



National Defense Industrial Association
Program Management Systems Committee

Integrated Baseline Review (IBR) Guide

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Executive Summary

This guide describes the purpose of the Integrated Baseline Review (IBR). It describes the overall, ongoing IBR process and specifically describes the IBR event, which is the formal review jointly conducted by the customer and supplier teams. It is recommended this guide be used whenever an IBR is warranted. While the overall IBR is a continuous process of analysis of the Performance Measurement Baseline (PMB) and its executability, the IBR event is a formal review that occurs at a point in time. Specific conditions within a project's life cycle warrant an IBR event. These include the initial establishment of the project PMB, either before contract award (when a pre-award IBR is required) or after contract award as determined by the customer, as well as significant changes to the original PMB, e.g., a significant contract modification or a major project replan. IBR events may also recur any time a PMB assessment determines the need for a subsequent IBR. Recurring IBRs can be initiated by the customer Project Manager (PM) or supplier PM.

An effective IBR process leads to a better understanding of project risks and opportunities. With the common definitions and framework provided by this guide, the expectations and objectives of the customer and supplier will be better aligned and key stakeholder engagement will be enhanced. The IBR process enables PMs to effectively assess the PMB and to determine its adequacy for successful project execution.

Pre- or post-award IBRs are directed on all projects requiring Earned Value Management Systems (EVMS). The solicitation will specify which type of IBR applies. For pre-award IBRs, the supplier must establish the PMB and the organization that will manage it prior to contract award. For post-award IBRs the supplier must establish a PMB as soon as possible after receipt of the Authorization to Proceed (ATP) and begin preparations for the initial post-award IBR event. Both types of reviews should follow the structured approach for conducting the IBR review as described in this guide.

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1 Introduction

Integrated Baseline Reviews (IBRs) are a critical part of the contract award and management process for major acquisitions and inter/intra agency or organization agreements. IBRs are required, either pre-award or post-award, to ensure that authorized work is adequately planned and resourced, and to establish a mutual understanding of the risks and opportunities inherent in the Performance Measurement Baseline (PMB) and in the management processes used during project execution. IBRs are performed on the initial contract baseline and whenever there is a significant change to the baseline. The customer may require an IBR when the customer Project Manager (PM) wants to review the PMB to assure both parties are in agreement on the scope of work and the resources and schedule to meet the customer's needs.

The intent of the NDIA Program Management Systems Committee (PMSC) IBR Guide is to provide guidance for customer and supplier PMs and their teams for the preparation and execution of IBRs. In addition, this guide identifies the purpose of the IBR, the two types of IBRs and when each should be conducted, and the need to make the IBR an element of the ongoing project management process. This guide integrates the IBR process with risk and opportunity management practices and is intended to improve the consistency of the IBR process for all users.

The following general guidance is neither a how-to nor a step-by-step tool kit for conducting an IBR. PMs are strongly encouraged to use this guide, along with applicable agency instructions, during IBR training in preparation for an IBR and during IBR execution, to achieve optimal results. Links to supplemental agency operational guidance can be found at the NDIA PMSC website www.ndia.org/pmsc.

The traditional approach to IBRs is to conduct them after the award of a contract or a major contract modification (i.e., the post-award IBR). The pre-award IBR is a relatively new concept but it is recommended by both the Office of Management and Budget (OMB) and the NDIA PMSC. Because major government programs continue to experience large contract overruns and schedule delays, there is increasing pressure to ensure the award of contracts that have a high probability of achieving their cost, schedule, and performance goals. OMB and industry recommend the pre-award IBR as a means to identify and understand program risk, leading to the award of realistic contracts in terms of well-defined technical requirements, schedule and cost, with a more reasonable probability of successful execution. Guidance for the pre-award IBR is found in the last section of this guide.

1.1 IBR Benefits

The IBR process benefits PMs in the following ways:

- Promotes customer PM and supplier PM knowledge of the PMB
- Improves communications by enabling a comparison of each PM's understanding of technical/schedule/cost objectives and identification of any differences so they can be addressed before problems arise
- Lays a solid foundation for mutual understanding of risks and opportunities
- Determines whether the PMB covers the entire scope of work, is realistic, and, if executed as planned, satisfies all technical/schedule/cost objectives
- Provides PM teams with a thorough understanding of the PMB and its risks, enabling early intervention to mitigate risks and exploit opportunities

- Ensures that meaningful and reliable performance monitoring techniques are employed
- Assesses the PMB's capability to provide timely, reliable, and actionable schedule, cost and scope information
- Provides the customer PM with an understanding of the supplier's management processes for effective and integrated technical/schedule/cost control.

Review of the PMB often identifies management risks related to staffing, work sequence and durations, performance measurement methods, processes, tools, and the metrics that are intended to provide continuous insight into project performance and health. The management control processes established for the project use the principles of management by exception. This management approach improves problem traceability rather than requiring specific oversight of every task. Ideally, well planned projects coupled with adequate management control processes provide an early warning system to identify potential problems and allow a proactive response.

