OCFO Strategic Investment Division

Program Implementation Review (PIR) Advisory Guidance

October 2017

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1 BACKGROUND

As a strategic management structure, the Program construct is extremely important within NASA. Programs provide the critically important linkage between the Agency's ambitious needs, goals, and objectives and the projects that are the specific means for achieving them. Although Programs vary significantly in scope, complexity, cost, and criticality, within NASA they have a generic life-cycle management process that is divided into two distinct phases: Formulation and Implementation.

For uncoupled and loosely coupled as well as tightly coupled Programs, the implementation phase requires Program Implementation Reviews (PIRs) as required by the Decision Authority. Single-project and tightly coupled Programs are more complex. For single-project Programs, the implementation phase Program reviews shown in Figure 2-4 are synonymous (not duplicative) with the project reviews in the project life cycle through Phase D. Once in operations, these Programs have KDPs preceded by attendant PIRs. Tightly coupled Programs during implementation have Program reviews tied to the project reviews to ensure the proper integration of projects into the larger system. Once in operations, tightly coupled Programs also have KDPs to assess the Program's performance and authorize its continuation.

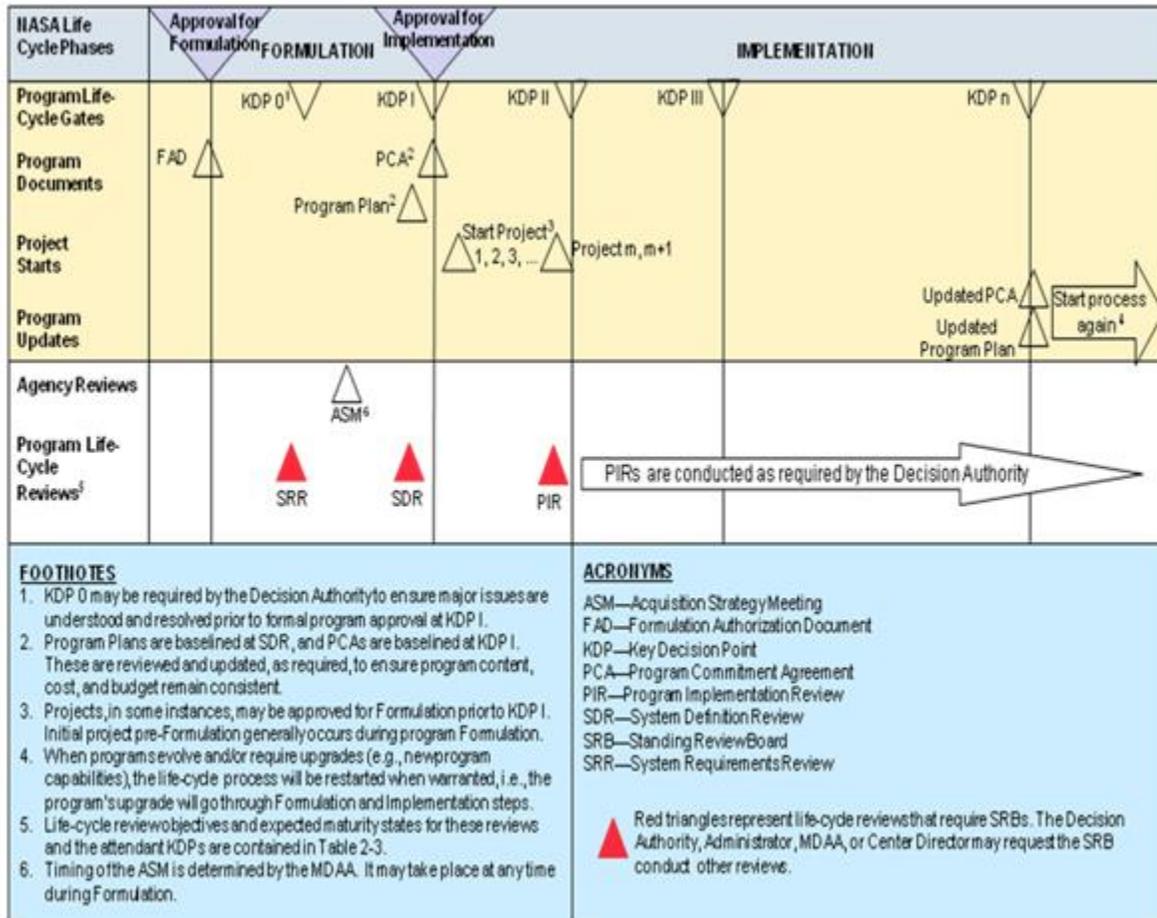| Review	Uncoupled or Loosely Coupled Programs	Single-Project Programs	Tightly Coupled Program	Projects
System Requirements Review (SRR)	X	X	X	X
System Definition Review (SDR), or Mission Definition Review (MDR)	X	X	X	X
Preliminary Design Review		X	X	X
Critical Design Review		X	X	X
System Integration Review (SIR)		X	X	X
Operational Readiness Review (ORR)		X	X	X
Program Implementation Review (PIR)	X	X	X	

