Air Force Integrated Baseline Review (IBR) Process Guide

Version 3.0 20 September 2012

This is a process guide for performing incremental Integrated Baseline Reviews (IBRs). The document details the process and contains sample forms and templates to plan and execute an incremental IBR.

Contents

Document Configuration Management Log

Versions	Content Summary / Change Description
1.0 - 31 March 2011	Initial Breakout of the IBR Process Document into separate volumes (Process Document and Workbook Guide) Pending Changes – Update to reflect the pilot process.
1.1 - 13 May 2011	Update of Document to make changes necessary to complete the pilot process. Pending Change – Document will be completely revised following feedback from the initial pilot
2.0 - 12 January 2012	Update of Document and templates to reflect lessons learned from pilot and to create a single document with templates and samples and eliminate the workbook. Pending Change – Updates from users.
3.0 – 20 September 2012	Update document for lessons learned in tailoring artifacts, artifact integration, and risk management interfaces.

Air Force Integrated Baseline Review (IBR) Process

1. Background Information

This document has been approved for, but not mandated for use. Please contact SAF/AQXC prior to use and provide feedback from process use. This document incorporates revisions resulting from the initial pilot.

The IBR process began a pilot in late March 2011 on the KC-46 Tanker Program. SAF/AQXC personnel (authors of the process) were acting as advisors to the KC-46 Program Office as they went through this process. In August 2011, the IBR pilot was completed. The incremental approach defined by this IBR process was well received by both the contractor and Government Program Office. Several updates were made to the process early in the process planning. The process originally drafted called for a number of integration meetings organized by IBR risk area to validate the artifacts (documents) that define the program baseline. Early planning indicated that some of the meetings could be consolidated into fewer meetings. In addition, the integration of the five risk areas is now one process rather than individual integration meetings. The IBR process has two phases. The first phase, concentrates on the documents that represent the baseline, and the second phase focuses on contractor business office and Control Account Manager (CAM) / Integrated Product Team (IPT) Lead discussions to ensure participants have a thorough understanding of the program baseline.

The number of artifacts and integration points in the original IBR process were considerable. During early planning, some artifacts were consolidated with their parent documents, such as including the Critical Path as part of the Integrated Master Schedule (IMS) rather than a separate document. The current number of artifacts has been reduced depending upon the acquisition phase of the program. A draft MS Excel Workbook was provided with the original draft. The Workbook is replaced by a series of templates and sample documents provided as appendices to this document.

This document will be updated based on the feedback from other users.

1.1. Organization of Document

This document contains several major sections:

- Section 1 – Provides background and overview information
- Section 2 – Provides an introduction to the Revised Air Force IBR Process
- Section 3 – Provides a sequential description of IBR activities
- Section 4 – Provides detailed, specific IBR procedures
- Section 5 – Provides process summary
- Section 6 – Provides templates and sample forms for executing an IBR

1.2. Purpose and Benefits of IBR

The IBR is an essential program management tool for identifying, quantifying, and mitigating risks when executing complex weapons system and information technology projects. The IBR concept was

developed in 1993 and published in DoD 5000.2-R due to a growing recognition within the Department of Defense that unrealistic contract baselines were established, leading to significant cost and schedule overruns and / or under-performance on technical objectives.

The IBR's purpose is to develop a common understanding between the Air Force Program Management Office (PMO) and the contractor PMO regarding the project's baseline and the project's technical, schedule, cost, resources, and management process risks and impacts. The PMO cannot reduce risks unless it first identifies them. The IBR helps to identify risks and opportunities and provides a means for assessing their severity in a standardized and transparent fashion. The PMO and other stakeholders then use the IBR's results to make management decisions that consider cost, schedule, and technical tradeoffs. These decisions include re-defining the program requirements or objectives, developing risk handling plans, prioritizing where and when to apply resources, and other means to achieve an executable and realistic program baseline.

Historically, IBRs were conducted without regard for a standard process. The lack of a quantifiable and repeatable IBR process has resulted in inconsistent execution across the Air Force. This guide is a metrics based approach designed to:

- Standardize the rigor that is required in an IBR
- Increase program performance through a standard IBR process
- Be able to compare IBRs results between programs
- Provide cost effective tools to aid the process

This document provides a standardized process for planning and conducting IBRs across the Air Force enterprise. It establishes a disciplined approach to identifying and quantifying the risks and opportunities inherent in Contractor performance plans and aligns the IBR process with established Air Force and Department of Defense instructions and guidance.

Perhaps more importantly, this updated process and new instruction aims to streamline, simplify, and focus the program team on building a meaningful, achievable, and truly integrated baseline that helps identify program execution risks and opportunities early enough to enable effective course corrections. The new instruction promotes Government and industry working collaboratively from the pre-contract award phase through IBR closeout. This instruction also supersedes existing Air Force IBR team handbooks and guides and provides sample worksheets, checklists, questionnaires, and other tools that help the Government and Contractor PMO through all phases of the IBR process.

> *Note: Hereafter within this document, the term PMO refers to the joint Government and Contractor program team. If a process or step specifically addresses a Government or Contractor role or responsibility, then "Government" or "Contractor" is used accordingly.*

The benefits of this IBR process include:

- A common understanding and quantification of program risks and opportunities

- Early management insight into baseline planning assumptions and resources
- Comparison of expectations, allowing differences to be addressed early in the planning phase
- Correction of baseline planning errors and omissions
- In-depth understanding of developing performance variances
- Improved early warning of significant risks
- Resource targeting to address challenges and handle risks
- Mutual commitment by the Government and contractor PMOs to manage to the baseline

1.3. Current IBR Guidance and Process Documentation

IBRs are normally limited to cost and incentive contracts with an Earned Value Management requirement. Department of Defense acquisition policy 48 CFR Parts 252 and 234, as flowed down to Department of Defense Instruction (DoDI) 5000.02, Defense Federal Acquisition Regulation (DFAR) subpart 234.203(2) and DFAR clause 252.234-7002 (May 2011) require conducting IBRs on all cost and incentive contracts valued at $20M or greater. An IBR is also required on any subcontract, intra-Government work agreement, or other agreement that meets or exceeds the $20M threshold for Earned Value Management (EVM) implementation. The Integrated Program Management Report (IPMR) DID, DI-MGMT-81861 also lists the requirements for the performance of an IBR.

The IBR is not a one-time event or a single-point review. The program team conducts additional IBRs when internal or external events significantly change a project's baseline. These types of events include changes to a project's contract requirements or content, funding perturbations, or when a major milestone occurs, such as moving from development to production. Additionally, IBRs are conducted whenever an Over Target Baseline (OTB) or Over Target Schedule (OTS) is implemented.

The AF IBR Process Document presents an incremental approach to conducting the IBR. The DoD Earned Value Management Implementation Guide (EVMIG), October 2006 and NDIA IBR Guide, September 2010 are two current documents that reflect a slightly different approach to conducting an IBR from that proposed in this document. Both are guidance rather than compliance documents. Within the Air Force, acquisition organizations should use this document as the principle guidance for conducting an IBR.

2. Introduction to Revised Air Force Process

This section of the document provides an overview of the incremental IBR process.

2.1. Objectives of the Revised Air Force Process

From an acquisition oversight perspective, the objective of this process is to provide a standardized approach for conducting IBRs. IBRs are infrequently performed activities. As a result, few personnel have experience with multiple IBRs. Using a standardized process across the Air Force acquisition community will overcome that limited experience and reduce the amount of training required.

Similarly, the acquisition oversight organizations have a need to analyze IBR results and compare them with program progress to determine the impact of IBRs. This is not possible with each acquisition organization performing IBRs differently.

From a Program Management Office (PMO) perspective, the objective is to get an executable Performance Measurement Baseline (PMB) as soon as possible. A related objective is to ensure mutual contractor / Government understanding of all the risks associated with the PMB. From a contractor's perspective, the joint collaborative efforts help the contractor understand the customer expectations better. It also provides the contractor's customer with insight to the methods and processes used to develop the product.

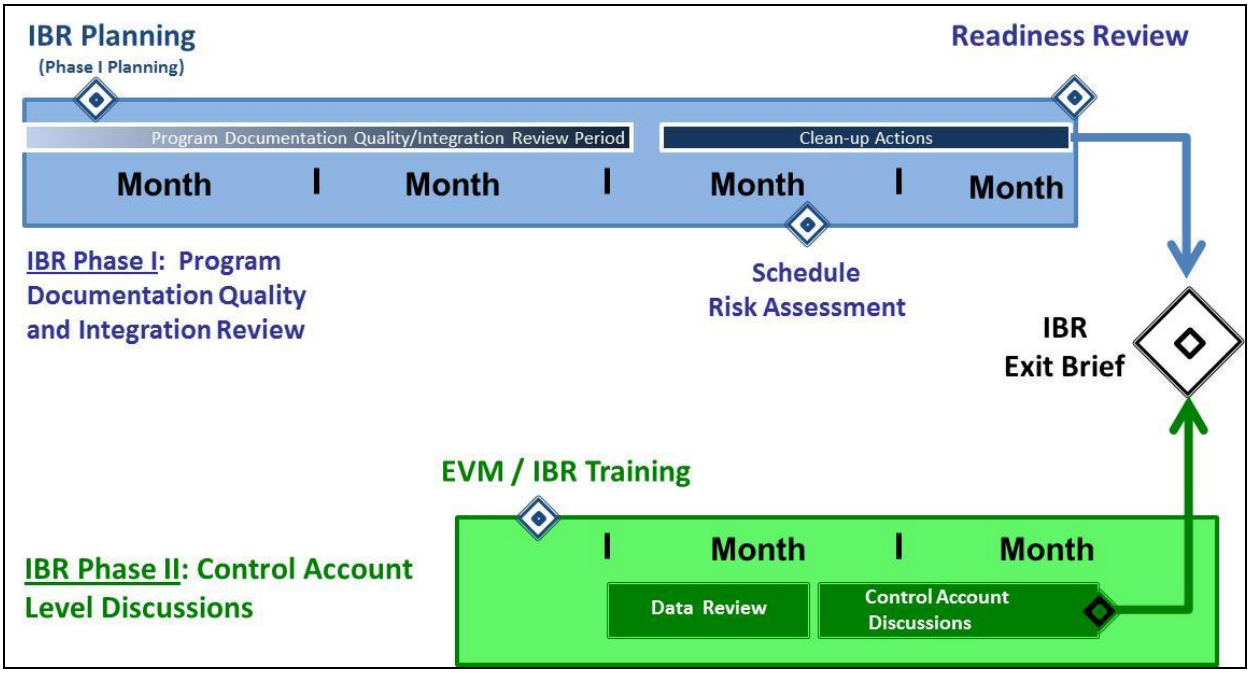
A great portion of the IBR process is devoted to reviewing and evaluating data. Terms used for data merit explanation. The term "artifact" is used to describe some information that may or may not be a standalone document. One example of an artifact is the program critical path that is displayed in the IMS. The term "document" refers to elements of data that are standalone entities. The Contract Performance Report (CPR) or Integrated Program Management Report (IPMR) are documents. Several other terms for data are used in this document. The term "deliverable" or "Contract Deliverable Requirements List (CDRL) item" refers to data elements formally delivered from contractor to Government as specified in the contract. The IMS is an example of a CDRL item or deliverable. The final term "data call items" are items that are not deliverables but needed for the IBR process. The Control Account Plan (CAP) is an example of a data call item.

Some artifacts are assessed for quality in the IBR process. Others are vetted by other processes (such as contract negotiations) are source documents for integration traces. Some artifacts may be evaluated for quality (format and content) and evaluated as part of integration traces to ensure the PMB is consistent across the family of program documents. Some artifacts such as the Work Authorization Documents (WAD) are available for use, as appropriate, in CAM discussions.

2.2. Incremental / Phased Approach

In a traditional IBR, some considered the IBR Exit Briefing the key deliverable of the IBR, but here the IBR Exit Briefing is merely the culmination of a *process.* The process focuses on the quality and integration of program documentation via a series of reviews or meetings that precede the IBR Exit Briefing. These reviews are conducted by IBR phase and help the Government and contractor teams

concentrate on the quality of contractual documentation and the five risk areas in a sequential manner. The figure below (with notional timing) reflects the two phases of the IBR process.



IBR Phases

From the time the IBR process begins and through IBR Closeout, the team identifies, addresses, and tracks actions. The IBR process also entails an assessment based on data call readiness; that is, the ability of the Government and contractor teams to provide the necessary data in an adequate format (see section 3.3.1). Rather than wait for the interview portion later in the IBR process to find too many unanswered questions or integration issues, the IBR process provides opportunity to address PMB quality and integration issues early and throughout the process.

> *Note: The term "incremental IBR" is often used to reflect a series of IBRs at each point where a significant amount of detailed planning occurs. As an example, an IBR is conducted on the path from contract award to Preliminary Design Review (PDR). Another IBR is conducted for the path from PDR to Critical Design Review (CDR). The "incremental" nature of the process described herein is that the Government and contractor teams are jointly participating / evolving the PMB. This process supports incremental IBRs as described above.*

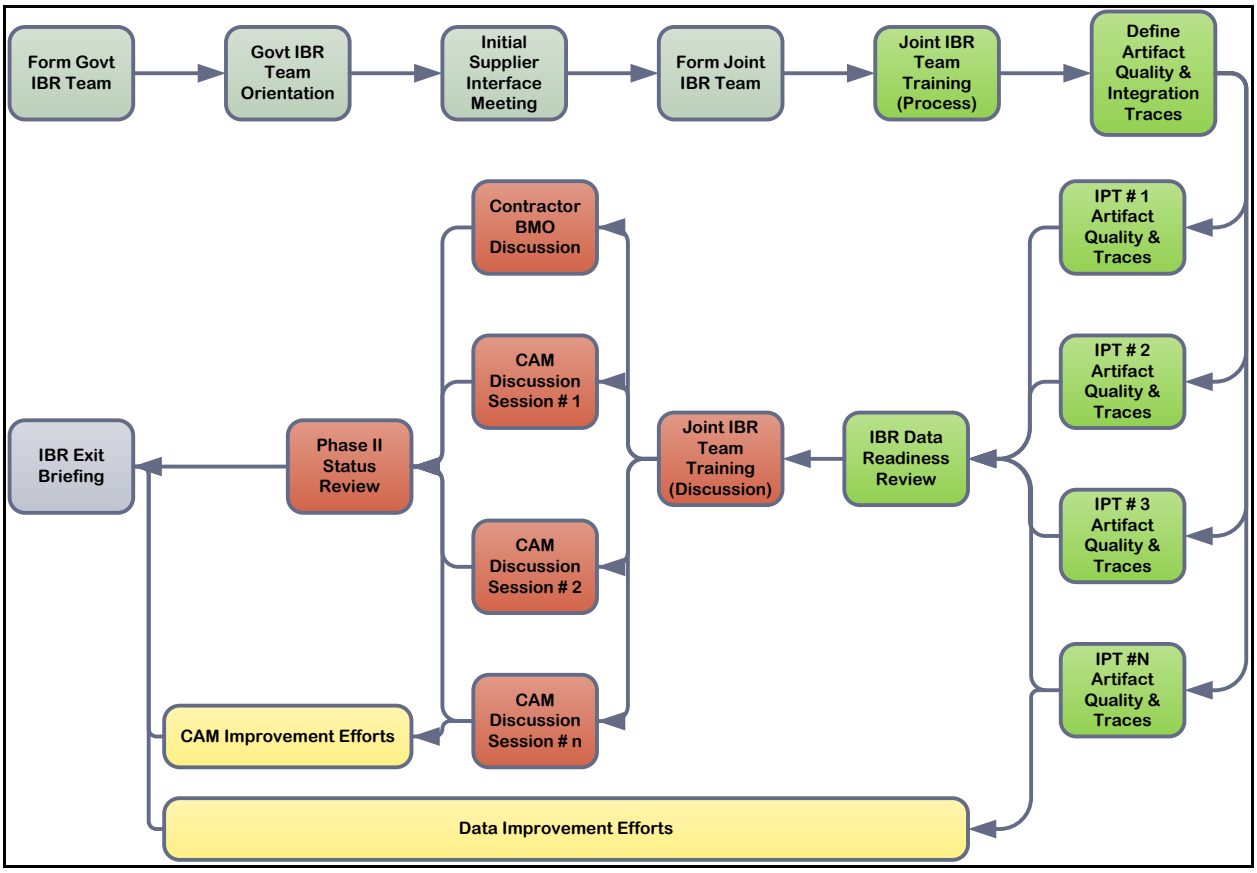
The table below lists the major activities of this IBR Process and notional timing aspects, depicted as calendar days in relation to Contract Award (CA).

Activity	Participants	Timing
Initial Meeting to Kick-off the IBR process	Government Agencies	CA-60d
Earned Value Management (EVM) Basics and Analysis Training	Government Agencies	CA-30d
Contract Award		CA
Post Award Conference / Joint IBR Expectations to introduce the IBR process	Government and contractor	CA+15d
Notification / Call for data to determine preliminary schedule and data call list	Government Agencies	CA+30d
IBR Process Walkthrough with Joint IBR Team to finalize IBR schedule, artifact list and integration checks	Government and contractor	CA+45d
Assign teams for each topic area	Government and contractor	CA+45d
Begin Artifact Quality Assessments	Government and contractor	CA+60d
Begin Data Integration Assessments	Government and contractor	CA+70d
Begin Periodic Quality and Integration Progress Meetings	Government and contractor	CA+77d
IBR Readiness Review to initiate CAM and Business Office Discussions	Government and contractor	CA+100d
IBR CAM Discussion Training	Government and contractor	CA+105d
Begin CAM and Business Office discussions	Government and contractor	CA+110d
IBR Readiness Decision to conduct IBR Exit Briefing	Government and contractor	CA+130d
Formal conduct of the IBR Exit Briefing	Government and Contractor	CA+145d
Issue coordinated IBR Report	Government and contractor	CA+155d

Activity	Participants	Timing
Complete critical open action items and declare IBR complete	contractor	CA+155 to CA+180

Major IBR Activities

The chart below shows the relationship of the various IBR activities.



Top Level IBR Process Flow

2.3. Benefits of Revised Air Force Process

The table below compares the differences between the current single event IBR and an incremental IBR process.

