NASA
Policy
Directive

NPD 1000.0C
Effective Date: January 29, 2020
Expiration Date: December 30, 2025

Subject: NASA Governance and Strategic Management Handbook

Responsible Office: Associate Administrator

Dear Colleagues:

NASA works on behalf of the Nation to lead the world in science, space exploration, technology and aeronautics. The Agency regularly delivers breakthroughs that create next-generation aeronautics' capabilities, garner amazing scientific discoveries about the cosmos and the Earth, enable humankind to set foot upon and explore destinations like the moon and Mars, and – as always -- improve life for everyone on Earth in unforeseen ways. These achievements are directly traceable to the talents and dedication of our Federal and contractor workforce, as well as our commercial and international partners.

Designed to help enable our missions' success, this Governance and Strategic Management Handbook provides updated detail about the Agency's structure, values, management priorities and processes. Our extensive portfolio of complex, risky, and highly challenging programs and projects that sometimes require decades to complete necessitates this Handbook.

NASA's governance and strategic management structure begins with four councils: the Executive Council (EC), the Acquisition Strategy Council (ASC), the Agency Program Management Council (APMC), and the Mission Support Council (MSC). These councils strive to make decisions efficiently and effectively – whether technical or policy-based – and to clearly communicate their decisions throughout the Agency's diverse organizations.

NASA (and its predecessor NACA) has a storied history that is the envy of the technological world. We have repeatedly accomplished great things, sometimes making the incredibly difficult look almost routine. We have also on occasion fallen short, yet our policies and processes – beginning with this policy directive – assure that lessons are not just learned but fully embraced.

As we continue to lead humankind to places and capabilities in aerospace never before achieved, I am confident that NASA's exceptional employees will effectively manage the risks and complexities inherent in the agency's mission. I am confident that we will continue to apply our expertise to realize an American future in space and aeronautics as only this Agency can.

Stephen Jurczyk,
Associate Administrator

CHANGE HISTORY
NPD 1000.0C, NASA Governance and Strategic Management Handbook

Chg #	Office/Center	Date	Distribution/Comments
1	OSF/HQ	June 2019	This directive sets forth NASA's governance framework—principles and structures through which the Agency manages mission, roles, and responsibilities—and describes NASA's Strategic Management System—processes by which the Agency manages strategy and its implementation through planning, performance, and results. It is being updated to revise the governance and strategic management framework to reflect current operations, revalidate the policy statements, and clarify the roles, responsibilities, and authorities.
2	OA/HQ	Jan 2020	Significant changes for this revision include the following: • Removes references to obsolete governance structures and strategic management processes and updates with current operations • Updates roles and responsibilities to reflect current operations • Updates supporting images and graphics • Reorganizes to remove many sub-sub-sections and improve information flow

			• Adds reference and description of Acquisition Strategy Council • Adds section on Program Management Integration • Adds section on Risk Leadership • Adds section on Roles of External Councils and Advisory Groups • Adds section on Center Roles • Adds section on restructuring associated with Enterprise Management approach to selected Mission Support functions
3	OA/HQ	Aug 2020	Changes for this revision include the following: • Adds a 5th core value to NASA's set of core values in chapter 2.0 • Changes nomenclature from Dissenting Opinion to Formal Dissent • Updates the Formal Dissent process
4	OA/HQ	Dec 2023	Changes for this revision include the following: • Clarification to delegation of programmatic authority in accordance with NPR 7120.5F, Section 3.3.3 • Recognition of the Chief Program Management Officer in the Agency's Program Management integration function, Section 3.4.2 • Clarification to aspects of Technical Authority, Section 3.5.1 • Addition of new section on Technical Excellence, Section 3.5.2, per 8/3/23 CD/MD forum agreement to TE definition and inclusion in policy

P.1 POLICY

This NASA Policy Directive (NPD) has two primary aims: (1) to set forth NASA's governance framework—principles and structures through which the Agency manages mission, roles, and responsibilities; and (2) to describe NASA's Strategic Management System—processes by which the Agency manages strategy and its implementation through planning, performance, and results.

P.2 APPLICABILITY

This NPD applies to NASA Headquarters and NASA Centers, including component facilities and to the extent specified or referenced in the appropriate contracts, grants, or agreements. It applies to the Jet Propulsion Laboratory, and as is the case for NASA centers and component facilities, only to the extent specified or referenced in the appropriate contracts, grants, or agreements.

P.3 AUTHORITY

National Aeronautics and Space Act of 1958, as amended, 51 U.S.C 20113.

P.4 APPLICABLE DOCUMENTS AND FORMS

a. NPD 1001.0, NASA Strategic Plan
b. NPD 1000.3, The NASA Organization
c. NPD 1000.5, Policy for NASA Acquisition

P.5 MEASUREMENT AND VERIFICATION

P.6 CANCELLATION

NPD 1000.0B, Strategic Management and Governance Handbook, dated June 2014.

Contents

CHANGE HISTORY **2**

P.1 POLICY **5**

P.2 APPLICABILITY **5**

P.3 AUTHORITY **5**

P.4 APPLICABLE DOCUMENTS AND FORMS **5**

P.5 MEASUREMENT AND VERIFICATION **5**

P.6 CANCELLATION **5**

CHAPTER 1. OVERVIEW AND PURPOSE **9**

CHAPTER 2: CORE VALUES **10**

CHAPTER 3. GOVERANCE PRINCIPLES AND FRAMEWORK **12**

3.1 Efficient and Effective Governance **13**
3.1.1 Roles of External Councils and Advisory Groups and Inspector General 16

3.2 Roles, Responsibilities, and Decision-Making **16**

3.3 Management Structure and Authorities **22**
3.3.1. Mission Directorates and Programmatic Authority 23
3.3.2 Mission Support and Institutional Authority 24
3.3.2.1 Enterprise Management of Mission Support 24
3.3.3 Institutional Authority—Center Directors 25
3.3.3.1 Field Installations: Center Roles and Related Authority 25

3.4 NASA Senior Leadership Focus Areas 26
3.4.1 Risk Leadership 26
3.4.2 Program Management Integration 27
3.4.3 Strategic Acquisition 28

3.5 Checks and Balances 29
3.5.1 Technical Authority 29
3.5.2 Technical Excellence 29
3.5.3 Independent Life-Cycle Review Process 30
3.5.4 Requirements' Tailoring Process 31
3.5.5 Formal Dissent Process 31

CHAPTER 4. STRATEGIC MANAGEMENT SYSTEM 33

4.1 Planning 37
4.1.1 Factoring External Guidance 38
4.1.2 Leveraging Internal Analyses and Assessments 38
4.1.3 Utilizing Strategic Planning Processes 38
4.1.4 Implementation Planning 40

4.2 Programming 40

4.3 Budgeting 41

4.4 Execution 41
4.4.1 Controls 42
4.4.2 Monitoring, Evaluating, and Reporting on Performance Progress 42

4.5 Feedback into Planning and Programming 42

4.6 Process Communications 43

ATTACHMENT A: DEFINITIONS 44

ATTACHMENT B: ACRONYMS 47

ATTACHMENT C: GUIDE TO FURTHER INFORMATION 48

ATTACHMENT D: INDEX 53

CHAPTER 1. OVERVIEW AND PURPOSE

Like previous versions, this handbook has two primary aims: (1) to set forth NASA's governance framework—principles and structures through which the Agency manages missions, roles, and responsibilities; and (2) to describe NASA's Strategic Management System—processes by which the Agency manages strategy and its implementation through planning, performance, and results.