Table 1-1. PIR application (SRB Handbook)

Figure 1-1. NPR 7120.5E Figure 2-2 The NASA Program Life Cycle
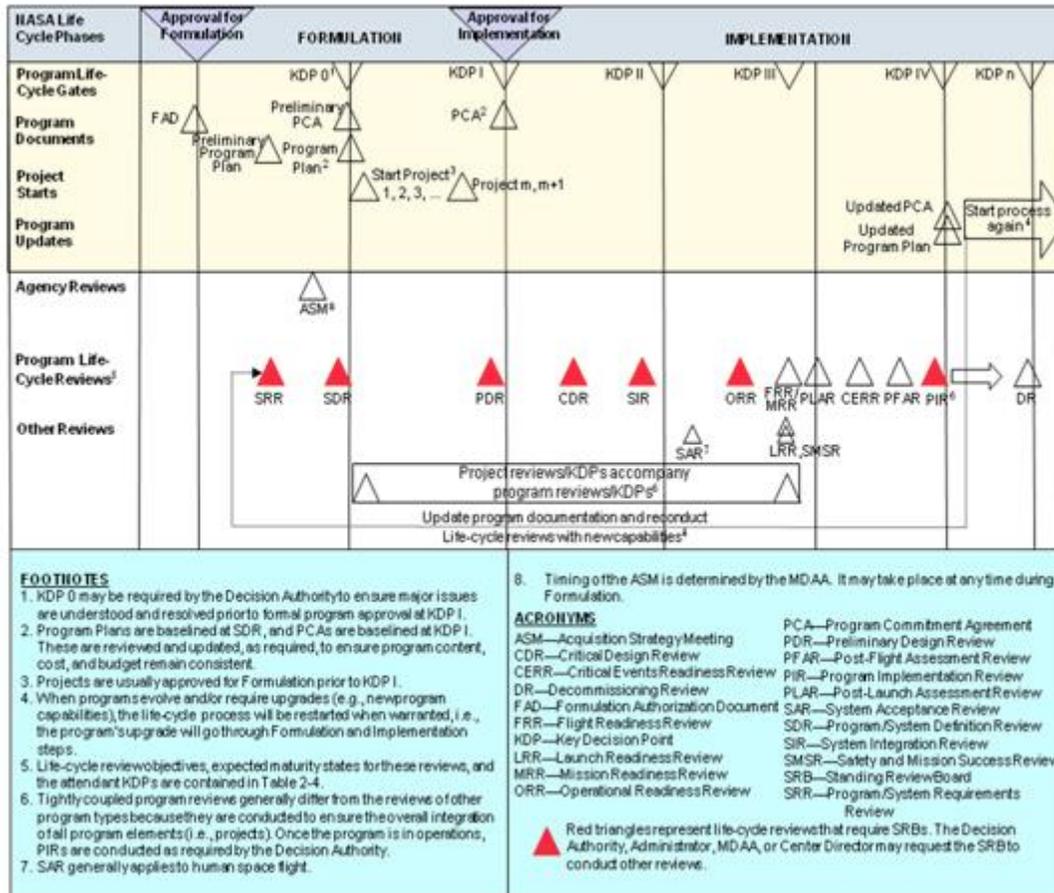(Uncoupled and Loosely Couples Program Life Cycle)