Traditional IBR Process	Transformed IBR Process
Focused on EVM / Compliance	Focused on program execution risks and opportunities
Cumbersome storyboards to depict integration	Risk topic areas with standard artifacts
Interviews with varying questions	Discussions based on risk areas
CAM Interviews including data traces	Focus on control account risks and performance measurement baseline
Multiple data providers	One Government and one contractor focal point for each artifact and integration trace
Administratively burdensome reviews and interviews	Fewer discussions with standard formats and clear expectations
Inconsistent CAM Interview questions / approach	Consistent discussion focused on risk in the PMB
Administratively burdensome post-reviews (Discrepancy Reports (DRs), Corrective Action Requests (CAR), Corrective Action Plans (CAPs)	Action Tracker Report with specific actions by function
One-size-fits all	Flexible / tailorable IBR depending on phase, size, complexity of program
Inconsistent application of the process; each center has its own process	Consistent, clear expectations and standard methodologies
Evaluation criteria not clear	Transparent, clearly defined guidelines
IBR is a short duration of intense activities	IBR Exit Briefing is anti-climactic; merely a final assessment step
IBR results inconclusive or incomplete	IBR Go / No-Go assures when IBR is conducted the results are meaningful
Government-only Assessment	Joint contractor / Government Assessment

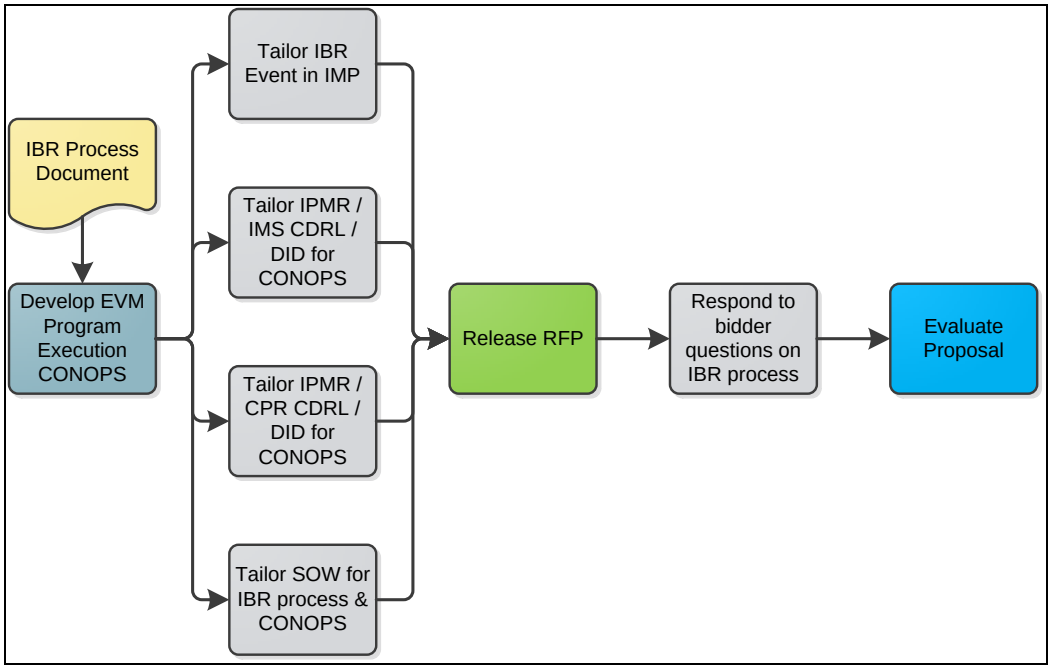
Traditional versus Transformed IBR Process

3. Sequential Description of IBR Activities

This section walks through the IBR process chronologically beginning with a Request for Proposal (RFP) preparation and culminating with the declaration of IBR completion.

3.1. RFP Preparation / Pre-Award Activities

RFP Preparation and Pre-Award activities begin when the Government identifies a requirement for a Request for Proposal or Quote (RFP or RFQ) solicitation with an EVM requirement. The incremental nature of this IBR proceeds more smoothly if RFP documents reflect this process. Tailor sections of the RFP to reflect the IBR conduct. Some programs find it helpful to write a short concept of operations (CONOPS) about how they execute the contract from an EVM perspective. That document helps to identify contract documents tailored for the IBR and program execution. The chart below shows potential RFP tailoring for the IBR.



Pre-award Activities

3.1.1. RFP Document Tailoring for IBR

The Statement of Work (SOW) or Performance Work Statement (PWS) should include a description of the incremental nature of the IBR process and refer to the Air Force IBR Process Document for guidance. Consider adding SOW wording to require the contractor to support requests for non-CDRL items as part of the IBR data call.

> *Note: Statement of Work (SOW) and Performance Work Statement (PWS) are two terms used to define the scope of work for the contractor. Where SOW is used in the document it refers to SOW or PWS as applicable.*

The contract deliverables should be consistent with the incremental schedule of the IBR. The delivery schedule of PMB defining documents (IMS, CPR, and IPMR) should be consistent with the preliminary IBR schedule. The IMS is especially important as it reflects the contractual SOW and is the primary instrument used to determine project status and IMS, CPR, and IPMR CDRL reporting. The Air Force maintains processes and tools to assess the contractor IMS and provide essential feedback to improve this critical deliverable. Granularity requirements (i.e. activity duration limits) should be included in the SOW or tailored Data Item Description to ensure that the Government gets the visibility needed to manage the program. Consider making limits on rolling wave planning, such as requiring a minimum of the first year from establishment of the PMB to be detail planned (no planning packages) or detailed planning to a specified program event.

On large complex programs, developing the IMS may be a driving document for the IBR schedule. It is common to take up to four months after contract award to develop a credible IMS. Compare the draft IBR schedule with the deliverables schedule proposed in the RFP to ensure they allow for an incremental IBR.

When an Integrated Master Plan (IMP) is included in the RFP, adjust the Events, Accomplishments and Criteria to reflect this IBR process. A sample template for the IBR Program Event is contained in Section 6.2.

Tailor the CPR / IPMR Data Item Description (DID) to ensure the CPR / IPMR provides the appropriate level of visibility. Specify the level of the Work Breakdown Structure (WBS) that the contractor reports on the CPR / IPMR. A review of MIL-STD–881 helps the Government PMO make this determination as contractors use this as guidance when preparing the Contract Work Breakdown Structure (CWBS).

3.1.2. IBR Process in Blended Contract Environments

There may be cases where EVM is not flowed from the prime contractor to a number of suppliers. This is most common where suppliers are providing goods or services at a Firm Fixed Price. The contract EVM clauses in the contract specify when EVM is to be flowed down to suppliers. Remember to flow EVM down to any non-US subcontractors, if EVM is required per the contract clauses.

When there is no flow down of EVM, a supplier does not have to support an IBR unless otherwise specified in a contract clause or SOW. In this case, it is the prime contractor's responsibility to get the supplier information necessary to establish the PMB and identify any risks associated with executing to that baseline. During the IBR, the prime contractor CAM that has responsibility for that supplier must be able to address each of the risk area topics pertaining to that supplier. This means the CAM must be able

to explain the supplier's role in the program describing related items in technical, schedule, resources, costs, and management processes for all risks.

Large portions of the PMB may be provided by suppliers without an EVM requirement. Add wording to the SOW similar to that in the paragraph above and specify the visibility of supplier information required in the IMS.

The term "blended contracts" can mean a combination of FFP and EV applicable Contract Line Item Numbers CLINs in a contract or situations where subcontractors are not required to use EVM in a contract where the prime is required to use EVM. In this document, the term is used relative to CLINs. In a blended contract environment where a large percentage of the contract is Firm Fixed Price (FFP) through suppliers, the use of multiple CLINs can help provide the granularity needed for the EVM portion of the contract. As an example, consider a case where 50% of the contract effort is performed by a single supplier with a FFP purchase agreement. On the CPR, this supplier's Budgeted Cost of Work Performed (BCWP) and Actual Cost of Work Performed (ACWP) would always be equal and could distort program level Cost Performance Index (CPI) calculations. Having this supplier's work scope as a separate CLIN and having separate CPRs or IPMRs for different CLINs would prevent this distortion.

See Section 4.2 Scoping the Performance Measurement Baseline for additional discussion of this subject.

3.1.3. Definition of Roles and Responsibilities

Definitions of roles and responsibilities for EVM and the IBR should be determined prior to award. The PMO team should understand the roles and responsibilities defined below. After award, communicate the roles and responsibilities to the contractor through the SOW or Post Award Conferences, Program Startup Workshops, or other meetings. Several organization and individual roles and responsibilities are defined below.

3.1.3.1. IBR Roles (Government and contractor)

Program Managers (PM) (Government and contractor) The Government PM owns and leads the IBR process. The contractor PM is a co-leader of the IBR process but final decision authority rests with the Government PM. The PMs ensure the program team gives necessary priority and dedication to prepare for, conduct, and support follow-up for each activity. They help facilitate the various sessions and reviews by requiring attendance, holding the team to the rules of engagement, and adhering to agendas. Government and contractor PMs assign the panel of key program team members and external experts (if required) who help conduct the IBR and document the formal IBR results / assessment.

IBR Integrators (Government and contractor) The Government PM selects the Government IBR Integrator with the following characteristics:

- The Integrators have a good perspective of integration (able to see the big picture of how things fit together, how systems, subsystems, data, work, and the teams integrate).
- A strong program knowledge and cost / schedule background is essential.
- Technical knowledge is a plus.

The contractor PM selects the contractor IBR Integrator. These pivotal roles require individuals who are organized, detail-oriented, objective, and respected by the program team. The two IBR Integrators remain in their roles to provide continuity and consistency throughout the IBR process as much as practical. The two IBR Integrators run the various meetings. This includes handling logistics, sending invitations,

conducting the meetings, and managing follow-up tasks. They ensure the CAMs understand their IBR roles and responsibilities and facilitate guest speakers that may conduct training. The Government IBR Integrator maintains the master data set for the IBR. The IBR Integrators compile actions, risks, opportunities, and questions as submitted.

Artifact Experts (Government and contractor) PMs and the IBR Integrators assign one Government and one contractor expert for each artifact. These individuals are experts or expected to become experts for their respective artifacts. They perform data trace presentations and help guide the team to evaluate integration and quality aspects of the artifacts. They explore and report on the artifact deficiencies with objectivity, frankness, and an aim toward improving the artifact for the betterment of the program. These identified deficiencies may develop into actions. Contractor Artifact Experts help CAMs determine the level of artifact integration within their Control Account documents.

See Section 4.1, Organizing the Air Force IBR Team.

3.1.3.2. Defense Contract Management Agency (DCMA)Role

DCMA participates as an invited member of the Government IBR team. Specific roles and responsibilities are defined based on availability of skills and experience. DCMA participation gives them a better understanding of the program and the PMB. It also makes clear that the PMO priority is establishing a credible PMB and understanding the risks rather than EVMS compliance. DCMA participation also allows the contractor to provide additional insight into contractor methods and procedures.

The origin of the IBR is in Earned Value Management. The IBR requirement began in 1993 based on the application of EVM in the contract. This situation sometimes causes confusion in document quality evaluations and identification of EVMS compliance issues.

While many of the risk areas touch EVM artifacts, the focus of this IBR process is not EVMS compliance. Review artifacts considered EVMS documents for quality with an emphasis on the complete and accurate identification of the PMB and the risks associated with meeting the program objectives.

If, in the performance of the AF IBR Process, significant potential EVMS compliance discrepancies are discovered, the program office can document these potential discrepancies as risks in the appropriate risk categories and provide the observations to DCMA. DCMA can further investigate the matter as part of their surveillance role.

3.1.3.3. Supplier Roles in an IBR

As EVM flows down from the prime contractor to subcontractors / suppliers (hereafter referred to as suppliers), the requirement for Supplier IBRs is established. That requirement may be satisfied in two ways. The prime contractor and Government PM may agree to have a consolidated IBR and the supplier's portion of the PMB is addressed as part of the overall program. Another option is to conduct separate Supplier IBRs led by the prime contractor PM with participation from the Government PMO. This section discusses both approaches.

The Government PM and the prime contractor may agree to have a consolidated IBR. This is often the choice when the prime contractor is using the "One Team" concept. Under this concept, suppliers CAMs perform at the same level as prime contractor CAMs. The contractor team appears as one contract with one set of EVMS deliverables to the Government Program Office. This concept is frequently used when the suppliers are business units of the prime contractor.

Under the "One Team" concept, the supplier's portions are awarded almost simultaneously with the prime award, enabling the incremental approach (maturing artifacts, integration and risk identification) of this IBR process to succeed. This IBR process focuses on the PMB and the risks associated with executing the program. EVMS compliance down through the suppliers is the responsibility of DCMA, alleviating this duty from the IBR team. As a result, under this "One Team" approach the number of artifacts should not be significantly increased. For example, a supplier's effort can normally be identified as a specific section of the prime contracts SOW and WBS.

When EVM is flowed down to suppliers, the Prime contractor and Government PM may elect to conduct separate IBRs for the suppliers instead of a consolidated IBR. In this approach, the suppliers deliver a set of EVMS artifacts to the prime who, after consolidating the data into the prime's EVMS artifacts, forwards the supplier artifacts to the Government.

From a risk management perspective, it is desirable to complete any separate supplier IBRs and Integrated Risk Assessments (IRA), if applicable, before finalizing the prime contract IBR. That way all risks identified at the lower level can be flowed into the top level IBR. In some cases, the supplier's contracts may not be awarded simultaneously with the prime contract. If there is a delay of several months, it may not be possible to execute the supplier IBR using the approach described in this process document. It may be necessary, due to timing, to revert to the traditional IBR approach (last minute data call and compressed IBR activities) for suppliers.

When conducting the supplier IBR is not possible within the period of the Prime contractor's IBR, then the risks associated with that supplier's PMB is addressed in the Prime contractor IBR. As a minimum, the inability to perform the supplier IBR prior to the completion of the prime IBR should be reflected in each applicable risk area (schedule, cost, technical, resources, and management processes). See also section 4.2; Scoping the Performance Measurement Baseline.

3.2. Immediate Post Award Activities

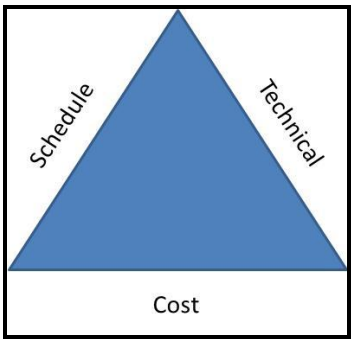
Having completed the pre-award activities, the next efforts are associated with jointly preparing the plans and assigning individual roles and responsibilities to conduct the IBR.

3.2.1. IBR Process Introduction and Detailed Planning

Soon (fifteen to thirty days) after contract award, the Government PMO team should meet with the contractor team to introduce the IBR process in detail and plan the execution of the IBR. The introduction should address roles and responsibilities, the IBR phases, artifact selection / integration, and CAM selection criteria for Phase II discussions. If formal notification of the IBR is appropriate, a notification letter may be prepared. Section 6.3 contains a sample notification letter. If there is a face-to-face meeting such as at a Program Startup Workshop, joint agreement may be reached on the following topics.

3.2.1.1. Artifact Identification

Section 6.4 of this document contains a Sample Artifact List. This is a list of the most common artifacts used in IBRs across a variety of acquisition phases. Consider including artifacts from the artifacts list, for the IBR if they define the PMB or flow the PMB down to the execution level (control account). The program management triangle with technical, schedule, and cost sides is a good representation of the PMB.



The technical side represents the requirements for the product or services created. The schedule side represents the activities, durations, and sequence of work. The cost (resource) side represents the various assets used to create the product or services. The artifacts selected represent all three sides. The Joint IBR team should review this sample artifact list and decide which artifacts are applicable for this IBR. Following that step, they should further identify which documents are already "vetted" and not subject to quality evaluation. They should also determine which artifacts are deliverables (CDRL items) and which are non-CDRLs with delivery addressed in the data call list.

3.2.1.2. Data Call Identification

The artifacts examined for the IBR include deliverables (CDRL items), as well as non-CDRL items such as control account plans, work authorizations, and other EVMS data elements. These non-CDRL items are defined in the Sample Artifact List. Take time to ensure that all parties understand these data call items, as contractor s and EVMS software often use different names and formats for these items. During the review of the data call items, the team should note when these items are available. For example, work authorization documents are often not finalized until after the baseline has been set.

3.2.1.3. Integration with Other Program Events

Depending upon the acquisition phase, the program structure and sequence of events, other program events can be folded into the IBR, reducing or eliminating duplicate efforts. One example is the Systems Requirements Review (SRR). This review duplicates some portions of the review of technical artifacts and the trace of system requirements from an Initial Capabilities Document (ICD) or Capability Development Document (CDD) to System Requirement Document (SRD) or System Specification (SS). Another example is the IRA. Results from an IRA may streamline the required SRA activities. The IBR team should consider these other events in the scheduling of the IBR activities.

3.2.1.4. IBR Schedule Preparation

As the delivery dates for the CDRL and non-CDRL artifacts are finalized, the detailed IBR schedule can be completed. A template in Microsoft Project is included in Section 6.1. A copy of the file in Microsoft Project format is available from SAF/AQXC.

When preparing the schedule, the joint IBR team should include schedule margin in the plan so that completion of the IBR within 180 days of contract award is possible. The schedule should be statused weekly and available to all members of the IBR team.

3.2.2. Joint IBR Team Assignment of Responsibilities

After agreeing on the IBR schedule, individuals are assigned specific roles and responsibilities. This includes the Artifact Experts, as well as risk area leaders.

The EVMIG documents five risk areas for identifying IBR risks (technical, cost, schedule, resources, and management processes). The IBR process in the EVMIG is organized around those risk areas so that integration teams are formed for each of those five areas. Today, most major acquisition programs use the IPT approach in both the Government and contractor organizations. In some cases, the Government and contractor IPT align exactly and joint IPTs are easily formed. The five risk areas do not align perfectly to the IPT structures and may create some confusion in the initial organization of the IBR process. The Joint IBR Team may elect to align responsibilities by IPTs, but retain reporting by the EVMIG risk areas.

3.3. IBR Phase I Artifact Quality and Data Integration

After the IBR team is organized and the IBR schedule developed, Phase I begins. Phase I is dedicated to evaluating artifact quality and assessing data integration. Initial steps define the standards for measuring the artifact quality and data integration. The artifacts and data integration points are then assigned to teams and evaluated.

3.3.1. Jointly Defining Artifact Quality

During the initial post award activities, artifacts are identified for quality evaluation. The next step is joint determination of the standard or quality proofs for each artifact. A number of quality standards may be established for the artifacts:

- Adequate quality of key program documentation may be defined as complying with contractual CDRL requirements, as well as any DIDs referenced in the applicable CDRL.
- Where a CDRL does not exist, the quality of a document can be established based on the informed and experienced judgment of the document's Artifact Experts, considering characteristics such as document clarity, completeness, and conformance to common industry standards.
- Establishing the quality of a document should take into account if it has sufficient data elements for the standard cross-documentation data traces defined in this document.

