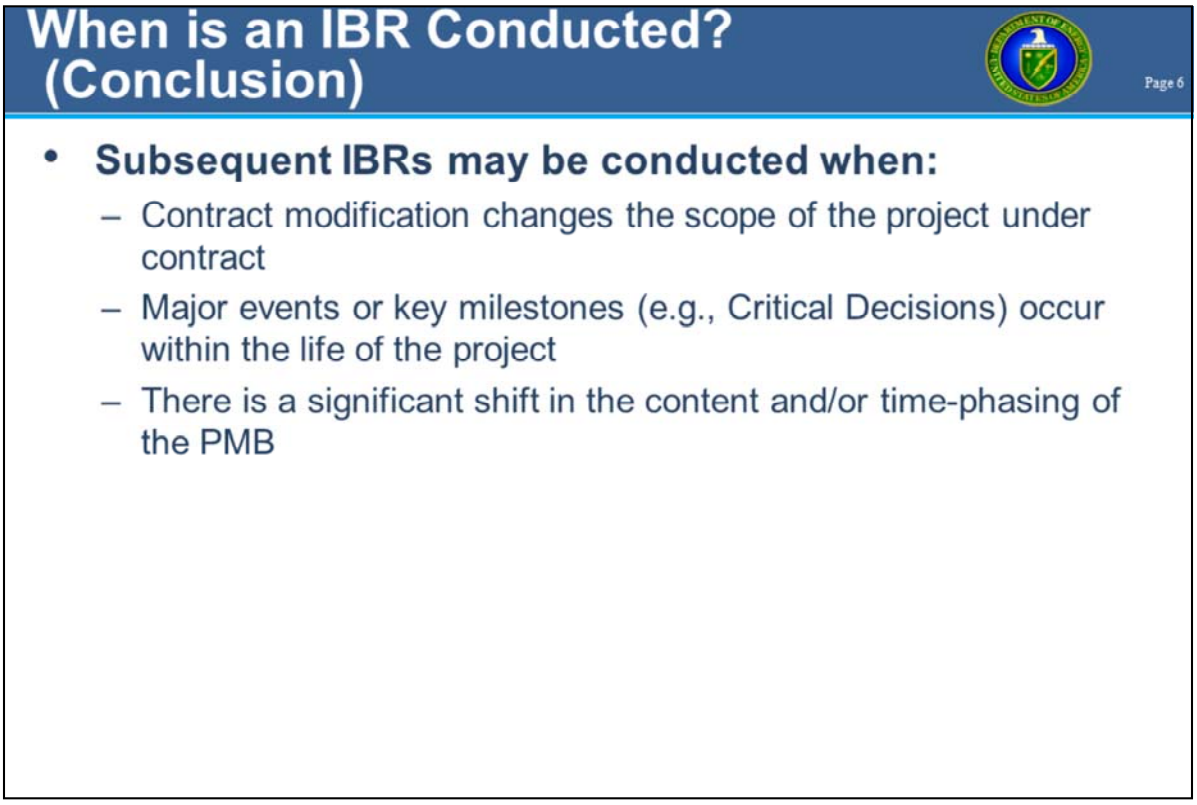
Why an IBR is important?

- To ensure the timely establishment of the technical scope, schedule, and cost baseline
- To determine the credibility, sufficiency, and adequacy of the baseline
- To ensure baseline scope, schedule and cost components are integrated with each other

The IBR Team wants to verify that there has been a timely establishment of the technical, schedule, and cost baseline. It will also want to determine the credibility and the sufficiency of the baseline by deciding if it is realistic and integrated. Additionally, there is risk in achieving completion of any project. The DOE needs to understand the risks and the mitigation plans.



While ordinarily an IBR is conducted three to six months after contract award, the key factor in scheduling an IBR is that the contractor has completed the initial baselining effort. The sooner the review is undertaken, the better for both parties---and more than one IBR may be required during the life of a typical project if the baseline is revised extensively. If revisions to the PMB result in changes to the contractor's work statement, a contract modification issued by the Contracting Officer (CO) is required.

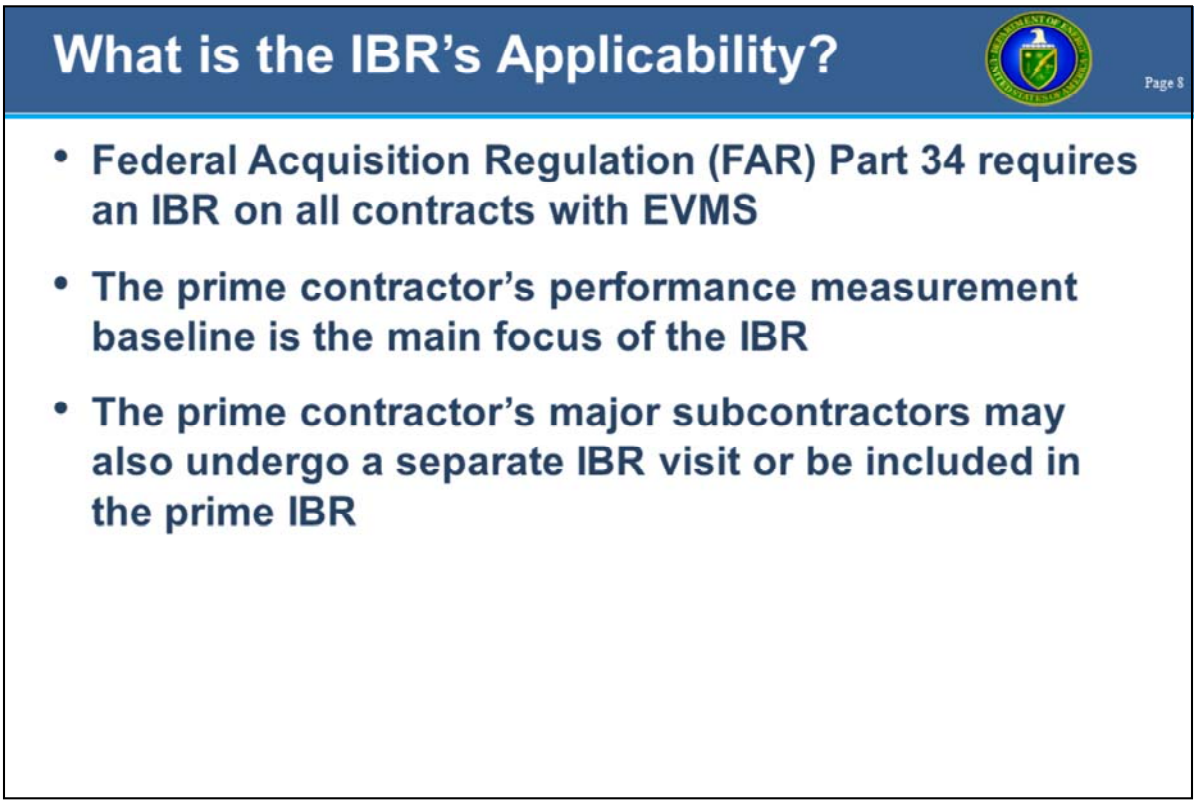


IBRs may also be contractually required after major project events that have potential impact to the technical baseline. Other significant baseline shifts could also occur during the life of a project which would warrant an IBR, especially to understand the schedule impacts of that shift. These shifts may be caused by various events, including but not limited to DOE funding constraints or delays in project design and technical maturity. In accordance with Acquisition Guide Chapter 43.3 (March 2013), if there will be a change to the contract terms, conditions, or requirements, a contract modification issued by the CO is required.