Figure 1-2. NPR 7120.5E Figure 2-3 The NASA Program Life Cycle
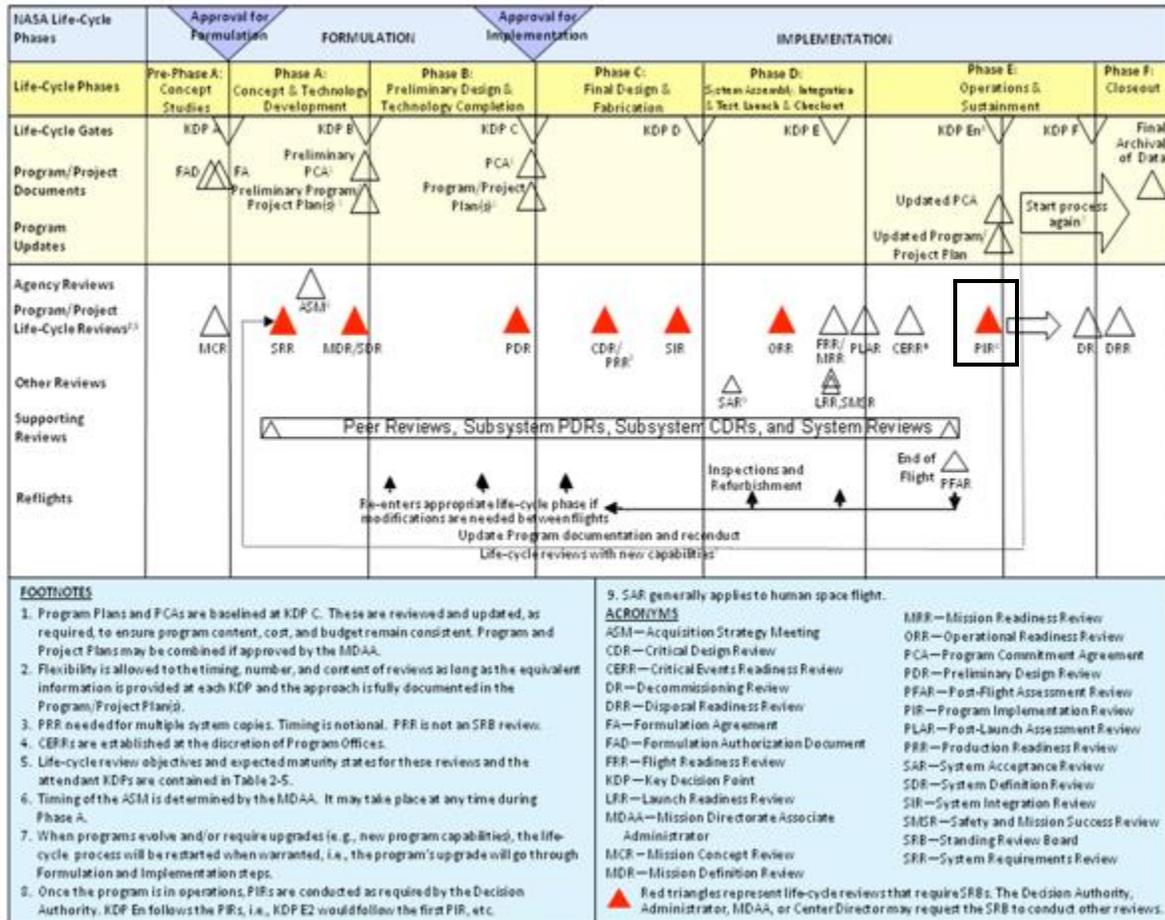(Tightly Coupled Program Life Cycle)

Figure 1-3. NPR 7120.5E Figure 2-4 The NASA Program Life Cycle
(Single-Project Program Life Cycle)

This Program Implementation Review (PIR) advisory guidance document has been formulated to communicate important standard practice and review guidance information in a single, limited scope, document that is consistent with NASA procedural requirements (NPRs). This document contains original written language as well as information extracted directly from the following sources: *NASA Space Flight Program and Project Management Requirements*, NPR 7120.5; *NASA Systems Engineering Processes and Requirements*, NPR 7123.1. This document is intended to provide general information that is applicable to all NASA Program Implementation Reviews. However, each PIR should be tailored to best enhance the probability of mission success for the Program undergoing review. The tailored review content should result from a collaborative process that includes the Program and the Convening Authorities.

1.1   Program Implementation Review Definition

NPR 7120.5 Definition: Program Implementation Reviews (PIRs) are conducted to evaluate the program's continuing relevance to the Agency's Strategic Plan, assess performance with respect to expectations, and determine the program's ability to execute the implementation plan with acceptable risk within cost and schedule constraints.

The PIR is an independent life-cycle review that is conducted by a Standing Review Board (SRB). Programs are required to document in their Program Plan their approach to conducting program/project internal reviews and how they will support independent life-cycle reviews such as the PIR. Consistent with these processes and plans, the Terms of Reference (ToR) for each independent life-cycle review are jointly developed and approved/concurred by the Convening Authorities: the NASA Associate Administrator, the NASA Chief Engineer, and the responsible Mission Directorate (MD) Associate Administrator. A template showing the typical content of a PIR ToR is shown in Appendix A.

1.2   7120.5 PIR Review Criteria

The PIR is an independent life-cycle review that is conducted by a Standing Review Board (SRB). Programs are required to document in their Program Plan their approach to conducting program/project internal reviews and how they will support the independent life-cycle reviews. Consistent with these processes and plans, the Terms of Reference (ToR) for each independent life-cycle review are jointly developed and approved/concurred by the Convening Authorities: the NASA Associate Administrator, the NASA Chief Engineer, and the responsible Mission Directorate (MD) Associate Administrator. The following criteria are used for Program Implementation Reviews (PIRs) and may be used at other independent reviews, as appropriate, to the review objectives defined in the ToR:

a.   Alignment with and contributing to Agency needs, goals, and objectives, and the adequacy of requirements flow-down from those.
b.   Adequacy of technical approach and performance.
c.   Adequacy of schedule and schedule performance.
d.   Adequacy of estimated costs (total and by fiscal year) and cost performance, including Independent Cost Analyses (ICAs) and Independent Cost Estimates (ICEs), against approved budget resources.
e.   Adequacy/availability of resources other than budget.
f.   Adequacy of risk management approach and risk identification/mitigation.
g.   Adequacy of management approach.

