

**Science Mission Directorate
Deputy Associate Administrator – Programs
Flight Programs Policy Document # 002 – Directorate Program Management
Council (DPMC)
July 5, 2007**

1. Purpose

1.1 The purpose of this document is to describe SMD policy for preparing, conducting, and recording meetings of the DPMC.

1.2 References:

- (1) NPR 7120.5D, section 2.4
- (2) NPD 1000.0, section 5.0
- (3) SMD DPMC Charter
- (4) SMD Management Handbook

2. Background

2.1 The Science Mission Directorate implements the NASA Strategic Plan and national priorities through research and analysis activities, technology development activities, education and outreach activities, and flight programs and projects. The DPMC provides the Directorate with top-level oversight and approval for flight programs and projects funded by the Directorate, and for other (non-flight) programs and projects as assigned by the SMD AA.

2.2 The DPMC serves as the primary forum in the Directorate for carrying out the responsibilities of the Directorate for program and project oversight and approval outlined in reference (1), and for providing programmatic direction to Centers as described in reference (2). The SMD AA has established basic authority and ground rules, including membership, for the DPMC in reference (3). The DPMC does not provide oversight and approval for research and analysis, technology development, or education and outreach activities, except to the extent that these are embedded in flight programs and projects.

3. Program/Project Management

3.1 The focus of the DPMC is the management of high value investments in space flight missions. Flight projects have a well-defined end result, and well-defined cost and schedule parameters for obtaining the end result, as opposed to research and analysis and technology development activities, where the objective is to push the state of the art or the bounds of knowledge as far as possible with the available budget. Programs, which achieve their objectives through projects, are higher-level, strategic approaches to meeting Directorate mission needs, based often on thematic properties or a common acquisition approach.

3.2 The management approach utilized by the DPMC (and defined in NPR 7120.5D) is one of reducing risk in a project through a series of “phases”, by clearly defining the end result and cost and schedule parameters (Phases A and B), completing a detailed design , constructing the end product and placing it into an operational state, (Phases C and D), operating the mission and producing science data for research and analysis activities (Phase E) and concluding with decommissioning/disposal (Phase F).

4. Types of Meetings

4.1 DPMC meetings may be for informational purposes only (informational meeting), or for purposes of arriving at a Directorate-level decision (decisional meetings).

	Decisional	Informational
Result	Recommendation for AA approval	Information only
Documentation	<ul style="list-style-type: none"> • decision memorandum signed by the AA • minutes of the meeting • presentation materials • list of attendees 	presentation materials and attendees only
Examples	<ul style="list-style-type: none"> • KDP approvals • Re-baseline • Readiness for critical events (e.g., landings, sample returns) • Project termination/continuation • Readiness for presentation to Agency PMC • Approval of SMD programs budget 	<ul style="list-style-type: none"> • status updates • closure of action items • discussion of new initiatives prior to program formulation • topics of special interest

4.2 A DPMC is not required for the following flight program/project decisions, responsibility for which is delegated to Division Directors:

- Project decisions and authorizations for Category 3 projects (including AO release and selections)
- Mission extensions beyond prime phase
- Termination of operating missions, in accordance with NPD 8010.3A
- Post-launch mission transition to full science operations (must include OCE and OSMA participation)

5. Requirements for DPMC Meetings

5.1 Requirements for DPMC meetings need to be adapted to fit the purpose of the meeting. Minimum requirements for the most common DPMC meetings, project Key Decision Points (KDPs), are described in detail below. Requirements for other DPMC meetings will generally follow the approach described below (documentation required prior to the meeting, meeting agenda, post-meeting actions), and will be determined by the requesting Division Director and the Deputy AA for Programs prior to the meeting.

5.2 Other types of DPMC meetings include informational DPMC meetings, program KDPs, special events (landings, sample returns, etc), preparation for an Agency PMC (other than project KDPs described below), and approval of the SMD programs budget.