Section 6.4 contains a list of common artifacts, their most appropriate risk or IPT category and a narrative description of desired artifact quality. The IBR team should review and update this list for their particular program. It is extremely important that the definition of artifact quality standards are agreed to by both contractor and Government IBR teams. Taking the time to reach consensus on these proofs early in the process avoids downstream confusion and helps keep the process on track.

In addition to "deliverable" artifacts, the IBR also requires supporting documents. These documents are normally requested through a data call letter. To avoid incorrect interpretations, the data call letter for these other artifacts should contain enough definition that the contractor can readily determine the format, content, and acceptability of each requested data item. A sample data call request is contained in Section 6.5.

Document quality should receive one of these scores: (1) Adequate Quality: Quality criteria are met. There are no open action items regarding quality aspects or (2) Inadequate Quality: Quality criteria are

not met. Artifacts judged to have inadequate quality should have associated action items. The status and scoring of artifacts can be maintained by adding a scoring column to the artifact list spreadsheet.

It is important to maintain the current artifact scoring during the incremental IBR process. As corrective actions are taken, an artifact status may move from "Inadequate" to "Adequate." The Government IBR Integrator should maintain the current status / scoring of all artifacts.

3.3.2. Jointly Defining the Data Integration Proof Statements

Data traces verify the integrity of the baseline from Government source documentation through the contractor baseline at all levels. Data traces may flow from top-level program requirement documents, such as the CDD, through to control account work authorizations. Data integration proof statements explain the order or flow of documentation, the purpose of the data trace, the scope, risk area or applicable IPT, and the proofs. The relationship of program documentation may vary between programs. The IBR teams must review and agree upon these data relationships to establish an accurate standard to score the existing documentation through data traces. Section 6.6 contains a sample template reflecting these relationships.

Data traces are scored as "Adequate" or "Inadequate." Traces rated as inadequate should have corresponding action items to restore the artifacts to an adequate rating. Common discoveries during traces include:

- Scope of work in SOW not assigned to any control account
- Differences in work scope between SOW, WBS Dictionary, or Work Authorization
- Work scheduled inconsistently to the time-phased budget for that work

Section 6.6 contains a list of common documentation traces. The IBR Team should use this table as a starting point and refine it to match the particulars of their program.

3.3.3. Assigning and Evaluating Artifact Quality and Data Integration

After artifact quality standards and data integration proof statements have been finalized, the artifacts may be assigned to teams for evaluation. Teams should periodically report evaluation status to the IBR Integrator.

The AF IBR Process touches artifacts at least twice. The first review of an artifact is an assessment of its quality. If the artifact is a contract deliverable, the contract including SOW, CDRL, and DID outline the requirements for the artifact. Normally, an artifact that meets these requirements is considered to have satisfactory quality. Sometimes during an IBR, additional standards may be established for an artifact, such as meeting the DCMA 14 Point Assessment Criteria for an IMS. The higher standard may be imposed to ensure that related activities like the Schedule Risk Assessment (SRA) yields credible results.

As the teams evaluate the artifact quality and data integration, they should record any anomalies. This is best accomplished with screenshots accompanied by a written description of the anomaly. This helps the artifact owner to understand what corrections are required. When one or more anomalies represent a significant update or correction that needs to be made, an action item should be prepared and forwarded to the IBR Integrator. The report should state clearly, what standard or proof is not met, provide an example, and include the recommended corrective action. The IBR Integrator keeps a master list of the action items. If the anomaly is sufficiently severe, turn the anomaly into a risk for determining the severity of

consequence. Since the evaluation team is composed of both contractor and Government personnel, feedback from the evaluation to the organization responsible for correcting the artifact should be immediate.

There may be a direct relationship between artifact quality and data integration. If artifact quality is not acceptable and the trace team is unaware of the documented quality issues, the trace may not be accurate or it may require repeating the trace after artifact revision. Since different personnel may be assessing an artifact at the same time (data quality and integration trace), it is recommended that the IBR Integrator hold a weekly status review for all IBR team members.

3.3.4. Readiness Review for Transition to Phase II

As artifact quality and data integration evaluations are concluding, the team should be preparing for a Readiness Review. The purpose of the Readiness Review is to present the status of Phase I of the IBR to both Government and contractor PMs and gain approval to begin Phase II, the CAM and Business Office discussions.

The Readiness Review should include a review of all artifact quality and data integration checks. The review should also include a review of all action items, both those closed as well as any items still open. Section 6.7 contains a sample Readiness Review briefing outline.

Some artifacts may not be adequate by the time of the Readiness Review. In this case, the IBR leadership may elect to continue artifact improvements and initiate the second phase of the IBR (CAM Discussions) or delay Phase II. This decision should consider whether the artifacts condition would affect or invalidate the discussions of control account details.

3.4. IBR Phase II – CAM and Business Office Discussions

After receiving a go-ahead from the IBR leadership, the second phase of the IBR process begins. During this phase, Business Office and CAM discussions are conducted. Business Office discussions focus on the management processes used by the contractor to implement and manage the program using Earned Value. The management processes discussed should include those pertaining to CAM roles and responsibilities. There are two advantages to having separate Business Office discussions. First, the processes and procedures provide a background for the CAM discussions. Second, the discussions do not need to be repeated during the CAM discussions, allowing the focus to be on control account-related risks. During the Business Office discussions, the contractor explains any program unique EVMS procedures, as well as a review of the information systems / software used for EVM.

3.4.1. Business Office Discussion Topics

The following are potential topics for Business Office discussions:

- Work authorization process and common documentation
- Contract Budget Base (CBB) Log and the Management Reserve (MR) /Undistributed Budget (UB) guidance
- How routine EVM information is developed and maintained
- Introduction to the IMS, including integration of suppliers / contractor data
- How subcontracts /suppliers are managed

- Role of Program Control and CAM
- How the PMB Status is maintained

3.4.2. Control Account / CAM Selection Criteria

The CAM selection criteria are discussed when the IBR process is originally introduced to the contractor. At this point, the criteria are applied in the selection of control accounts and CAMs for discussions. The selection criteria recommended are high dollar value control accounts, control accounts on the critical path, and control accounts associated with high-risk events. A combination of the Responsibility Assignment Matrix (RAM), IMS, and Risk Register are used for the CAM selection process. In addition, a copy of the dollarized RAM will assist with the control account selection.

3.4.2.1. Percent of PMB Sampled

The EVMIG recommends selection of at least 80% of the PMB value for review. The sampling for an IBR has been interpreted in various ways by IBR teams in the past. Some teams use PMB dollars to calculate the recommended percentage for sampling. Others use the number of control accounts. Some use direct labor hours. The guidance in the EVMIG is not specific on how the percentage should be calculated. Additionally, the EVMIG implies that FFP subcontracts and FFP material items may be excluded from selection. Control Accounts that are 100 percent LOE and properly removed from the critical or driving paths in the IMS are also candidates for exclusion.

CAMs are often assigned a number of control accounts. Individual CAM discussions tend to focus on the high or medium-risk control accounts to get a satisfactory amount of detail during the limited time available for discussions. This raises the question whether credit should be taken for all CAM control accounts when only one or two control accounts are discussed.

This IBR process recommends the following steps to select control accounts (that then determine CAMs) for discussion sessions.

- Identify and select all control accounts with a program level of medium or high risk, based on probability multiplied by consequence.
- Identify and select all control accounts on the current program critical path.
- Remove the previously selected control accounts from consideration and select the next five to ten highest dollar value control accounts.
- Remove all the previously selected control accounts from consideration and have each Government Program IPT select one control account from the remaining list that concerns them the most based on the five IBR risk areas (technical, cost, schedule, resources, and management processes).

The combination of the incremental IBR process with a quality review of artifacts, and document traces provides the IBR team more insight to potential problems than a single event IBR. This additional insight reduces the need to “cover the waterfront” with a high percentage of control accounts sampled.

3.4.3. Scheduling and Conducting Discussions

Depending on the program size, complexity, number of CAMs, number of control accounts, and risks, the CAM discussions are often conducted using one of these options:

Option 1: Individual CAM Discussions. Present CAMs one at a time (optionally including Government and contractor IPTs and IBR stakeholders) to discuss the CAM's understanding of their area of responsibility and to determine the risk levels associated with accomplishing the work scope of their control accounts within cost and schedule. Direct the questions to individual CAMs. The CAMs should demonstrate control account ownership, adequate span of control, and ability to understand and act on the data to establish and execute the control account baseline. In some cases, allow CAMs to have support staff such as planners, schedulers, or analysts from other disciplines (e.g., finance, earned value, scheduling, or supply chain management) in attendance. CAM support staff may help answer some questions but the CAM must demonstrate overall ownership and understanding of their control accounts.

Option 2: Round Table Discussions. Round table discussions include a gathering of a group of CAMs (optionally including Government and contractor IPTs and IBR stakeholders) to discuss the CAMs' understanding of their area of responsibility and to determine the risk levels associated with accomplishing the program baseline within cost and schedule. This grouping of CAMs is normally focused on a common WBS element such as Guidance and Navigation. Questions are directed to individual CAMs and the CAMs respond in this public forum. Specific CAM knowledge and the interdependencies among control accounts are explored during these discussions. If the program has a significantly large number of CAMs, round table discussions may be divided into manageable subgroups to facilitate thorough discussions. Round table discussions may require more preparation time, including a dry run or demonstration to ensure that the flow of artifacts, questions, and data traces transition smoothly and that enough time is allocated for the sessions.

Option 3: Combination of Options 1 and 2, above. The PMs and IBR Integrators can use a mix of both techniques to assess CAM knowledge, data integration, and data quality.

3.4.4. CAM Questions and Discussion Topics

The IBR incremental process with artifact quality evaluations, data integration traces, and a Business Office discussion session enable CAM discussions to focus on identifying risks at the control account level. Section 6.8 provides a number of questions that may be used during the discussion sessions. Additionally, Section 6.9 provides a CAM checklist. This checklist is a detailed list addressing CAM knowledge, skills, and responsibilities. It should be shared with the CAMs prior to discussion sessions and may be used by interviewers to prompt questions.

Occasionally IBR teams may attempt to limit CAM discussions due to time constraints or lists of questions. The purpose of the IBR is a joint understanding of all risks associated with executing the PMB. CAM and Business Office discussions are allowed to "deep dive" into any area that appears to contain risks to program execution. This point needs to be made clear prior to any discussions.

3.4.5. CAM Scoring and Recording of Discussions

The IBR CAM discussions are assessed using a three-point scale; 1 for high risk, 2 for medium risk, and 3 for low risk. The scoring captures systemic issues and be used for the overall IBR assessment. Those areas found to be scored as inadequate (1 or 2) are documented as actions and monitored through IBR close out. The scoring criteria are contained in Section 6.10 and contain potential ratings for each of the five risk areas (technical, schedule, cost, resources, and management processes).

Following each CAM discussion, the IBR team should convene to review observations and reach consensus regarding any action items. Ideally, this session takes place the same day as the discussion. The

Government IBR Integrator determines the level of collaboration based on the contractor's participation and demonstrated management approach.

If the IBR team discovers a serious concern, the IBR Integrator is responsible to ensure it is added to the AF IBR Action Tracker and reported to the local DCMA or Defense Contract Audit Agency (DCAA) for follow up.

A record of each CAM discussion should be prepared. The record should include:

- General Information - CAM and Interviewers names, date of discussion, and control accounts addressed
- Summary by risk area
- New / additional risks identified
- Acton Items
- Any Planned Follow Up

Summarize CAM discussion ratings at program level. The overall CAM discussions are rated Red, Yellow, or Green for the categories of technical, schedule, cost, resources, and management processes. For the overall scoring:

- Green = 2.6 or greater
- Yellow = less than 2.5 and greater than 2.0
- Red = 1.9 or less

3.4.5.1. Translation of CAM discussions into Risks and Action Items

The CAM discussion records provide a mechanism to ensure that individually identified risks and action items are included into the overall IBR history and scoring. Overall scoring of CAM discussions are recorded for each of the risk topic areas. CAM discussion ratings that are less than Green are expected to have program level recommendations associated with them. As an example, consider that the average Schedule rating for all CAM discussions is red and the most cited comment is that CAMs cannot determine if they are on the critical path. Then a general recommendation or action item for CAM training in scheduling theory and reading schedule reports may be appropriate.

A sample form for summarizing CAM and Business Office discussions is contained at Section 6.11.

At the end of the CAM discussions, the IBR team should be able to determine if the assembled contractor team can effectively manage at the control account level and ensure that all significant risks are identified.

3.5. IBR Exit Briefing and Follow-up

The culmination of the IBR is an Exit Briefing. If the incremental IBR process has been well-exercised, all significant risks have been identified, action items prepared, and all critical action items completed.

3.5.1. Prerequisites for IBR Exit Briefing

The IBR incremental process places emphasis on completing action items by the two major review points (Readiness Review and IBR Exit Briefing). Action items from quality assessments and integration traces are expected to be completed by the Readiness Review Meeting (that initiates CAM discussions). Similarly, action items from the CAM discussions are expected to be completed by the Exit Briefing. This emphasis results in a minimum number of action items carried forward from the Exit Briefing.

3.5.2. IBR Exit Briefing Content

The IBR Event is a presentation led by the Government IBR Team that includes the following.

- Top level review of the IBR results
- Rating of risk areas
- Review of open action items
- Review of program-level risks
- Review of the SRA for major milestones and program completion dates
- Review of the IBR Event, Accomplishments, and Accomplishment Criteria, as depicted in the IMP, as part of the Exit Briefing.

Section 6.13 contains a sample of an Exit Briefing.

3.5.3. PMB Approval – Criteria and Documentation

The IBR Program Event described in the IMP normally includes an Accomplishment Criteria for approval of the PMB. This PMB approval is the Government acceptance that the PMB is well defined, achievable, and the risks associated with its achievement understood by both contractor and Government teams.

The definition of the PMB is addressed by the artifact quality reviews and the data integration traces. During Phase I of the IBR, the trace from requirements into detailed work packages that define the effort necessary to satisfy all requirements is verified. In addition, achievability of the PMB is examined by teams focusing on technical, schedule, cost, and resource aspects of the plan during this phase. The understanding of risks is possible through artifact reviews, integration traces, and CAM discussions.

The PMB is the schedule for expenditure of resources at the control account level that reflects the scope of the contract. The PMB is defined by several documents:

- The IMS reflects the time sequencing of the contract scope
- The Control Account Plan reflects the time phased budget by control account
- The SOW reflects the scope of work to be performed
- The requirements documents (e.g. SRD, Technical Requirements Document (TRD), Spec) reflect the performance required of the product based on the scope of work
- The IMP reflects the events, accomplishments, and criteria for the scope of work

- Work Authorizations reflect the assignment of work to CAMs

Therefore, if there are discrepancies in the above documentation, the PMB may not be correctly defined. If there are discrepancies in the definition between the documents, the flow from requirements to detailed plans may not be correct. Phase I of the IBR process is focused on PMB definition, its completeness, accuracy, and proper integration across the family of documents.

The decision for PMB approval will be made prior to the IBR Exit Briefing and the following questions should be considered in determining if the PMB is adequately defined:

- Is the entire scope of work included in the PMB?
- Is the work sequenced and time-phased?
- Are requirements well defined and either cross-referenced or flowed down to the control account level?
- Is there joint understanding between the contractor and Government teams on the definition of the PMB?

The PMB should be reasonably achievable. Some deviation from the baseline is common in almost all programs. However, when programs deviate significantly from the baseline, the benefits of Earned Value Management diminish as the number and magnitude of variances grow. Eventually, a time and labor intensive reprogramming may be required. For these reasons, the PMB should be reasonable and achievable.

The following questions should be considered in determining if the PMB is achievable:

- Are activities sequenced, as the work should be performed?
- Are activities sequenced in the most effective and efficient manner?
- Are adequate resources planned for the work scope?
- Is the schedule margin consistent with the projected completion dates based on the SRA?
- Is there adequate cost margin (Management Reserve) for the program risks identified to date?
- Is the cost margin consistent with the schedule margin?
- Is there cost margin beyond the risks identified to date?
- Have rolling wave planning approaches limited detailed visibility of critical program events?
- Are there peaks and valleys in staffing profiles that may be difficult to achieve?
- Are the management processes in place adequate to identify risks / opportunities in a timely manner?
- Is the PMB consistent with prior contractor performance history?

- Do both contractor and Government teams have the same understanding of program risks?

Based upon PMB definition and achievability, the PM makes the final decision to approve the PMB. Approval of the PMB is not the same as IBR completion. The closure of the IBR is discussed in the following section.

When the PMB is approved, normally the PM completes a Memo for the Record (MFR) to document that the PMB has been approved. This additional documentation is appropriate since the PMB is manifest in a wide variety of artifacts, some that are not approval deliverables. Section 6.14 contains a sample MFR. The MFR may also address the closure of the IBR if the timing of the PMB approval and the IBR closure are identical.

3.5.4. IBR Closure – Criteria and Documentation

The IBR is considered closed when all the accomplishment criteria for the IBR Program Event are met as defined in the IMP. Normally the last item to be completed is the closing of any critical action items. Critical action items are steps that must be completed to satisfactorily define the PMB, adjust the PMB to make it achievable, or further define any potential risk events that are not yet included in the Risk Register. Action items of less severity than critical may be categorized as "major" or "minor."

At the IBR Exit Briefing conclusion, the action items have been reviewed and a schedule for the completion of all open actions has been agreed to by the IBR Government and contractor Team.

Depending upon agreement between the DCMA Contract Management Office (CMO) and the Government PMO, the local CMO may be responsible for monitoring the subsequent closeout of the remaining actions (those not deemed critical action items). A monthly report updating the actions is sent to the Government PMO. Upon completion of the actions, the local CMO documents the closeout in the form of a report to the Government PMO. Alternatively, the Government PMO may monitor the closeout of the remaining action items. In either case, the DCMA and Government PMO should maintain close liaison until all IBR action items are complete.

4. Detailed / Specific IBR Procedures

This section contains specific IBR procedures for topics that cut across the chronological description of activities contained in Section 3.