A set of example questions and their applicability to the various types of programs are delineated in Appendix B for each of the above criteria. These questions are provided as advisory guidance to the PIR SRB regarding the types of topics that are typically explored during a PIR.
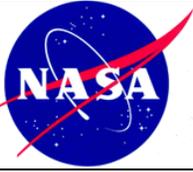
Program Life Cycle—Program Implementation Review						
NPR 7123.1B (PIR success criteria)	**Assessment Criteria/NPR 7120.5E**					
	Alignment with and contribution to Agency strategic goals	**Adequacy of management approach**	**Adequacy of technical approach**	**Adequacy of the integrated cost and schedule estimates and funding strategy**	**Adequacy and availability of resources other than budget**	**Adequacy of the risk management approach**
Program still meets Agency needs and should continue.	P					
The program cost and schedule estimates are credible and within program constraints.		S		P	S	S
Risks are identified and accepted by program/project leadership, as required.		S	S	S	S	P
Technical trends are within acceptable bounds.		S	P			S
Adequate progress has been made relative to plans, including the technology readiness levels.		S	P	S		
Technologies have been identified that are ready to be transitioned to another project or to an organization outside the Agency.		P	S	S		

Note: P = Primary, S = Secondary.

Table 1-2. Program Implementation Review Assessment Criteria

1.3 Program Review Documents

The following documents are typically reviewed during a Program Implementation Review:

1. Program Commitment Agreement (PCA)
2. Program Plan
3. Project Plans
4. Program Risk Management Plan
5. High-level Program Requirements, including success criteria and verification plan
6. Integrated Master Schedule and supporting schedules (in native format)
7. Reports from other review teams and peer reviews

8. Correlation of WBS to organizational elements
9. Latest manifest
10. Technology Development Plan
11. Data Management Plan
12. Configuration Control Plan
13. Education and Public Outreach Plan

However, not all the above documents will be applicable to every NASA Program and the nature and extent of these documents varies with Program type and total life cycle cost. There may be other important Program documents that are not included in the list above that would be captured in the Program plan. This document list is provided as advisory guidance to the PIR Team SRB regarding the documents that are typically explored during a PIR. Each PIR should be tailored to best enhance the probability of Program success for the Program undergoing review. The tailored review content, as documented in the ToR, should result from a collaborative process that includes the Program, the Convening Authorities, and Program stakeholders.

1.4   PIR Standing Review Board Charter

In accordance with NASA Procedural Requirement (NPR) 7120.5E, a Standing Review Board (SRB) will be assembled to perform the Program Implementation Review (PIR) for Agency Programs as required by the Decision Authority. See the NASA SRB Handbook for additional details.

The following operating principles will be used during the review process:
   a. The review will be oriented towards Program success. The review serves the following Convening Authorities: the NASA Associate Administrator, the NASA Chief Engineer, and the responsible Mission Directorate (MD) Associate Administrator. The overarching purpose of the review is to assess, and where possible, improve the Program's probability of success and ability to meet programmatic commitments.
   b. The most highly qualified individuals available will be used for the review. In their roles as SRB members, they must demonstrate full independence and objectivity. SRB members will be approved by the NASA Associate Administrator, the NASA Chief Engineer, and the MD Associate Administrator in coordination with Office of Chief Financial Officer (OCFO) Strategic Investment Division (SID).
   c. All SRB members will read relevant program documentation to educate themselves about the program and constituent projects prior to attending review meetings with program and project personnel, including understanding of overall scope, issues and risks.
   d. The review will include an assessment of the integrated technical, management, cost, schedule, and risk elements. However, it is not a design review.
   e. Where possible, the SRB will provide findings to enhance the Program's technical and programmatic performance.

f. The review will use an open process, with all issues vetted with the Program and the MD PMC prior to release of report. These stakeholders will also be pre-briefed on review results prior to presentation to the APMC.

2 EXAMPLE REVIEW AGENDA

This example review agenda is intended to provide guidance regarding the potential content that could be included to achieve the objectives of the independent Program Implementation Review (PIR). The agenda should be collaboratively tailored by the Program and SRB Chair to most efficiently gather the required information. When feasible, the PIR requirements can be integrated with a Program Status Review (PSR) to minimize the additional effort required by the Program undergoing review.

PIR Welcome and Introductions
> Program Management Team Introductions
> Review Team (SRB) Member Introductions and Assignment Areas

Program Review Success Criteria
> Scope and Purpose of PIR
> PIR Success Criteria
> Schedule for PIR Completion and Report Out

Program Overview
> Alignment with Agency Vision, Goals and Objectives
> Program Scope and Concept of Operations
> Program Architecture/Organization
>> Internal Organizational Interfaces and Agreements
>> External Organizational Interfaces and Agreements, including dependencies on entities outside of Program's direct control
> Program-Level Requirements and Flow- Up & Down
> Requirements Verification Strategy

Program Management Approach
> Roles and Responsibilities
> Program Performance to Date
> PCA/ Program Plan Status
> 7120.5D Compliance and Waivers
> Performance Management/Measurement Strategy including EVM
> Certificate of Flight Readiness (CoFR) Process for Flight
> Communications Strategy with Stakeholders and Customers
> Education and Public Outreach
> Science Management
> Future Mission Planning
>> Project Formulation
>> Budget Allocation
>> Launch Vehicle Availability/Access to Space
> Program Reserves Management