NASA governance and strategic management provide the discipline and rigor to enable success of NASA's mission – to drive advances in science, technology, aeronautics, and space exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of the Earth, consistent with the Agency's Strategic Plan (NPD 1001.0C). This handbook presents:

- Core values for mission success
- Governance principles by which NASA manages
- The governance structure by which the Office of the Administrator and senior staff provide leadership across the Agency
- NASA's organization (NPD 1000.3) and organizational plan to conduct the Agency's mission, including roles and responsibilities
- Guidance for Mission Directorates and Centers to implement programs and projects
- The process by which strategy is converted into implementation and outcomes, and
- The process for establishing performance indicators and for providing feedback on progress.

Governance and strategic management must also ensure compliance with applicable laws and policies for the management of Federal agencies. The Agency must meet these requirements in a clear and traceable manner that demonstrates accountability as depicted in Figure 1.0-1.

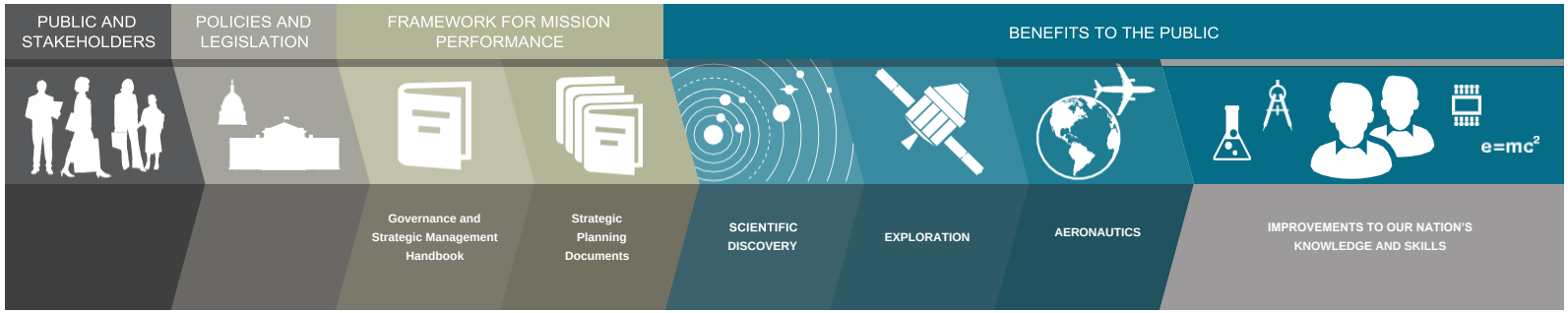

Figure 1.0-1: Public Accountability *-- The Space Act authorized the Agency for the purpose of expanding human knowledge in aeronautical and space activities for the benefit of all humankind.*

Chapter 2 addresses NASA's core values for mission success:

- Safety
- Integrity
- Teamwork
- Excellence
- Inclusion

Chapter 3 describes NASA's governance principles:

- Governance
- Councils, roles, responsibilities, and decision-making
- Management structure and authorities, including mission direct, mission support (reformulated), and Center roles
- NASA senior leadership focus areas, including risk leadership, program management integration, and strategic acquisition.
- Checks and balances

The Strategic Management System of Chapter 4 describes how the Agency establishes and conducts its missions through four fundamental phases:

- Planning
- Programming
- Budgeting, and
- Execution.

The four chapters in this handbook include a written explanation of the subject and, where useful, a visual graphic or table of the identified process.

CHAPTER 2: CORE VALUES

NASA engages in a spectrum of programs, projects, and activities of extraordinary risk, complexity, and national priority. Mission-driven, with mission success at the cornerstone of its culture, the Agency rigorously manages requirements, schedule, facilities, human resources, and budget.

Every NASA employee is responsible for mission success, being mindful of content, risk, cost, and schedule; all must understand the goals and requirements of their activity and how that activity interacts and integrates with the overall portfolio, how their actions or inactions affect safety and security, as well as priorities and Agency structure. Each employee is responsible for proactively identifying, documenting, and communicating any concerns regarding their activity or the larger system with which it interacts.

NASA's core values of safety, integrity, teamwork, excellence, and inclusion (Figure 2.0-1) don't just guide but mandate individual and organizational behavior from the bottom to the top. NASA leadership must live by these values when making decisions, knowing that constant attention to these core values leads to mission success. The NASA and contractor staff, working within their organizations, must live by these values as they work to achieve objectives in support of the mission.

Safety—NASA's constant attention to safety is the cornerstone upon which we build mission success. We are committed, individually and as a team, to protecting the safety and health of the public, our team members, and those assets that the Nation entrusts to the Agency.

Integrity—NASA is committed to maintaining an environment of trust, built upon honesty, ethical behavior, respect, and candor. Our leaders enable this virtue in the NASA workforce by fostering an open flow of information on all issues among all employees without fear of reprisal. Building trust through ethical conduct as individuals (Federal employees and contractors) and as an integrated organization is a necessary component of mission success.

Teamwork—NASA's most powerful asset for achieving mission success is a multi-disciplinary team of diverse, competent people across all NASA Centers. Our approach to teamwork is based on a philosophy that each team member brings unique experience and important expertise to planning and execution of the agency's programs and projects. Recognition of and openness to that insight improves the likelihood of identifying and resolving challenges to safety and mission success. We are committed to creating an environment that fosters teamwork and processes that support equal opportunity, collaboration, continuous learning, and openness to innovation and new ideas.

Excellence—To achieve the highest standards in engineering, research, operations, and management in support of mission success, NASA is committed to nurturing an organizational culture in which individuals make full use of their time, talent, and opportunities to pursue excellence in conducting all agency efforts.