4.1. Organizing the Air Force IBR Team

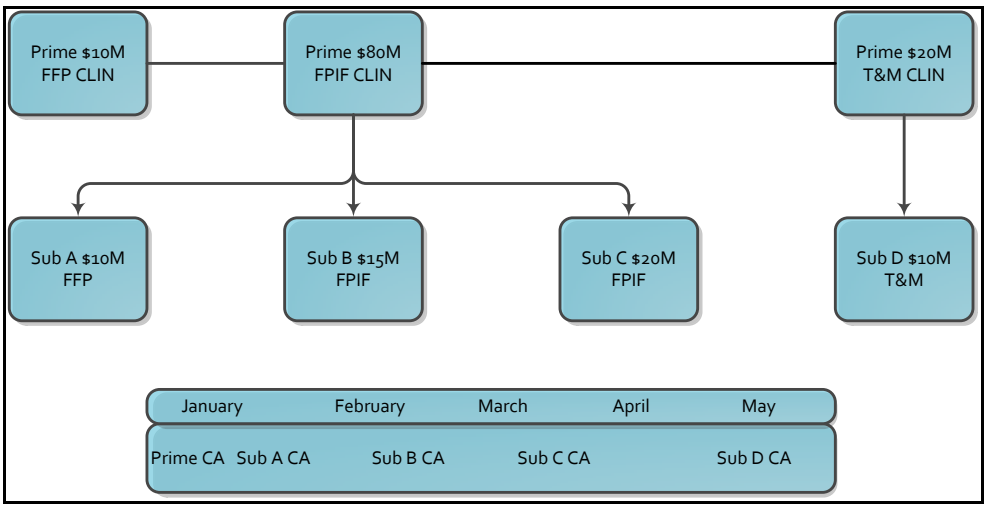
This incremental IBR process places different requirements on personnel than a compressed single IBR event. It is advisable to have a core Air Force IBR Team that can devote a portion of their time to the IBR from contract award through IBR closure. As the IBR progresses, other personnel can be included for document quality evaluations, integration traces, and CAM discussions. The core team should minimally include the IBR Integrator and representatives from Engineering, Finance, and Program Management organizations. There may be consideration given to calling in advisors or subject matter experts (SMEs) such as contracts, logistics and risk to augment the team where needed. Ideally, the core team members do not rotate out during the IBR period to maintain continuity. It may be worthwhile for the contractor to organize with an IBR core team.

4.2. Scoping the Performance Measurement Baseline

Scoping of the PMB, that is defining which portions of the contract that will be applicable to the IBR is essential. PMB scoping needs to be done before artifact quality checks and artifact integration evaluations began. The IBR team needs to have a sound understanding of the scope of the PMB as well as the timing for the development of the PMB at the IBR evaluation level.

During the RFP preparation phase of the acquisition, the Government PMO will have a reasonable idea how the program contract will be structured. This will certainly be clear at the prime contractor level. The CLIN structure will define the portions of the contract that are applicable to Earned Value Management. This will become the primary selection method for scoping the PMB. CLINs that are cost plus or fixed price incentive types typically become part of the PMB.

When Earned Value Management is flowed down to the subcontractors, the basic scope of the PMB is unchanged but the timing of its definition may be extended. Consider the example below:



Sample PMB Scope

In the example above the prime contractor has three CLINs. Only the FPIF CLIN is applicable to EVM and subsequently Earned Value Management. Beside the prime contractor's direct efforts, there are four subcontractors. Those subcontractors that are under the FPIF CLIN and meet the EVM thresholds will require an IBR. Subcontractor C would be expected to have an IBR as well as the prime contractor. The Prime contractor's scope would be the entire 80M of effort in the FPIF CLIN (even though subcontracted efforts are FFP). Subcontractor C would have an IBR covering the 20M FPIF effort.

4.3. Training Throughout the IBR Process

IBRs are infrequently performed activities. As a result, training is required for personnel participating in an IBR. Not all participants are available throughout the IBR period so some training sessions may have to be offered multiple times. Three distinct training sessions are appropriate. The first session orients Government and contractor personnel to the IBR process and provides an EVM refresher. The second session informs attendees about the specifics of Phase I and prepares the joint IBR team for those efforts. This is normally a joint training session. The final session prepares the team for Business Office and CAM discussions. The attendance necessary for this session includes Government and contractor personnel participating as part of the IBR team in the discussion sessions.

An outline of recommended subject matter for each session is shown below. Note that some material is repeated, as personnel may be joining the IBR team as the process unfolds.

- ***IBR Orientation and EVM Refresher Training***
    - ***EVM Basics Refresher***
        - ***EVM Background***
        - ***WBS***
        - ***Scheduling***
        - ***Budgeting***
        - ***EV Methods***
        - ***EV Measurements***
        - ***EV Reporting***
    - ***IBR Requirements / Timeline***
    - ***Overview of IBR Process***
    - ***IBR Roles / Responsibilities***
    - ***IBR Schedule / Next Steps***
- ***IBR Phase I Training***
    - ***IBR Timeline***
    - ***Overview of IBR Process***

- ***IBR Roles / Responsibilities***
- ***Phase I Activities***
    - ***Artifact Quality Evaluations***
    - ***Integration Traces***
- ***Phase I Recording / Reporting / Scoring***
- ***Action Item Identification and Management***
- ***Readiness Review Preparation***

- ***IBR Phase II Training***
    - ***IBR Timeline***
    - ***Overview of IBR Process***
    - ***IBR Roles / Responsibilities***
    - ***Phase II Activities***
        - ***Business Office Discussions***
        - ***CAM Discussions***
            - ***Preparations***
            - ***Rules for Conduct***
    - ***Phase II Recording / Reporting / Scoring***
    - ***Action Item Identification and Management***
    - ***IBR Exit Briefing Preparation***

4.4. Artifact Adjustment During the IBR Process

Missing Artifacts - Artifacts for an IBR include those that define the PMB (scope and timing), the risks and mitigations identified to date, as well as the management processes, procedures, and reports that will be used to manage to the PMB in an Earned Value Management environment. It may be possible that errors in program planning have created some holes in the minimum artifact set.

If essential artifacts are missing, this will normally be identified during the artifact selection process. For example a RAM may be identified but not be available. There are two responses to missing artifacts; one is to create the needed artifact using the data call request to the contractor as the requesting vehicle. A second approach is to dissect the data elements needed that would be in the artifact and determine if one or more other documents might provide that needed information. As an example, a PMO did not initiate a

WBS or require the contractor to prepare a WBS deliverable. Rather a "baseline book" was prepared that included the essential WBS index and WBS element descriptions.

The IBR team should seek alternatives to get all information required to define the PMB and its execution processes. Where possible avoid requiring new artifacts when the information exists in one or more other data sources.

Evolving Artifacts - Early in the IBR cycle, the IBR team identifies the artifacts and traces they think are applicable for the IBR. The artifacts originally chosen for the quality evaluations and traces may change during the IBR process. For example, an Integrated Test Matrix that becomes available later may be a better document to trace test plans from requirements to activities in the IMS. Thus, the IBR team needs to stay flexible during the process.

During the incremental process of the IBR, CAM discussions may be spaced over a period of several weeks. In addition, the contractor may be updating the IMS weekly and the CPR / IPMR may be updated during this time. This is a different situation from a single event IBR where a specific month end set of artifacts are established as the standard for all evaluations. In the incremental process, discussing the current artifact places additional burdens on the Government team, as they have to continually update their reference artifacts. It is less burdensome on the contractor team since CAM duties are always focused on updating and analyzing the latest artifacts.

The incremental process is designed to yield the best PMB possible with complete understanding by both Government and contractor teams. Following current artifacts through the discussions helps the team focus on the current PMB and potential risk to that baseline.

4.5. Integrating IBR Identified Risks into Program Risk Management

In the final scoring of the PMB during the IBR process, the IBR open action items are merged with existing program risk lists and CAM discussion scores to yield IBR scores in each of the risk topic areas. Open action items should be identified with one or more risk topic areas if the IBR action item spreadsheet is used. During an IBR, there may be situations when discoveries merit entering the item into a risk database. There are a number of approaches to maintaining program risk lists / databases. This section discusses the most common situations and provides recommended procedures for translating open action items into risk databases.

Situation 1 – The program is using a Government and contractor integrated risk database. Active Risk Manager is one example of such a database. The risk database has levels associated with identified risks so that the Government program office may have the top level and the prime contractor and subcontractors have numerous subordinate levels. This risk system may be web-based where all levels of participants may enter risks and associated data into the database.

In this situation, action items are identified during the IBR process. Action items that cannot be closed by the completion of Phase II are submitted to the two IBR integrators who make a decision on the appropriate next step. If the integrators agree that the action item meets the criteria for an identified risk, the action item tracker is annotated with the decision and the appropriate IBR team member is assigned the task to get the risk entered into the integrated risk database at the appropriate level. This may entail assigning a contractor or subcontractor IPT Lead with the responsibility of entering the risk into the database.

When the IBR is being scored, the Government and contractor IBR integrators with assistance from other IBR team members will determine which open risks are appropriate for inclusion into the IBR scoring. This may entail a decision on the level of risks to include. This decision will also depend upon the level or scope of the IBR. If for example, the IBR is a subcontractor IBR, the role of Government integrator may be performed by the prime contractor and the risks at the prime contractor level may be the highest level of risks considered in the IBR scoring. Where contractor and Government teams cannot reach consensus on the identified risk, the matter will be elevated to the Government and contractor program managers for resolution.

Situation 2 – The Government program office and the prime contractor have separate risk databases. In this situation it is assumed that the Government program office has access to the prime contractor's risk database either through a data call item or through participation in the prime contractor's risk review / management board.

When Government and contractor teams have separate risk databases, they should use the same DoD defined five-by-five matrix, but they may have different risk consequence standards (the scales that determine if a risk is low, moderate, or high). These differences may come into play when integrating risks into the IBR scoring.

In this situation, action items are identified during the IBR process. Action items that cannot be closed by the completion of Phase II are submitted to the two IBR integrators who make a decision on the appropriate next step. If the integrators agree that the action item meets the criteria for an identified risk, the action item tracker is annotated with the decision and the appropriate IBR team member is assigned the task to get the risk entered into the appropriate risk database. The contractor's risk database may have multiple levels. If the identified risk is being entered into the contractor's database, the contractors risk management plan will define the entry level.

When the IBR is being scored, both the contractor's risk database and the Government's risk database will be reviewed. The two IBR Integrators will lead a decision session with the IBR team to determine which of the risks in each of the databases are applicable to the scope of the IBR and should be included as an input into the IBR risk topic area scores.

Situation 3 – The Government program office does not have a risk management plan or risk database. The Government program office in conjunction with the contractor uses the contractor's risk management program and risk database to document all the applicable program risks. In this situation, the Government program office normally participates as part of the contractor's risk review board.

In this situation, action items are identified during the IBR process. Action items that cannot be closed by the completion of Phase II are submitted to the two IBR integrators who make a decision on the appropriate next step. If the integrators agree that the action item meets the criteria for an identified risk, the action item tracker is annotated with the decision and the appropriate IBR team member is assigned the task to get the risk entered into the contractor's risk database. The contractor's risk database may have multiple levels. If the identified risk is being entered into the contractor's database, the contractors risk management plan will define the entry level.

When the IBR is being scored, the contractor's risk database will be reviewed. The two IBR Integrators will lead a decision session with the IBR team to determine which of the risks are applicable to the scope of the IBR and should be included as an input into the IBR risk topic area scores.

Five versus three risk consequence / impact areas - The EVMIG recommends the evaluation of the PMB in five risk topic areas. Risk databases and risk management systems normally have three impact areas for an identified risk (cost, schedule, and technical). The IBR scores risk in five areas (cost, schedule, technical, resources, and management processes). It is fairly straight forward to translate risks in the database to the cost, schedule, and technical risk topic areas by reading the risk impact or consequence. If the IBR process identifies a risk that is associated with resources, the impact or consequence is normally cost, schedule, technical or a combination of the three. Management process risks in a risk database are rare.

Management process risks identified in an IBR can be entered into the risk database only when the consequence or impact is quantifiable. As a result, most management process action items do not get transferred into a risk database. For example, consider that the IBR CAM discussions may reveal that the CAMs require additional training on Variance Analysis but that the training will not take place prior to the Exit Briefing. It is hard to quantify the impact so the action item may not be appropriate for a risk database. The open action item would be used as an input to the management process risk topic area score. It is unlikely that anything other than open action items or CAM discussion scores will be used as inputs for management process scoring.

Translating Risks into IBR Scores – The process of translating risks in the risk database to IBR scores should be defined and agreed upon by the contractor and Government IBR teams.

There are two perspectives on risks; the contractor's and the Government's. There may be cases where a risk is applicable to the contractor and not to the Government. One example would be a cost risk to the contractor in a FPIF contract where the cost ceiling has already been reached. It is important in the scoring to identify when risks are applicable to only one of the parties.

Risks with quantified cost, schedule, and technical risks should be considered in the IBR scoring. The process of combining the risks to gauge a total impact on the PMB should be discussed and agreed upon by both Government and contractor. A simple adding of all the schedule impacts to determine the overall schedule risk for the IBR may overstate the risk especially if risk events can occur in parallel. Some of the techniques used in the Independent Risk Assessment process may be useful for determining the net impact to the PMB from multiple risks.

The questions below may be helpful for determining whether to include risks and how to translate them into the IBR scores:

- Does the risk impact the Government, the contractor or both?
- If the risk were viewed by the other party, would the impact and risk rating be the same?
- Are there differences in the consequence standards between the Government and contractor risk management systems?
- Are risk events mutually exclusive; are they serial?
- How would the risk rate when compared to the scoring guidance in the process document? Is a high risk in the risk database still a high risk when overall PMB scoring is applied?

4.6. Treatment of Opportunities

Most Contractors combine their risk and opportunities management into a single process. Risk Management Plans or Risk and Opportunity Management Plans usually outline the Contractor's processes. Opportunities and risks are often categorized as having technical, cost, or schedule impacts.

Technical opportunities may add capability to the system and require an Engineering Change Proposal (ECP). Technical opportunities may also introduce new processes or procedures that have a favorable cost or schedule impact on the program.

The IBR team ensures that the data call for the Risk Register includes the list of opportunities as well. When the list of program opportunities is received, it is evaluated by the appropriate technical, cost, or schedule IBR team members.

The appropriate IBR team considers the impact of opportunities on the SRA three point values. Where opportunities exist to improve the schedule, these opportunities are considered in predicting the completion dates for key milestones. If the schedule impact of an opportunity has not been quantified, the schedule group seeks help from the technical group or others to estimate the schedule impact.

The appropriate IBR team reviews the opportunities list to ensure that opportunities have been properly considered in the preparation of the program Estimate at Completion (EAC). Most opportunity scales have a quantified dollar value associated with each opportunity. If that is not available, the cost impact group may have to seek assistance in estimating the cost benefit of an opportunity.

The appropriate IBR team reviews the opportunities list for any efforts that may result in a favorable cost or schedule impact to the program. The team validates the feasibility of the technical opportunity before recommending that the cost or schedule impact be considered by the other risk groups.

The reduction in risks associated with the consideration of opportunities is documented and included in the presentation of IBR results.

4.7. Managing the Air Force IBR Process

This section discusses situations and activities in the management of the incremental IBR process. Most of these activities are the responsibility of the Government IBR Integrator.

4.7.1. Documentation Requirements

The IBR Integrator is the collection point for IBR information. The IBR Integrator should develop a file or folder system that will facilitate maintenance of the status of the IBR, as well as the history, including the evolution of artifacts and traces. All versions of artifacts evaluated for quality or integration traces are archived. In addition, each update of the action item list or any scoring of artifact quality and integration traces are also archived.

A record of action items is maintained throughout the IBR process. Section 6.12 contains a sample action item tracking log.

Risk Register history is maintained as well. Risk Register databases should be dynamic, only reflecting current status. Obtain monthly Risk Register snapshots to help track the IBR process and history.

4.7.2. IBR Scoring

IBR scoring consists of converting the results of the incremental process into ratings. The rating areas can be the same ones defined in the EVMIG (technical, cost, schedule, resources, and management processes) or they may be aligned by IPT. Rating by IPT area aligns the risks with the people responsible for their management. IPTs normally include Engineering, Integration, Test, Program Control, and Sustainment. The decision on risk topics should be made early in the IBR process. If the contractor IPT structure is the same as the Government's then use of IPTs has a better chance for success.

Inadequate artifact quality evaluations result in action items to improve the definition of the PMB. Inadequate data integration traces also result in action items to make the PMB consistent across all applicable documents. Leading up to the IBR Exit Briefing, there may be action items still open from Phase I and / or Phase II.

Individual and summary scores are calculated during the CAM discussions in Phase II. The challenge is how to integrate the open action items from Phase I with the CAM scoring into a single set of scores for the IBR. Some IBR teams may be tempted to establish separate IBR level scoring for artifact quality and data integration. However, this should be avoided. The purpose of the Incremental IBR process is to identify and improve the PMB. Early scoring may be discouraging when preparing artifacts that take longer to mature and tends to reduce joint collaboration. A final scoring made just prior to the IBR Exit Briefing is more appropriate since the overall goal is to understand risks in the baseline and jointly make improvements to minimize these risks.

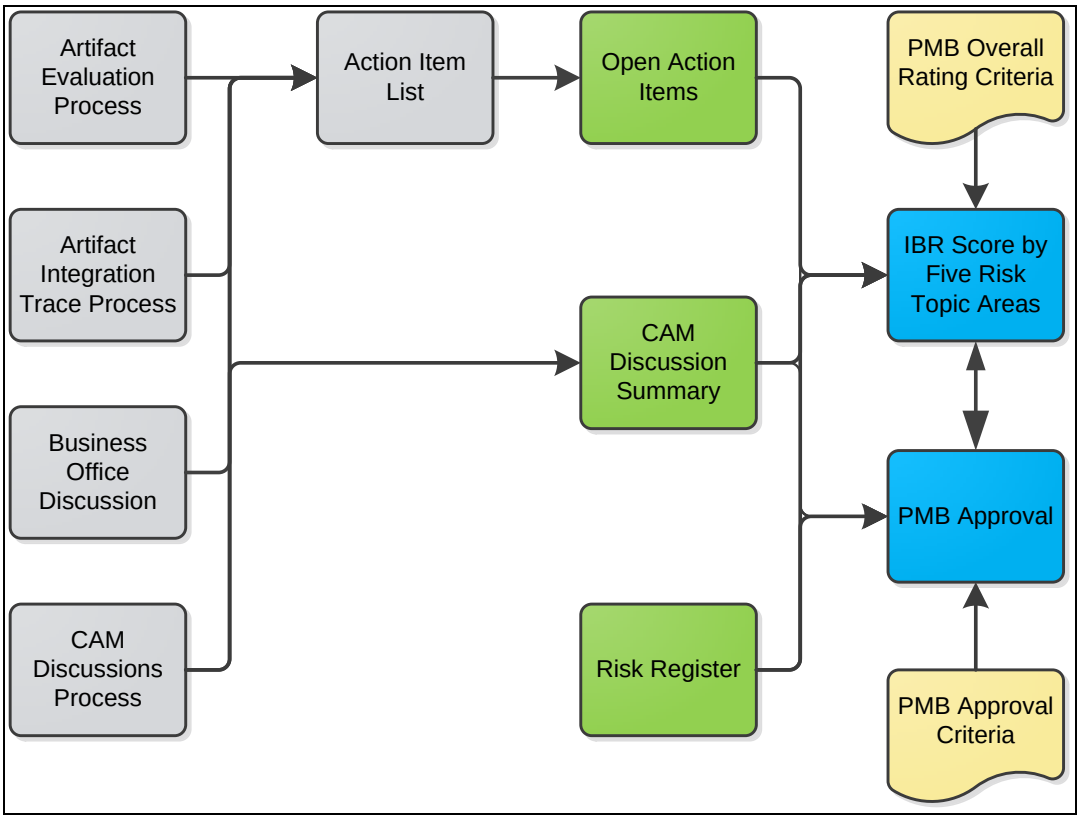
One scoring approach is to list each open action item by risk area immediately prior to the IBR Event. A critical action item would represent high risk. Major action items would represent medium risk and minor action items represent low risk. This approach works for cases where there are action items.