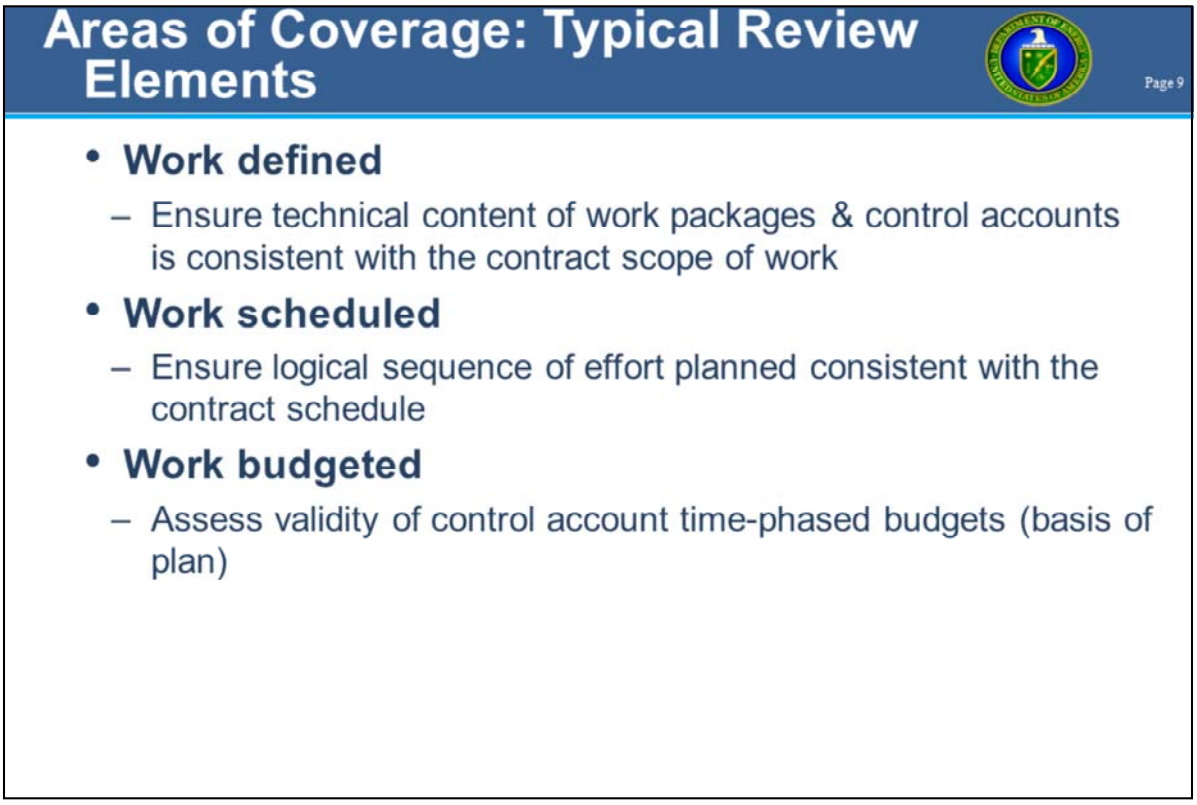
Who conducts the IBR?

- **Joint review by DOE and the contractor**

The IBR is conducted jointly by the DOE and the contractor. Team membership and team leads will vary based on project specifics.

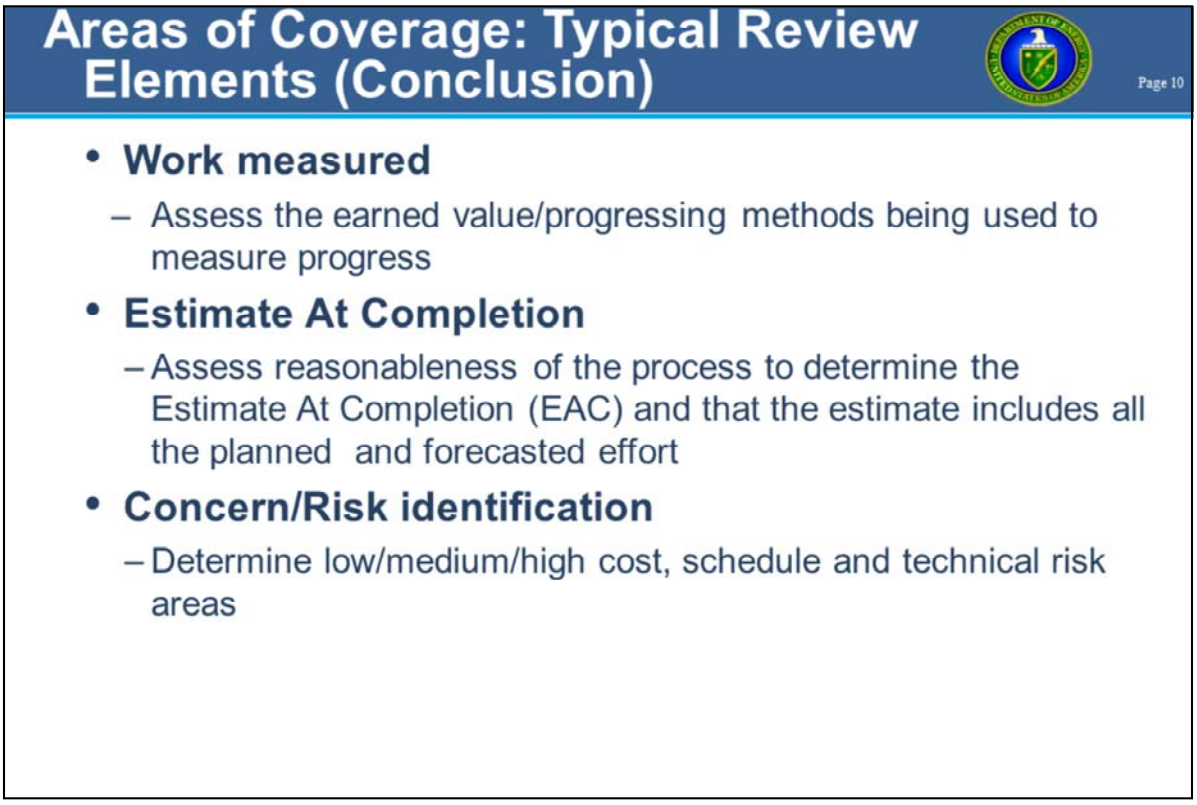


The Office of Management and Budget's (OMB) Capital Programming Guide (CPG) and FAR Part 34, Major Systems Acquisition require that all contracts with EVMS requirements conduct an IBR either pre-award or post-award to finalize the agreement on the baseline and ensure all risks are identified and understood. Significant subcontractors may be included in the prime's IBR or separate IBRs may be conducted with the subcontractors. Where significant subcontracts are subsequently awarded, it may warrant follow-on IBRs on the new award scope.



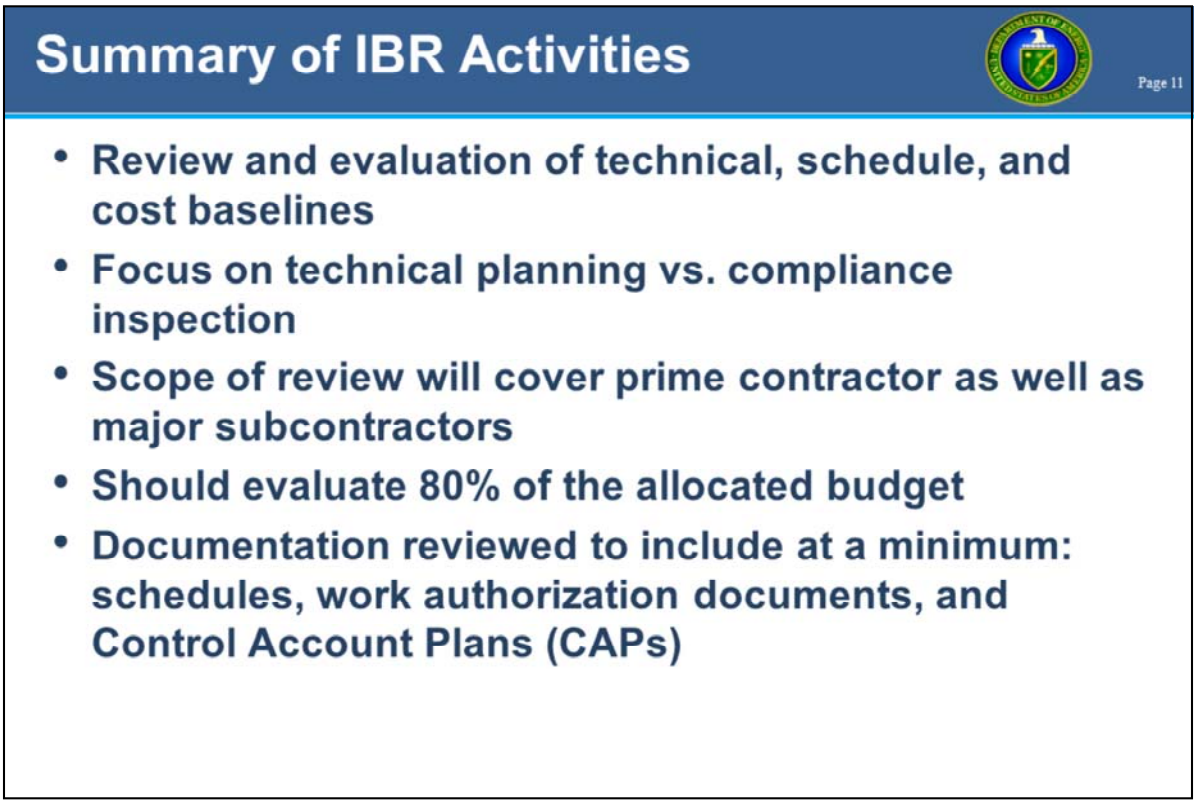
The remaining slides describe typical areas of coverage in an IBR. We will start with review elements.