1.2 Definitions

This guide uses the terms “contract” or “contractual” for any contract, subcontract, inter/intra agency or organizational transfer work agreement or other agreement. Broadly, these terms are used to refer to the legal document directing the supplier to perform a defined scope of work.

“Project,” versus “Program,” is used in this guide to identify all work authorized by a contract. Generally, a project involves a planned effort to achieve an outcome, the progress toward which is discretely measurable. A project will have an established scope, schedule, and cost. A program may consist of just one project or multiple projects within a portfolio.

Although the IBR process occurs throughout the project life cycle, involving continuous assessment of the PMB's executability, the actual review is an event within this process. Unless otherwise specified, the use of the term Integrated Baseline Review (IBR) in this guide refers to the formal IBR event.

2 IBR Process Overview

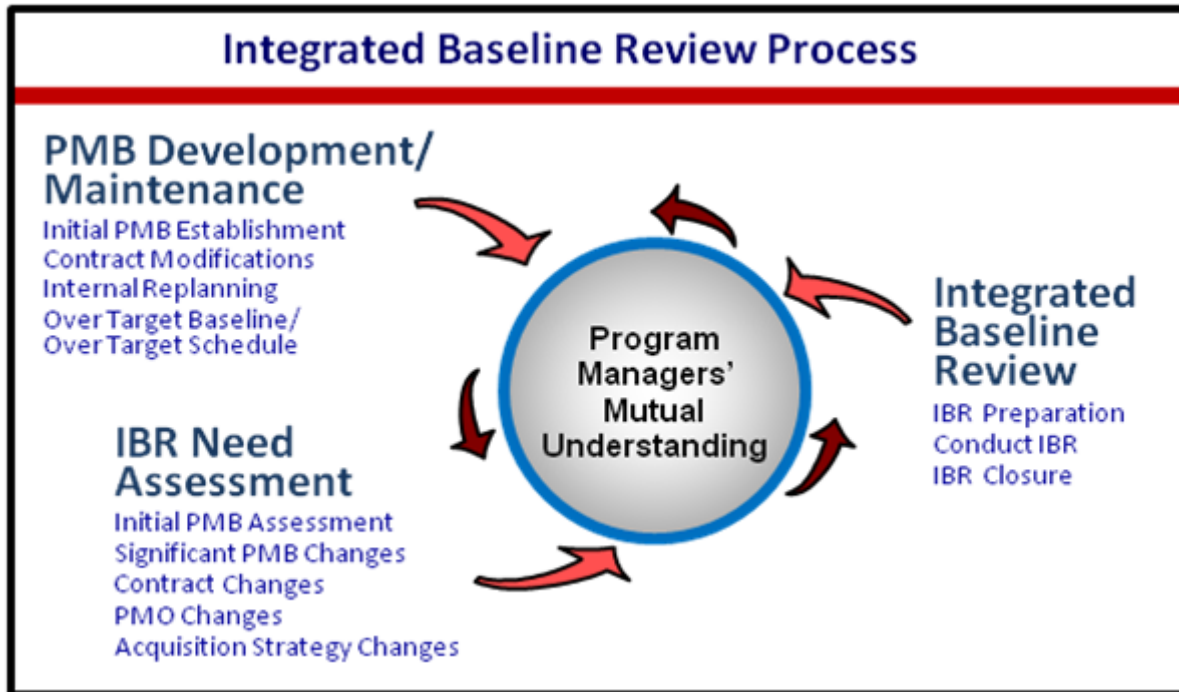


Figure 1: The IBR Process

The IBR Process depicted in Figure 1 provides a continuous process for all engaged management and staff personnel to develop and maintain a mutual understanding of the project objectives, the PMB, the management processes, and the project risks and opportunities. Before conducting the IBR, the PMB must reflect the complete contractual scope of work, documented at the appropriate level of detail. PMs should establish a mutual understanding of the PMB and associated project risks and opportunities as early in the life of the project as is reasonable. Initially, the IBR process enables this mutual understanding. Subsequently, the project relies on the established management processes to support a continuing mutual understanding of the PMB and its risks and opportunities. As the project proceeds, a major modification may be made, which could require an IBR, and, in addition, ongoing PMB assessments may indicate the need for a subsequent IBR. Unless the contract requires the IBR to be on a specific date, the PMs will jointly determine the timing of the IBR. An IBR is one element of an iterative, continuous process that provides a structure for project management to openly discuss the project's work plans, their various strengths and weaknesses, and the identified risks/opportunities.

An IBR consists of three activities, which are described in the following sections:

- Need Assessment
- Preparation, Execution and Closure
- PMB Development/Maintenance

3 IBR Need Assessment

Subsequent to the initial IBR as required by contract, the objective of the need assessment is to determine whether additional IBRs are necessary to validate the current PMB and to verify the identified risks and opportunities. Alternatively, the determination can be made to continue reliance on the ongoing management processes that provide mutual understanding of the PMB and identification of inherent project risks/opportunities.