Program Technical Approach
> Overall Program Technical Approach
> Technical Authority Approach and Implementation
> Processes Used to Enhance Mission Success (redundancy, reliability, failure analysis, configuration management, etc.)
> Technology Infusion Plans
> Program Operating and Technical Direction, including Margins

Management of Contractors and associated Subcontractors

Safety and Mission Assurance Approach and Implementation

Health and Medical Approach and Implementation

Other Mission Success Strategies

Program Schedule

Program Schedule Performance to Date

Schedule Management, including Level of Integrated Master Schedule Utilization

Critical Path Scheduling

Schedule Margin and/or Reserve

Internal Program Schedule Interdependencies

External Program Schedule Interdependencies

Program Cost and Resources Management

Acquisition Strategy and Procurement Approach

Cost and Resource Management Processes

Past Budget and Cost Growth Performance

Current Cost Estimates

Current Budget Baseline

Budget Phasing Plans to Projects/Elements

Expected Future Program Budget Performance

Budget Reserves

Budget Risks and Unresolved Threats to Baseline

Required Resources (and Status) Other than Budget

Workforce Status and Issues

Required NASA Facilities and Institutional Support

External Resource Requirements

Program Risk Management

Current Risk Management Plan and Implementation Approach

Risk Management Performance to Date

Overview of Current Program Risks and Mitigation Strategies for each major Program element (e.g. Program Management, Technical, Schedule, Cost, etc.)

Methodology and Timeliness of Communicating Risks and Risk Status to Program Personnel and Stakeholders

Minimum Mission Success Plan

Summary

3 PIR REVIEW PRODUCTS

The SRB will produce a detailed written report and briefing of its proceedings, findings and recommendations with the purpose of enhancing Program success. The report is Sensitive but Unclassified (SBU), and must be kept internal to the Agency to preserve the integrity of the independent review process. Dissenting opinions of SRB members will be captured and included in the final report. Positive findings and best practices will be identified, in addition to any issues/recommendations. The report and briefing will provide details of quantitative and qualitative assessments completed by the team. The NASA SRB Handbook contains detailed guidance regarding the expected report and briefing content including the recommended evaluation (rating) system.

The following products are presented in the report:
1. Individual strengths and weaknesses
   - Strengths
   - Issues (highest level – includes a recommendation)
   - Concerns (lower level – may not be verbally reported to the PMC)
2. Global rating of Program status as defined in the SRB Handbook
3. Any Mission Directorate review specific success criteria (optional)
4. Request for Action (RFA) resolution status
5. Overall recommendation for Program to continue implementation as planned, or recommended adjustments to Program's current plan

A verbal report will be briefed to the Program manager and Program TA after the first SRB caucus period, at the end of the onsite review. A written report and summary briefing are to be completed within 30 days after a PIR or as agreed to in the ToR. When the report and summary briefing are completed, the SRB Chair will brief the results to the Program Manager and the applicable (integrated) Center Management Council (CMC). The results will also be briefed to the Mission Directorate PMC and to the Agency PMC leading up to a Key Decision Point (KDP) and NASA AA decision to continue. PMC protocol has been successful with point-counter-point style briefings on each issue/recommendation and response between the SRB Chair and the Program Manager.

APPENDIX A. PIR Terms of Reference (ToR) Template

Terms of Reference
Program Implementation Review
_____ Program

DATE

Submitted by:

_____   _____

NNNNNNN   *NNNNNNN*
Review Manager   Chair
XX Mission Directorate

Approved by: Approved by:

_____   _____

NNNNNNN   *NNNNNNN*
Associate Administrator   Chief Engineer
NASA Headquarters   NASA Headquarters

Purpose
This Terms of Reference (ToR) documents the agreement between the following Convening Authorities of the Program Implementation Review (PIR): NASA Associate Administrator; NASA Chief Engineer; Associate Administrator, and Associate Administrator _____ Mission Directorate. The agreement defines the requirements for conduct of the Program Implementation Review (PIR) for _____ Program.

1. Governance
This Program Implementation Review shall be conducted in accordance with NPR 7120.5.

2. Scope

- Tailored topic list from Section 2, Example Review Agenda

- An Independent Cost Analysis (ICA)

- List of unique topics requested by the Program and/or the Convening Authorities.

3. Roles and Team Membership
In accordance with NASA Procedural Requirement (NPR) 7120.5, a Standing Review Board (SRB) will be assembled to perform the biannual Program Implementation Review (PIR) for the _____ Program. See the NASA SRB Handbook for additional details.
The Review Chair and the Review Manager (RM), in consultation with the Program Director, will develop a list of candidates for team membership. The RM will assess the independence of team members and the Convening Authorities will approve the membership of the team.