First, is the work understood and well defined? DOE and the contractor must jointly verify that there is a clear understanding of the contract and project work statement. It is the contractor's responsibility to then define the work to the control account level and identify the task or tasks to be accomplished before work commences. It is also the contractor's responsibility to develop a baseline schedule consistent with the contract schedule, and a resource plan, the PMB, which represents a realistic, logically sequenced, time phased resource plan to accomplish the contract work as scheduled. The work budgeted is assessed to ensure the validity of the control account time-phased budgets as these form the basis of the plan. If the IBR results in a change(s) to the contract's cost, schedule, or scope, the CO must issue a bilateral contract modification.



A key factor in the plan to accomplish the contract work is the process of Work Measurement. This is one of the most important factors to be reviewed during the IBR. The IBR Team will want to determine if earned value is being determined monthly or weekly, how much work was done, irrespective of how much work was scheduled to be done, as well as how much it costs to do that work. This gets to the very core of why an IBR is being done. The team will also want to make sure the contractor knows how to do an Estimate at Completion as this provides insight for DOE to funding profile constraints and requirements.

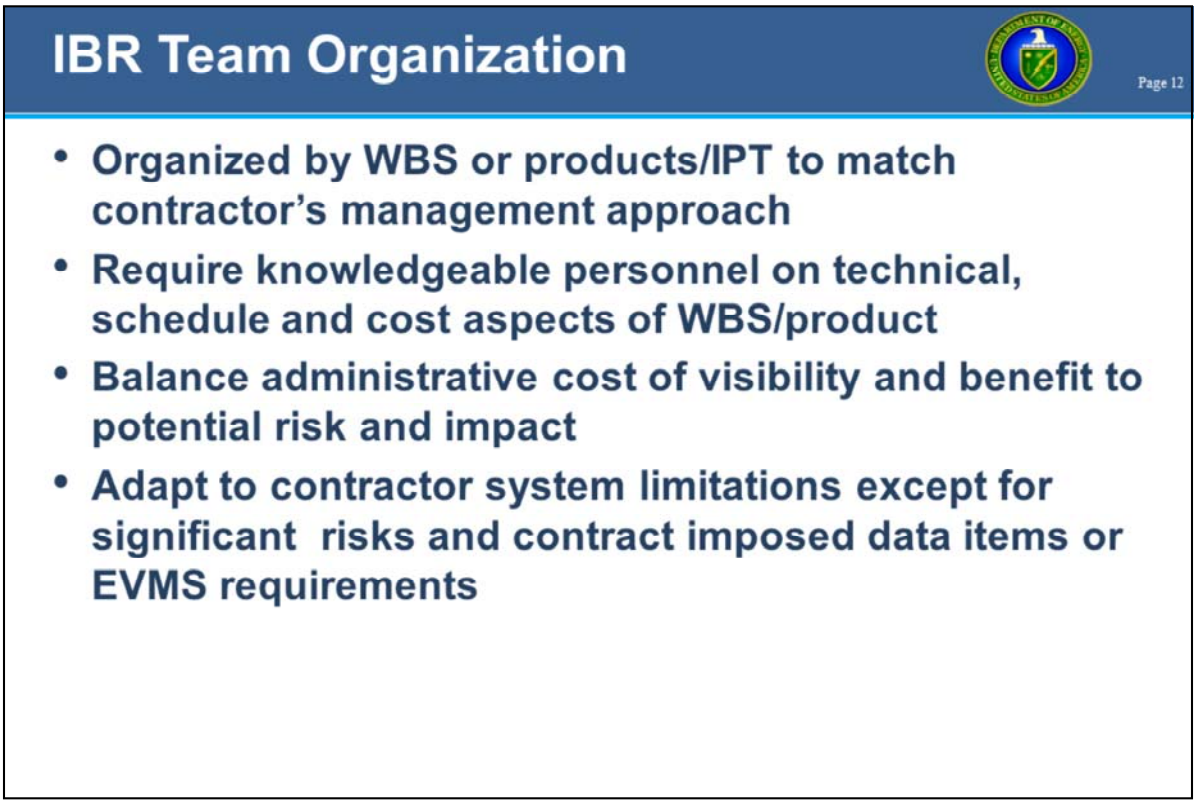
And, finally, there needs to be a thorough assessment of risk identification and management. Discussion should focus on what has been identified and how, the plan for mitigation of risks, and what management reserve has been set aside for potential use as a budget for those risks should they be realized.



To summarize the IBR activities, an IBR is not an inspection or an audit. It is a joint opportunity to review and discuss with the contractor, the technical, schedule, and cost baselines.

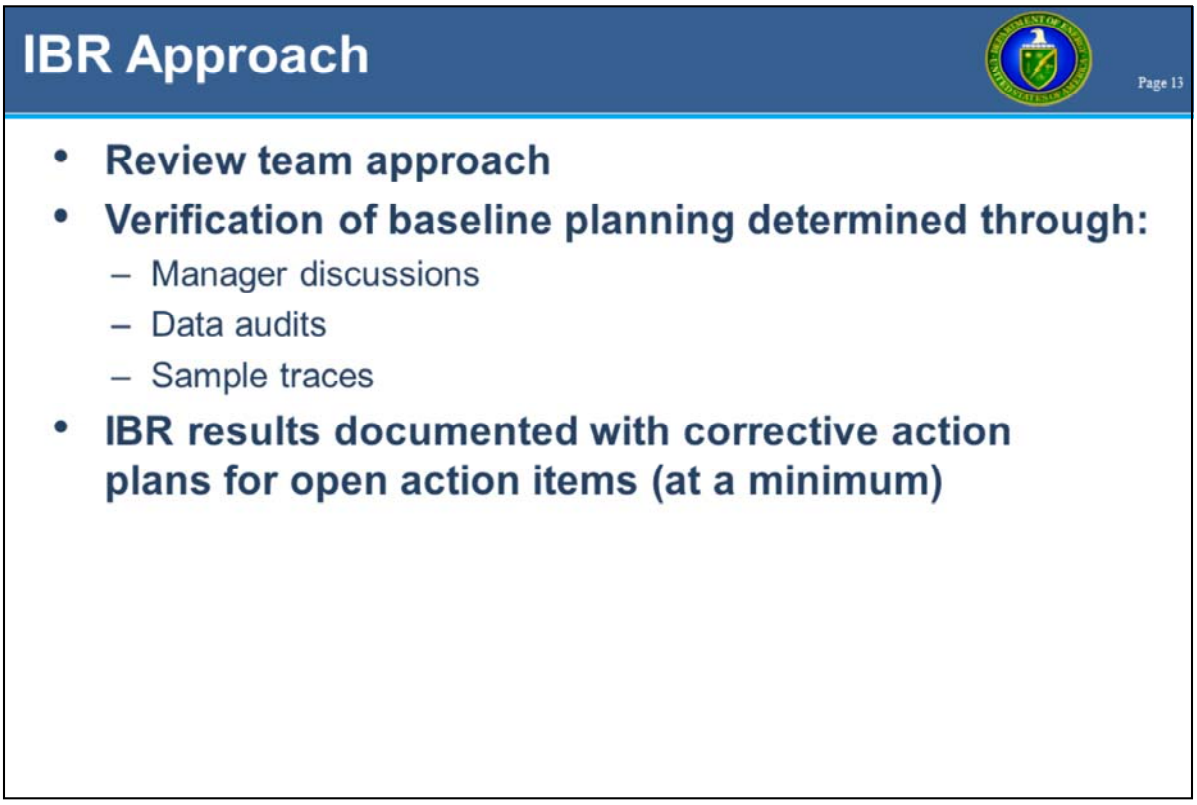
The review should cover any major subcontractors where there may be EVM system flow down. The team will want to review at least 80% of the project's budget. For example, if this is a 100 Million dollar project, where is the preponderance of effort? How many managers have at least 80% of that project's budget? It should be noted that the 80% is derived from historical analysis conducted by DOD. Do not, under any circumstances, leave high risk or critical path items out of the discussions regardless of the respective budget value that a manager might be authorized.