Inclusion—NASA is committed to a culture of diversity, inclusion, and equity, where all employees feel welcome, respected, and engaged. To achieve the greatest mission success, NASA embraces hiring, developing, and growing a diverse and inclusive workforce in a positive and safe work environment where individuals can be authentic. This value enables NASA to attract the best talent, grow the capabilities of the entire workforce, and empower everyone to fully contribute.

Figure 1.0-1: Values: NASA is committed to a core set of values in everything it does.
Mission success requires uncompromising commitment to Safety, Integrity, Teamwork, Excellence, and Inclusion.

CHAPTER 3. GOVERANCE PRINCIPLES AND FRAMEWORK

Agency governance is critical to mission success and supporting strategies to deliver on our commitment to be good stewards of the resources entrusted to us by the taxpayer. Governance relates to consistent management, cohesive policies, and highly effective guidance, process, and decision-making.

To enable NASA's mission success, the governance framework is characterized as follows:

- Clear leadership roles, authorities and responsibilities;
- Strategic, transparent, and informed decision-making, including the communication of decisions and their rationale;
- Management of creative tension, promoting and respecting the airing of differing views by and to appropriate leaders and authorities;
- Balance between short-term efficiency and long-term sustainability;
- Ready provision of information to appropriate levels of management for visibility into programs, projects, processes, facilities, and institutions; and
- Independent reviews by respected experts to obtain objective measures of progress, risks, and challenges.

The following sections in this chapter discuss NASA's governance principles, including (1) efficient and effective governance; (2) roles, responsibilities and decision-making; (3) management structure and authorities (4) NASA senior leadership focus areas; and (5) checks and balances.

3.1 Efficient and Effective Governance

NASA uses senior leadership councils to govern the Agency. Councils provide high-level oversight, set requirements and strategic priorities, and guide key assessments of the Agency. The council members evaluate issues and support decision authorities when issues involve or require high levels of difficulty, integration, visibility, and approval.

NASA governs with four Agency-level councils, each with distinct charters and responsibilities (see Table A as well as NPD 1000.3): the Executive Council (EC), the Acquisition Strategy Council (ASC), the Agency Programmatic Management Council (APMC), and the Mission Support Council (MSC). The EC focuses on major Agency-wide decisions; the ASC focuses on long-term, large-impact acquisition decisions; the APMC focuses on program and mission decisions, with emphasis on managing performance; and the MSC focuses on mission-enabling decisions related to (among other things) infrastructure and human resources. Regardless of organizational position, senior managers are accountable to the appropriate council chair with respect to topics addressed by that council.

These councils, further described in Table A, are essential components of efficient and effective governance. All internal, Agency-level decision-making bodies, such as sub-councils or boards, are authorized by the Chair of one of the four governance councils. The basic structure of each council is similar. Each council has a Chair, who is the sole decision authority for the council. The members of the council serve as advisors to the Chair; as such, the Chair has the discretion as to if and when to engage the council members' advice. The NASA Administrator is the EC Chair, the Associate Administrator is the ASC and APMC Chair, and the Deputy Associate Administrator is the MSC Chair. The Administrator or the Chair can delegate meeting leadership to an alternate, and also appoints the standing members; the list of members may be found in Chapter 3 of NPD 1000.3. The Chair may invite others to attend meetings. Attendance at all council meetings is limited to members and invited guests. The functional relationships between the Councils is shown in Figure 3.0-1.

GOVERNANCE – NASA Management Councils (Decisional Bodies)

NASA controls all strategic management processes through its governance structure, which consists of Agency-level management councils:

The **Executive Council (EC)** determines NASA's strategic direction, assesses Agency progress toward achieving the NASA Vision, and serves as the Agency's senior decision-making body for Agency-wide decisions. For topics dealing with Agency strategic direction and planning, the EC Chair may call a meeting of the Senior Management Council (SMC), which acts in the 'extended EC' mode. Members of both councils advise the Administrator in the Administrator's capacity as Council Chair and decision authority.

The **Acquisition Strategy Council (ASC)** approves acquisition approaches for large, high-profile programs as recommended by the sponsoring Mission Directorate. Chaired by the Associate Administrator, the ASC also decides particular work assignments to Centers and updates to Center Roles. The ASC evaluates mission needs and Agency workforce capacity through an annual Agency Strategic Implementation Planning (ASIP) meeting. It subsequently recommends results as high-level guidance to the EC to inform formulation of the budget Strategic Programming Guidance. The ASC may decide or provide guidance on significant additions or changes to Agency acquisition policies, under the scope of acquisition defined in NPD 1000.5. Finally, the ASC has subsumed the Partnership Council and its responsibilities.

The **Agency Program Management Council (APMC)** serves as the Agency's senior decision-making body regarding the integrated Agency mission portfolio. Chaired by the Associate Administrator, the APMC baselines and assesses performance of NASA projects, programs, mission directorate portfolios, and the integrated Agency portfolio to ensure achievement of NASA strategic goals.

The **Mission Support Council (MSC)** serves as the Agency's senior decision-making body regarding the integrated Agency mission support portfolio, and mission support plans and implementation strategies (including facility, infrastructure, workforce, and associated investments). Chaired by the Deputy Associate Administrator, the MSC determines and assesses mission support requirements to enable successful accomplishment of the Agency's missions.

Table A: Councils, Roles, and Decision Authority

In addition to the governing councils, the Administrator may convene NASA senior leadership for advice on key issues and strategy through the Senior Management Council (SMC) and other non-governing bodies established under NPD 1000.3. For example, while not a council, the widely attended Baseline Performance Review (BPR) monthly meeting is integral to councils' productivity. The BPR is a monthly internal assessment and reporting forum that tracks performance against Agency plans.