The primary points-of-contact for the conduct of these reviews are.
1. Mission directorate point-of-contact is *name, position, e-mail address, phone number*.
2. Program Office point-of-contact is *name, position, e-mail address, phone number*.
3. Review Team Chair is *name, position, e-mail address, phone number*.
4. Review team RM is *name, position, e-mail address, phone number*.

4. Review Process
[EXAMPLE] *The review team's initial activity begins with a review of documentation followed by a pre-site meeting, normally held at LaRC, approximately thirty days before the site review. The intention of the pre-site meeting is for the team to become familiar with the program and to discuss the risk areas for which a more in-depth knowledge should be pursued. In addition, the team should use the pre-site meeting to finalize plans and schedules for the onsite review, reach team consensus on the detailed draft of review questions, determine team member*

assignments/responsibilities, review a draft outline of the planned report outline and briefing, and finalize the review rating/evaluation system that will be used during the onsite review. The thirty days between the pre-site and the site review are spent reviewing the available data to gain a high level of knowledge of the program. Also during this period, the Review Chair should vet the SRB-tailored PIR question list with the governing Mission Directorate and stakeholders, as well as the Program. The Chair should also work with the Program to ensure the planned review agenda is consistent with the questions being posed and should also provide to the Program the planned PIR team evaluation/rating methodology. It is imperative that information is exchanged freely so the SRB team can make a knowledgeable and value-added assessment. The site review is the team's opportunity to verify facts and also fill in any gaps of information.

5. Review Inputs

- Tailored document list from the generic lists in Section 1.3, Program Review Documents and Section 1.4, Independent Cost Analysis

All documents exchanged with the review team shall be provided and distributed through a Process Based Mission Assurance (PBMA) account established by the RM.

Website: https://secureworkgroups.grc.nasa.gov
Community name: _____

6. Review Products

The SRB will produce a detailed written report and briefing of its proceedings, findings and recommendations with the purpose of enhancing Program success. The report is Sensitive but Unclassified (SBU), and must be kept internal to the Agency to preserve the integrity of the independent review process. Dissenting opinions of SRB members will be captured and included in the final report. Positive findings and best practices will be identified, in addition to any issues/recommendations. The report and briefing will provide details of quantitative and qualitative assessments completed by the team. The NASA SRB Handbook contains detailed guidance regarding the expected report and briefing content including the recommended evaluation (rating) system.

The following products are presented in the report:
1. Individual strengths and weaknesses
   - Strengths
   - Issues (highest level – includes a recommendation)
   - Concerns (lower level – may not be verbally reported to the PMC)
2. Global rating of Program status as defined in the SRB Handbook
3. Any Mission Directorate review specific success criteria (optional)

4. Request for Action (RFA) resolution status
5. Overall recommendation for Program to continue implementation as planned, or recommended adjustments to Program's current plan

A verbal report will be briefed to the Program manager and Program TA after the first SRB caucus period, at the end of the onsite review. A written report and summary briefing are to be completed within 30 days after a PIR or as agreed to in the ToR. When the report and summary briefing are completed, the SRB Chair will brief the results to the Program Manager and the applicable (integrated) Center Management Council (CMC). The results will also be briefed to the Mission Directorate PMC and to the Agency PMC leading up to a Key Decision Point (KDP) and NASA AA decision to continue. PMC protocol has been successful with point-counter-point style briefings on each issue/recommendation and response between the SRB Chair and the Program Manager.

7. Schedule
Significant schedule dates are:
(Including Report preparation and briefings)

APPENDIX B. PIR Example Questions

The purpose of this appendix is to provide example questions to assist the PIR SRB team in developing the questions most appropriate to evaluate performance for a specific type of Program. **The SRB is expected to recognize that not all programs fit precisely into the standard categories and should tailor the applicability and requested level of detail to the specific nature of the Program.** Differences may also exist between Programs in the same category. To optimize review success, questions should be tailored to each Program, reviewed by the Program, and vetted by the Agency stakeholders, as appropriate, prior to establishing the final review agenda.

Example Review Questions (Categorized by PIR Review Criteria)	Single Project	Tightly Coupled	Loosely Coupled	Un-coupled
Alignment with Agency Needs, Goals and Objectives				
1. Do the Program's vision, goals and objectives continue to directly contribute towards the Agency's strategic vision, goals and objectives?	**X**	**X**	**X**	**X**
2. Does there remain a clear, consistent and appropriate flow of requirements from the Agency's strategic vision, goals, objectives and approved Mission Directorate architectures to the Program's requirements?	**X**	**X**	**X**	**X**
3. Are the requirements still clearly expressed throughout the flow-down to the Program elements and/or projects?	**X**	**X**	**X**	**X**
4. Do the Program's requirements continue to be verifiable?	**X**	**X**	**X**	**X**
5. Are Agency corporate capital resources being appropriately utilized?	**X**	**X**	**X**	**X**
6. Is the Program dependent on requirements being met on other Programs within the or outside of the agency? a. If there is a dependency for Program success upon entities outside of the Program's direct control, is the performance of each entity properly integrated with Program status and risk tracking and reporting?	**X**	**X**	**X**	**X**
7. Is the Program maintaining effective and positive relationships with supported and/or supporting Mission Directorates?	**X**	**X**	**X**	**X**