The second part of this approach involves the Risk Register. During the incremental IBR process, the team identifies and enters risks into the Risk Register. Risks should be grouped by the "IF-THEN-THEREFORE" statement. For example, "IF the selected power supply cannot provide the power margin, THEN a new power supply has to be designed, THEREFORE costing $100K and delaying integration 90 days. This risk event should be grouped under technical, even though the impact may be cost, schedule, and resources. Consider all risks in the Risk Register when making the scoring determination.

The IBR team may take the following approach when determining how to score the five risk areas:

- Group the program risks from the Risk Register by the five topic areas. Use the "IF-THEN-THEREFORE" statement to define the risk c area.
- Review the open action items for document quality and integration traces. Translate these into risks and assign them to the appropriate risk topic area. Translate any incomplete actions into an "IF-THEN-THEREFORE" risk statement to determine the appropriate risk area. For example, "IF the IMS logic is incorrect or incomplete, THEN critical tasks may not be performed when needed THEREFORE the delivery date may slip, which costs $X."
- Review the CAM discussion scores by risk area and include these into the grouping. Make a summary "IF-THEN-THEREFORE" statement from each of the CAM discussion ratings and add this to the grouping. For example, if the schedule risk is rated high because the CAMs could not identify their critical path, then an "IF-THEN" statement might read, "IF the CAMs cannot determine their critical path, THEN they may not perform tasks when needed and the delivery schedule may slip."
- Once all risks are visible in their appropriate risk areas, the IBR team can discuss and determine the appropriate rating for each area.

The chart below shows the flow of scoring for the IBR and PMB approval.



IBR Scoring

The following sections list scoring guidance for the overall IBR using the risk areas in the EVMIG.

4.7.2.1. Technical Risk Area

Low (Green)

- PMB reflects a comprehensive technical plan that covers all efforts within the SOW, is consistent with contract requirements, and has adequate definition and identification of tasks in the baseline.
- Work scope responsibility properly allocated to the performing organization that controls budget and schedule.
- Presented technical plan has opportunities identified to handle all medium and high risk areas.

Medium (Yellow)

- Technical plan does not cover some effort within the SOW, but is consistent with most contract requirements and has adequate definition and identification of tasks in the baseline. Any omitted tasks have no material effect on Key Performance Parameters (KPPs) or Technical Performance Measurements (TPMs).
- All significant work scope responsibility is properly allocated to the performing organization that controls budget and schedule.
- Few identified opportunities are available to handle medium and high risks.

High (Red)

- Technical plan does not include significant efforts within the SOW, is not consistent with contract requirements, lacks adequate definition and identification of tasks in the baseline, or does not meet KPPs/TPMs as currently planned.
- Work scope responsibility, in many cases, is not properly allocated to the performing organization that controls budget and schedule.
- Technical plan does not identify risk handling plans to bring the program within an acceptable risk level and is likely to cause a significant disruption to schedule, increased cost, or degradation of performance.

4.7.2.2. Schedule Risk Area

Low (Green)

- Low risk in adequacy of time required to achieve the project schedule objectives.
- All required contract work scope is represented in the baseline schedule.
- Virtually all work task plans have appropriate durations, demonstrate logical minimal float, follow a logical sequence of work, and support contractual milestones.
- Use of constraints and leads/lags is minimized. Discrete task interdependencies clearly identify the program critical path to contract completion and critical paths to all major program milestones and/or IMP events.

Medium (Yellow)

- Medium risk in adequacy of time required to successfully achieve the project schedule objectives.
- Most of the required contract work scope is represented in the baseline schedule.
- Greater than or equal to 80% of work task plans within the planning window have appropriate durations, demonstrate minimal float, follow a logical sequence of work, and support contractual milestones.
- Use of constraints and leads/lags is apparent but minimized. The schedule is capable of forecasting downstream impacts to the demonstrated program critical path.

High (Red)

- Inadequate time allocated for performing defined tasks to achieve the project schedule objectives.
- Much of the required contract work scope is not represented in the baseline schedule.
- Proper technical approach for the critical path is not evident.
- Fewer than 80% of tasks have appropriate durations.
- Use of constraints and leads/lags is not minimized. Proper technical approach for the critical path is not evident. Program lacks a valid critical path to assess schedule risk impacts.

4.7.2.3. Cost Risk Area

Low (Green)

- PMB is executable within the project cost objectives for the authorized work scope.
- Baseline is derived from a sound Basis of Estimate (BOE) using historical data or similar programs and fully aligns with the project schedule.

Medium (Yellow)

- PMB is marginally executable within the project cost objectives for the authorized work scope.
- Baseline derived from a sound BOE, using historical data or similar programs and aligned with the project schedule.

- Budget values, time phasing, and breakout between labor / material / other direct cost assigned are optimistic.

High (Red)
- PMB does not fully address program requirements and is not executable within the project cost objectives for the authorized work scope.
- Baseline not derived from a sound BOE, using historical data or similar programs and is not aligned with the project schedule.
- Budget values, time phasing, and breakout between labor / material / other direct costs assigned are inadequate, given funding, schedule, and resource constraints, and are likely to cause a significant increase in cost.

4.7.2.4. Resource Risk Area

Low (Green)
- Resources (e.g. facilities, personnel, skills) to support task planning within the project schedule are adequate.

Medium (Yellow)
- Resources (e.g. facilities, personnel, skills) to support task planning within the project schedule are inadequate; availabilities and constraints not fully considered.

High (Red)
- Resources (e.g. facilities, personnel, skills) to support task planning within the project schedule are inadequate; availabilities and constraints not fully considered and likely to cause a significant disruption of schedule, increased cost, or degradation of performance.

4.7.2.5. Management Processes Risk Area

Low (Green)
- Management processes provide timely and accurate performance data.
- Processes are in place and implemented in accordance with the contractor's Earned Value Management System Description (EVMSD) and internal operating instructions.
- Few issues identified with the processes and their application.

Medium (Yellow)
- Concerns that the management processes may hinder timely and accurate performance data.
- Most, but not all, processes are in place and implemented in accordance with the EVMSD and internal operating instructions.
- CAMs are not using the management processes correctly.

High (Red)
- Concerns that the management processes prevent accurate and timely reporting of performance data.
- Few management processes are in place.
- There is inadequate integration between cost and scheduling systems.
- Processes are not documented.
- CAMs are not using the management processes.

A combined team of Government and contractor IPT Leads should review the open action items and the Risk Register and present the PM a preliminary scoring by risk topic area. The Government PM is the final determiner of the IBR scores.

5. Summary

This IBR Process Document provides background and overview information and includes an overview of the incremental IBR process. The IBR process is then discussed chronologically. Specific guidance is provided on non-chronological activities. Finally, a series of templates and sample forms for executing an IBR are provided in appendices.

Some key characteristics of this IBR process include teams organized by the five standard IBR risk areas (technical, schedule, resource, cost, and management processes), early formation of teams, and early review and refinement of the PMB definition. The PMB must trace from top-level requirements to the work performed at the control account level. The work scope has both cost and schedule dimensions. All documents correctly reflecting the PMB are essential for effective execution of programs. The various artifacts (data elements that may or may not be standalone documents) associated with the PMB are evaluated for quality, as well as integration with other artifacts. Where exceptions are discovered, artifacts are refined immediately by the joint Government and contractor IBR team. Refined documents are checked again to validate the changes. As documents are reviewed, risks are identified and understood. After the PMB artifacts have reached an acceptable level for quality and integration, discussions with CAMs are held to ensure the PMB is executable and achievable at the lowest work level.

The IBR process document includes a list of recommended IBR artifacts, integration points among the various artifacts, and recommended topics for CAM discussions. The IBR process document also includes scoring criteria for artifacts and CAM discussions, as well as action item tracking templates.

Programs required to perform IBRs may be in different acquisition phases, have different contract types, and most certainly different deliverables, documents, and artifacts. This IBR process has been designed to be flexible in its conduct and adaptable to each program's distinctive characteristics. The IBR teams using this process are advised to maintain the overarching objectives.

Several samples or templates in Section 6 are available in their native software format. These documents are either on the acquisition portal or available from SAF/AQXC.

For questions regarding this process or the document, please contract SAF/AQXC at (202) 404-2113 (commercial).

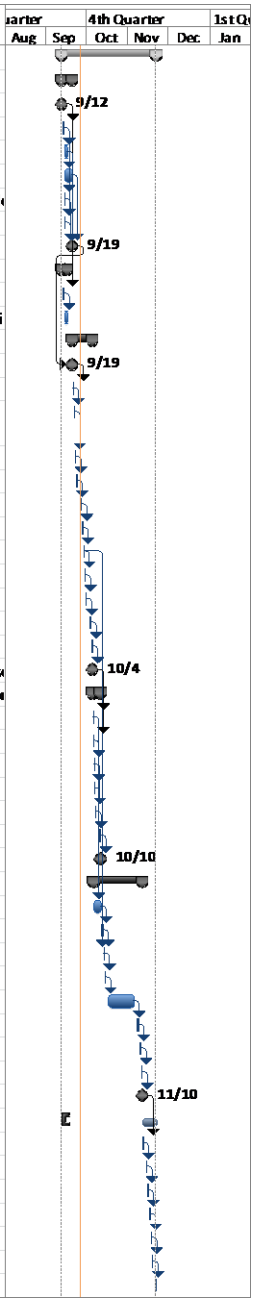
6. Templates and Samples (Appendices)

The appendices contain templates and samples for conducting an incremental IBR. All these templates and samples are shown as illustrations in this process document. Samples and templates in their native software formats are available from SAF/AQXC or on the Air Force Acquisition Portal located at https://www.my.af.mil/gcss-af/USAF/ep/globalTab.do?channelPageId=s5FDEA9F02769C1090127867185EE02F8

6.1. Sample IBR Schedule (MS Project File)

A template that corresponds to the process document is shown below. Please note the durations are notional and should be specifically determined by the IBR team.

ID	Task Name
0	**Sample IBR Schedule (notional durations)**
1	**IBR Process - RFP Activities**
2	RFP Preparation Kick Off
3	Develop IBR Event for IMP
4	Reference IBR Process in RFP
5	Tailor CDRLs and DIDs for Incremental IBR
6	Define IBR process in Blended Contract (If applicable
7	Define Supplier roles in IBR
8	RFP Documents reflect IBR Process
9	**IBR Process - Pre-award Activities**
10	Identify Government IBR Team
11	Define Government IBR Team Roles and Responsibi
12	**IBR Process - Immediate Post Award Activities**
13	Contract Award (add lag from RFP to award)
14	Introduce IBR Process to Contractor
15	Define Joint Government / Contractor IBR Team Roles and Responsibilities
16	Develop IBR Process Orientation / Training
17	Conduct IBR Process Orientation / Training
18	Jointly Define IBR Artifacts
19	Jointly Define IBR Data Call Items
20	Jointly Define Control Account Selection Criteria
21	Develop Preliminary IBR Schedule
22	Integrate IBR Schedule with other Program Events
23	Finalize IBR Schedule
24	Finalize Assignment of Individual Responsibilities
25	Joint Government / Contractor Team ready for Phas
26	**IBR Process - Phase I (Artifact Quality / Data Integratio**
27	Jointly Define Artifact Quality Standards
28	Jointly Define Data Integration Proof Statements
29	Evaluate Artifact Quality
30	Evaluate Data Integration
31	Determine Readiness for CAM Discussions
32	Conduct Readiness Review
33	Readiness for Phase II
34	**IBR Process - Phase II CAM Discussions**
35	Develop CAM Discussion Training
36	Conduct CAM Discussion Training
37	Select Control Accounts / CAMs for Discussion
38	Schedule CAM Discussions
39	Conduct CAM Discussions
40	Record / Score CAM Discussions
41	Establish Prerequisites for IBR Event
42	Determine Readiness for IBR Event
43	Phase II Complete
44	**IBR Process - IBR Event**
45	Determine IBR Event Content
46	Determine PMB Approval Criteria
47	Determine IBR Event Closure Criteria
48	Conduct IBR Event
49	Approve PMB
50	Approve Action Item Closure Plan
51	Close IBR



6.2. Sample IBR Program Event for IMP

The following is a sample IBR Program Event with accomplishments and criteria consistent with the Air Force IBR Process.

Integrated Baseline Review (IBR) Event (15)						
Notes: Click on the **+/-** sign in the left margin to reveal/hide the list of Significant Accomplishment (SA) and Accomplishment Criteria (AC)						
PE	**SA**	**AC**	**Accomplishment/Criteria Nomenclature**	**Cross-Reference**		
				SOW	**WBS**	**OBS**
15	**01**	000	**Phase I - IBR Data Quality and Data Integration Evaluated**			
15	01	001	IBR data package and need dates defined and documented.			
15	01	002	IBR Phase I training conducted			
			Joint Government / Contractor IBR team responsibilities assigned			
			IBR Deliverables and Artifacts quality evaluation completed			
			IBR Deliverables and Artifacts integration evaluation completed			
			Critical Action Items identified and documented			
			Critical Phase I Action Items closed			
			Phase II Readiness Review completed			
15	**02**	000	**Phase II - Control Account Managers (CAM) Evaluated**			
15	02	001	Control accounts to be examined identified			
			IBR Phase II training conducted			
			CAM interview preparations completed			
			Joint Government / Contractor evaluation of Control Account Managers Completed			
			Critical Action Items identified and documented			
			Critical Phase II Action Items closed			
15	**03**	000	**Performance Measurement Baseline Approved**			
15	03	001	IMS and EVMS deliverables updated to reflect approved baseline			
			Monthly Performance Reporting Process Operational			
			Baseline Change Management Process Operatonal			
			Estimate-at-Completion Process Operational			
			Earned Value Management Processes Operational			
			IBR Exit Meeting Conducted			
			Performance Measurement Baseline Approval reported to Oversight Agencies			

6.3. Sample Notification Letter

The following is a sample notification letter. This letter may be dispatched from the Administrative Contracting Officer (ACO) or PM formally initiating the IBR process.

[Mr./Mrs./Ms Name]
[Title]
[Supplier Name]
[Address]

Dear Mr./Mrs./Ms. [Name]:

The [program name] PMO, department of the Air Force intends to conduct an Integrated Baseline Review (IBR) on the [Program Name] on [date].

The purpose of the IBR is to work in a collaborative manner to jointly assess the viability of the [program] baseline regarding technical risk. The IBR is an incremental process and will involve joint collaborative workshops / meetings for; technical, schedule, resources, cost, and management process. These workshops will permit the government and contractor(s) to arrive at a common understanding of each area of the program particularly program risk. A Schedule Risk Assessment (SRA) will also be conducted as part of the IBR.

The IBR will be conducted using the Air Force IBR Process Document. A copy of that document was made available to you as part of the RFP.

In our initial meetings to plan the IBR schedule we will jointly determine the documents to be used for this review.

We also request that the team be provided with non-escort badges, a working area (conference room) with tables and access to fax/copy machines, LCD projectors, scanners, printer (connected to a laptop), and telephones.

Upon successful completion of the IBR, the Gov't PM will issue a final report to the Program Executive Officer reflecting satisfaction of the contractual requirements.

[Review Lead's Name] will be the Review Lead and the POC for this review. Questions concerning the review and requested documentation should be directed to [Review Lead's Name] [Review Lead's email address] or phone number [(xxx) xxx-xxx].

If you have any questions pertaining to this notification, please contact the Program Control IPT Lead at [Review Chief's email address] or phone number [(xxx) xxx-xxxx].

Sincerely,

[program manager name]
[title]

6.4. Sample Artifact List

Shown below is a sample artifact list. The artifact list may be different for each IBR, depending upon contract requirements and acquisition phase. The sample list provides a number of columns that should be completed early in the IBR planning process, as the data determines key IBR schedule dates. The columns in the sample list provide space to identify if the artifact is applicable to the IBR, the delivery method, whether the item is already available, a CDRL item, or a data call item (delivered separate from CDRL items). The team assigned to evaluate the item (may be IPT or Risk Topic Team). The table also includes a summary of the quality criteria if different from CDRL or DIDs. Included in the list are some candidate data elements that are part of deliverables or data call items.

Artifact Name	Artifact Description	Applicable to this IBR	Delivery Method	Date Available	Evaluation Team	Quality Standard Summarized
Contract or Subcontract (exclusive of SOO / SOW)	Overarching agreement between Government and supplier. Establishes the bounds of the PMB.					Considered a static source document. Not normally evaluated.
Initial Capabilities Document (ICD)	Describes the capability gap derived from the JCIDS process & proposes materiel approaches to resolve the gap. / Used to trace requirements in the PMB					ICD is a static source document that will not change. Quality score should be limited to identifying obvious flaws that prevent it from contributing to standard cross-documentation data traces.
Capabilities Development Document (CDD)	Captures the information necessary to deliver an affordable & supportable capability as described in the Acquisition Strategy. Provides the operational performance attributes necessary to design a proposed system(s) & establish a program baseline.					CDD is a static source document that will not change. Quality score should be limited to identifying obvious flaws that prevent it from contributing to standard cross-documentation data traces.
Capability Production Document (CPD)	A document that addresses the production elements specific to a single increment of an acquisition program. The CPD defines an increment of militarily useful, logistically supportable, and technically mature capability that is ready for a production decision. Captures the information necessary to support production, testing, & deployment of an affordable & supportable system within an Acquisition Strategy.					CPD is a static source document that will not change. Quality score should be limited to identifying obvious flaws that prevent it from contributing to standard cross-documentation data traces.