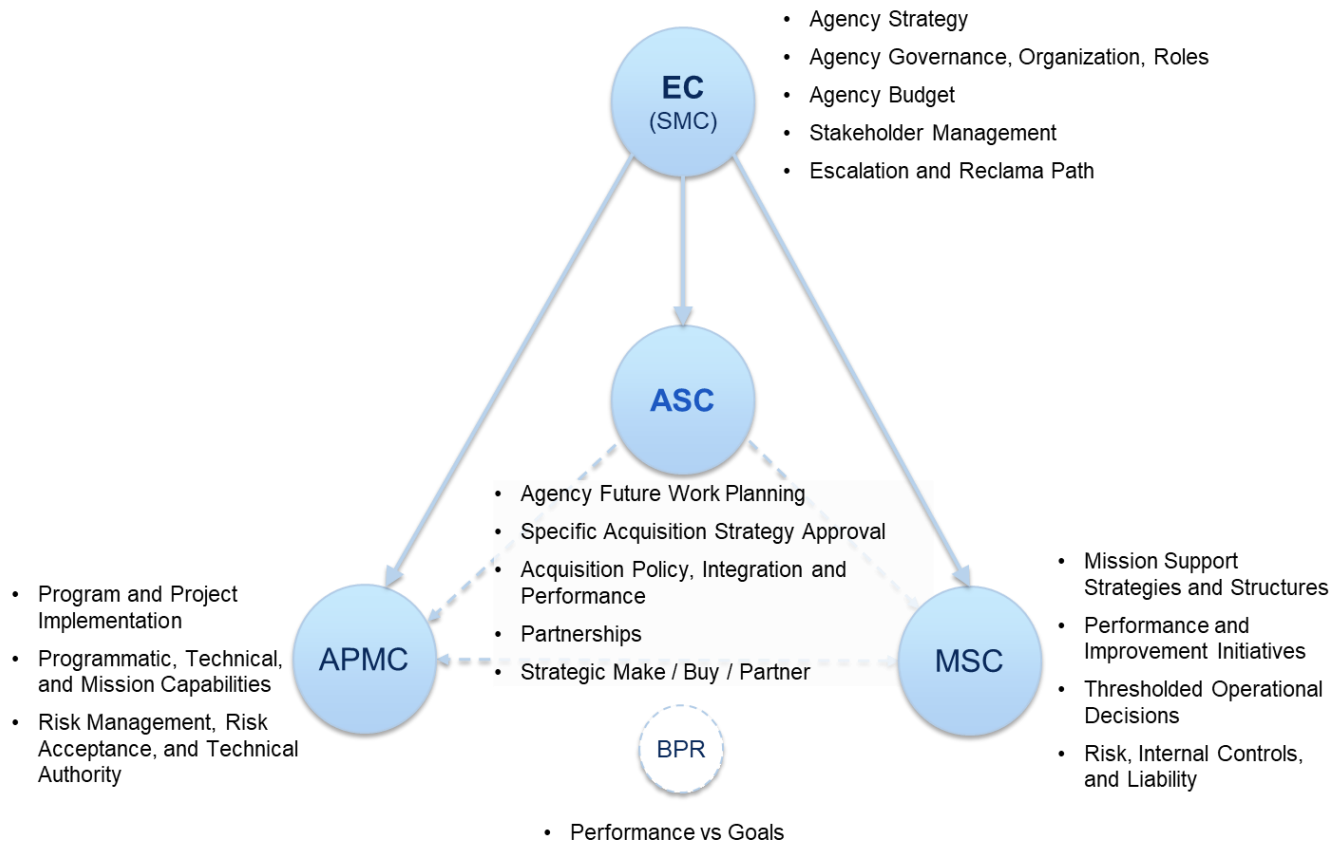

Figure 2.0-1: Functional Relationships between NASA's Governing Councils

In addition to the governing councils, the Administrator may convene NASA senior leadership for advice on key issues and strategy through the Senior Management Council (SMC) and other non-governing bodies established under NPD 1000.3. For example, while not a council, the widely attended Baseline Performance Review (BPR) monthly meeting is integral to councils' productivity. The BPR is a monthly internal assessment and reporting forum that tracks performance against Agency plans.

3.1.1 Roles of External Councils and Advisory Groups and Inspector General

External councils and advisory groups play additional roles in NASA's governance. Only three that are solely concerned with aeronautics and space are addressed here.

Led by the Vice-President of the United States, the National Space Council (NSpC) guides space policy within the administration, providing it advice, information and recommendations for action. The NSpC maintains a User's Advisory Group appointed by the NASA Administrator to "foster close coordination, cooperation, and technology and information exchange", and to assure "the interests of industries and other non-Federal entities involved in space activities, including in particular commercial entities, are adequately represented" across the entire space enterprise.

The NASA Advisory Council is a longstanding body of external experts that meets at least annually and addresses a broad range of topics relevant to NASA, including science, human exploration, aeronautics, technology and innovation, and STEM engagement, offering its recommendations to the NASA Administrator on aspects such as safety, efficiency, and effectiveness of the planned approaches and strategies.

Several decades ago, Congress directed NASA to form an Aerospace Safety Advisory Panel (ASAP) to advise the NASA Administrator on issues of safety, risks, and hazards in NASA's aerospace programs. The ASAP submits an annual report to the NASA Administrator and to Congress on these issues, and NASA's leadership reviews and assesses their findings and recommendations.

Finally, the NASA Office of Inspector General conducts audits, reviews, and investigations of NASA programs and operations to prevent and detect fraud, waste, abuse, and mismanagement and to assist NASA management in promoting economy, efficiency, and effectiveness. In accordance with the Inspector General Act, the Office of Inspector General independently reports to the Administrator, Congress, and the public to further the Agency's accomplishment of its mission.

3.2 Roles, Responsibilities, and Decision-Making

While governing through councils, NASA relies on line organizations for implementation. Implementation takes place primarily at the program or project level, where agreements, requirements, budgets, risk, and schedules are managed.

Many NASA activities require the same resources such as requests for specific inhouse technical expertise, test facility access, hiring additional capacity, procurement negotiation, program and project reviews, and independent safety and security assessments. Whenever possible, NASA management delegates to its line organizations the responsibility to address needs that cross organizations (Mission Directorates, Mission Support offices, and Centers). When necessary, NASA management forms special ad hoc teams to recommend solutions that resolve these conflicts.

The roles and responsibilities of NASA senior management and their respective offices are provided in the authoritative document NPD 1000.3.[1] As reference for discussion, select roles are summarized in Table B – Roles and Responsibilities of NASA Senior Management. Organizational checks and balances are further discussed in Section 3.5.