Throughout the life cycle of the project there will be "fact-of-life" changes to the PMB. Accepting these changes reflects the dynamics of project management. In some instances, an external factor may induce a change. At other times, normal management activities or events may drive a change which may require the development of a revised PMB and subsequent PMB assessment, but may not necessarily require an IBR.

Continuous monitoring of the PMB is a critical factor in ensuring the success of the project. PMs will require a consistent commitment to enforce the baseline integrity and will periodically assess the remaining work to ensure the plan is executable and realistic. Significant changes to the PMB may warrant conducting an additional IBR.

In addition to either a pre- or post-award IBR in connection with a contract award, the need to conduct an IBR should also be considered in connection with any of the following occurrences: receipt of Authorization to Proceed (ATP); Unfinalized Contract Action (UCA); significant contract modifications, such as changes to project scope and/or schedule or changes to anticipated funding amounts or timing; the assignment of a new PM; revision of the acquisition plan or strategy; or an executive decision. Changes resulting in the need for increased contract funding, in connection with an OTB, generally require an IBR. Ultimately, the customer PM is responsible for deciding what method of PMB review is appropriate. Processes for initiating, preparing for, conducting, and closing the IBR are described in the following sections.

4 IBR Preparation

4.1 General Guidance

The customer and supplier PMs need to communicate extensively prior to the IBR to jointly determine the best approach for the review. Preparation is the foundation for a successful IBR. The PMs must ensure the joint team is adequately prepared to conduct the IBR and achieve its purpose. Typically, successful IBR preparation includes:

- Establishing the review schedule, including dates for data submittal, training and logistical considerations
- Determining the review content and entrance/exit criteria
- Identifying the data requirements
- Identifying team members and points of contact from each organization
- Developing a checklist with required preparation actions
- Training for the IBR event
- Reviewing submitted data.

The time and effort involved in the IBR will vary by project. Principal factors that influence time and preparation effort include the number of Control Account Manager (CAM) discussions, the

size and complexity of the project, the number and experience level of the IBR team members, and the overall risk of the project.

The IBR review is conducted in a professional manner in a spirit of constructive assessment and discovery that increases the probability of success for the execution of the project.

4.2 Review Content

Elements of the IBR preparation and review content fall into the following general categories:

- Area of focus
- Percent or dollar value of the PMB to be reviewed
- Specific WBS elements and control accounts to be reviewed and CAMs to be interviewed
- Risk management
- Approach to sub-tier suppliers (subcontractors or inter/intra agency or organization)
 - Determine if sub-tier suppliers will participate in the prime supplier IBR
 - Determine if separate IBRs will be held at the sub-tier supplier's facility
- Management risks
 - Government furnished equipment, data, facilities
 - Earned Value Management Systems (EVMS) integration and application
 - Integrated Master Plan (IMP), if applicable
 - Integrated Master Schedule (IMS) and critical path
 - Statement of Work (SOW)
 - Management Reserve (MR)
 - Schedule reserve
 - Communication methods and channels
- Issues, action items and resolution
 - Prescribed formats for documenting issues, action items, corrective action and closure plans.

4.3 IBR Event Entrance/Exit Criteria

Prior to the IBR, entrance criteria should be established to ensure the supplier's and the IBR team's readiness for the IBR event, such as:

- PMB establishment date
- IMS establishment date
- Data submittal requirements and timing
- Detail planning horizon
- Sub-tier supplier involvement
- Team training scheduled and performed

- IBR plan coordinated, finalized and disseminated
- Initial risk and opportunity identification and handling.
- Supplier ready to conduct the IBR

In addition, to facilitate IBR closure, exit criteria should be established, such as:

- Risks/opportunities identified, captured and handled
- Findings documented
- Corrective action plans developed and accepted
- Out brief conducted.

4.4 IBR Training

Training should be provided to both customer and supplier in a joint manner to maximize the parties' communications. Joint IBR training ensures that the customer and supplier IBR teams understand one another's roles and responsibilities, and will be better prepared to perform them effectively, leading to adequate assessment of the project's PMB, risks and opportunities. Joint IBR training helps both teams organize the relevant information for mutual understanding of the cost, schedule, technical, and management processes used on the project. The documents listed below in the Data Requirements section should also be used in the training.

Best practices indicate that the following topics should be included in IBR training:

PMS' Expectations

- IBR objectives; entrance and exit criteria
- IBR approach and expectations
- Risk and opportunity identification and documentation

Management Processes

- Baseline management (including change control)
- Risk and opportunity management
- Business management
- EVM
- Schedule management
- Contract, subcontract, inter/intra agency or organization management
- Technical management

Documentation requirements

- IBR process documentation, e.g., forms that will be used by the team members to record their assessments, interviews, results of document/data reviews, recommended corrective actions, etc.