Artifact Name	Artifact Description	Applicable to this IBR	Delivery Method	Date Available	Evaluation Team	Quality Standard Summarized
System Requirements Document (SRD) or Technical Requirements Document (TRD)	SRD/TRD defines system level functional and performance requirements. 'Note: One or more of these documents may exist at the same time. Whichever is latest is used in the IBR process.					SRD is considered a static source document that will not change. Quality score should be limited to identifying obvious flaws that prevent it from contributing to standard cross-documentation data traces.
Weapon System Specification	Performance goals at system level.					Document is evaluated to ensure requirements trace from top level documents. Normally evaluated during SRR.
Key Performance Parameters (KPPs)	Performance goals at system level. May not exist as a standalone document.					KPPs are considered a static source data that will not change. Quality score should be limited to identifying obvious flaws that prevent it from contributing to standard cross-documentation data traces.
Critical Technical Parameters (CTPs) & Technical Performance Measurements (TPM)	Generally derived from KPPs for testing reasons (as in, what TPMs need testing in order to achieve KPP) & integrated with the TEMP.					CTPs are a static source document that are included in the TEMP and should not change. Quality score should be limited to identifying obvious flaws that prevent it from contributing to standard cross-documentation data traces. TPMs should be scored based on SME expertise and extent to which flaws prevent it from contributing to standard cross-documentation data traces
Statement of Work (SOW), Performance Work Statement (PWS) or Statement of Objectives (SOO)	Document that describes the program scope, activities and deliverables.					SOW is a static source document that is part of the contract and should not change. Quality score should be limited to identifying obvious flaws that prevent it from contributing to standard cross-documentation data traces. Both IBR phases should focus on identifying any area where interpretations of the SOW differ between Government and Contractor.

Artifact Name	Artifact Description	Applicable to this IBR	Delivery Method	Date Available	Evaluation Team	Quality Standard Summarized
Integrated Master Plan (IMP) or Equivalent	Document that describes a hierarchical, event-based approach to program planning and execution by Program Events (PEs) , Significant Accomplishments (SAs), and Accomplishment Criteria (ACs).					Normally an approval CDRL item. Quality check limited to deliverable requirements.
Systems Engineering Plan (SEP) or Systems Engineering Management Plan (SEMP)	The SEP describes the program's overall technical approach, including systems engineering processes, resources, & key technical tasks, activities, & events along with their metrics & success criteria.					SEP is a Government document and SEMP is a CDRL deliverable. Quality should be judged based on compliance to CDRL and associated DID. Quality can also be judged based on SME expertise and flaws that prevent it from contributing to standard cross-documentation data traces.
Test & Evaluation Master Plan (TEMP)	Document that describes the approach to test engineering on the program.					TEMP is a Government document. Quality score should be limited to identifying obvious flaws that prevent it from contributing to standard cross-documentation data traces.
Test & Evaluation Program Plan (TEPP) or Integrated Test Plan (ITP)	Contractor document that describes approach to testing.					TEPP or ITP are contractor documents. Quality should be judged based on compliance to CDRL and associated DID. Quality can also be judged based on SME expertise and flaws that prevent it from contributing to standard cross-documentation data traces.
Work Breakdown Structure (WBS) / WBS Dictionary	Document that organizes the program for management and reporting purposes. Document describes each WBS element Each WBS element narrative briefly describes the work scope, defines deliverables and associated activities, as well as applicable milestones.					WBS / WBS Dictionary is a contractor deliverable. Quality should be judged based on compliance to the CDRL and associated DID.

Artifact Name	Artifact Description	Applicable to this IBR	Delivery Method	Date Available	Evaluation Team	Quality Standard Summarized
Master Phasing Schedule (MPS)	Summary graphic depicting key program elements, including major phases, major tasks, and key deliverables or events. Usually in Gantt format with bars and milestones representing the entire program on a single page with meaningful labels. Typically follows the IMP structure (grouped efforts by IMP Events), depicts all key milestones, reflects timeline (FY or CY), and reflects progress thru the Status Date / Time Now. Ideally, the MPS is an extract derived from the IMS. Includes "As Of Date."					This document is normally initially drafted by the Government. It may later on become the Tier 0 portion of the IMS. Since it is often used in leadership presentations, accurate reflection of the IMS in the schedule is a key quality check.
Integrated Master Schedule (IMS) (IPMR Format 6)	Depending on the program complexity, may be a single file or multiple subprogram files. Minimally, contains standard scheduling data plus fields identifying WBS, control account managers (CAMs), control accounts (CAs), baseline dates & durations, and physical percent complete for each task.					The IMS is a deliverable. The CDRL and DID establish the minimum quality standards. Other checks should include the DCMA 14 Point Assessment and a check for readiness for an SRA
IMS Health Metrics	Report on the soundness of schedule construction. Often included with IMS delivery.					Check to ensure as a minimum DCMA 14 Points are included in metrics
IMS Basis & Assumptions (B&A)	Information on user defined fields and IMS construction approach. Often included with IMS delivery					Document should contain adequate information to permit independent evaluation of the IMS.
Program Critical Path	Depiction of the longest path from status date to program completion. Intergral part of IMS					CP should be visible using native scheduling software
Next Major Milestone Driving Path (DP)	Depiction of path from status date to next major milestone. Integral part of IMS.					Next Milestone DP should be visible using native scheduling software

Artifact Name	Artifact Description	Applicable to this IBR	Delivery Method	Date Available	Evaluation Team	Quality Standard Summarized
Other Major Milestone Driving Path(s)	Depiction of path from status date to other major milestones. Integral part of IMS.					Other Major Milestone DP should be visible using native scheduling software
Status or Progress	IMS update to reflect progress and changes to forecast dates. Integral part of IMS.					IMS should be statused to the time now or status date.
Forecast or Look-Ahead	IMS views that focus on near term activities. Integral part of IMS.					IMS should contain filter or views so that near term activities can be easily identified.
Program Resource Profile	A time phase list or chart that shows the allocation of personnel working on the program. Ideally this list will have some definition of labor categories or specialties.					This may be an extract from a resource loaded IMS. If possible the profile should include planned and actual totals by month.
Schedule Risk Assessment (SRA)	Rigorous process to estimate probability of program completion by specific dates. Often included with IMS delivery.					Check SRA against SAF/AQ SRA process document.
Control Account Plan (CAP)	Program budget time phased by control account					Not a CDRL item. Used to validate control accounts and work scope in the IMS. Should total to PMB
Contractor Performance Report (CPR) Integrated Program Management Report (IPMR)	Multiple format report displaying PMB and explaining deviations from plan. Status date should be consistent with IMS status date.					Should meet the CDRL and DID requirements as well as CPR quality checklists from SAF/AQ
Bill of Material (BOM)	Listing of material items used in manufacturing					Check for completeness and linkage to control accounts
Responsibility Assignment Matrix (RAM)	Allocation of program scope assignment to control accounts					Not a deliverable. Verify that totals match PMB. Useful with IMS and Risk Register for selecting Control Accounts for discussion.
Estimate at Completion (EAC) Rationale	Contractor justification for EAC value					Not a deliverable. Verify that totals are consistent with CPR data.
Organization Chart(s)	Chart displaying lines of responsibility from CAM to Program Manager					Check to see responsibility path from CAMs to PM. See of consistent with Control Account Structure.
Control Account Work Authorization Documents (WAD)	Documents defining the scope of work assigned to individual control accounts					Check to ensure that all scope of work addressed and all scope has budget.
Risk & Opportunity Management Plan	Document defining contractor approach for risk and opportunity management					Normally an approval CDRL item. Quality check limited to deliverable requirements.
Risk Register	Listing of Risks and Opportunities to include ratings and where applicable risk mitigations					Not a deliverable. Check that all risks identified in IBR process are entered into Risk Register.

Artifact Name	Artifact Description	Applicable to this IBR	Delivery Method	Date Available	Evaluation Team	Quality Standard Summarized
Budget Control Logs	Document that track the changes to the PMB and Management Reserve.					Check that the baseline is configuration controlled and the cost system reflects the PMB.
Cost Analysis Requirements Description	Describes the system or capability to be developed in sufficient detail to be a reference document for cost analysis.					A source document that will not be evaluated. Rather is used to check that the PMB is consistent with the approved cost analysis baseline.
Below are additional Items that may come up in Business Office or CAM Discussions (TBD)						
Basis of Estimate (BOE)	Contractor documented rational for resources by WBS, OBS, or SOW. Normally evaluated as part of source selection.					Should reflect the baseline for CA that have not been adjusted since the baseline was set.
Earned Value Management System Description and Program Unique Instructions	Contractor's detailed process and procedures for Earned Value Measurement. Used by DCMA to measure compliance.					For validated systems DCMA will approve EVMSD. Should be consistent with EVM Standard 748B
Subcontract Management Plan	Contractor document that addresses integration of subcontractor data into program management information and outlines roles and responsibilities for management of the subcontractor.					Plan should ensure subcontractor risk and management data is integrated into overall program management.
LOE Percent Calculation	Chart or table that show percent of LOE in each CA and the percent of LOE in the PMB					LOE percentages should not distort EVM progress reporting and be consistent with EVMSD
Management Reserve (MR) and Schedule Margin (SM) Burn Down Charts	Charts that show the consumption of SM and MR over account periods					Remaining MR and SM should be consistent and realistic.
Material Thresholds for High / Low Value	Procedures for measuring the progress of material received and consumed in the program.					Progress for material items must be consistent with these procedures
Variance Analysis Reports	Reports beyond the CPR or IPMR Format 5 that address variances.					Should identify problem, recommend corrective action as appropriate and measure progress of corrective actions.

Sample Artifact List

6.5. Sample Data Call Request

The IBR process may require data that is not normally provided as contract deliverables. These data may be associated with integration traces, verifying that the PMB completely and accurately flows down to the control accounts. Other data elements are essential to identify risks in the five risk areas.

The formality that the data call request is presented to the contractor can be determined by the IBR Integrator. If there is any doubt regarding data delivery when needed, a formal request through the PMO contracting organization is appropriate.

The sample below lists common data call items. Since the IBR process may span several iterations of these data call items, the request should specify if updates are needed by the IBR team.

Data Call Item	Description	Need Date	Update Submittals
Master Phasing Schedule (If prepared and maintained by Contractor)	Summary graphic depicting key program elements, including major phases, major tasks, and key deliverables or events. Usually in Gantt format with bars and milestones representing the entire program on a single page with meaningful labels. Depicts all key milestones, reflects timeline (FY or CY), and reflects progress thru the Status Date / Time Now. Ideally, the MPS is an extract derived from the IMS. Includes "As Of Date."	At start of Document Quality Evaluations	When updated
Organization Chart	Organizational Breakdown Structure showing accountability path from Control Account Manager to Program Manager	At start of Document Quality Evaluations	When updated
Control Account Work Authorization Documents	Report or extract from Contractor EVMS that shows the scope of work for each control account assigned to a CAM and the control account period of performance.	At start of data intrgration traces	When updated
Risk Register	Listing of program risks and opportunities to include probability, consequence and handling activities. In lieu of report access to contractor database may be acceptable.	At start of Document Quality Evaluations	When updated

Data Call Item	Description	Need Date	Update Submittals
Contract Budget Logs	Report or Logs that show the establishment of the baseline reconciles to the contract, changes to the PMB, and the status of Management Reserve	When the PMB is established	Monthly Updates
Technical Performance Measurement (TPM) Progress Report (If not a contract deliverable)	Report that shows the progress of the contractor in achieving technical performance. May be a separate deliverable or incorporated in the IMS	At start of Document Quality Evaluations	When updated
Dollarized Responsibillity Assignment Matrix (RAM)	Spreadsheet or matrix depicting control accounts where the WBS and OBS (Organization/ IPT/Function) intersect. (dollarized RAM) and PMB totals. Ideally, identifies 1) CA status (Open, Closed, or Future); 2) Discrete vs. LOE; 3) major subcontractors; and 4) MR and UB values that total to the TAB level.	At start of Document Quality Evaluations	When updated
Control Account Plan	Time phased plan by task with each element of cost (EOC) and resource categories broken out at the task level. Minimally, provide CAPs that contain monthly BCWS (hours and costs) spreads by CA by work package / planning package, including EV methods. Note: Typical EOCs include labor, material, subcontract, and ODCs.	At start of Document Quality Evaluations	When updated
IMS Basis and Assumptions or IMS Supplemental Guidance documents (If not delivered as part of the IMS)	Document describing program-specific methodology for analyzing the critical path—including specific UIDs/Activity IDs. Includes data dictionary specifying fields (code, number, text, and flags), embedded formulas, and master/ subproject structure mapping (if applicable). Describes use of constraints (particularly late date constraints and deadlines), Note fields, and any custom views, filters, groups, or reports used to manage the IMS.	At start of Document Quality Evaluations	When updated
Additional Items (TBD)			

6.6. Sample Document Trace Narratives, Integration Proofs and Mapping

The purpose of document or artifact traces is to ensure that the documents that reflect the PMB are consistent with one another. Different IPT or CAMs may, in the performance of their duties, use only a subset of the documents that reflect the PMB. It is important that whatever data they use is correct and consistent with the execution plan.

The table below lists a number of possible traces designed to ensure that the PMB is consistently documented. It is important that the IBR team review and agree with these traces for the specific program. Changes may be made to the table below to reflect the relationships for specific programs. This enables CAM discussions to focus on technical control account risks and performance matters.

Trace Name	Trace Components / Artifacts	Trace Order	Trace Standard	Risk Area / IPT	POCs
TRACE - Requirements Validation (Milestone B to C) Purpose: Requirements consistently and accurately flow from overarching documents to the effort required to deliver the capability	Capability Development Document (CDD)		Previously vetted source document containing KPPs, KSAs and additional attributes	Technical / Engineering IPT	
	System Requirements Document (SRD)	CDD --> SRD	SRD traces to the CDD		
	Critical Technical Parameters (CTP) / Technical Performance Measurements (TPM)	SRD --> CTP/TPM	CTPs and TPMs are consistent with SRD requirements and measure progress toward KPPs and KSAs		
	TPMs can be traced to organization and schedule	TPM --> CA, WBS, and IMS	TPMs are attributed to a single WBS element and progress toward achieving the TPMs are contained in the IMS		
	Test and Evaluation Master Plan (TEMP) / Test and Evaluation Program Plan (TEPP)	SRD --> TEMP / TEPP	Testing Plans reflect validation and verification of flowed down requirements. TEMP is aligned with KPPs and KSAs.		
	System Specification (SS)	SRD --> SS	Spec reflects requirements in SRD		
	Statement of Work (SOW) or Performance Work Statement (PWS)	SS --> SOW	Scope of SOW references and includes all effort needed to achieve specified requirements. Requirements documents are referenced in the SOW		
	Systems Engineering Plan (SEP)	CDD --> SEP	SEP is consistent with CDD and articulates process for managing TPMs		
	Cost Analysis Requirements Document (CARD)	CARD --> SOW, SRD, WBS	CARD is an approval document that sets the cost analysis baseline. The PMB should be consistent with the CARD		
	Systems Engineering Management Plan (SEMP)	SEP --> SEMP	The contractor prepared SEMP should be consistent with the systems engineering approach outlined in the Government prepared SEP		

Trace Name	Trace Components / Artifacts	Trace Order	Trace Standard	Risk Area / IPT	POCs
TRACE - Requirements Validation between Milestone A and Milestone B (other traces listed above may also apply)				Technical / Engineering IPT	
	Systems Engineering Plan (SEP)	ICD --> SEP	SEP is consistent with ICD		
	System Requirements Document (SRD)	ICD --> SRD	SRD traces to the ICD		
TRACE - Requirements Validation between Milestone C and Full Rate Production (FRP) (other traces listed above may also apply)				Technical / Engineering IPT	
	Capability Production Document (CPD)	CPD --> ITP	Integrated Test Plans (ITPs) should trace to the Requirements Cross Reference Table in the CPD		
TRACE - Test and Evaluation Activities Planned in IMS			T&E is frequently a schedule driver.	Technical / Engineering IPT	
	Test and Evaluation Master Plan (TEMP)	TEMP --> IMS	The IMS must fully represent the required activities to accomplish the TEMP. Detailed activities or planning packages should be consistent with the top level T&E schedule in the TEMP		
TRACE - Integrated Master Plan (IMP) incorporated in IMS			All IMP events, accomplishments and accomplishment criteria should be integrated into the IMS	Schedule / Program Control IPT	
	Integrated Master Plan (IMP)	IMP --> IMS	The IMP can either be duplicated in the IMS or all events, accomplishments, and criteria cross referenced to applicable activities or summary tasks.		