Administrator	The Administrator leads the Agency and is accountable to the President for all aspects of the Agency's mission, including establishing and articulating the Agency's Vision, strategy, and priorities and overseeing successful implementation of supporting policies, programs, and performance assessments. The Administrator chairs the Executive Council.
Deputy Administrator	The Deputy Administrator advises the Administrator on overall leadership, planning, and policy direction for the Agency. The Deputy Administrator performs the duties and exercises the powers delegated by the Administrator. The Deputy Administrator acts for the Administrator in his or her absence by performing all necessary functions to govern NASA operations and exercise the powers vested in NASA by law.
Associate Administrator	The Associate Administrator performs the duties and exercises the powers delegated by the Administrator and acts for the Administrator in the absence of the Administrator and Deputy Administrator. The Associate Administrator is responsible for integrating the technical and programmatic elements of the Agency. The Associate Administrator oversees the Agency's Centers, Mission Directorates and their programs, and Technical Authorities. The Associate Administrator oversees the planning, directing, organization, and control of the day-to-day Agency technical and programmatic operations, including establishing controls over Agency efforts, providing a means for evaluating mission accomplishments, and correcting deficiencies. The Associate Administrator chairs both

[1] It is intended for the descriptions in this document to be consistent with 1000.3, which remains under revision. NPD 1000.3 is the governing document in terms of the specific language, as it is or will be the most current.

	the Acquisition Strategy Council and the Agency Program Management Council.
Deputy Associate Administrator	The Deputy Associate Administrator is responsible for integrating the mission support elements of the Agency. The Deputy Associate Administrator oversees the Agency's mission support functions through mission support officials-in-charge and the Mission Support Directorate, Centers, and appropriate staff offices. The Deputy Associate Administrator also performs the duties and exercises the powers delegated by the Associate Administrator and acts for the Associate Administrator in his/her absence. The Deputy Associate Administrator chairs the Mission Support Council.
Chief of Staff	The Chief of Staff is responsible for coordinating the management and execution of initiatives, programs, and policies in critical areas of concern to the Administrator and ensuring that the strategic goals and objectives established by the Administrator are achieved. The Chief of Staff directs the Office of the Administrator, oversees the Office of the Agency Council Staff, and also serves as a liaison to the White House staff.
Chief Financial Officer	The Chief Financial Officer provides leadership for the planning, analysis, justification, control, and reporting of all Agency fiscal resources; oversees all financial management systems and activities relating to the programs and operations of the Agency; serves as the Agency's appropriations liaison with the House and Senate Committees on Appropriations; leads the planning, programming, budgeting, and execution process; and monitors and reports the financial execution of the Agency budget.

Chief Engineer	The Chief Engineer provides policy direction, oversight, and assessment for NASA engineering and program/project management. Serves as the lead Technical Authority for engineering and as the principal advisor to the Administrator and other senior officials on matters pertaining to technical readiness in execution of NASA programs and projects. The Chief Engineer is responsible for Agency-level standards and policies as applied to engineering and program management.
Chief, Safety and Mission Assurance	The Chief, Safety and Mission Assurance provides policy direction, functional oversight, and assessment for all Agency safety, reliability, maintainability, and quality engineering and assurance activities. Serves as the principal advisory resource to the Administrator and other senior officials on matters pertaining to safety and mission success. Serves as the lead Technical Authority for safety and mission assurance, and has the responsibility for institutional safety (OSHA, pressure systems, electrical/fire, etc.).
Chief Health and Medical Officer	The Chief Health and Medical Officer provides policy direction, functional oversight, and independent assessment of all NASA health and medical matters in all environments and medical emergency preparedness and contingency operations and response. Serves as the lead Technical Authority for health and medical and as the principal advisor to the Administrator and other senior officials on matters pertaining to human health in all Agency programs and projects. The Chief Health and Medical Officer is also responsible for health and medical Agency-level standards and policies.
Chief Information Officer	The Chief Information Officer provides leadership, planning, policy direction, and oversight for the management of NASA information technology (IT). The Chief Information Officer (CIO) is the principal advisor to the Administrator and other senior officials on matters pertaining to IT, the NASA Enterprise Architecture (EA), cybersecurity, records management, and privacy. The Chief Information Officer is responsible for Agency-level IT standards and policies as applied to IT engineering and IT program management, and accepts IT risk on behalf of the agency consistent with FISMA regulations.

Chief Technologist	The Chief Technologist serves as the principal advisor to NASA senior leadership and advocates on matters concerning Agency-wide technology policy and programs. The Chief Technologist provides advocacy for NASA research and technology programs through communication and integration with technology efforts being conducted by other Agencies; conducts annual review and assessment of technology investments across the Agency, serves as an advocate for cultural change toward creativity and innovation at NASA Centers; identifies innovative technology partnerships; and communicates societal impact of technology investments across and outside the Agency.
Chief Scientist	The Chief Scientist serves as the principal advisor to NASA senior leadership and advocates for the NASA Administrator on matters concerning Agency-wide science policy and programs. The Chief Scientist serves as a primary external interface regarding science issues and results on behalf of the Administrator; encourages and fosters science integration and cooperation across the Agency; and provides oversight to ensure that NASA funds only the most exemplary and meritorious science to enable NASA to achieve its mission.
Associate Administrators, Mission Directorates	The Mission Directorate Associate Administrators (MDAA) are responsible for managing the Mission Directorate's program portfolio and are accountable for the safety, success, and performance of the programs and projects assigned to them. MDAAs define, fund, evaluate, advocate, and oversee the implementation of NASA programs and projects to ensure their outcomes meet schedule and cost constraints as well as performance requirements. MDAAs provide guidance regarding future capability needs required to accomplish the NASA Strategic Plan and for supporting the necessary resources to meet the specific goals and objectives of the Mission Directorate.
Associate Administrator, Mission Support Directorate	The Associate Administrator for the Mission Support Directorate provides effective and efficient institutional support to enable the Agency to accomplish its missions. The Associate Administrator for

	the Support Directorate focuses on reducing institutional risk to NASA's current and future missions by improving processes, stimulating efficiency, and providing consistency and uniformity across institutional capabilities and services.
Center Directors	Center Directors are responsible for providing and/or obtaining resources, overseeing the assignment of workforce and facilities, and managing Center operations to facilitate program and project execution while ensuring that the statutory, regulatory, and fiduciary compliance requirements for the Center are met. The Center Director ensures proper integration, planning, and execution of the programmatic, technical authority, and operational needs of the program and projects assigned to their Center. For resources located at a Center that are managed by the Center, Headquarters, or others, the Center Director is responsible for maintaining, supporting, and/or identifying the workforce and facilities required to meet the planned needs of NASA.
General Counsel	The General Counsel establishes Agency-wide legal policy, provides legal advice, assistance, and Agency-wide functional guidance, ensures the appropriateness of all legal actions and activities Agency wide, and provides binding formal legal opinions on Agency matters. With respect to legal matters and issues, the General Counsel further ensures consistency of approach and eliminates duplication of functional support activities through collaboration, centralization, and/or consolidation of functions between and within Headquarters, the Centers, and separate NASA entities.
Administrator Staff Offices	A number of additional staff offices (e.g., legislative affairs, communications, STEM engagement, and international / inter-governmental relations) provide support to enable Agency operations and other responsibilities.