6. Roles of the Program Executive and DPMC Secretariat

	Program Executive	Secretariat
Pre-meeting actions	<ul style="list-style-type: none"> • Obtains DAAP approval to schedule the meeting <ul style="list-style-type: none"> ○ Coordinates scheduling the meeting with Secretariat ○ Provides names of requested attendees other than standard list ○ Works visitor clearance issues as needed • Provides draft briefing materials to AA, Deputy AA, DAAP, and Secretariat at least 5 calendar days prior to the meeting • Provides documentation required by DAAP policy 002 to Secretariat at least 3 calendar days prior to meeting • Organizes and conducts pre-DPMC briefing with DAAP and Division Director at least one calendar day prior to the meeting • Publishes agenda • Verifies project office and SRB briefings comply with direction in DAAP policy 002 • Arranges for duplication and distribution of briefing hard copies at the meeting 	<ul style="list-style-type: none"> • Generates and coordinates meeting notice • Reserves conference room and AV support as needed • Maintains DPMC master schedule • Verifies that draft briefing materials and all DAAP policy 002 documentation is available within times required (if not, postpones meeting with DAAP concurrence)
Conducting	<ul style="list-style-type: none"> • Provides meeting overview, introduces 	<ul style="list-style-type: none"> • Collects attendee list

the meeting	speakers, summarizes action items, etc	
Post-meeting actions	<ul style="list-style-type: none"> • Prepares documentation as required by DAAP policy 002 and other DPMC direction <ul style="list-style-type: none"> ○ Provides draft to DAAP within 14 calendar days of meeting ○ Provides final documentation to Secretariat within 30 calendar days of meeting 	<ul style="list-style-type: none"> • Loads meeting documentation into RMS • Tracks delinquent documentation

7. Specific Requirements for Project Key Decision Points (KDPs)

7.1 KDP-A (non-AO projects only)

7.1.1 Documents required to prior to the meeting

- Signed Formulation Authorization Document
- Draft Standing Review Board (SRB) Terms of Reference (ToRs) for the formulation phase
- Science Definition Team (SDT) report from the Mission Concept Review
- Final Acquisition Strategy Planning Meeting report/decision memorandum
- Draft Level 1 Requirements
- Draft AA decision memorandum

7.1.2 Meeting agenda

7.1.2.1 Project office briefing to cover the following

- Mission overview
- Management approach for formulation
- Overview of draft Level 1 Requirements
- Resources required and phasing for formulation phase
- Plan and schedule for formulation activities
- Description of risks for formulation phase and plans for retirement of risk during formulation
- Description of risks to remain for development phase and initial plans for retirement of risk during development
- Description of any long-lead development work (parts acquisition, fabrication) to begin prior to KDP-C with detailed cost and schedule, and performance management plans (e.g., EVM)
- Preliminary estimate of project Life Cycle Cost
- Preliminary proposed Launch Readiness Date

7.1.2.2 SDT briefing to provide an assessment of the ability of the concept/approach to achieve the scientific objectives

7.1.2.3 Readiness assessments from Program Office and/or Center

7.1.2.4 DPMC discussion

7.1.2.5 DPMC actions

- Recommendation for AA action: for example, approval of entry into Phase A as presented, or with specified changes to the

recommendations presented, with action items assigned and conditions stipulated as needed

7.1.3 Post-meeting actions

7.1.3.1 First draft of minutes: due to DAA-Programs within 14 calendar days of the meeting

7.1.3.2 All final meeting documentation: loaded into RMS within 30 calendar days of the meeting

- Decision memorandum signed by the AA
- Minutes of the meeting
- Presentation materials
- List of attendees

7.1.3.3 Status of action item resolution: presented at monthly Flight Program Reviews as part of the Program Executive briefing

7.2 KDP-B

7.2.1 Documents required prior to the meeting

- Baselined Level 1 Requirements
- Signed Formulation Authorization Document (if revised/updated post-KDP-A)
- Signed Standing Review Board (SRB) Terms of Reference (ToRs)
- SRB reports from the System Requirements Review and Mission Definition Review
- Final Acquisition Strategy Meeting report/decision memorandum
- Preliminary Project Plan
- Draft AA decision memorandum