4.5 Data Requirements

Data review and CAM discussions form the basis for the conclusions and action items resulting from the IBR. It is imperative to the success of the IBR that sufficient and appropriate data are

available in a timely manner. The request for data should be a formal request that includes due dates and mutually agreed file format. The customer IBR team should review the data provided and prepare IBR discussion questions prior to the on-site visit. Typical examples of data or documents that may be requested, as applicable to the contract, include:

- Dollarized Responsibility Assignment Matrix (RAM)
- Organization charts and Organizational Breakdown Structure (OBS)
- Supplier primary point of contact
- Integrated Master Plan (IMP)
- Integrated Master Schedule (IMS)
- IMS Field Map
- Giver/Receiver List (identifying both internal and external dependencies)
- Schedule Risk Assessment (SRA) and related schedule reserve (additional duration or float)
- Critical path
- Time-phased manpower by resource type at the control account level for control accounts to be reviewed
- Work Breakdown Structure (WBS) and WBS dictionary
- Work Authorization Documents (WAD)
- Time-phased Control Account Plans (CAP)
- Basic assumptions and constraints
- Basis of Estimate (BOE), if applicable
- List of critical subcontracts and authorization/definitization schedule, including subcontract type
- Engineering Bill of Material (EBOM)
- Manufacturing Bill of Material (MBOM)
- Material High dollar/low dollar threshold breakdown
- Critical Materials list
- Budget Logs (PMB, UB, MR)
- Risk and opportunity register or data repository
- EVMS description
- Dollar value of level of effort (LOE) vs. discrete content in the PMB
- Project unique process documentation, e.g., Project Management Plan (PMP)
- Basic contract and modifications
- Records documenting contractual changes and internal actions
- Current Contract Performance Report (CPR), if available.

4.6 Review Schedule

The IBR schedule should include the dates for each activity leading to the IBR such as the dates for establishment of the PMB and IMS, the due dates for data requests and submittals, training, and working sessions if appropriate, along with the review dates themselves. Since coordination of the IBR should start either at ATP for the initial contract award (post-award IBR) or upon receipt of a pre-award IBR requirement, the first draft of the comprehensive IBR schedule should be submitted as far in advance as practical.

4.7 Team Members

The customer and supplier PMs lead the review and select team members based on their programmatic assignments, or technical expertise, as required for the review. Team member disciplines generally include project management, risk and opportunity management, business management, subcontract management, and technical management (e.g., system engineering, software engineering, manufacturing, integration and test engineering, and integrated logistics support). When appropriate, the team should include subcontractor personnel. In addition, the team may include cost estimators and schedule analysts as needed. The resulting size and composition of the team should reflect the PMs' objectives, expectations, and risk assumptions. Team member names and their contact information, should be exchanged by supplier and customer organizations.

4.8 Risk and Opportunity Assessment

A primary goal of the IBR is the identification and quantification of risks and opportunities that may impact project execution, and the supplier's plans for handling them.

Risks and opportunities can be broadly categorized into the following five areas: technical, schedule, cost, resource, and management. Documentation of each risk or opportunity area should be performed using identified evaluation criteria. The following are brief discussions of each risk category:

- **Technical** - the ability of the project's technical plan to achieve the objectives of the scope of work and key performance parameters. Technical risk/opportunity includes the effects of requirements definition, available technology, software development capability, design maturity, test/evaluation and modeling adequacy, production transition, logistics and sustainment, and any other factor which may affect scope of work definition
- **Schedule** - the adequacy of the time allocated for performing the defined tasks to successfully achieve the project's schedule objectives. Schedule risk/opportunity includes the effects on the schedule of the interdependency of scheduled activities to achieve project milestones and support the PM's ability to identify and maintain the critical path.
- **Cost** - the ability to successfully execute the PMB and attain cost objectives, recognizing the relationship between budget, resources, funding, schedule, and scope of work. The quality of the estimates, including their underlying assumptions, affects the cost risk/opportunity.
- **Resources** - the availability of personnel, facilities, funding, and equipment, when required, to perform the defined tasks needed to execute the project successfully. Resource risk/opportunity includes the effect of external factors such as loss of availability to competing projects or unexpected downtime that could preclude or otherwise limit the availability of the resources needed to complete planned work.

- **Management Processes** - the degree to which the management processes provide effective and integrated technical/schedule/cost planning and baseline change control. Management risk/opportunity includes the ability to establish and maintain valid, accurate, timely, actionable performance data, including data from subcontractors, for early visibility into risks.

5 IBR Execution

5.1 General Guidance

Effective IBR execution requires a well-developed and coordinated agenda, adequate preparation for, and execution of, discussions with each selected CAM, a crisply focused and outcome-oriented process, and a succinct and clearly written set of action items that can bring the IBR to the desired closure.

Team members should conduct themselves in a professional manner at all times, conducting the IBR in a spirit of constructive assessment and discovery, to ensure the IBR's probability of success and achievement of all desired outcomes.