Table B: Roles and Responsibilities of NASA Senior Management

3.3 Management Structure and Authorities

NASA's primary focus is mission success for the full breadth of operational, developmental, planned, and forecasted programs and projects. Owed to their complexity and technical challenges, these programs and projects typically do not begin with ready-made or off-the-shelf solutions and thus carry risks (technical, cost, schedule) throughout their lifetime. NASA's comprehensive system of independent authorities, process checks and balances (section 3.4) seek to resolve the challenges and reduce risks (section 3.5) to acceptable levels.

At the same time, there is a need to construct and manage an appropriate agility in organizational practices (e.g. various levels of reviews and decision-making) to promote both near- and future-term mission success. For example, NASA's success depends upon a proper balance between factors such as: (a) those authorities vested in Program and Project Managers intended to promote programmatic success, (b) those authorities vested in facility and human resource managers intended to ensure availability of needed workforce and infrastructure, (c) compliance with external and internal Agency requirements, (d) compliance with applicable standards of professional practice, and (e) effectiveness and efficiency across NASA's total program portfolio.

There are three roles in NASA recognized with a title of 'Authority': programmatic, institutional, and technical. NASA's separation of the roles for these Authorities enables a management structure that emphasizes the Authorities' shared goal of mission success while taking advantage of the different perspectives each brings. The Office of the Administrator assigns specific responsibility and authority to the Programmatic, Institutional, and Technical Authorities. These authorities, who are the "official voices" for their respective areas, ensure conformance to applicable institutional and programmatic requirements.

- Programmatic Authorities include the Mission Directorates and their respective program and project managers, where a program is defined as a strategic investment that has a defined architecture, and/or technical approach, requirements, funding level, and a management structure that initiates and directs one or more projects. Similarly, a project is a specific investment identified in a Program Plan having defined requirements, a life cycle cost, a beginning, and an end. A project also has a management structure and may have interfaces to other projects, agencies, and international partners. A project yields new or revised products and services that directly address NASA's strategic needs.
- Institutional Authorities consist of those organizations not in the Programmatic Authority, including mission support functions such as finance, procurement, information technology, legal, and facilities engineering (a more complete list is in NPD 1000. 3E).
- Technical Authorities for Engineering, Safety and Mission Assurance, and Health and Medical interests independently oversee technical aspects of programs and projects; they are appointed and funded separately from programs and projects to assure their independence. The Technical Authorities are described further in the Checks and Balances section of this document.

The Associate Administrator, Mission Directorate Associate Administrators, the Mission Support Directorate Associate Administrator, and Center Directors all work together to help align Center resources and program/project plans over a multi-year time frame, and are committed to ensure an integrated approach to resolving performance, schedule and resource challenges.

Much of the following summary is drawn directly from NPD 1000.3, which should be consulted for a full description of all responsibilities.

3.3.1. Mission Directorates and Programmatic Authority

The Mission Directorates and their Program and Project Managers are the Programmatic Authorities. The Mission Directorates:

- Create the high-level implementation strategies for program formulation based upon the NASA Strategic Plan;
- Define the corresponding programmatic requirements and objectives;
- Provide guidance to the strategic acquisition process, and oversee implementation of decisions from this process; and
- Manage program/project implementation by continually evaluating performance and taking corrective actions as appropriate

MDAAs are responsible for managing the Mission Directorate's program portfolio and are accountable for the safety, success, and performance of the programs and projects assigned to them. MDAAs define, fund, evaluate, advocate, and oversee the implementation of NASA programs and projects to ensure their outcomes meet schedule and cost constraints as well as performance requirements. MDAAs provide guidance regarding future capability needs required to accomplish the NASA Strategic Plan and for supporting the necessary resources to meet the specific goals and objectives of the Mission Directorate. MDAAs provide strategic guidance and input to the NASA Strategic Plan. They establish and maintain the Mission Directorate's strategy and corresponding portfolio to meet Agency goals and objectives.

In their role of Programmatic Authority, the MDAA (among other things):

- Initiates new programs and projects and recommends assignment of programs and projects.
- Establishes in coordination with the assigned Center the program and project budgets; approves Formulation Agreements and Program and Project Plans; oversees program and project performance via the Directorate Program Management Council (DPMC); and approves launch readiness.
- Manages the development of the Mission Directorate's budget to support programmatic requirements and objectives; allocates resources in support of programs and projects in conjunction with OCFO’s functional leadership of Resource Management.
- Reports on program and project progress to Agency forums including deviations in performance (cost, schedule, technical, risk) which could impact Agency commitments and performance goals with external organizations and stakeholders.

Program and Project Managers are responsible and accountable for the safe and secure conduct and successful outcome of their program or project in conformance with governing Programmatic requirements.

All NASA Mission Directorate Associate Administrators (MDAAs) report to the NASA Associate Administrator.

3.3.2 Mission Support and Institutional Authority

The Institutional Authorities providing mission support are the designated "official voices" of their institutional areas and the associated requirements established by NASA policy, law, or other external mandate. Responsibilities are fulfilled by designated Institutional Authorities and vary depending on the functional areas. Common responsibilities are to:

- Represent the institutional function and convey respective institutional requirements established by law, NASA policy, or other external or internal authority to Program and Project Managers;
- Collaborate with programmatic managers on how best to implement prescribed institutional requirements and achieve program/project goals in accordance with all statutory, regulatory, and fiduciary responsibilities;
- Collaborate with Center managers to ensure human resources and facilities are managed efficiently and are adequate to meet mission requirements.
- Ensure conformance to institutional requirements either directly or by agreement with other NASA organizations;
- Disposition all requests for changes to prescribed institutional requirements in their respective area of responsibility; and
- Represent the institutional function to ensure the Agency and cross-enterprise needs are met and protected.

Specifically, the AA for Mission Support (among other things):

- Oversees management of the functional areas of the Chief Human Capital Officer, Strategic Infrastructure, Procurement, Protective Services, Headquarters Operations, and the NASA Shared Services Center.
- Develops and implements plans that include the organization's goals, objectives, metrics, and actions needed to execute the strategic goals and outcomes in the NASA Strategic Plan.
- In consultation with Center Directors, provides input as it relates to the assignment, promotion, discipline, and relief of the principal mission support official at each Center (i.e., the Associate Director).

The Associate Administrator (AA) for Mission Support reports to the NASA Associate Administrator.