7.2.2 Meeting agenda

7.2.2.1 Project office briefing to cover the following

- Overview of mission concept and mission design
- Management approach for Phase B
- Description of project requirements and changes since KDP-A, linkage to Directorate and Agency strategic planning documents
- Resources required and phasing for Phase B
- Plan and schedule for Phase B activities
- Description of risks for Phase B and plans for retirement of risk during Phase B
- Description of risks to remain for development phase and initial plans for retirement of risk during development
- Description of any long-lead development work (parts acquisition, fabrication) to begin prior to KDP-C with detailed cost and schedule, and performance management plans (e.g., EVM)
- Revised estimate of the project Life Cycle Cost at the 70% confidence level
- Preliminary top-level project schedule
- Description of any waivers to NPR 7120.5D expected to be requested at KDP-C

7.2.2.2 SRB briefing to cover the following

- Description of SRB KDP-B review process
- Assessment of project office approach, discussion of any unresolved issues
- Verification of completion of the activities described in NPR 7120.5D, paragraph 4.4, and readiness for KDP-B of project documents listed in NPR 7120.5D, tables 4-3 and 4-4
- Verification of compliance with the FAD, other previous Directorate authorizations/direction, and program documentation
- Recommendation for future SMD decision points and criteria for continuation in Phase B
- Summary of risk to be accepted by the Directorate as a result of approval to enter Phase B

7.2.2.3 Program Executive assessment of project compliance with the requirements of the SMD Handbook, particularly paragraph 5.4.2.2

7.2.2.4 Readiness assessments from Program Office and Center Management Council

7.2.2.5 DPMC discussion

7.2.2.6 DPMC actions

- Recommendation for AA action: for example, approval of entry into Phase B as presented, or with specified changes to the recommendations presented, with action items assigned and conditions stipulated as needed

7.2.3 Post-meeting actions

7.2.3.1 First draft of minutes: due to DAA-Programs within 14 calendar days of the meeting

7.2.3.2 All final meeting documentation: loaded into RMS within 30 calendar days of the meeting

- Decision memorandum signed by the AA
- Minutes of the meeting
- Presentation materials
- List of attendees

7.2.3.3 Status of action item resolution: presented at monthly Flight Program Reviews as part of the Program Executive briefing

7.3 KDP-C

7.3.1 Documents required prior to the meeting

- Signed updated Level 1 Requirements
- NEPA documentation (if required)
- Final updated Program Plan and PCA
- Final Interagency and International agreements (as applicable)
- Signed Standing Review Board (SRB) Terms of Reference (ToRs) (if revised/updated post-KDP-B)
- SRB report from the Preliminary Design Review
- Baseline Project Plan
- Draft AA decision memorandum

7.3.2 Meeting agenda

- 7.3.2.1 Project office briefing to cover the following
- Overview of mission concept and mission design
 - Management approach for development
 - Description of project requirements and changes since KDP-B, linkage to Directorate and Agency strategic planning documents
 - Resources required and phasing for development at WBS level 2 at the 70% confidence level
 - Plan and schedule for development activities
 - Description of risks for the development phase and plans for retirement of risk during development
 - Description of risks to remain for the operations phase and initial plans for retirement of risk during operations
 - Description of accepted risks for the development and operations phases
 - Risk-based justification for cost, schedule and scope reserves (scope reserves = de-scope plan)
 - Description of any waivers requested to NPR 7120.5D

- 7.3.2.2 SRB briefing to cover the following
- Description of SRB KDP-C review process
 - Assessment of project office approach, including executability of the Project Plan, discussion of any unresolved issues
 - Verification of completion of the activities described in NPR 7120.5D, paragraph 4.5, and readiness for KDP-C of project documents listed in NPR 7120.5D, tables 4-3 and 4-4
 - Verification of compliance with the FAD, other previous Directorate authorizations/direction, and program documentation
 - Recommendation for future SMD decision points and criteria for continuation in development
 - Summary of risk to be accepted by the Directorate as a result of approval to enter development

7.3.2.3 Program Executive assessment of project compliance with the requirements of the SMD Handbook, particularly paragraph 5.4.5

7.3.2.4 Readiness assessments from Program Office and Center Management Council

7.3.2.5 DPMC discussion

7.3.2.6 DPMC actions

- Recommendation for AA action: for example, approval of entry into development as presented, or with specified changes to the recommendations presented, with action items assigned and conditions stipulated as needed