Applicable Work Authorizations and Control Account Plans, in conjunction with the schedules and other documents, are absolutely review interest areas. The documentation used to authorize the technical, schedule, and cost baseline must be reviewed.



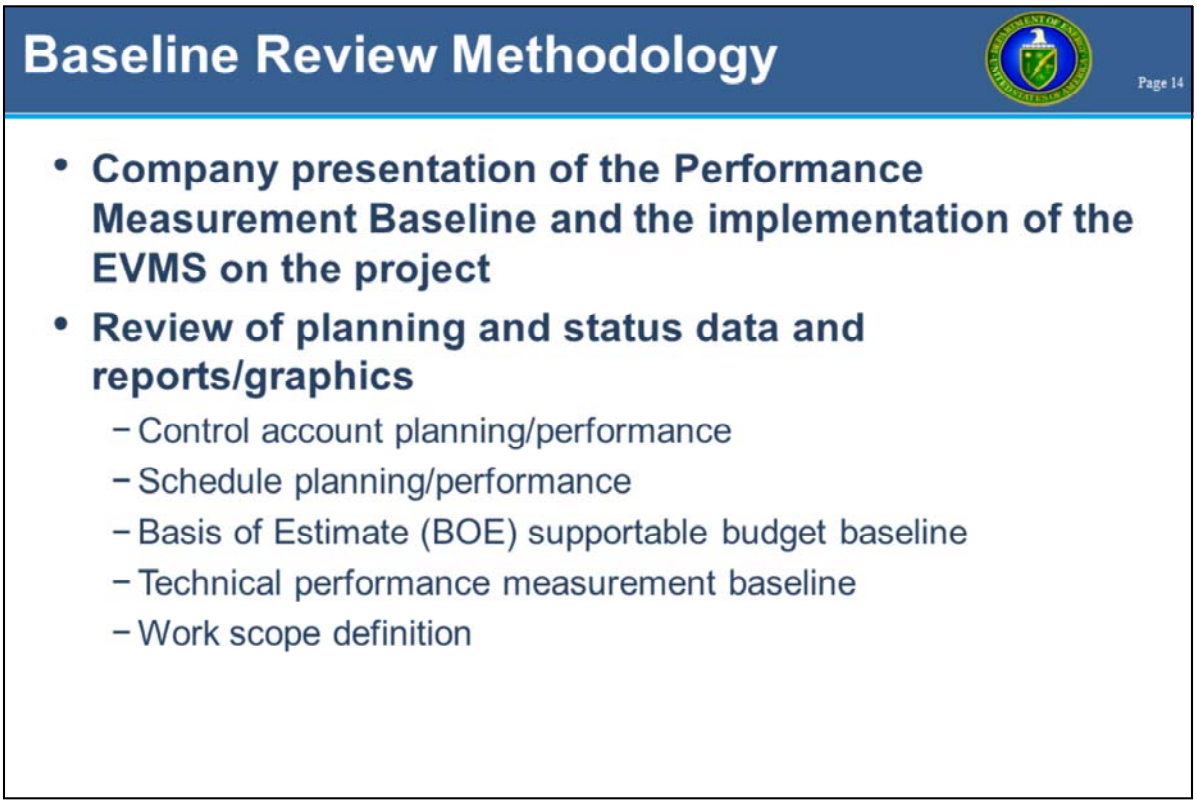
The IBR Team's organization should align with the project team's organizational breakdown structure; for example by WBS, Functional area, IPT, et cetera.

A major factor in all successfully completed IBRs is an IBR Team consisting of knowledgeable specialists; such as, representatives from the technical staff, project control, scheduling, and so forth. The IBR Team should be willing to spend time understanding the contractor's EVM system and its approach to risk identification and managing the project. In turn, the team's approach must be very proactive and positive; an IBR is not an audit! It is a joint working relationship.



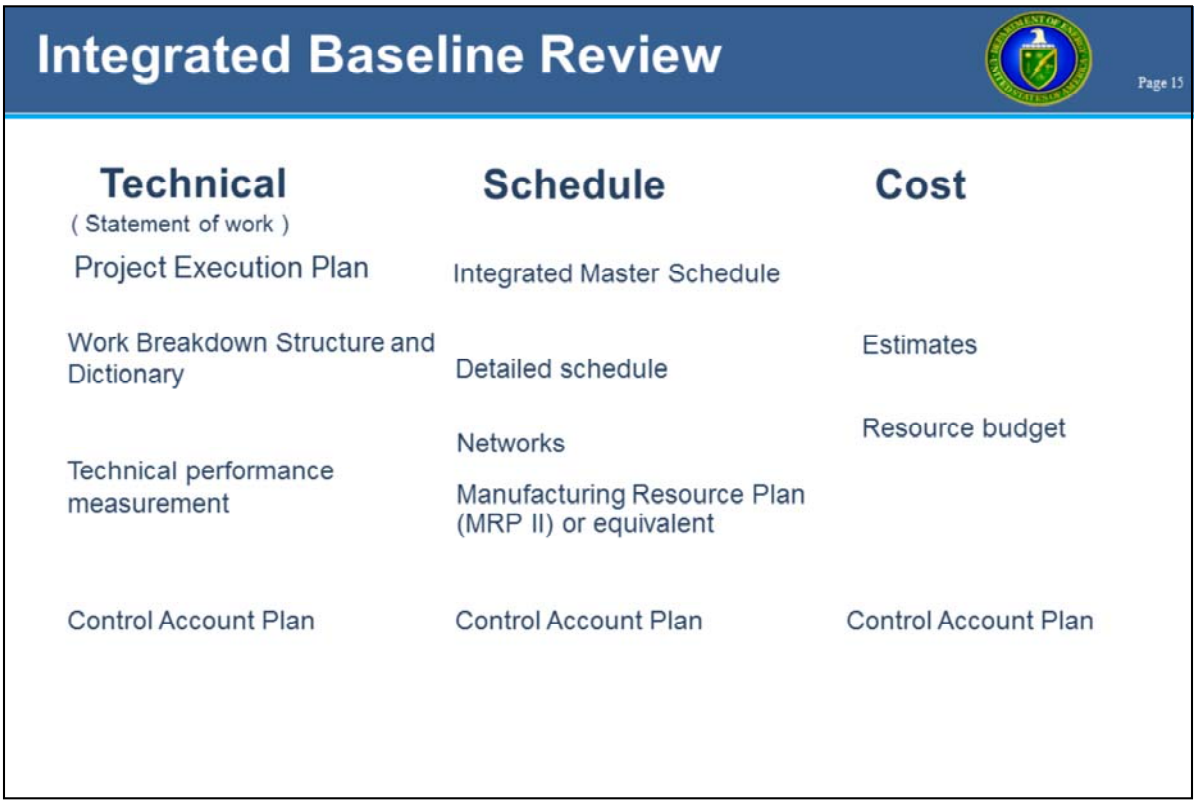
While the IBR Team is at on-site, it will conduct a series of discussions to verify adequate planning of the Technical scope, cost and schedule Baseline, as well as the following important perspectives from project managers on Risk Assessment.

Typically there will be findings resulting from the IBR. While some findings will be mistakes, which can be corrected and eliminated early, others will be categorized as more systemic and might require follow-up.



Typically, an IBR starts with a contractor in-briefing of the administrative details and a summary of the project. There might be some unfinished implementation tasks presented since the IBR is conducted early in the project's life.

Some questions which the IBR team will ask will focus on whether the Basis of Estimate available, or if the schedule and cost baselines are integrated and reflect the same status. The team needs to examine how the contractor flows the budget for the tasks to the managers; how the contract work statement has been extended, using the OBS, to the managers; and, most importantly, that all work is included in the baseline plan.



The IBR also includes demonstration of a series of traces; these are usually accomplished during the CAM discussions. These traces comprise the technical, schedule, and cost (or budget) baselines, and integration of these baselines through the contractor's management system.

The technical trace begins with the contract work statement and Project Execution Plan (PEP). This defines at a high level what technical work is required in the project.