3.3.2.1 Enterprise Management of Mission Support

The Mission Support functions of NASA are following an Enterprise operating model, in which capabilities are managed horizontally across the Agency and shared across Centers, while realigning structure (including budget authority and lines of reporting). Rather than a Center-centric model, Mission Support functions follow a more interdependent model, requiring more standard systems, practices, and processes across NASA locations. This Enterprise approach is intended to result in stronger mission services, greater efficiency and lower costs, improved quality and equity of capabilities, and vital resources for critical investments. The *primary* Mission Support functions adhering to this management model include the offices of human capital, procurement, strategic infrastructure, chief information officer, and chief financial officer.

3.3.3 Institutional Authority—Center Directors

Center Directors are responsible and accountable for all efforts assigned to their Center, and to ensure the proper planning and execution of programs and projects assigned to their Center. They allocate resources to successfully execute the programs, projects, and activities assigned to their Center in accordance with Agency priorities and communicate any issues to Mission Directorate Associate Administrators and higher. Center Directors are also responsible for establishing and maintaining Center Technical Authority policies and practices (see Checks and Balances section), consistent with Agency policies and standards.

In accordance with the separation of authorities, the Center Directors do not exercise Programmatic Authority over programs and projects (i.e., do not make programmatic cost and schedule decisions), unless delegated by MDAA in accordance with NPD 7120.5F (section 2.3.1). Similarly, Mission Directorates do not exercise Institutional or Technical Authority. The Center Director is the implementing agent of the Agency through partnering with the Mission Directorate Associate Administrators (MDAAs) for successful execution of programs. As such, Mission Directorate Associate Administrators and Center Directors have a strong and vested interest in the mission of the Agency, and together they must meet the specific needs of individual programs and projects alongside compliance with applicable priorities, policies, procedures, and practices. They continually exchange information to ensure the needs are met and to ensure that issues and concerns are properly elevated to those above them in the authoritative chain for resolution.

Center Directors report to the NASA Associate Administrator.

3.3.3.1 Field Installations: Center Roles and Related Authority

Center roles serve a multitude of critical functions. First and foremost, the establishment of specific Center roles provide policy guidance for Mission Directorates to assign work. Mission Directorates utilize the known Center roles in mission and project planning, as well as future acquisition strategy planning. Secondly, Center roles provide Center leadership the policy direction they need to shape their current and future workforce and supporting infrastructure. Centers use these roles as foundational in developing required planning products and internal guidance, such as Strategic Workforce Plans and Facility Master Plans.

Clear Center roles also enable focused investment in workforce and facilities to support existing and forecasted work assignments across the entire Agency. This enables Agency leadership to optimize capabilities across the Centers and enhance technical excellence.

NASA senior management may expand designations of Center roles, at levels lower than defined in the baseline. Annually, the Acquisition Strategy Council can approve changes to the Center roles. As Mission Directorates clarify their acquisition strategies, Center roles may also be adjusted.

The list of established Center roles may be found in NPD 1000.3E, Chapter 6.

3.4 NASA Senior Leadership Focus Areas

Decisions related to accepting risk for technical and operational matters involving safety and mission success require formal concurrence by the cognizant Technical Authorities (Engineering, Safety and Mission Assurance, and Health and Medical). This concurrence is based on the technical merits of each case and includes agreement that the risk is acceptable. For matters involving human safety risk, the actual risk taker(s) (or official spokesperson[s] and applicable supervisory chain) must formally agree to assume the risk. The responsible program, project, or operations manager must formally accept the risk.

3.4.1 Risk Leadership

While the paragraph above describes authority, NASA leadership/employees are undergoing a cultural shift in risk understanding and acceptance, with the Agency actively implementing a philosophy of 'Risk Leadership' that has the goal of increasing 'decision velocity' within a proper risk posture. Implementation involves many dimensions — defining appropriate technical standards; communicating a clear understanding of risk and benefits; and ensuring the workforce has the proper experience and commitment to collaboration.

NASA's diverse program/project portfolio necessitates a range of risk profiles tuned to the purpose of the program/project/sub-project elements within the portfolio. For example, efforts focused on early innovation are encouraged to take technical and experimental risk to maximize agility and learning. Efforts that are focused higher on the technical maturation scale are still encouraged to take appropriate technical risk (if not as much experimental risk). Various management approaches are employed to achieve this, such as employing minimum, full and stretch success criteria. Team, program, and project leads are afforded the authority to prioritize requirements and identify a minimum essential set of requirements related to the criteria. Simply put, requirements should be tailored (via the process described in Section 3.5.3), with concurrence by the appropriate Technical Authorities, to the minimum necessary to ensure project safety and success. At the same time, a risk assessment across the entire project or programs is performed to enable both management and personnel working individual programs to do a "check" on the consistency of risk and implementation of requirements. By doing so, lessons can be incorporated across projects, and informed, transparent acceptance of variations between projects and programs in the portfolio can occur.

Risk Leadership is not just with respect to NASA's engineering workforce, rather it involves all aspects of implementing missions, including the legal team, the resources managers, the procurement specialists, etc.; all of whom contribute to the risk posture. Furthermore, the risk posture can and should extend all the way to the initial selection of mission proposals, especially recognizing and factoring in the various classes of missions, where each class can accept a different level of risk.

Finally, it is incumbent on all to maintain an understanding and formalize management of risk through the Enterprise Risk Management Program. There is a recognized need to define an appropriate risk posture along the lines of 'how safe is safe enough'. For instance, the ASAP

noted in its recommendation 2009-01-02a: “[a risk-informed design] approach is viable only if a common understanding of "sufficiently safe" exists…and …inconsistent "safe-enough" thresholds among various developers [can develop] if not carefully managed.”

3.4.2 Program Management Integration

In addition to risk leadership and in recognition that Program Management (PM) is an essential element in the successful implementation of our missions, the Agency established the Chief Program Management Officer, an integrating function with matrixed support from the Office of the Chief Engineer (OCE) and Office of the Chief Financial Officer (OCFO) and in partnership with the Mission Directorates and Centers. The PMI function will help assure consistent application of the following principles (for more detail see NPD 7120.4) that establish a standard of uniformity in managing programs and projects at NASA:

> (a) Programs and projects are managed based on a phased life cycle with key decision points (KDPs) that determine readiness to proceed to the next phase. This determination is supported by reviews, including Independent Assessments, conducted by independent review boards/teams through the life cycle and at KDPs.
> (b) The determination of a program’s or project’s readiness to proceed is made by the Decision Authority. The program / project Decision Authority approves the key program or project content, cost, schedule, and content parameters for the life-cycle. These are documented at each KDP.
> (c) Programs and projects are reviewed by a governing Management Council or equivalent (e.g., the APMC, MSC, Mission Directorate PMCs, or IT Program/Project Management Board).
> (d) Programs and projects establish cost and schedule estimates and maintain control plans for program and project management (e.g., Program or Project Plan; Work Breakdown Structure; Risk Management Plan; Systems Engineering Management Plan).
> (e) Programs and projects are managed by trained managers in compliance with Federal acquisition program/project management certification requirements and/or other Agency requirements.