7.3.3 Post-meeting actions

7.3.3.1 First draft of minutes: due to DAA-Programs within 14 calendar days of the meeting

7.3.3.2 All final meeting documentation: loaded into RMS within 30 calendar days of the meeting

- Decision memorandum signed by the AA

- Minutes of the meeting
- Presentation materials
- List of attendees

7.3.3.3 Status of action item resolution: presented at monthly Flight Program Reviews as part of the Program Executive briefing

7.4 KDP-D

7.4.1 Documents required prior to the meeting

- SRB reports from the Critical Design Review and System Integration Review
- Draft AA decision memorandum

7.4.2 Meeting agenda

7.4.2.1 Project office briefing to cover the following

- Overview of mission concept and final mission design
- Management approach for Phase D
- Description of project requirements and changes since KDP-C, linkage to Directorate and Agency strategic planning documents
- Resources required and phasing for Phase D at WBS level 2 at the 70% confidence level
- Plan and schedule for Phase D activities
- Description of risks for Phase D and plans for retirement of risk during Phase D
- Description of risks to remain for Phase E and initial plans for retirement of risk during Phase E
- Description of accepted risks for Phases D and E
- Risk-based justification for cost, schedule and scope reserves (scope reserves = de-scope plan)
- Final Incompressible Test List
- I&T flow chart, showing planned order and schedule of testing
- Description of any waivers requested to NPR 7120.5D

7.4.2.2 SRB briefing to cover the following

- Description of SRB KDP-D review process
- Assessment of project office approach, discussion of any unresolved issues
- Verification of completion of the activities described in NPR 7120.5D, paragraph 4.6, and readiness for KDP-D of project documents listed in NPR 7120.5D, table 4-4
- Verification of compliance with the Level 1 Requirements, the Project Plan, other previous Directorate authorizations/direction, and program documentation
- Recommendation for future SMD decision points and criteria for continuation in Phase D
- Summary of risk to be accepted by the Directorate as a result of approval to enter Phase D

7.4.2.3 Readiness assessments from Program Office and Center Management Council

7.4.2.4 DPMC discussion

7.4.2.5 DPMC actions

- Recommendation for AA action: for example, approval of entry into Phase D as presented, or with specified changes to the recommendations presented, with action items assigned and conditions stipulated as needed

7.4.3 Post-meeting actions

7.4.3.1 First draft of minutes: due to DAA-Programs within 14 calendar days of the meeting

7.4.3.2 All final meeting documentation: loaded into RMS within 30 calendar days of the meeting

- Decision memorandum signed by the AA
- Minutes of the meeting
- Presentation materials
- List of attendees

7.4.3.3 Status of action item resolution: presented at monthly Flight Program Reviews as part of the Program Executive briefing

7.5 KDP-E (old MRB)

7.5.1 Documents required prior to the meeting

- Signed Certificate of Flight Readiness
- SRB report from the Operational Readiness Review
- Signed Contingency Plan
- Draft AA decision memorandum

7.5.2 Meeting agenda

7.5.2.1 Project office briefing to cover the following

- Overview of mission concept and mission design
- Management approach for Phase E
- Description of project requirements and changes since KDP-D, linkage to Directorate and Agency strategic planning documents
- Summary of test and verification program status
- Description of remaining open work and schedule to complete
- List of open paper highlighting all launch constraints
- Schedule of remaining meetings and reviews
- Schedule of PAO activities
- Resources required and phasing for Phase E
- Schedule for Phase E
- Description of all open risks (including accepted risks) and mitigation plans (for other than accepted risks)
- Description of any waivers requested to NPR 7120.5D

7.5.2.2 SRB briefing to cover the following

- Description of SRB KDP-E review process
- Assessment of project office approach, discussion of any unresolved issues

- Verification of completion of the activities described in NPR 7120.5D, paragraph 4.7, and readiness for KDP-E of project documents listed in NPR 7120.5D, table 4-4
- Verification of compliance with the Level 1 Requirements, the Project Plan, other previous Directorate authorizations/direction, and program documentation
- Recommendation for any future SMD decision points needed during Phase E
- Summary of risk to be accepted by the Directorate as a result of approval to enter Phase E