Example Review Questions (Categorized by PIR Review Criteria)	Single Project	Tightly Coupled	Loosely Coupled	Un-coupled
Adequacy of Technical Approach and Performance				
1. Will the Program's current technical approach best ensure Program success?	X	X	X	
2. Are technology developments for the flight and ground systems and their risks well understood and manageable?	X	X	X	
3. Do processes to enhance Program success (redundancy management, configuration management, reliability analysis, failure analysis, fault protection, etc.) exist, and is their implementation appropriate for the Program's mission?	X	X	X	
4. Is program operating and technical direction (including margins) adequate for the intended mission(s) and well understood?	X	X	X	

5. Are the Program management of contractors and contractor management of subcontractors adequate and appropriate?
    a. Are make/buy decisions reasonable?
    b. Have contracts been awarded (and subs), if not, what is their status?
	X	X	X	

6. Are the Safety and Mission Assurance approaches adequate and appropriate, including contractors and contractor management of subcontractors?	X	X	X	
7. Are the Health and Medical approaches adequate and appropriate, including contractors and contractor management of subcontractors?	X	X		
8. How effective is the Program's technical evaluation of candidate projects and the Program oversight after selection?			X	X
9. How effective is Program System Engineering (distinct from the individual project's system engineering) in examining, exploiting, and verifying synergies and interdependencies among constituent or supported projects (e.g., common procurements, program-level inventory, sharing of lessons learned as well as institutional expertise, and multi mission operations)?		X	X	X
10. Is the Program Technical Authority chain, both downward technical direction and technical appeals upward, communicating effectively and actively ensuring the technical integrity of the Program?	X	X	X	X

Example Review Questions (Categorized by PIR Review Criteria)	Single Project	Tightly Coupled	Loosely Coupled	Un-coupled
Adequacy of Schedule and Schedule Performance				

1. Is the integrated master schedule (IMS) integrated with customer and/or partner schedules?
    a. Have all milestones and deliverables been identified?
    b. Have critical path(s) been identified?
    c. How is the IMS being used by the Program?
	X	X	X	X

2. What has been the Program's schedule performance to date?	X	X	X	X

3. Is the current schedule margin or reserve adequate given the technical challenges and identified risks of utilizing the Program's technical approach?
    a. Is the schedule reserve, if any, funded?
    b. Is the Program likely to meet current schedule baselines?
	X	X	X	

45. Is the program effectively managing schedule interdependencies?
    a. Between projects/elements in the Program?
    b. Tied to projects in other NASA Programs (for example, are there technologies or designs needed that are being developed in other projects under other Programs that are needed)?
    c. Tied to Programs outside the Agency?
	X	X	X	X

5. How effective are the Program processes for analyzing and establishing the flight opportunity schedule?	X	X	X	X
6. How effective is the Program's independent assessment of project schedules and schedule performance?		X	X	X

Example Review Questions (Categorized by PIR Review Criteria)	Single Project	Tightly Coupled	Loosely Coupled	Un-coupled
Adequacy of Estimated Costs and Cost Performance				
1. Have cost growth or budget insufficiency issues existed during Program implementation phase to date?	X	X	X	X
2. Does the Independent Cost Analysis indicate that there will be Program success if full Program funding is received consistent with the Program's estimated costs?	X	X	X	
3. Have the Program's processes that ensure constituent program projects/elements have sufficient financial resources as needed (including phased life-cycle budgets) to meet their requirements worked effectively?	X	X	X	
4. Are budget reserves sufficient for mission success given the Program's technical approach and identified risks?	X	X	X	
5. Does the Program have unresolved cost threats relative to Program's budget baselines?	X	X	X	X
6. Have the Program's acquisition strategy and procurement approaches worked efficiently?	X	X	X	X
7. Are the cost estimates of candidate projects effectively assessed, properly evaluated and valid?		X	X	X
8. How effective is the Program's business management oversight of its projects (and/or funds provided by projects to the Program)?		X	X	X

9. Within the 5-year fiscal planning horizon, does the program have adequate resources for its constituent projects that are in implementation?
    a. Does the program have adequate reserves to manage potential project implementation cost problems?
    b. Is the Program able to rephase project budgets as needed and appropriate?
	X	X	X	X

Example Review Questions (Categorized by PIR Review Criteria)	Single Project	Tightly Coupled	Loosely Coupled	Un-coupled

10. Within the 5-year fiscal planning horizon, does the program have adequate resources for formulation of new projects, the implementation of which are largely beyond the budget horizon?
    a. Does the process of project formulation ensure that the resources required for subsequent implementation are properly identified?
    b. Are the planning and the resources required for any technology development appropriate?
		X	X	X