5.2 IBR Execution Agenda

A typical IBR usually encompasses the following activities:

- Review
 - Kick off meeting
 - Data reviews (ongoing)
 - CAM discussions
 - IPT Leader or WBS manager discussions (as appropriate)
 - Management process owner discussions, as required
 - PM discussion
 - Daily caucus within the IBR team
 - Exit meeting out brief, including identification of preliminary findings and/or action items
- Post review
 - Develop action plans to address findings, as applicable
 - Update risk and opportunity register, including quantification (probability and consequence)
 - Update PMB as necessary
 - IBR closeout documentation.

This agenda is a demonstrated best practice for an IBR. However, the PMs can structure the review process and timing in a manner that accommodates the availability of the required review team and supplier resources and the nature of the project. During the course of the IBR and at its conclusion, action items requiring follow up may be assigned when issues are identified. These action items should contain a description of the issues, the responsible party, a due date, and an exit criterion.

5.3 IBR Discussions

The conduct of the IBR usually involves discussions with CAMs, project management, and/or management process owners. These discussions, along with the data reviews conducted prior to the event, are the team's opportunities to assess the five risk areas. It is a best practice to create and use a pre-planned set of questions to ensure the CAM discussions are consistent and thorough. There are many examples of question sets available (see www.ndia.org/pmsc for sources).

CAM discussions are the key events of the IBR. These discussions focus on the validity of the PMB to meet the technical, schedule and cost objectives. Also discussed are the five key risk areas and management processes defined above. CAM discussions should address topics identified during IBR preparation. The discussion groups should remain small and focused.

CAM discussions can occur serially or concurrently during the IBR event, depending primarily on the number of CAM discussions planned, the size of the IBR team, and the number of days scheduled for the IBR event. The length of the individual CAM discussions will vary depending on the number, size, and complexity of the control account(s) being discussed, as well as the overall risk assessment of the associated scope of work. The schedule for each CAM discussion should also include sufficient time to summarize the results at the conclusion of the discussion. It is a best practice to assign a scribe for each CAM discussion to take notes during the course of the meeting that can then be used as a reference for summarizing any related issues and/or action items. It is also a good practice to have a Facilitator (one who is well-versed in the IBR process) participate in each CAM discussion to assist in keeping the discussions on track with the IBR objectives and within the allotted schedule on the IBR agenda.

The following paragraphs discuss some topics that should be reviewed and addressed during the CAM discussions.

5.3.1 Technical

The customer IBR team should ensure that all work is included in the PMB. The team should track from the statement of work and the basis of estimates to discrete tasks in the IMS and cost baselines. Any missing work should be identified and the impact incorporated into updated cost and schedule projections. The team should also ensure that the planned methods for assessing progress will utilize objective measures of accomplishment wherever possible. For instance, conducting a test does not reflect technical progress; rather the measurement should be based upon successful completion of the test, thus reflecting that a capability has been met. If the customer and supplier teams have not already done so, they should discuss Key Performance Parameters (KPP) and Technical Performance Measures (TPM) to assure that both parties understand their intent and how they will be defined and measured. This joint understanding will ensure that KPPs and TPMs are measured consistently. The team should also assess the risks associated with new technology development or utilization of sophisticated processes. These technical assessments may be the basis for updated cost and schedule projections.

5.3.2 Schedule

Schedule assessment should focus on use of the IMS, its content integrity, and the validity of the critical path that it produces. This assessment will give the duration needed to complete all required effort. The customer IBR team must also ensure the IMS is adequately maintained with accurate activity progress and forecasting. Additionally, since the entire schedule may not be detail planned at the time of the IBR, the critical path to any major milestones or significant events within the agreed-to planning horizon should be assessed. Later, once the entire critical

path is identified, the team can discuss the acceptability of the overall timeline and any actions that might be taken to shorten its duration.

While assessing the schedule, the team should ensure that all discrete effort is included in the schedule with reasonable durations, the effort is properly sequenced, task interdependencies are appropriate, and resources are available to support the plan as scheduled. If any of these conditions are not met, the schedule should be updated to reflect anticipated execution. A Schedule Risk Assessment (SRA) should be conducted prior to the IBR to ensure adequate schedule health and provide a basis of discussion for schedule risk and adequacy of schedule reserve. An SRA provides two benefits; it involves a schedule health assessment that addresses the conditions just discussed, and it quantifies the schedule risk for management

5.3.3 Cost

The customer IBR team should review the basis and assumptions of the control account budgets, and, if needed, plans should be updated following the IBR. Likewise, the total amount allocated to MR should be reviewed to assess adequacy in relation to the collective cost of risks/opportunities identified. If there is a significant disconnect between the timing and availability of funding and the anticipated cost of the established detailed plan, the PMs need to decide a course of action to remedy the disconnect immediately after the IBR. Overall time-phasing of the PMB should be compared to the available funding levels to ensure the project is currently executable.