7.5.2.3 Readiness assessments from Program Office and Center Management Council

7.5.2.4 DPMC discussion

7.5.2.5 DPMC actions

- Recommendation for AA action: for example, approval of entry into Phase E as presented, or with specified changes to the recommendations presented, with action items assigned and conditions stipulated as needed

7.5.3 Post-meeting actions

7.5.3.1 First draft of minutes: due to DAA-Programs within 14 calendar days of the meeting

7.5.3.2 All final meeting documentation: loaded into RMS within 30 calendar days of the meeting

- Decision memorandum signed by the AA
- Minutes of the meeting
- Presentation materials
- List of attendees

7.5.3.3 Status of action item resolution: presented at monthly Flight Program Reviews as part of the Program Executive briefing

7.6 Termination/Continuation Review

7.6.1 Required when there is reasonable cause to believe that a project cannot meet its Level 1 cost, schedule and scope requirements

7.6.2 Actions required prior to a termination/continuation review

7.6.2.1 Request for termination/continuation review must be approved by the Division Director, DAA-Programs, and MDAA

7.6.2.2 Special SRB ToRs prepared and signed

7.6.2.3 SRB review conducted

7.6.2.3.1 Analysis of current project position, and determination of project's ability to meet Level 1 Requirements

7.6.2.3.2 If SRB assessment is that project can meet Level 1 requirements, SRB findings are presented to DPMC and DPMC assesses need for further action

7.6.2.3.3 If SRB assessment is that project cannot meet Level 1 requirements

7.6.2.3.3.1 SRB determines causes of inability to meet requirements, identifies alternative strategies for proceeding with the project, defines cost (at 70% confidence level), schedule, scope and risk for each alternative identified, and impact to science requirements and strategic Directorate objectives

7.6.2.3.3.2 Alternatives may include complete termination, return to the formulation phase, or revision of Level 1 Requirements and completion of development

7.6.3 Meeting agenda

7.6.3.1 Project office briefing covering technical, cost and schedule risk

7.6.3.2 SRB briefing to cover the following

7.6.3.2.1 Assessment of ability of project to meet Level 1 requirements

7.6.3.2.2 Description of alternative solutions, including cost (at 70% confidence level), schedule, scope and risk for each alternative, and impact to science requirements and strategic Directorate objectives

7.6.3.3 Project office response to SRB findings and recommendations

7.6.3.4 Program office and Center comments

7.6.3.5 Division Director assessment of alternatives and recommendation for DPMC/AA action

7.6.4 DPMC discussion

7.6.5 DPMC action: three alternatives for recommendation for AA approval

7.6.5.1 Terminate the project (Termination KDP), subject to conditions of NPR 7120.5D, paragraph 2.5.5:

7.6.5.1.1 Category 1 projects and Programs: the MDAA provides recommendations to the Decision Authority on the need for a termination KDP. The Decision Authority commissions an independent assessment, and following its completion, the governing PMC holds a Termination Review.

7.6.5.1.2 Category 2 projects: the Decision Authority notifies the NASA Associate Administrator at least 45 days in advance of a termination KDP

7.6.5.1.3 Category 3 projects: the Decision Authority notifies the NASA Associate Administrator at least 21 days in advance of a termination KDP

7.6.5.2 Return the project to the formulation phase, subject to new KDP-B based on existing documentation to the extent possible, updated to reflect changes, to establish new formulation parameters

7.6.5.3 Complete the project, subject to new KDP-C, based on existing documentation to the extent possible, updated to reflect changes, to establish new development and operations baseline

7.6.6 Post-meeting actions

7.6.6.1 First draft of minutes: due to DAA-Programs within 14 calendar days of the meeting

7.6.6.2 All final meeting documentation:

7.6.6.2.1 Reviewed with the NASA Associate Administrator prior to final implementation (project termination only – NPR 7120.5D paragraph 2.5.6)

7.6.6.2.2 Loaded into RMS within 30 calendar days of the meeting

- Decision memorandum signed by the AA
- Minutes of the meeting
- Presentation materials
- List of attendees

7.6.6.3 Status of action item resolution: presented at monthly Flight Program Reviews as part of the Program Executive briefing