Adequacy of Resources other than Budget				
1. Are sufficient resources, other than budget, available to the Program when required to ensure Program success?	X	X	X	X

2. Are the current workforce profiles achievable as required to ensure Program success?
    a. Is the necessary workforce, with the proper skills, available to accomplish the Program's tasks (including contractors)?
    b. Is sufficient workforce stability expected to exist for successful Program execution?
    c. Are the planned work shifts reasonable to complete the work?
	X	X	X	

3. Do the necessary facilities and equipment identified and available to accomplish the Program tasks remain available and have they been adequately planned and funded as part of the Program? a. Are there schedule conflicts with other Programs or external entities?	X	X	X	
4. Are there adequate natural resources and materials available to accomplish the program tasks?	X	X	X	
5. Is the appropriate level of Program support, expertise, and other resources being provided projects in a timely and effective manner? Does the timeliness of Program decisions meet project needs?		X	X	X
6. Are supporting mission directorates, NASA Centers, and other organizations (including international partners) allocating appropriate resources to meet the Program's (and its projects, where applicable) requirements?	X	X	X	X

Example Review Questions (Categorized by PIR Review Criteria)	Single Project	Tightly Coupled	Loosely Coupled	Un-coupled
Adequacy of Risk Management				
1. Is the approach to risk analysis, management and mitigation at the program level performing adequately? 　　a. Are the interdependencies among the Programs' constituent or supported project risks properly identified? 　　b. How effective is the Program in responding to project risks in technical approach, schedule, and/or cost that can potentially impact Program performance?		X	X	X
2. Has the program been successful in mitigating risks to date?	X	X	X	X
3. Is the Program's risk management approach and implementation operating to ensure Program success? 　　a. Is the risk management database maintained online with current status, and is this data available to Program personnel and stakeholders in a timely manner?	X	X	X	X
4. Are the currently identified risks consistent with issues that have been identified by the program and project teams and by the SRB?	X	X	X	X
5. Are mitigation strategies to identified risks technically and programmatically sound? a. Is ownership for mitigation and status updates assigned for each risk?	X	X	X	X
6. Are risks associated with cost and schedule reserves included in the Program's risk management system?	X	X	X	X
7. Have cost and/or schedule impacts been assessed for the identified risks? 　　a. Has budget been allocated for mitigation of the identified risks?	X	X	X	X
8. Is the evaluation of candidate projects' risks effective and linked to Program oversight after selection?		X	X	X
9. Does the Program independently assess project risks and planned risk mitigations appropriately?		X	X	X

Example Review Questions (Categorized by PIR Review Criteria)	Single Project	Tightly Coupled	Loosely Coupled	Un-coupled
Adequacy of Management Approach				
1. What is the overall program performance to date against top-level technical, schedule, and cost commitments/baselines?	X	X	X	
2. Is the current overall Program management approach optimized to ensure Program success and is the Program meeting Agency needs and requirements in an effective and efficient manner?	X	X	X	X
3. Is Program-level documentation current, complete and compliant with NPR 7120.5? (PCA, Program Plan)	X	X	X	X
4. Is performance measurement incorporated throughout all Program performance areas (technical, schedule, cost, risk)?	X	X	X	
5. What is the adequacy of Program communications and review processes with the Program's Projects, governing MD, host Center management, customers and stakeholders?	X	X	X	X
6. What is the level of MD, customer and stakeholder satisfaction with program performance to date?	X	X	X	X
7. Are program management team roles and responsibilities clearly identified and understood?	X	X	X	X
8. Is the appropriate level of earned value management (EVM) being utilized to enhance the probability of Program success?	X	X		
9. How effective is the Program strategy that guides the long-range planning of the Program? a. Is the appropriate stakeholder community effectively involved in formulating and/or independently reviewing this strategy during initiation and evolution over time?	X	X	X	X
10. Are plans for future projects sufficiently flexible to allow for alternate discoveries or outcome of the earlier projects?			X	X
11. Are agreements (e.g., MOUs) and plans (e.g., Program Plans) current, been properly vetted and approved by all appropriate parties and stakeholders?	X	X	X	X
12. Is the program management structure and organizational hierarchy appropriate? a. Are there any issues with the roles and responsibilities of the Technical Authority, Project Managers, Program Director at HQ and or Program Manager at the Center? b. Are there any issues with the reporting arrangements between the Project Managers and the Program Manager (particularly if they do not reside in the same Center) clear?		X	X	X

Example Review Questions (Categorized by PIR Review Criteria)	Single Project	Tightly Coupled	Loosely Coupled	Un-coupled
13. Are the Program's support and requirements relative to projects clearly documented, configuration controlled, and effectively managed?		**X**	**X**	**X**
14. Are there effective processes for maintaining Program and project performance standards and tracking performance against standards (as well as adjudicating descopes for its projects when required)?		**X**	**X**	**X**
15. Does the Program have an effective process for regularly and independently assessing project progress?		**X**	**X**	**X**
16. Does the Program effectively advocate for program and project resource requirements?	**X**	**X**	**X**	**X**