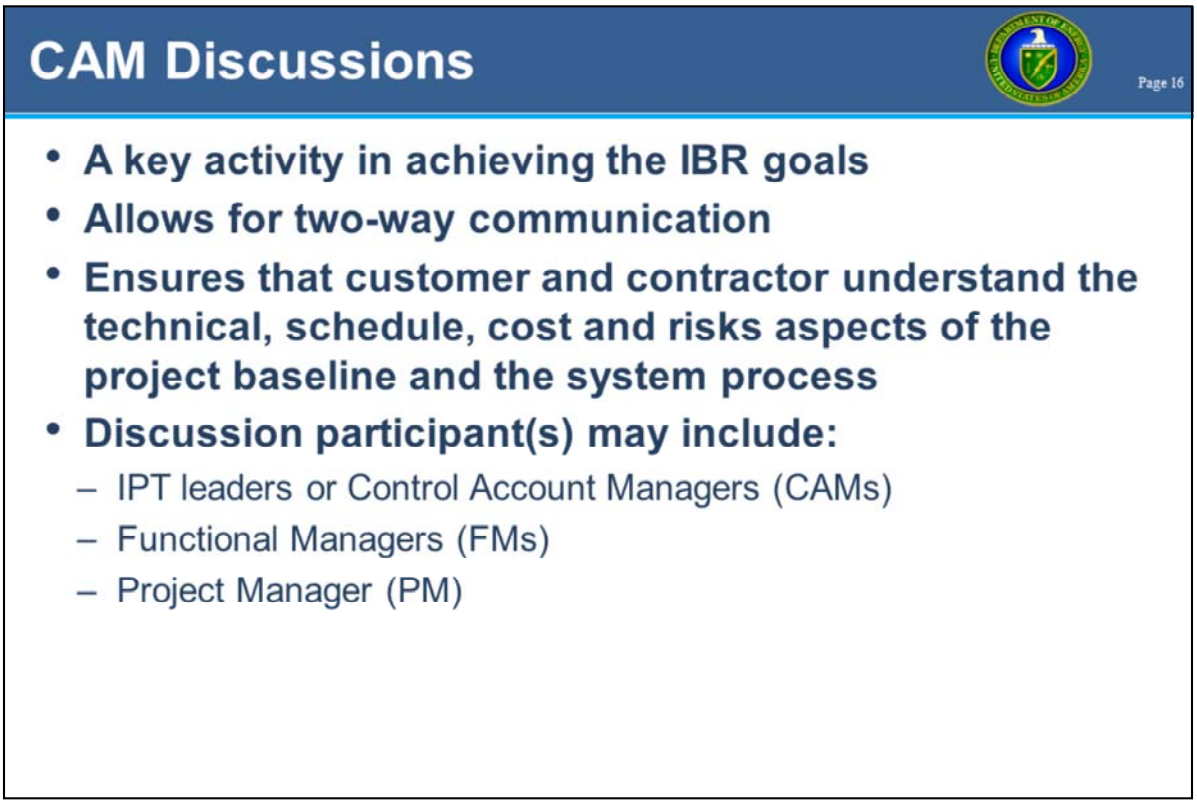
Other supporting documents include the Work Breakdown Structure and the WBS Dictionary, some technical performance measurements or metrics, and the Work Authorization Document (WAD), IMS and the Control Account Plan. The Control Account Plan is the micro project, while the contract level is the macro. The contract work statement and PEP are mapped to the WBS and the Dictionary. During an interview, each CAM may be asked to demonstrate how the scope of work is traceable from the highest level documents through the lowest, the control account plan. This assists in ensuring that all of the authorized work scope has been included in the control accounts.

The schedule trace involves the Integrated Master Schedule or IMS. The IMS, in turn, is drilled down to the detailed schedules, which must support the higher level milestones and show a logical integration and period of performance for all of the work to be performed. The start and complete baseline dates for each control account in the IMS must trace directly to the baseline dates shown on the work authorization document as well as the control account plan.

Finally, there is the cost or budget trace. This trace not only covers the budget, but also

estimates, the time-phasing of the budget by cost element, as well as risk down to the control account level. One note of caution, the budget may involve the original estimate made before award---often the basis of estimate, or BOE. This original budget estimate probably will not be the same amount as that formally authorized to a CAM. During negotiations, the work statement might have been changed, affecting the final authorized budget for the control account. Also, Management Reserve establishment might have had an impact to the control account budget. The CAM should be able to demonstrate budget integration by tracing the total control account budget from the Responsibility Assignment Matrix (RAM) and WAD to the Control Account Plan (CAP). This will also include tracing the budgets from the CAP to the IMS to demonstrate that lower level elements are time-phased consistent with the schedule requirements.

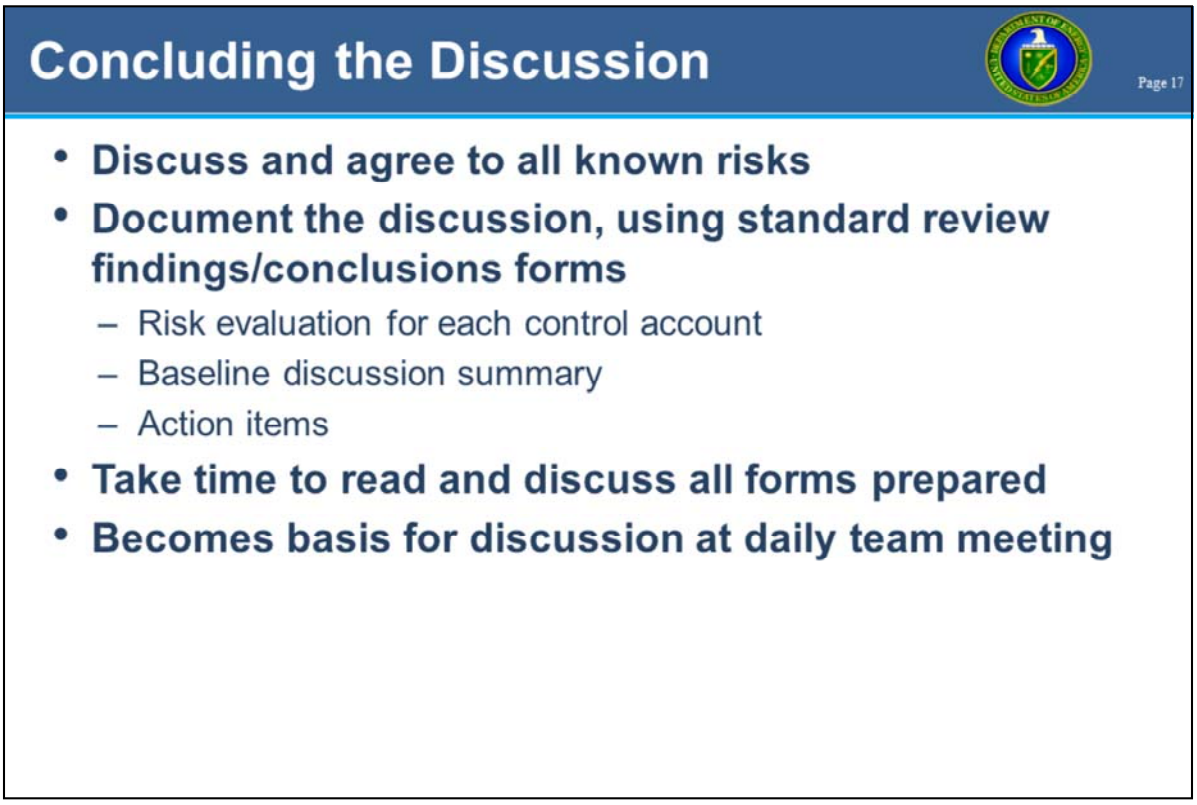
The technical, schedule, and cost components of the baseline should all be integrated at the control account level, as that is the level of the WBS where the three become a micro baseline. Each micro should trace to the macro---the project level.



Eventually, the IBR Team will want to interview some of the CAMs' management. Where is management involved? Where should they be involved? Do they authorize, along with project managers, the work to be done in the line organization?