Trace Name	Trace Components / Artifacts	Trace Order	Trace Standard	Risk Area / IPT	POCs
TRACE - Work Scope Integration			The scope of work in the SOW should be incorporated into the WBS /WBS Dictionary and the Work Authorization documents that assign the work to Control Account Managers (CAM)		
	Statement of Work (SOW) Performance Work Statement (PWS)	SOW --> WBS Dictionary	The entire SOW should be mapped to WBS elements. The wording of the WBS dictionary should be consistent with the referenced section of the SOW	Technical / Engineering IPT	
	WBS / WBS Dictionary	WBS Dictionary to Work Authorization Documents	All WBS elements should be mapped to control accounts. The wording of WBS elements and work authorizations should be consistent and clearly understandable	Cost / Program Control IPT	
TRACE - WBS Integration			The entire WBS should be reflected in the schedule, budget allocation, and performance reporting documents for the contract	See below	
	WBS / WBS Dictionary	WBS --> IMS	The WBS should be mapped to the IMS to time phase the scope of work. LOE may not be reflected in the IMS	Schedule / Program Control IPT	
	Integrated Master Schedule (IMS)	IMS --> CAP	The IMS is used to time phase the budget which is contained in the CAP. The CAP should be consistent with the IMS	Schedule / Program Control IPT	
	Control Account Plan (CAP)	CAP --> CPR / IPMR	The CAP should be reflected in the CPR / IPMR formats both totals and time phasing should be correct.	Management Processes / Program Control IPT	

Trace Name	Trace Components / Artifacts	Trace Order	Trace Standard	Risk Area / IPT	POCs
TRACE - Schedule to Cost Integration			The schedule portion of the PMB should be tightly integrated to the cost portion of the PMB. These traces should be verified prior to CAM discussions	Management Processes / Program Control IPT	
	Work Authorization Documents (WAD)	CAP --> WAD	Earlier tracing verified that the CAP was time phased consistent with the baselined IMS. This trace verifies that the CAP time phasing has be correctly allocated to the CAMs		
TRACE - Risk to IMS			High risk tasks should be identified in the IMS for the SRA. Additionally risk mitigation activities with a schedule impact should be listed in the IMS	Schedule / Program Control IPT	
	Risk Register	Risk Register --> IMS	The high risk events in the Risk Register should be mapped to the IMS so that individual three point duration estimates can be determined for the SRA. Approved risk mitigation activities with schedule impacts should be included in the IMS		
TRACE - Budget Baseline Changes			If the PMB has changed since the initial baseline was set, the associated artifacts should be updated		
	Baseline Change Document (BCD)	BCD --> IMS, WAD, WBS, CPR / IPMR, CAP	Ensure that all artifacts impacted by a baseline change are correctly updated	Management Processes / Program Control IPT	

Trace Name	Trace Components / Artifacts	Trace Order	Trace Standard	Risk Area / IPT	POCs
TRACE - Responsibility Assignment Matrix (RAM) Integration			The RAM is used to CA discussion selection and contains the Organizational Breakdown Structure (OBS). This trace validates the RAM	Management Processes / Program Control IPT	
	OBS	OBS --> RAM	Ensure the latest OBS is in the RAM		
	WBS / WBS Dictionary	WBS --> RAM	Verify that all WBS elements are in the RAM		
	Contract Budget Baseline (CBB) Logs	CBB --> RAM	Verify that the RAM reflects the latest baseline change		
	WAD	WAD --> RAM	Verify that the RAM reflects the latest WADs		
TRACE - Performance Reporting Reconciliation			The information in the Contract Performance Report should trace to source artifacts	Management Processes / Program Control IPT	
	IMS	IMS --> CPR / IPMR	For non-LOE work packages, progress is recorded through the IMS. Verify that IMS progress is correctly reflected in the CPR		
		Cost System --> CPR / IPMR	ACWP and LOE BCWP often come from the cost accumulation system to the CPR. Verify the values are correct.		
		BCD / CBB --> CPR / IPMR	Any PMB changes should be reflected in the CPR. Check the BCD and CBB to ensure that changes are reflected		

Trace Name	Trace Components / Artifacts	Trace Order	Trace Standard	Risk Area / IPT	POCs
TRACE - Estimate at Completion (EAC)			The EAC should be consistent with the rolled up source data.	Cost / Program Control IPT	
	Integrated Master Schedule (IMS)	IMS --> EAC	The period of performance for the EAC should be consistent with the forecast period of performance in the IMS		
	Cost System	Cost System --> EAC	The EACs at the control account level in the cost system should roll up to the program level EAC		
TRACE - Management Reserve and Schedule Margin			Management Reserve (MR) is budget withheld from the PMB for contingencies. Schedule Margin (SM) is baselining in advance of contractual need dates	See below	
	Contract Budget Baseline (CBB) Logs	CBB --> CPR / IPMR	The MR in the CBB should be consistent with the MR in the CPR / IPMR	Cost / Program Control IPT	
	Integrated Master Schedule (IMS)	IMS --> SM, EAC	The SM in the IMS should be consistent with the period of performance for the EAC and the budget available for contingencies in MR.	Schedule / Program Control IPT	
TRACE - Government Furnished Material, Equipment, Information			Government provided assets included in the PMB should be consistent with lists in the contract.	Schedule / Program Control IPT	
	Contract	Contract --> IMS	The IMS should reflect any government provided assets as an external feed-in milestones		

Sample Integration Trace Table

6.7. Sample Readiness Review Template

The Readiness Review is an event that serves two purposes. It is an IBR progress report to senior leadership and additionally a review to ensure that the PMB definition is adequate to proceed with Phase II, CAM discussions. If the PMB is not stable or adequately defined, detailed discussions on control account execution have no value. The outline below identifies the recommended subject matter for the Readiness Review.

- ***Review IBR Event Status using IMP Accomplishments and Criteria***
- ***For each risk area (Technical, Cost, Schedule, Resources, and Management Processes)***
    - ***Review progress / status of each document quality evaluation***
        - ***Artifact / document reviewed***
        - ***Rating (Adequate / Inadequate)***
        - ***Findings***
        - ***Actions Items Open and Closed***
        - ***Issue / Action Item burn down progress and closure plan***
    - ***Review progress / status of each integration trace***
        - ***Trace performed***
        - ***Rating (Adequate / Inadequate)***
        - ***Findings***
        - ***Actions Items Open and Closed***
        - ***Issue / Action Item burn down progress and plan***
    - ***Review current risks (contractor's Risk Register)***
    - ***Review any risks that would impact Phase II (CAM Discussions)***
    - ***Present Plan / Schedule for IBR Phase II***
        - ***Control Account Selection Criteria and Results***
        - ***Training Planned***
        - ***Schedule of discussions***

6.8. Sample Business Office / CAM Discussion Questions

During Phase II of the IBR process, discussions are held with CAMs to understand their risks and opportunities and their readiness to execute the program at the control account level. Prior to these discussions, the contractor Business Office discusses with the IBR team, the various systems and data used to establish, maintain, and execute the PMB.

Business Office Discussion Questions

The following questions are appropriate for the Business Office discussion.

- What is the work authorization process and common documentation?
- What is the CBB Log and MR/UB guidance?
- What were the baseline instructions to the CAMs?
- How CAM routine EVM information elements are developed and maintained?
- Introduction to the IMS
    - Critical Path
    - Current float analysis
    - Weekly/monthly update process
    - Schedule health assessment process
    - Schedule Risk Assessment process
    - Schedule Margin (if applicable)
- How are subcontracts / suppliers managed?
    - Where EVM is not flowed down, how is the contractor planning to manage the subcontracted effort?
    - What is the role of the CAM in subcontractor / supplier management?
    - How are the subcontracts integrated into the IMS?
- Role of Program Control and CAM
    - Responsibilities of the program control organization
    - To whom does the “business support person” report?
    - How many CAMs does a business support person handle?

- Current Status
    - Variance Analysis Reports (VAR)
    - EACs reported
    - Risk Register
    - Baseline Change Requests (BCR) processed
    - CBB log or the equivalent.
    - Undistributed Budget
    - Management Reserve
- Are there subcontractors with EVM flow down? What is the timing and process for those IBRs?
- Will subcontractor tasks in the IMS be resource loaded? If so, will they be loaded with material dollars?
- For CAMs that have both discrete and Level of Effort (LOE) in their work packages, how can the control account period of performance be clearly identified if LOE is only in the cost system?
- What are the program unique processes and procedures that are distinctive from those in the EVMS Description Document?

CAM Discussion Questions

The contractor Business Office discussions allow the CAM discussions to focus on specific control account information. The following list of questions (by risk area) may be used to promote discussion and understand specific risks. PMOs are encouraged to develop questions tailored to the specifics of the contract.

Management:

- How many control accounts are yours?
- What is the total dollar amount of your control accounts?
- How many work packages and planning packages in your control accounts? Provided in advance by Program Control, the CAM should be able to discuss the scope of each/any Work Package (WP) or Planning Package (PP) and the way it is planned. A spreadsheet such as the example below may help to focus discussions.

CA / Work Package #	Title	Budget at Completion	Percent Complete	BCWP Method	Estimate at Completion

Government selects at least two work packages and planning packages for the scope of the following questions unless the question calls out the control account level.

- Please discuss the process you used to develop the performance measurement baseline for the work packages in your Control Account.
- Do you have LOE effort? If so, how did you determine if LOE was appropriate?
- How many people are working on your control accounts?
- Do you feel you have had adequate Planning / EVM training or do you need more?

Technical:

- What is your scope of work?
- How does your work package structure relate to the scope in your Work Authorization?
- Do you agree you will be able to accomplish the scope, within schedule, and budget as shown in your Work Authorization?
- Are you responsible for any subcontracts or suppliers? How do you monitor performance on these? What is the process for managing subcontractor or supplier earned value?
- Please discuss any pending BCRs.
- Do you have or foresee any technical, cost and/or schedule risks and impacts?

Schedule:

- For the selected work packages and planning packages, please open the IMS. Please discuss rationale for any time phasing of the work packages or planning packages.

- Are all of your work packages and planning package represented in the IMS?

- Do you have any detailed schedules below the work package?

- Please discuss any schedule interfaces, logic, and constraints.

- How do you know if a task from another control account will affect your effort?

- How are you informed by other organizations or IPTs of changes in their output that may affect your control accounts schedules?

- Please show how you manage your control account tasks using total float?
    - Are you on the program's critical path? If not on the critical path, please identify how close you are to the critical path.
    - What happens when you are on the critical path? How do you get off it?
    - Which tasks have the least amount of total float? Discuss likelihood of executing to the planned durations (confidence in task durations).
    - Which tasks have the most amount of total float?

- Please define / address all schedule related risks, including any handling plans currently modeled in the schedule.

- Do you have any percent complete effort? If so, please demonstrate Basis of Evidence (i.e., earned value methodology) for how performance is measured on the selected work packages?
    - Do you use interim milestones on any of your work packages to measure progress?
    - Is the earned value method chosen appropriate for the type of work performed?
    - Does the method chosen objectively measure performance?
    - Does the earned value assessment correlate with technical achievement?

Resources and Cost:

- What is your total Control Account budget amount? Of this total budget amount, how much is distributed to work packages and how much is retained in planning packages? Do you have any unbudgeted work?

- How are your budgets time-phased for each work package and planning package?

- Please discuss the basis of estimate used to develop the baseline for this control account (e.g., history, similar program, standard work)?
    - Is your budget and Estimate to Complete (ETC) sufficient to perform the work?
    - What is the current EAC? How does the EAC compare to the Budget at Completion (BAC)?

  - Do you have any resource concerns?

- Do you have any reportable variances?
- Is your EAC realistic?
- Please discuss the current staffing requirements for this control account through completion of the SOW and in support of schedule milestones. Please discuss any issues or risks associated with staffing.
- Demonstrate that your EAC/baseline is reasonably segregated by labor, material, and other direct charge categories.
- Please discuss other elements of costs (e.g., travel, material, or other costs) and any issues or risks associated with these resources.

Other CAM Discussion Questions:

- What challenges, uncertainties, or difficulties can impede your performance?
- Which is the most challenging: technical, schedule, resources or cost risk impacts going forward?

6.9. Sample CAM Checklist

CAM discussion questions may present opportunities to explore a number of areas in detail. Time limitations may make it impossible to ask all the questions listed in the section above. The following checklist may be offered to CAMs to ensure they are familiar with all of their responsibilities and which risk area applies to each item. The checklist may also be used to ensure an adequate sampling of control account information and CAM knowledge.

	Risk Area				
	Tech	Sched	Res	Cost	Mgmt
I have traced the effort in my control accounts from the contract through the applicable technical artifacts (such as the 'Initial Capabilities Document (ICD), CDD, CPD, System Requirements Document (SRD), Technical Requirements Document (TRD), KPPs, Systems Engineering Plan (SEP), SEMP, and TEMP) to my respective portions of the SOW, Statement of Objectives (SOO), WBS, IMP, IMS and am confident the relationships are sound, accurate and complete.	X				
I have reviewed, understand and can demonstrate the applicable CDRLs and deliverables that apply to my Control Account(s).	X				
I have reviewed, understand and can demonstrate the Contract Line Item Numbers (CLINs) applicable to my effort.	X				
I have reviewed, agree with and can demonstrate the WBS Dictionary and associated SOW references to the work scope, including deliverables for my Control Account(s).	X				
I have reviewed and agree with the dollarized Responsibility Assignment Matrix (RAM) & confirmed that the Control Account budgets align with the Work Authorization(s) documents for my Control Account(s).				X	X
I have reviewed and can reconcile the BOE(s) to my Control Account(s) budget(s).			X		
I have reviewed and agree with the Work Authorization(s) to assure that the budget by element of cost is complete, sufficient to execute the scope and match that shown on the RAM.			X	X	X
I have reviewed the SOW and Work Authorization documents applicable to each Control Account I am responsible for and I do not have any unbudgeted work.	X				X
I have reviewed and agree with the sections of the Integrated Master Plan (if applicable) & the Master Phasing Schedule (if applicable) which reflect major events or control milestones that precede or succeed my Control Account(s).	X	X			

	Risk Area				
	Tech	Sched	Res	Cost	Mgmt
I understand and can demonstrate the exit criteria for my effort.	X				
I have reviewed and agree with the sections of the Integrated Master Schedule that are assigned to my Control Account(s) or to me, including work packages, planning packages, & logic tasks or milestones (if applicable).		X	X		
I have reviewed and agree with the detail planning (including any planning packages) in my Control Account(s) and agree this accurately represents the SOW and schedule in the control account and provides me a good tool to manage and control my effort.	X		X		
I have reviewed the durations of the tasks in my Control Account(s) and agree the durations are realistic and reflect the way the work will be executed.		X			
I have reviewed and understand the EV methods used in my detail planning and agree those used are the appropriate methods for this program.		X	X		
My planning does not use the rolling wave concept; all my tasks are detail planned through completion. - OR - My planning includes planning packages using the rolling wave concept and I understand and can demonstrate this process.		X	X		
I understand the concept of a critical path, how it is used on this program and can demonstrate how I determine if my effort is on the critical path.		X			
I understand and can demonstrate what negative total float means, how it may impact my tasks and how to develop a mitigation plan to eliminate or minimize negative total float.		X			X
I have reviewed, understand and can demonstrate the handoffs or interdependencies between my Control Accounts and other Control Account(s) or external efforts such as Government Furnished Equipment (GFE), Government Furnished Information (GFI), Inter-Organizational Transfers (IOTs), Sub contracts & Contractors.		X	X	X	X
I have reviewed and understand the manpower profile of my Control Account(s) and can reconcile any peaks and valleys.			X		
I have reviewed any material in my control account plans; I understand and can demonstrate how and why the material was planned as shown, if applicable			X	X	
I have reviewed, understand and can demonstrate how any Government Furnished Equipment / Government Furnished Property (GFP), and Government Furnished Information is planned and reported in my Control Account(s).		X	X	X	X
I have reviewed the actual costs to date for each of my Control Account(s) and they are accurate.				X	

	Risk Area				
	Tech	Sched	Res	Cost	Mgmt
I have reviewed, understand and can demonstrate the use of Estimated Actuals in my Control Account(s) for situations requiring its use to align Actual Cost of Work Performed (ACWP) with Budgeted Cost for Work Performed (BCWP) to avoid a false under run or other incorrect cost variance.				X	X
I understand the concept of cost / schedule integration and can demonstrate how this applies to my effort.		X		X	X
I have reviewed and agree that the amount of resources I have in each Control Account(s) is adequate and available (make separate line) to accomplish the effort.			X		X
I have reviewed, agree with, and can reconcile the planning, status and EACs of any subcontracted (contractor / IOT) effort in my Control Account(s).			X	X	X
I have reviewed, agree with, and can reconcile with the status in my Control Account(s) including any Quantifiable Backup Data (QBD) used to substantiate the %EV for any work packages with the Percent Complete (PC) Earned Value Technique (EVT) as applicable to my Control Account(s).		X	X		
I understand and can demonstrate the statusing process and how to provide status and claim earned value on my effort.		X			X
I have reviewed and agree with the remaining work (unearned work) for ongoing or future work packages or planning packages in my Control Account(s).		X		X	
I have reviewed and agree with the most recent Variance Analysis Report(s) for my Control Account(s).					X
I have reviewed and agree with the EAC for each of my Control Account(s).				X	
I understand and can demonstrate the use and purpose of Management Reserve (MR) and when it would be appropriate for requesting MR for a Control Account.				X	
I understand the Baseline Change Request process and my responsibilities when presenting BCRs for approval.					X
I have reviewed and agree with the risks & opportunities for my work found in the program Risk Register (or equivalent).					X
I have received EVM training. If not, I have a plan in place to receive such training within the next 30 days.	X	X	X	X	X

6.10. Sample CAM Scoring Criteria

Each IBR discussion is evaluated for technical, schedule, cost, resource, and management risk. It should be noted this activity is success-oriented, working toward having an IBR resulting in a high level of confidence that the program delivers within cost and schedule.

Use the overview of the risk areas summarized below as a reminder for the discussion process:

- Technical Risk - Ability of the project's technical plan to achieve the objectives of the scope of work. This includes the effects of factors such as available technology, software development capability, and design maturity.
- Schedule Risk - Adequacy of time allocated for performing defined tasks to successfully achieve the project schedule objectives. This includes effects on a schedule of interdependency of scheduled activities to achieve project milestones and supports PMs' ability to identify the critical path.
- Cost Risk - Ability of PM to successfully execute project cost objectives, recognizing relationships of budget, resources, funding, schedule, and scope of work. This includes effects of assumptions used for estimates and resource allocation on budgets for work items.
- Resource Risk - Availability of personnel and facilities when required for performing defined tasks to execute program successfully.
- Management Processes Risk – The degree that management processes provides effective integrated cost / schedule / technical planning and baseline change control. This includes the ability of processes to establish and maintain valid, accurate, and timely performance data, including that from subcontractors, for early visibility and tracking risks.

The IBR CAM discussions are assessed using a three-point scale; 1 for high risk, 2 for medium risk, and 3 for low risk. The scoring is meant to capture systemic issues and issued for the overall IBR assessment. Those areas found to be scored as inadequate (1 or 2) are documented as action items and monitored through IBR closeout. The scoring criteria are:

Technical Risk - Evaluation Criteria:

3- Low risk: (All points should be true to score low risk)

- Contractor CAMs have developed a comprehensive technical baseline plan that covers all efforts within the SOW, is consistent with contract requirements, and has adequate definition and identification of task in the baseline.
- Work scope responsibility is properly allocated to the performing organization that controls budget and schedule.
- Technical plan considers the effect of factors such as available technology, software development capability, design maturity, and rework.
- Presented plan has efforts identified to handle all medium and high risk areas and the mitigation plans if completed reduce the risk to low.

- The plan has little potential to cause disruption to schedule, increase costs, or degradation of performance.
- Normal contractor effort and normal Government monitoring is probably sufficient to overcome difficulties.