5.3.4 Resources

The customer IBR team should determine whether the available funds are adequate to cover the anticipated cost of the total authorized effort. The time phasing of the supplier's baseline and projected expenditures should be reviewed to ensure that they align with the customer's funds availability. If there are periods where expected expenditures will exceed funding availability, the baseline may need a revision to accommodate the funding constraint. Although it may be difficult to assess during the CAM discussions, the team should try to break down this funding alignment to the lowest level necessary to accommodate any potential issues associated with multiple funding sources. The team needs to look at the adequacy of resources to meet the contracted requirements. The team needs to ensure that the required number of adequately skilled resources will be available in the timeframe to support the effort. The team should assess the staffing plan and how it relates to the baseline plan. The supplier should address any spikes or drops in staffing in short periods. Also, historical staffing trends, such as slow ramp up, should be discussed so the team understands how, or if, this was considered during baseline development. Most suppliers share their resources across multiple contracts. The team should understand the process for obtaining resources (labor, material, facilities, equipment, external dependencies, etc.) from the resource owners, the priority of this contract compared to other contracts at the facility, and facility-wide staffing requirements. Any of these areas could impact the supplier's ability to deliver requirements as planned. Any anomalies discovered in resource planning will likely result in impacts to cost and schedule risk. Conversely, resource availability should be revisited whenever risks are discussed.

5.3.5 Management Processes

The customer IBR team should familiarize itself with the supplier's management processes to understand how the supplier operates and how information flows among managers and to the customer. Examples of management processes that might be discussed include: material and subcontracting processes, scheduling process, overall EVMS status (via coordination with the applicable cognizant federal agent responsible for ongoing system surveillance), risk and

opportunity management, engineering management, production management, and managerial analysis. The material and subcontracting process might include discussions of how the supplier differentiates material procurement and subcontracting, the relationship that the procurement organization will have with the CAM, integration of subcontractor performance data, EVM flow-down requirements, and late item tracking. The scheduling process discussion could address how sub-schedules will be integrated, incorporation of subcontractor schedules, reflection of lead times, use of an IMP, SRA conduct and findings, or regular schedule statusing and analysis rhythm.

It is important to recall, when discussing management processes, that the IBR is not a management process review. Therefore, when discussing the EVMS, there is no need to re-assess the system. Instead, the supplier should address any outstanding deficiencies and plans for their resolution. Similarly, the team should also understand any process risks related to other processes such as estimating, pricing, or the material management and accounting system. Engineering management might include discussions of maintaining the configuration baseline, integrating design drawing maturity with the procurement process or how the system engineering processes relate to EVM and schedule progressing. Production management would include discussions of the relationship and integration of manufacturing resource planning (MRP II) data with other programmatic data. The managerial analysis assessment could address corrective action identification and tracking, integrating disparate organizational performance into common reporting formats, variance analysis thresholds, metrics used to track progress, and the process for raising issues to management. The management process discussion is important because it is the medium used to identify and communicate risks in the other four areas.

5.4 IBR Results

The IBR should verify that:

- The technical content of work packages, control accounts and summary level planning packages are consistent with the scope of work defined in the WBS dictionary and the SOW or other technical description documents
- There is a logical sequence of effort among the activities in the IMS and a clearly identified critical path
- Key schedule milestones are identified and integrated in the IMS
- The schedule and resources in the PMB are sufficient based on a common understanding of the technical requirements, the ability to complete work content, and the time phasing of the work
- Underlying PMB assumptions and rationale are reasonable
- The earned value techniques to be used for measuring accomplishment of work provide objective and meaningful performance data
- The overall time-phased PMB is consistent with the available funding
- The management systems, as implemented, provide timely, reliable and actionable schedule, cost and scope information
- The amount of management and schedule reserves are adequate for successful execution of the project

- The IBR has provided a vehicle for supplier management to have a full and open dialog with their customer counterparts and obtain a mutual understanding of the sufficiency of the baseline and the risks and opportunities associated with the baseline activities
- Risks and opportunities have been identified, quantified in terms of impact, and applicable handling plans have been incorporated into the PMB, as appropriate.

6 IBR Closeout

Upon completing an IBR, the customer and supplier PMs should jointly assess and conclude that they have achieved the exit criteria the parties agreed to at the outset. The PMs should include all elements necessary to achieve:

- Mutual understanding of the project PMB
- Mutual understanding of the project's risks and opportunities and agreement on a plan of action to handle them
- Mutual agreement that all findings and action items have been captured and adequately documented.

In addition, the PMs should agree on a corrective action plan to close out the IBR action items. This plan must identify the individual(s) responsible for each action item. New risks as well as new opportunities require PM attention and must be immediately included in risk and opportunity management planning.

An IBR is completed when the agreed upon exit criteria have been met.

7 Pre-Award IBR

7.1 General Guidance

The Office of Management and Budget's (OMB) Capital Programming Guide (CPG) and the Federal Acquisition Regulation (FAR) (Part 34, Major Systems Acquisition) require that all contracts with EVMS conduct an IBR either pre-award or post-award to finalize the agreement on the baseline and ensure all risks are identified and understood. The use of an IBR before or after contract award is determined by the customer PM and Contracting Officer depending on the risk to establishing an achievable PMB at time of contract award. While the post-award IBR is traditional, the CPG cautions: "When considering whether to conduct a pre-award or post-award IBR, the (acquisition planning) IPT should consider that the baseline established with the initial contract award becomes the original baseline for meeting the Federal Acquisition Streamlining Act requirement that major acquisitions are expected to achieve 90 percent of the cost, schedule and performance goals. Any request for a baseline change after initial award that exceeds 10 percent or requires additional funding, requires agency head review and OMB approval, before the new baseline may be included in the contract."