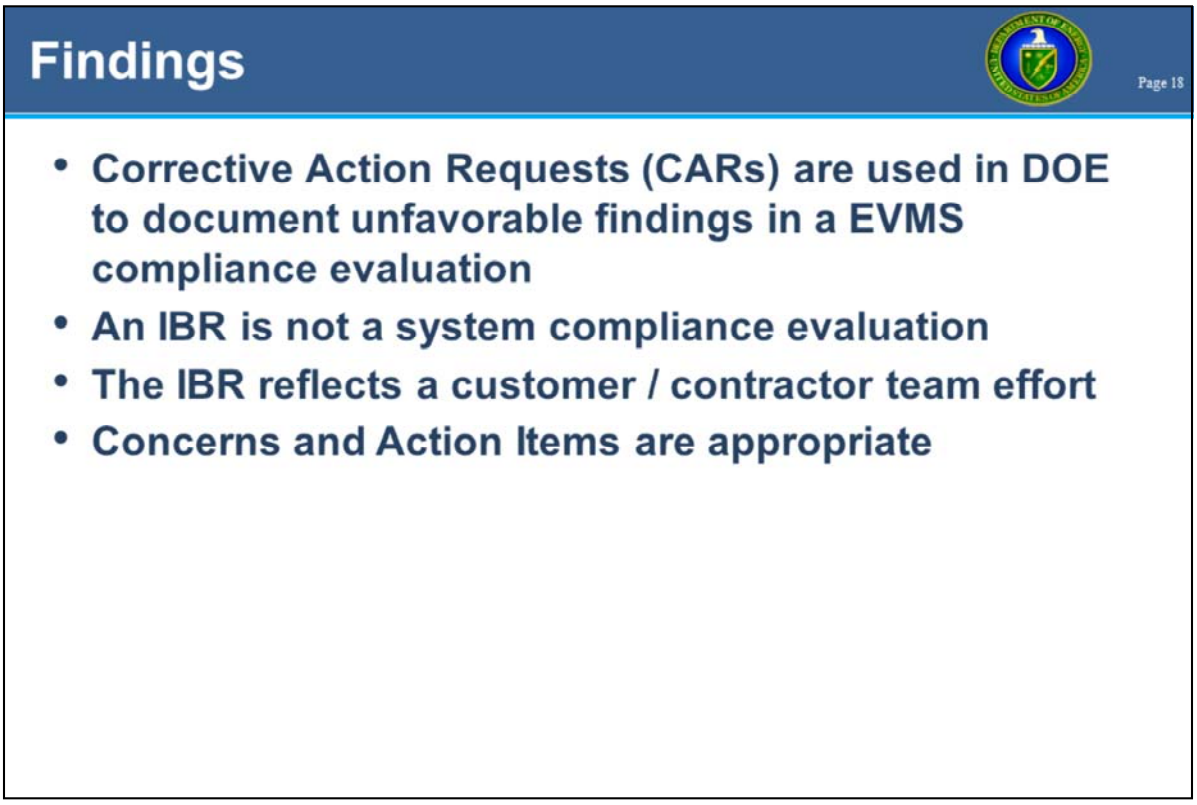
This is important, particularly if the interviews are organized with integrated project teams or IPTs. If there is an integrated project team environment on the project, the CAMs are essentially small business-based managers. IPTs are made up of a team of people from various functional organizations, which may include an engineer, someone from the production or manufacturing organization, a quality person, someone from the test area, plus other disciplines as necessary. Basically, the IPT leader is managing a group of people who do not necessarily report to him/her. It is important to talk to the functional managers of the various organizations, as they provide the resources for the IPT.

Finally, a discussion should be held with the project manager. Often during an IBR, more than one PM discussion is convened, as not only is the PM at the helm of the project, he or she is reporting project cost and schedule status to the company's senior staff. That information and its analysis should be the same as reported to the DOE in the CPR or IPMR.



At the conclusion of the discussions, it is very important to reach an agreement on the project's risks. Document the discussion findings and conclusions using the standard review forms, which should be shared with the CAMs.

The forms are structured along topic areas and flow accordingly, to cover risk, the baseline, and action items. Read the forms and if any samples of data or reports are needed, request them prior to the conclusion of the discussion. Conclude on a positive note; thank the interviewee and his or her team.



In the DOE Earned Value reviews, Corrective Action Requests (CARs) are used. While an IBR, per se, is not a compliance review, occasionally findings of non-compliance may result in a CAR. In general though, findings are identified as "Concerns." An IBR should be a joint effort to take ownership of the baseline. While it might sound like a euphemism, the terms "Concern" or "Action Item" suggest joint resolution; it's a joint term. None-the-less, if there are findings, prompt resolution is encouraged, regardless of the problem's severity.

What is generally more appropriate is a well-written description of the concerns and action items that were found during the data traces and CAM baseline discussions. These are items that need to be documented to ensure they get immediate management attention and for follow-up.

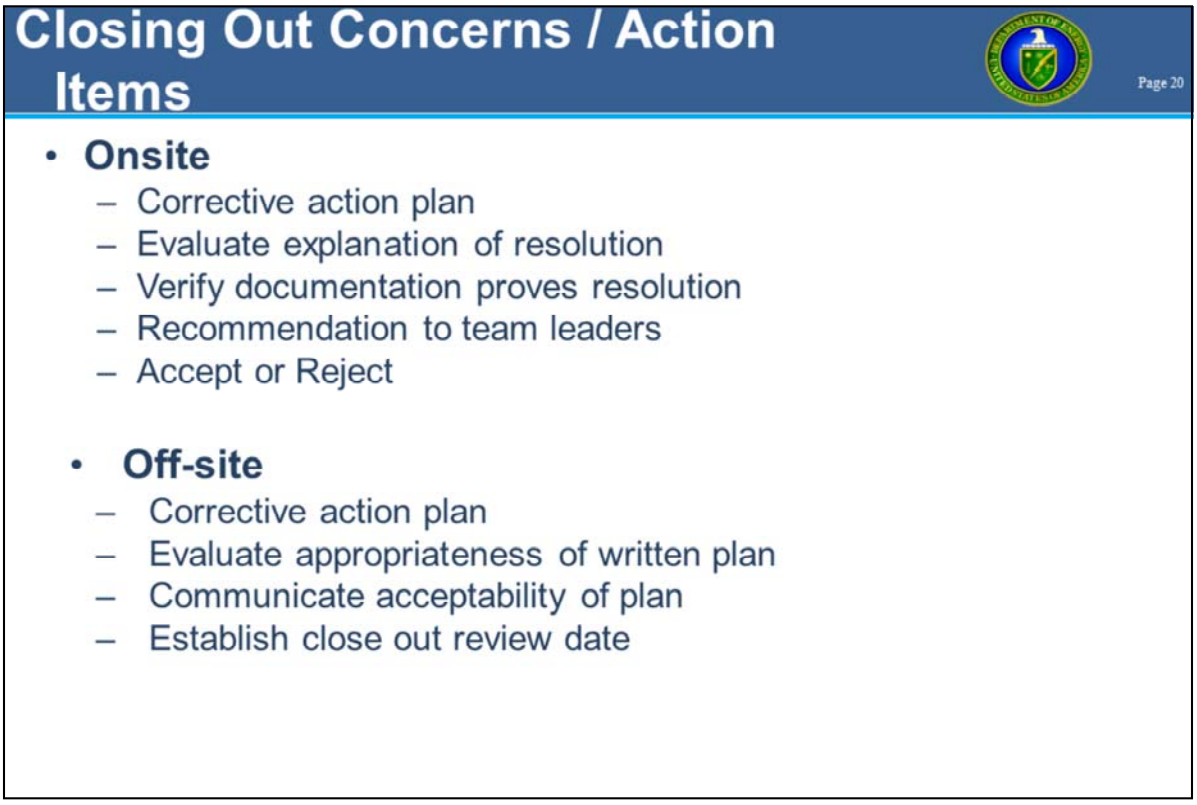
Documentation should be complete and clearly state the problem. Exhibits or artifacts showing the concern should be attached to the concern report.

Concerns / Action Items

- Well written description of concern / action item as to technical / schedule / cost / risk areas involved should be documented
- Thorough discussion of who / what / when / where of the concern / action item

Concerns and action items are typically documented on a *concern sheet;* these are usually completed at the end of discussions and data traces to document findings. The *concern sheet* identifies the control account where the issue was found, what documents are involved, a description of the finding, and what needs to be done to resolve the concern.

Once documented, the form provides a space for the contractor to respond with how it will address the issue and the process being used to ensure correction. It is important to designate a company representative who is responsible for follow-up and determination of when the concern is expected to be resolved. The review team lead on the DOE's side should sign off on the document to indicate agreement with the finding and with the contractor's response. The contractor's response may not be completed during the IBR, but a suspense date should be set when the response is due to the IBR team leader.