2 – Medium risk: (if any are true and there are no high risks in the assessment)

- Technical plan does not cover some effort within the SOW, but is consistent with most contract requirements and has adequate definition and identification of tasks in the baseline.
- Any omitted tasks have no material effect on KPPs or TPMs.
- All significant work scope responsibility is properly allocated to the performing organization that controls budget and schedule.
- Technical plan does not fully consider the effects of factors such as available technology, software development capability, human system design options, design maturity, and rework.
- Few identified efforts are available to handle potential risk areas.
- Special contractor emphasis and close Government monitoring expected to be sufficient to overcome difficulties.

1 – High risk: (if any are true, this risk level is appropriate)

- Technical plan does not include significant efforts within the SOW, is not consistent with contract requirements, lacks adequate definition and identification of tasks in the baseline, or does not meet KPPs / TPMs as currently planned.
- Work scope responsibility, in many cases, is not properly allocated to the performing organization that controls budget and schedule.
- Technical plan does not consider the effects of factors such as available technology, software development capability, design maturity, and rework.
- The approach does not identify risk mitigation plans to bring program within an acceptable risk level and is likely to cause a significant disruption to schedule, increased cost, or degradation of performance.
- Risk may be unacceptable even with contractor emphasis and close Government monitoring.

Schedule Risk – Evaluation Criteria

3 - Low risk: (All points should be true to score low risk)

- Low risk in adequacy of time allocated for performing defined tasks to achieve the project schedule objectives.
- All discrete contract work scope is represented in the baseline schedule.
- Proper technical approach is demonstrated in the construction of the program critical path.
- Tasks within planning window have appropriate durations for management purposes.
- Tasks beyond the planning window have appropriate durations.
- Tasks demonstrate total float with minimized values, follow a logical sequence of work, and support intermediate / master schedules and contractual milestones.

- Use of constraints and leads / lags is minimized to assess risk / opportunities to the critical path.
- Discrete task interdependencies, including major critical subcontract work, clearly identifies the program critical path to contract completion and are able to demonstrate driving paths to all major program milestones and / or IMP events.
- Sufficient schedule margin exists to accommodate normal schedule disturbances and achieve program objectives.
- Normal contractor effort and Government monitoring are expected to resolve documented difficulties.

2 – Medium risk: (if any are true and there are no high risks in the assessment)

- There is a medium risk in adequacy of time allocated for performing defined tasks to achieve the project schedule objectives.
- Most required contract work scope is represented in the baseline schedule.
- Discrete task interdependencies, including major critical subcontract work, somewhat identify the program critical path to contract completion and are able to somewhat demonstrate driving paths to all major program milestones and / or IMP events.
- Most of the tasks within planning window have appropriate durations.
- Most of the tasks beyond the planning window have appropriate durations.
- Most of the tasks demonstrate total float with minimized values, follow a logical sequence of work, and support intermediate / master schedules and contractual milestones.
- There is a use of constraints or leads and lags that are not justified, but appear to be infrequent.
- Sufficient schedule margin does not exist to accommodate normal schedule disturbances, but anticipate minimal impact to program objectives.
- Special contractor emphasis and close Government monitoring are expected to resolve documented difficulties.

1 – High risk: (if any are true, this risk level is appropriate)

- Inadequate time is allocated for performing defined tasks to achieve the project schedule objectives.
- Much of the required contract work scope is not represented in the baseline schedule.
- Proper technical approach is not demonstrated in the construction of the program critical path.
- A minimal number of tasks within planning window have appropriate (shortest) durations.
- A minimal number of tasks beyond the planning window have appropriate durations.
- A minimal number of tasks demonstrate total float with minimized values, follow a logical sequence of work, and support intermediate / master schedules and contractual milestones.
- Use of constraints and leads / lags is not minimized.
- There are serious concerns with the accuracy of the critical path and inclusion of the technical approach.
- Program lacks a valid critical path to assess schedule risk and the ability to forecast impacts to major critical subcontract work, downstream program milestones, and / or IMP events.

- Insufficient schedule margin exists to accommodate normal schedule disturbances, but anticipate minimal impact to program objectives.
- Risk is unacceptable even with contractor emphasis and close Government monitoring.

Cost Risk - Evaluation Criteria:

3- Low risk: (All should be true for scoring the risk level)

- Budget is executable within the technical and schedule objectives for the authorized work scope of the control account.
- Basis of the work package scope is well understood and risks, assumptions, or complexity factors have been documented for the differences between the BOE and control account budget.
- Budget values, time phasing, and breakout between labor / material / other direct cost assigned are reasonable.

2 – Medium risk: (if any are true and there are no high risks in the assessment)

- Budget is marginally executable within the technical and schedule objectives for the authorized work scope of the control account.
- Budget values, time phasing, and breakout between labor material / other direct cost assigned are optimistic and may represent a risk in terms of cost achievability.
- Special contractor emphasis and close Government monitoring is probably sufficient to overcome difficulties.

1 – High risk: (if any are true, this risk level is appropriate)

- Budget is not executable within the technical and schedule objectives for the authorized work scope of the control account.
- Budget values, time phasing, and breakout between labor / material / other direct cost assigned are inadequate given contractual cost, schedule, and resource constraints, and is likely to represent a risk in terms of cost achievability.
- Risk may be unacceptable even with contractor emphasis and close Government monitoring.

Resource Risk - Evaluation Criteria:

3- Low risk: (All should be true for scoring at this risk level)

- Resources are adequate; taking into consideration any / all resource availabilities, constraints, and their limitations.
- Has little potential to cause disruption of schedule, increased cost, or degradation of performance.
- Normal contractor effort and normal Government monitoring is probably sufficient to overcome difficulties.

2 – Medium risk: (if any are true and there are no high risks in the assessment)

- Resources may be inadequate; availabilities and some constraints not fully considered.
- This can potentially cause some disruption of schedule, increased cost, or degradation of performance.
- Special contractor emphasis and close Government monitoring is probably sufficient to overcome difficulties.

1 – High risk: (if any are true, this risk level is appropriate)

- Resources are inadequate; availabilities and constraints not fully considered.
- This is likely to cause a significant disruption of schedule, increased cost, or degradation of performance.
- Risk may be unacceptable even with contractor emphasis and close Government monitoring.

Management Processes Risk - Evaluation Criteria:

3- Low risk: (All should be true for scoring at this risk level)

- Has access to the management processes and knows where to get help.
- Has a basic knowledge of Baseline Maintenance, Risk Management, Scheduling, and Estimate at Completion updates, Subcontractors Management (as applicable) and Managerial Analysis.
- Implemented management processes are in accordance with the system description and internal operating instructions and provide effective integrated cost / schedule / technical planning and baseline change control.
- Is able to demonstrate impact to the critical path, predict and handle cost and schedule risks, and execute the program successfully meeting all cost and schedule risks, and execute the program successfully meeting all program requirements.
- Utilizes appropriate earned value methods consistent with the type of work performed.
- Management Processes are providing timely and accurate performance data.
- Has little potential to cause disruption of schedule, increased cost, or degradation of performance.
- Normal contractor effort and normal Government monitoring is probably sufficient to overcome difficulties.

2 – Medium risk: (if any are true and there are no high risks in the assessment)

- Does not have access to all the management processes or does not know where to get help.
- Has partial knowledge of Baseline Maintenance, Risk Management, Scheduling, and Estimate at Completion updates, Subcontractors Management (as applicable) and Managerial Analysis.

- Is not implementing some management processes in accordance with the system description and internal operating instructions that may not provide effective integrated cost / schedule / technical planning and baseline change control.
- Is unsure how to demonstrate impact to the critical path, predict and handle cost and schedule risks, and execute the program successfully meeting all cost and schedule risks, and execute the program successfully meeting all program requirements.
- Appropriate earned value methods are generally utilized and are consistent with the type of work performed.
- Has some potential to cause disruption of schedule, increased cost, or degradation of performance.
- Increased contractor effort and increased Government monitoring is probably sufficient to overcome difficulties.

1 – High risk: (if any are true, this risk level is appropriate)

- Does not have access to the management processes and does not know where to get help.
- Has little knowledge of Baseline Maintenance, Risk Management, Scheduling, and Estimate at Completion updates, Subcontractor Management (as applicable) and Managerial Analysis.
- Is not implementing management processes in accordance with the system description and internal operating instructions that may not provide effective integrated cost / schedule / technical planning and baseline change control.
- Unable to demonstrate impact to the critical path, predict and handle cost and schedule risks, unable to execute the program successfully meeting all cost and schedule commitments, and unable to execute the program successfully meeting all program requirements.
- Appropriate earned value methods are not utilized or are not consistent with the type of work performed.
- Management processes are not providing timely and accurate performance data.
- There is significant potential to cause disruption of schedule, increased cost, or degradation of performance.
- Significant contractor effort and significant Government monitoring is not sufficient to overcome difficulties.
- Risk is unacceptable even with contractor emphasis and close Government monitoring.

6.11. Sample CAM Discussion Summary

CAM discussions begin with an IBR team meeting where any areas that may need a deeper than normal discussion are identified. Following the discussion session, the IBR team meets to document the findings and record any action items. Later on in the IBR process, the challenge is to translate the findings from the CAM discussions into an overall assessment of the PMB and the capability of the contractor team to execute that baseline. Thus, CAM discussion results need to be carefully and consistently recorded.

The following is a template that may be useful for recording CAM discussions.

CAM Discussion Summary	
Control Accounts assigned to CAM:	
CAM Name:	
Government Discussion Lead:	
Discussion Assessment:	
Technical: Low Medium or High Risk	Specific examples justifying risk rating
Schedule: Low Medium or High Risk	Specific examples justifying risk rating
Cost: Low Medium or High Risk	Specific examples justifying risk rating
Resource: Low Medium or High Risk	Specific examples justifying risk rating
Management Processes: Low Medium or High Risk	Specific examples justifying risk rating
Identification of Risks:	Describe any additional risk candidates identified in CAM discussion.

Post Discussion Actions:	For each action detail the following:
	Description of Action Item: Specific narrative description of action item. **Response:** Contractor response to action item assignment **Status:** Status of corrective / preclusive actions
Planned Follow Up:	Define any follow-up activity by the IBR team or the CAM (such as providing additional documents or information).

The CAM discussion ratings are summarized at the total program level. The overall IBR is assessed as red, yellow, or green for the technical, schedule, cost, resources, and management processes categories. Recall that Low risk receives 3 points, Medium risk 2 points, and High risk 1 point. For the overall scoring:

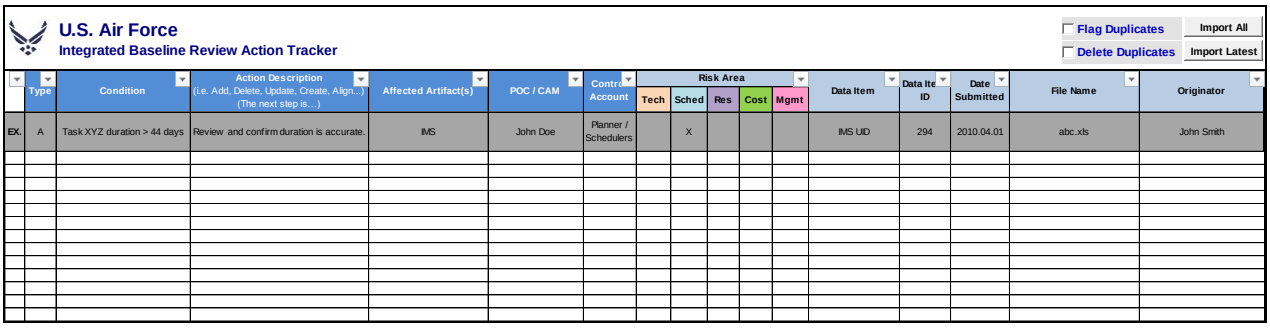
Green = 2.6 or greater

Yellow = less than 2.5 and greater than 2.0

Red = 1.9 or less

6.12. Sample Action Tracker / Sample Action item List

This IBR is an incremental process that spans a number of months. Tracking action items to closure is important to ensure the goals of the IBR are achieved. Tracking action items also provides a history of progress of the PMB and is helpful if additional IBRs are conducted on the same program. SAF/AQXC provides a Microsoft Excel action item tracking spreadsheet that includes workbooks that are synched to a master action item spreadsheet. A screenshot of the Air Force Integrated Baseline Review Action Tracker is shown below.



U.S. Air Force
Integrated Baseline Review Action Tracker

Flag Duplicates | Import All
Delete Duplicates | Import Latest

	Type	Condition	Action Description (i.e. Add, Delete, Update, Create, Align...) (The next step is...)	Affected Artifact(s)	POC / CAM	Control Account	Risk Area					Data Item	Data Item ID	Date Submitted	File Name	Originator
							Tech	Sched	Res	Cost	Mgmt					
EX.	A	Task XYZ duration > 44 days	Review and confirm duration is accurate.	IMS	John Doe	Planner / Schedulers		X				IMS UID	294	2010.04.01	abc.xls	John Smith

6.13. Sample IBR Exit Briefing

The IBR Exit Briefing is the final full joint contractor and Government IBR team gathering. The purpose is to validate the team's understanding of the PMB, its risks and the plans to execute the program. A considerable amount of information is presented at the IBR Exit Briefing. The information presented is the assessment of the joint IBR team. The presenters of the information are normally the Government IBR team but contractor presenters are also appropriate. The material presented is similar to that presented at the Readiness Review but will also reflect progress made during Phase II. Listed below is the minimum content for the presentation.

- ***Bottom Line Up Front (i.e. PMB and risks well understood; PMB achievable)***
- ***IBR Direction (Requirements that the IBR satisfies)***
- ***IMP IBR Event Status (Review accomplishments and criteria)***
- ***IBR Timeline (Recap for leadership in attendance)***
- ***Phase I Action Item Status (Open and Closed Items; update from Readiness Review)***
    - ***Document Quality Evaluation Results***
    - ***Integration Trace Results***
- ***Schedule Risk Assessment Results***
- ***Phase II (CAM Discussion) Summary and Scoring***
- ***Phase II (CAM Discussion) Action Item Status***
- ***Review latest update to Program Risk Register***
- ***Risk Topic Area Assessment***
    - ***Program Technical Risk Rating / Justification***
    - ***Program Schedule Risk Rating / Justification***
    - ***Program Cost Risk Rating / Justification***
    - ***Program Resources Risk Rating / Justification***
    - ***Program Management Processes Risk Rating / Justification***

- ***Review of remaining IBR Open Action Items***
- ***PMB Approval Recommendation***
- ***IBR Closure Plan***
- ***Detailed Backup Charts (as appropriate)***

6.14. Sample Memo for the Record

The following is a sample memo documenting the approval of the PMB and the completion of the IBR.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AERONAUTICAL SYSTEMS CENTER (AFMC)
WRIGHT-PATTERSON AIR FORCE BASE OHIO

MEMORANDUM FOR THE RECORD

SUBJECT: [Program name] Integrated Baseline Review

1. The [Program] Directorate and [contractor name], with support from the Defense Contract Management Agency, conducted an Integrated Baseline Review (IBR) starting [date] and extending through [date].

2. The primary culminating elements of the [program name] IBR were:

a. System Requirements Review [date]
b. Integrated Risk Assessment [date]
c. IBR Integration Meeting [date]
d. Schedule Risk Assessment [date]
f. Supplier IBRs
- Supplier #1 [date]
- Supplier #2 [date]
g. Exit Briefing [date]

3. Based on the findings of the [program name] IBR, I approve the Performance Measurement Baseline (PMB) represented in the [month/year] month-end Contract Performance Report and associated Integrated Master Schedule.

4. [Describe any additional requirements or corrective actions contractor must complete to close out the IBR]

5. Please address any questions to [name], [phone number].

[PM name]
[title]

Attachment:
1. [program name]IBR Exit Briefing

6.15. Acronyms

AC	Accomplishment Criteria
ACWP	Actual Cost of Work Performed
B&A	Basis and Assumptions
BCD	Baseline Change Document
BCR	Baseline Change Request
BCWP	Budgeted Cost of Work Performed
BCWS	Budgeted Cost of Work Schedules
BOM	Bill of Materials
CAM	Control Account Manager
CAP	Control Account Plan
CAP	Corrective Action Plan
CAR	Corrective Action Request
CBB	Contract Budget Base
CDD	Capability Development Document
CDR	Critical Design Review
CDRL	Contract Deliverable Requirements List
CLIN	Contract Line Item Number
CONOPS	Concept of Operations
CPD	Capability Production Document
CPI	Cost Performance Index
CPR	Contract Performance Report
CTP	Critical Technical Parameter
CWBS	Contract Work Breakdown Structure
DCAA	Defense Contract Audit Agency
DCMA	Defense Contract Management Agency
DFAR	Defense Federal Acquisition Regulation
DID	Data Item Description
DR	Discrepancy Request
EAC	Estimate At Completion
ECP	Engineering Change Proposal
EOC	Element of Cost
ETC	Estimate To Complete
EV	Earned Value
EVM	Earned Value Management
EVMS	Earned Value Management System
EVMSD	Earned Value Management System Description
EVT	Earned Value Technique
FFP	Firm Fixed Price
FRP	Full Rate Production
GFE	Government Furnished Equipment
GFI	Government Furnished Information
GFP	Government Furnished Property
IBR	Integrated Baseline Review
ICD	Initial Capability Document

IMP	Integrated Master Plan
IMS	Integrated Master Schedule
IOT	Inter-Organizational Transfer
IPMR	Integrate Program Management Report
IPT	Integrated Product Team
IRA	Integrated Risk Assessment
ITP	Integrated Test Plan
KPP	Key Performance Parameter
LOE	Level Of Effort
MFR	Memorandum For the Record
MPS	Master Phasing Schedule
MR	Management Reserve
NDIA	National Defense Industry Association
OBS	Organizational Breakdown Structure
ODC	Other Direct Costs
OTB	Over Target Baseline
OTS	Over Target Schedule
PC	Percent Complete
PDR	Preliminary Design Review
PE	Program Element
PMB	Performance Measurement Baseline
PMO	Program Management Office
PP	Planning Package
QBD	Quantifiable Backup Data
RAM	Responsibility Assignment Matrix
RFP	Request For Proposal
RFQ	Request For Quote
SA	Significant Accomplishment
SEP	Systems Engineering Plan
SM	Schedule Margin
SME	Subject Matter Expert
SOO	Statement Of Objectives
SOW	Statement Of Work
SRA	Schedule Risk Assessment
SRD	System Requirements Document
SRR	System Requirements Review
SS	System Specification
TEMP	Test and Evaluation Master Plan
TEPP	Test and Evaluation Program Plan
TPM	Technical Performance Measures
TRD	Technical Requirements Document
UB	Undistributed Budget
VAR	Variance Analysis Report
WAD	Work Authorization Document
WBS	Work Breakdown Structure
WP	Work Package