To improve the probability that major acquisitions will achieve their cost, schedule, and performance goals the federal government has increased its emphasis on pre-award IBRs. In 2006, both OMB's CPG and the FAR were changed to add pre-award IBR requirements. The CPG expresses a preference for pre-award IBRs and, in 2009, industry endorsed them as a way to ensure that both parties to a major acquisition share a common understanding of the

project's requirements and risks, and have adequately estimated the cost and schedule required to achieve the project's cost, schedule and technical goals.¹

Pre-award IBRs are recommended when there is significant risk that the traditional source selection process will not result in an awarded contract that is likely to meet the cost, schedule and performance goals without significant modification during the life of the contract. A pre-award IBR can confirm whether or not the government's statement of work clearly defines the requirements, such that potential suppliers can understand them, identify the project's risks, and can adequately estimate the cost and schedule required to achieve project requirements given those risks. The pre-award IBR is used to identify deficiencies in supplier proposals that can be fixed, thus improving the probability of successful performance. Deficiencies identified by the evaluation team during a pre-award IBR must be corrected by proposal revisions. The estimated cost or price of any resulting contract must include the cost of correcting the deficiencies.

The ideal result of the pre-award IBR will be improved supplier proposals that are more accurate as to cost, schedule, and technical requirements for the full duration of the program or the project element that will be included in the contract. Any request for a baseline change after initial award that exceeds the statutory ten percent deviation threshold requires agency head review and OMB approval, before the new baseline may be included in the contract.

The CPG recommends that a pre-award IBR be conducted in several specific situations :

- Prior to the award of any sole source major acquisition contract or task order issued under major acquisition Indefinite Delivery/Indefinite Quantity (ID/IQ) contracts to ensure the cost, schedule and performance goals have been thoroughly reviewed and agreed to by both parties.
- For competitive acquisitions, including the initial award of an ID/IQ contract through multi-source competition, using a multi-step acquisition process, which has advantages in increasing competition for large contracts regardless of the amount of development necessary. The solicitation should provide that subsequent to the receipt and evaluation of competing technical and cost proposals in the second step, there will be a third step that provides for a down-select to the two best value offerors where separate contracts will be awarded. These contracts will provide funding and time for the two offerors to prepare for a pre-award IBR, which will be conducted on each proposal to finalize the cost, schedule and performance baselines, complete the risk management plan, and select the best value offeror for award of the contract.
- For the purpose of reducing risk in ID/IQ contracts for major acquisitions, agencies should use competitive prototype contracts or define the first task order in the solicitation and conduct a pre-award IBR on the two most qualified offeror's proposals before awarding the contract or contract with the first task order. Either of these methods will maintain competition through a detailed review of the proposed solution and provide a clear set of risk adjusted cost, schedule, and performance goals and a PMB that both the government and supplier believe can be achieved without major changes. The award of this competitive contract will provide the government with realistic cost information that can be used as a basis to evaluate the IBRs of the follow-on task orders.

¹ The Council of Defense and Space Industry Associations (CODSIA), in its response on July 2, 2009 to a DOD request to provide industry views on the implementation of EVM by DOD, recommended greater use of (funded) pre-award IBRs "to ensure that a program has a reasonable probability of execution." A copy of this letter is posted on the NDIA PMSC web site (www.ndia.org/evm) under the Committee Letters to DOD section.

- When competing prototype contracts are awarded, which limit the total costs to be reimbursed by the government, and the agency decides that a pre-award IBR is necessary to establish a firm baseline with high probability of achieving the cost, schedule and performance goals for the contract or module before proceeding to award for subsequent phases, e.g., full scale development and initial production.
- When a pre-award IBR was not contemplated at the time of the solicitation, but the Source Selection Team (SST) determines that the proposals received do not clearly demonstrate that the cost, schedule and performance goals have a high probability of being met, an IBR can be conducted before award on the two best proposals, provided the solicitation includes this possibility and the criteria for determining when a pre-award IBR will be required as part of the proposal evaluation process.

The CPG identifies the best practice among those just described as the multi-step acquisition process, which includes the third step of issuing contractual authorization and funding to selected suppliers for the development of a baseline and subsequent preparation, conduct and closeout of a pre-award IBR. The suppliers will then be incentivized to gather the necessary resources to develop a baseline with a high probability of achieving success, and the government will have the opportunity to identify the best value solution and award the contract to the supplier with the most fair, reasonable and realistic schedule and price, given the identified risks and opportunities and the supplier's plans for their handling.