Closing out concerns and action items before the team leaves the contractor's facility is an important step. The IBR Team should evaluate the contractor's resolutions to the actions items and close out as many of the concerns and action items as possible. If a concern or action is resolved, the contractor should provide documentation that indicates a successful closure. The team leader then has the responsibility to review this information and decide if it responds to the concern and no further action is required. If the resolution is not acceptable to the DOE, the action item should be entered in the corrective action plan.

Once the review ends, it is important to keep a list of concerns and actions that were cited and entered in a corrective action plan. The plan should be carefully reviewed and the contractor informed of its acceptance. A method should be established to track, over time, what actions are being closed. Make sure this is well communicated with the contractor so there is a mutual understanding of how closures will be handled.

If any additional on-site follow-up will be necessary to demonstrate corrective actions, establish this date early with the contractor.

Ending the Review

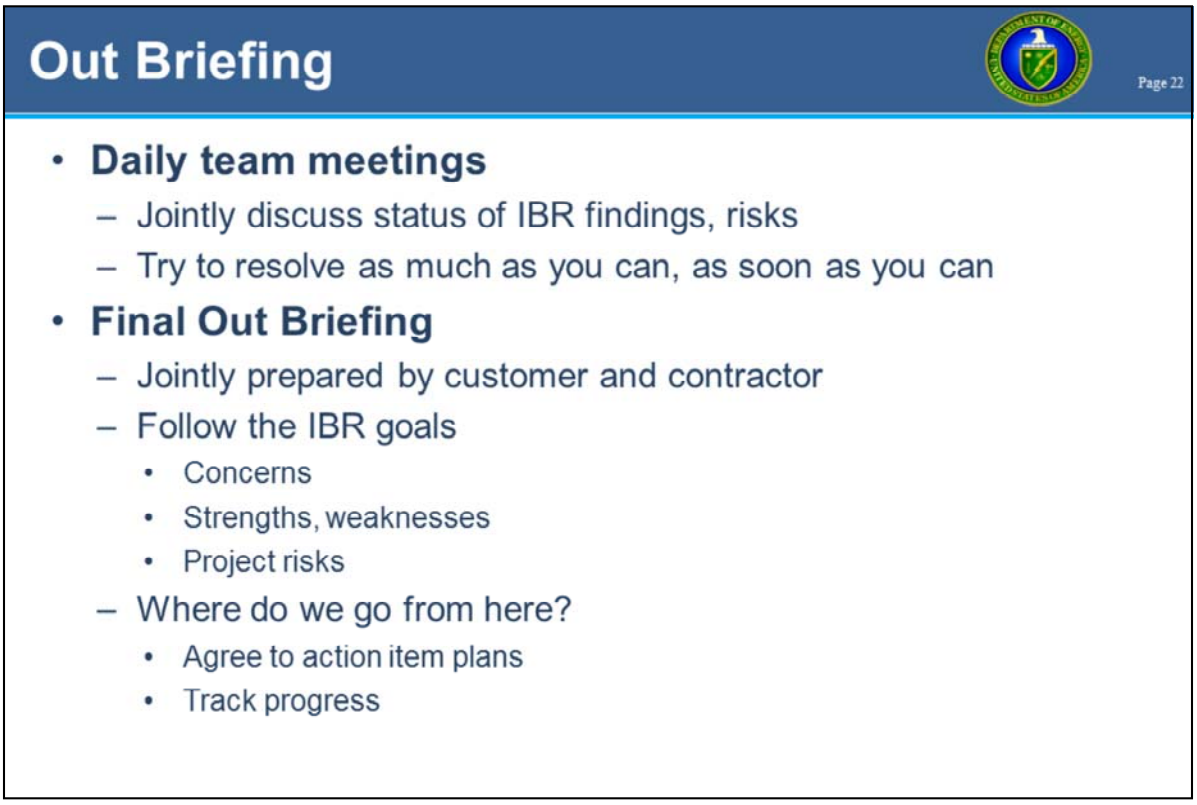
- **Concerns / Action items status**
  - Closed
  - Corrective Action Plan in hand or
  - Schedule set for Corrective Action Plan delivery
- **Close-out requirements understood**
- **Results of the review will be documented**

At the end of each day, it is helpful for both sides to review what was discovered during the day's interviews. Jointly discuss the IBR findings, including what risks were found, what documentation was absent, and what particular CAM discussions revealed which particular issues. This is also an ideal time to try to resolve as many issues as possible and an opportunity for the contractor to begin early corrective action.

The concerns/action items list is the key to resolution. Maintain it. Show closed items, and those with established corrective action plans and the dates for resolution.

At the close of the review, a draft of any actions pending should be presented to the contractor. If a complete corrective action plan cannot be accomplished prior to the close of the IBR, do not leave the contractor's facility without an understanding of the close-out requirements.

Results of the review must be documented.



There should be daily team meetings to discuss findings and efforts to close-out as many as possible before the team departs.

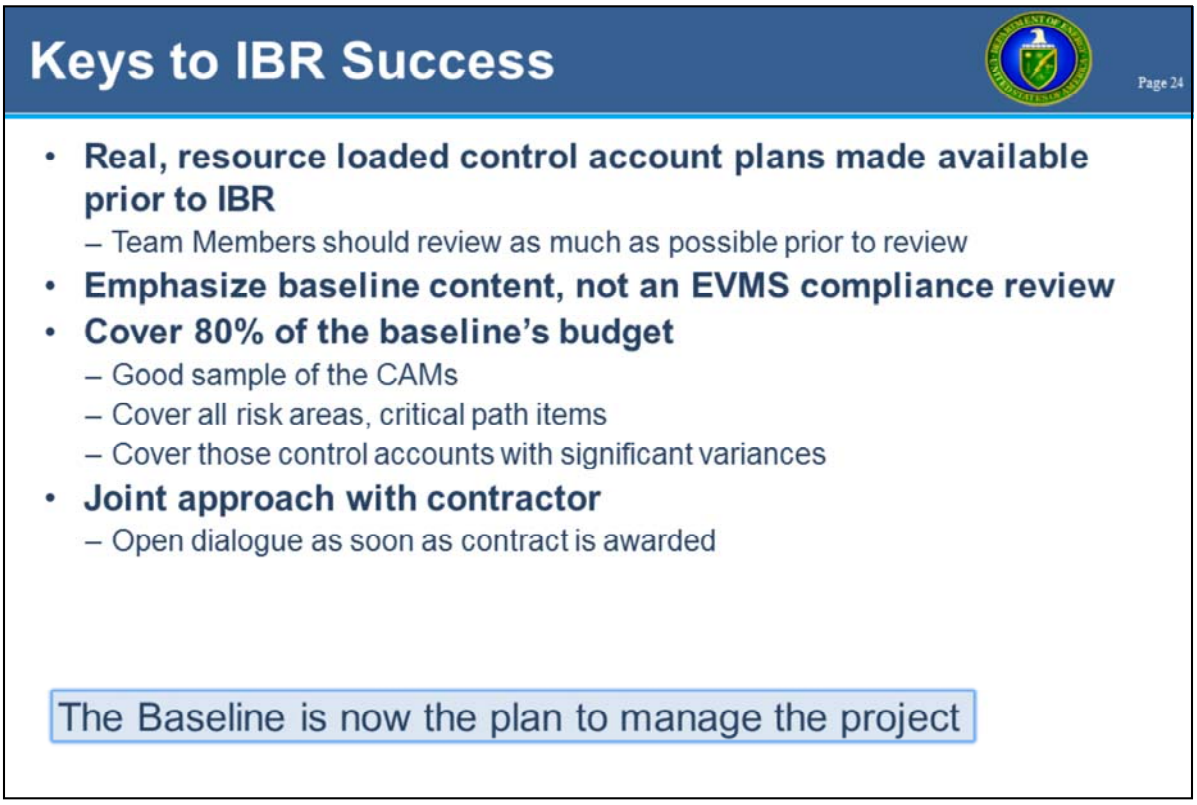
Nonetheless, it is very important that there is a final out-briefing at the end of the IBR. This is a jointly prepared summary of findings from the IBR and the general conclusions. The out-briefings should correspond to the actual IBR: Mapping to the goals and findings. Do not merely focus on concerns---include the strengths, any system weaknesses, and any project risks.

A corrective action plan should also be mutually defined. Completion dates should be realistic, and a plan to track progress through resolution of all open action items should be discussed.