If a pre-award IBR will be conducted, the solicitation must include the procedures for conducting the IBR and whether the offerors will be reimbursed for the associated cost. If reimbursement is not permitted, offerors should seek recognition of pre-award IBR expense as precontract costs via advance agreement in a sole-source situation, or in a multi-step acquisition as part of scope of the risk-reduction phase contracts requirements prior to final down select.

The CPG says that all pre-award activity should be authorized, as applicable, via the solicitation, which enables estimated costs for pre-award IBR preparation and participation to be included in the supplier's proposal, or via a contract. Contract values and funding for contracts requiring pre-award IBRs must provide funding for all contractually authorized effort, including pre-award IBR effort.

7.2 Pre-Award IBR Objectives

The FAR provision for pre-award IBRs (52.234-2) at paragraph (d) says, "The Government will conduct an Integrated Baseline Review (IBR), as designated by the agency, prior to contract award. The objective of the IBR is for the Government and the Contractor to jointly assess technical areas, such as the Contractor's planning, to ensure complete coverage of the contract requirements, logical scheduling of the work activities, adequate resources, methodologies for earned value (budgeted cost for work performed (BCWP)), and identification of inherent risks."

Note: there is no comparable DFARS or NFS clause that includes a requirement for a pre-award IBR. However, DOD components have conducted pre-award IBRs using special contract provisions.

7.3 Pre-Award IBR Process

The objectives for the pre-award IBR are identical to those of a post-award IBR. Consequently, the process is essentially the same with key differences associated with pre-award timing, e.g., the availability and handling of proposal data, the absence of management reserve, staffing of the IBR teams, and the maturity of the data to be reviewed due to the timing of the pre-award

IBR.² Management reserve is not included in a proposal cost estimate, which forms the basis for the execution plan reviewed in a pre-award IBR. The probability of success for the execution plan at this stage should be greater because the risks and opportunities are built into it. The initial post-award PMB is generally more challenging because management reserves are identified and set aside prior to budgets being allocated for PMB planning.

FAR 34.202(d) states – “The timing and conduct of the IBR shall be in accordance with agency procedures. If a pre-award IBR will be conducted, the solicitation must include the procedures for conducting the IBR and address whether offerors will be reimbursed for the associated costs. If permitted, reimbursement of offerors' pre-award IBR costs is governed by the provisions of FAR Part 31”.

For sole source procurements, both for full contracts and task orders as described above, the solicitation must clearly specify that the supplier's proposal should be presented with all documentation needed for the conduct of an IBR by a specified date. Although there will be only one supplier, the IBR should be as rigorous as a competitive IBR to ensure the awarded contract has a high probability of achieving the cost, schedule and performance goals.

For competitive procurements the solicitation should include a process for selecting the two best value offers for the IBR phase. The solicitation should also require offerors to include in the proposal an estimate of the time and cost of preparing for and conducting the IBR, and to identify which major subcontractors should be included in the IBR process. It must also specify the time after selection of the two offerors necessary for the government to prepare two contracts for the pre-award IBR, and specify that the government will negotiate the time and cost of the pre-award IBR with both offerors before award of those contracts, which should be firm-fixed price. Each offeror's contract should receive the same price and time to prepare for the pre-award IBR.

The negotiation on the time and cost of pre-award IBRs must recognize that pre-award IBRs add significant time and resource requirements as compared to the traditional source selection process. The suppliers must be given adequate time to form a complete team, develop the PMB, and prepare for the IBR, comparable to the time and cost of post-award IBRs conducted on projects of similar size and scope. The ultimate objective is a contract that will not require frequent baseline changes after contract award. The time allowed should generally range from 90 to 180 days from award of the pre-award IBR contract to award of the acquisition contract.

For competitive procurements, the government must decide to use one or two government teams to conduct the IBR. It is essential that the IBR teams on both the customer and supplier side exercise caution to protect the integrity of the competition. Customers who elect to use different IBR teams to ensure complete confidentiality of each competitor's data must also ensure each team is adequately trained and prepared to execute the IBR in a consistent manner by using the same process and evaluation criteria. Maintaining an equal footing between competitors during separate pre-award IBRs is extremely important. A flawed pre-award IBR can result in a re-solicitation which can be a very costly proposition. It is recommended that two government teams be used as this will speed the process and ensure that one team when conducting the second IBR is not influenced by the results of the first IBR. After the respective IBRs are completed the two teams should meet to select the best value offeror for award of the contract.

² The [GAO Cost Estimating and Assessment Guide](#) (GAO-09-3SP) also contains guidance on pre-award IBRs. This guide builds on that guidance and updates it to the latest information available at the time of this release.

The decision to conduct a pre-award IBR should be made early in the planning phase so that the costs of the government team(s) and the costs for the two IBR contracts can be included in the Exhibit 300 Business Case in time to be available for funding the IBR contracts. OMB's policy is to provide the full funding necessary for each phase of an investment. Failure to commit adequate funds to award a successful contract can have serious consequences on the ability of the agency to meet its strategic goals and objectives and can seriously affect the agency budget for many years.