In preparing the out-briefing, all team members should participate and document the results for their area of responsibility. The review results should be consolidated and summarized with focus on actions and highlighted risks.

For the areas in which the contractor team has done exceptionally well, cite this also during the out-briefing. It is supportive to team building and will be much appreciated. Conversely, if problems were found, discuss these beforehand while preparing the out brief. All requests for corrective actions should be provided to the contractor from the contracting officer.

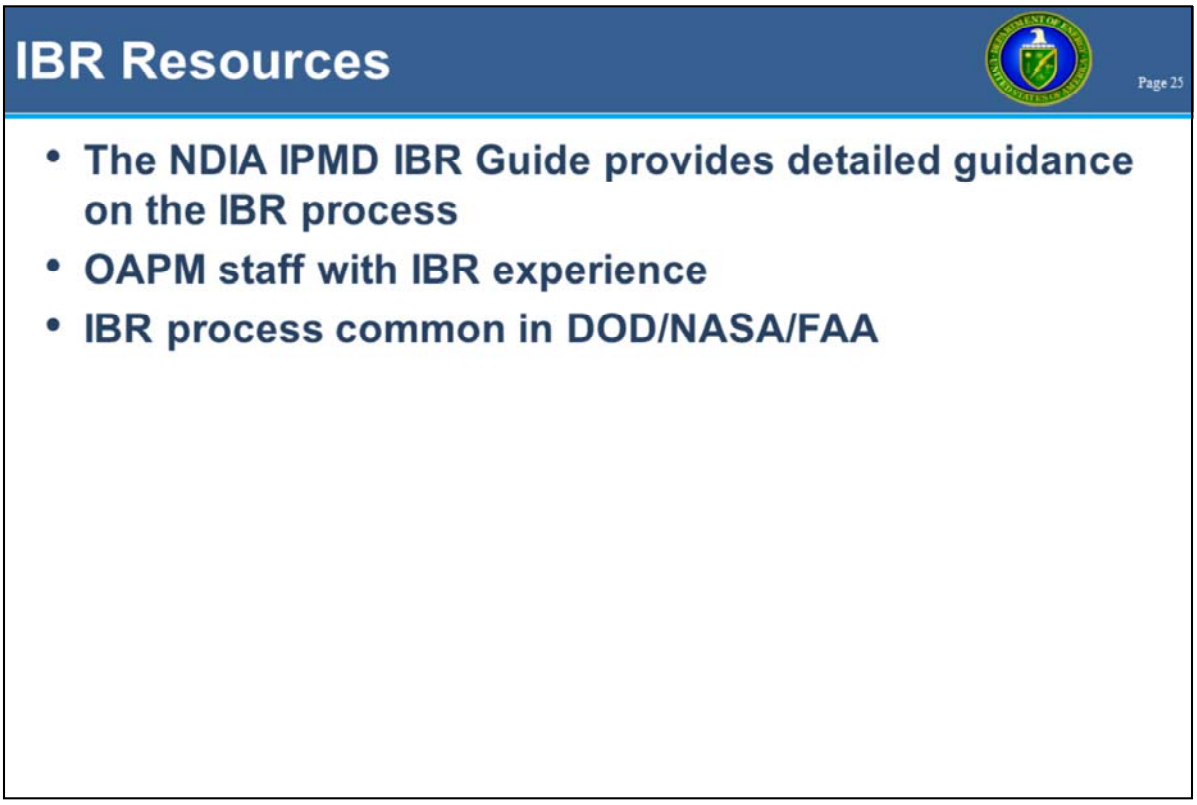
The DOE's technical managers must also be thoroughly trained in the EVMS and the IBR process. It is axiomatic that a realistic project baseline and continuous risk assessment lead to project success. DOE team leaders must be highly motivated. It is important that the DOE's team lead understands earned value, the project, and the goals and processes associated with an IBR.



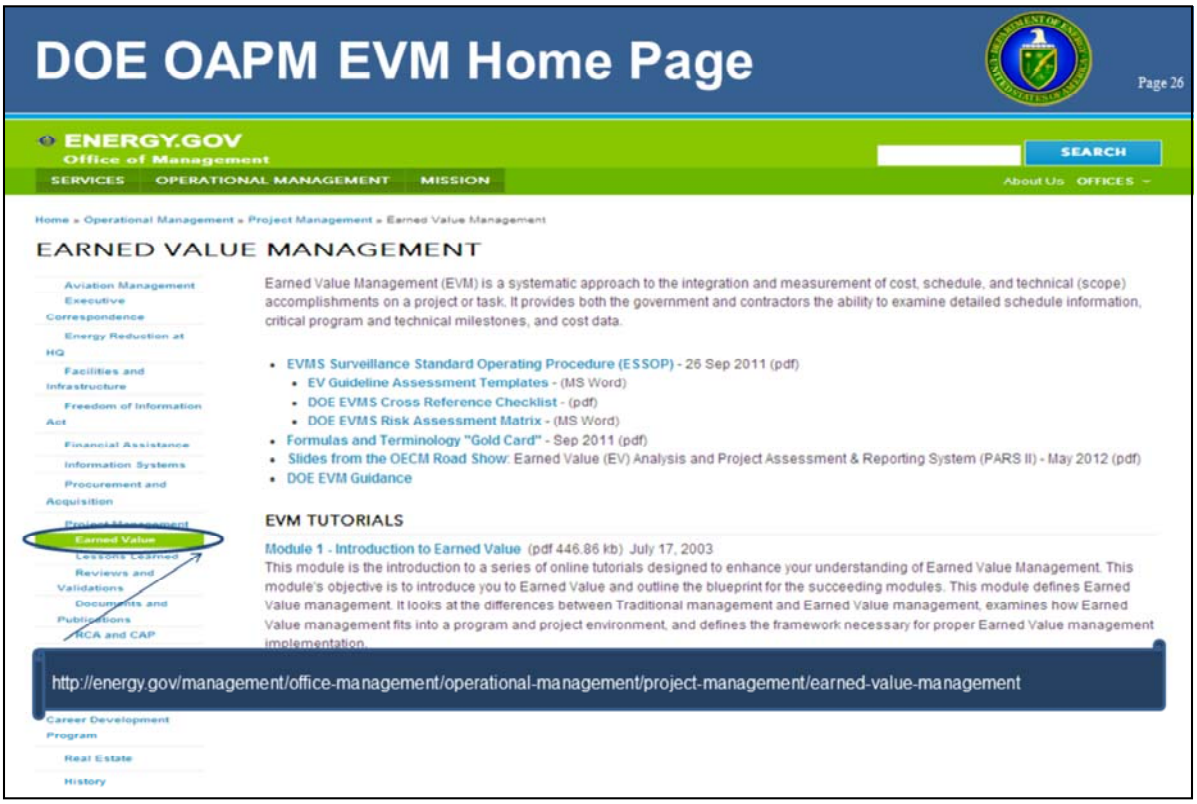
Early in the review process, the DOE team leader may request that the contractor provide to the DOE sample project documents so that they can be reviewed prior to the actual IBR. These documents might include control account plans, the RAM, OBS, WBS, WBS Dictionary, IMS or any other document. Reviewing the documents prior to the review assists the DOE in understanding the contractor's system, project and organizational structure, and understanding of the reports used in managing the project.

It is the responsibility, on both the contractor and the DOE's part, to have a positive working relationship early in the project.

The DOE should understand the health of the project from start to finish. Thus, the Earned Value Management System, which is simply a structured approach to project management, requires managers to understand the project's baseline. Remember the IBR is not an EVMS Compliance Review; it is an early health check of the baseline. To perform that health check on-site, CAM discussions are the key. Otherwise, teleconferences could just be conducted. Because the IBR Team is on-site in advance to discuss the project's health, those discussions need to be positive and focused on team-building. Remember, the baseline should be the realistic cost and schedule plan to undertake the project's Contract work statement. Review it early. If the IBR results in a change(s) to the contract's cost, schedule, or scope, the CO must issue a bilateral contract modification.



The IBR process is defined by the National Defense Industrial Association (NDIA) Integrated Program Management Division (IPMD) IBR Guide. OAPM has staff members with IBR experience within the Department of Defense (DoD) and can assist with IBR implementation. IBRs are common in the DoD, NASA, and the FAA.



For information relative to EVMS procedures, templates, helpful references, and training materials, please refer to OAPM's EVM Home page. Check back periodically for updated or new information.

Thank You