The objective of the Chief Program Management Officer integration function is to provide a focal point in the A-suite to facilitate the communication, coordination, A-suite stewardship, and synergy between different aspects of PM practices and capabilities to promote overall enhancement of PM performance across NASA and to further ensure mission success. This function is not intended to duplicate currently assigned PM functions but to enhance cross-agency integration. The Chief Program Management Officer integration function will include activities such as:

- *Independent Assessment (IA) Integration* to ensure proactive involvement and coordination with the A-suite for approval of IA approaches, products, and to provide stewardship for maintaining a strong Agency IA capability under the distributed approach instituted by an AA memorandum in 2016;

- *PM Policy Formulation and Dissemination* to enhance the involvement of the A-suite in the evolution of PM policies to capture areas of emphasis, lessons learned, process improvements, and to communicate NASA PM policies and policy intent broadly across the PM community;
- *PM implementation alignment* to further ensure proper alignment of PM practices across Mission Directorates and Centers;
- *Assessment and Analysis Integration* to facilitate determination of go-forward plans for assessments and analyses presented to the APMC and to ensure follow-through on recommendations;
- *PM training, certification and capacity* to sponsor coordination and synergy between development, training, and knowledge management efforts in support of NASA PM career development, certification, and PM workforce strategic planning.

3.4.3 Strategic Acquisition

NASA's strategic acquisition process supports obtaining, or advancing the development of, the systems, research, services, construction, and supplies to fulfill the Agency's mission and other activities that advance the Agency's statutory objectives. NASA considers multiple approaches to achieve these goals. The best approaches encourage innovation, efficiency, cost-effectiveness and collaboration, and take advantage of state-of-the-art solutions available within NASA, industry, academia, other Federal agencies, and international partners. The strategic acquisition process assures that NASA's senior management will consider the full spectrum of acquisition approaches from complete commercial development to joint partnerships to total in-house, design-and-build efforts, or a combination of approaches—all intended to meet the Agency's needs and advance NASA's strategic goals.

When a new Agency need is identified, NASA considers the fulfillment of that need from several perspectives. These include the high-level priorities set by the Administration and Congress, and broader goals such as national objectives to assist development of commercial capabilities. In addition, more detailed perspectives include the in-house capability of the Agency, compared to other sources; the maturity of the technologies required to meet the need; schedule requirements, cost constraints, and the spectrum of risks. All of these factors are considered in the formulation of an acquisition strategy for a program or project.

A key component of the acquisition strategy is the approach used to execute it. Such approaches include, but are not limited to, grants, cooperative agreements, international agreements, and Space Act Agreements (SAA), in addition to NASA's ability to contract for goods and services through procurements. The Agency also has the ability to enter into other types of arrangements depending on the circumstances, such as Inter-Agency Agreements, leases, concession agreements, property loan agreements, and Cooperative Research and Development Agreements (CRADAs). The strategic acquisition process ensures consideration of all available approaches to develop an acquisition strategy to best meet the need or goal.

The Agency conducts Acquisition Strategy Meetings (ASMs), which provide decision-making forums where senior Agency management debates and approves program and project acquisition strategies, especially the 'make-buy' elements of the programs/projects. These elements have significant and long-term impacts on the Agency's workforce, its needed size and core capabilities, the Center roles, the potential external

partnerships (international, interagency, and industrial), and the overall acquisition risk. Run through the auspices of the ASC, the annual Agency Strategic Implementation Planning (ASIP) meeting informs upcoming ASMs to assure that preliminary plans and options are developed systematically, and that senior management is aware of any emerging factors (e.g., new OSTP policy or National Space Council activities and priorities).

NASA Policy Directive 1000.5, Policy for NASA Acquisition, further describes strategic acquisition, including guidance for pre-ASM and ASMs.

3.5 Checks and Balances

Given the many risks and complexities of NASA's portfolio, there are many process-related checks and balances built into NASA's way of doing business. They range from peer reviews of individual elements of a payload or project conducted for a project team to high-level oversight of program portfolios (and the results of lower-level reviews) conducted by the Agency's Program Management Council. Four checks and balances of particular importance at both the program or project level are: the Technical Authority role; the independent life cycle review process, the process for tailoring a specific prescribed requirement, and the Formal Dissent process.

3.5.1 Technical Authority

The Technical Authority institutional organizations (Engineering, Safety and Mission Assurance, and Health and Medical) support programs and projects in two ways. As part of their Institutional Authority role, they provide support and oversee the technical work of matrix personnel. In addition, these organizations provide individuals who serve in a formally delegated 'Technical Authority' role traceable to the Administrator and are funded independent of Programmatic Authority.

The Technical Authorities are a key part of NASA's overall system of checks and balances and provide independent oversight of programs and projects in support of safety and mission success. Technical Authority originates with the Administrator. The Engineering Technical Authority and Safety and Mission Assurance Technical Authority are formally delegated to the NASA AA and then to the NASA Chief Engineer and the Chief, Safety and Mission Assurance, respectively; and then to the Center Directors. The Health and Medical Technical Authority is formally delegated to the NASA Chief Health and Medical Officer. Subsequent delegations are made to selected individuals at Center organizational levels.

The fundamental aspects of Technical Authority are: (a) provide an independent view of program/project activities and technical risk posture; (b) ensure direction to the program or project reflects the view of the Center or, where appropriate, the view of the NASA Technical Authority community, (c) adjudicate requests for relief (via waivers) from the Technical Authority technical baseline, and (d) implement the formal dissent process (See Section 3.5.4 Formal Dissent Process) with respect to the Technical Authority technical baseline.

The responsibilities of a Program or Project Manager are not diminished by the responsibilities of the Technical Authority. The Program or Project Manager is still ultimately responsible for the safe conduct and successful outcome of the program or project in accordance with governing requirements.

3.5.2 Technical Excellence

Technical Excellence and Technical Authority are complementary. The cultivation of Technical Excellence is a responsibility of all organizations and employees supporting NASA. The effectiveness of NASA's Engineering, Safety and Mission Assurance and Health and Medical Technical Authorities relies firmly on the Technical Excellence (i.e., the skills, capabilities, and resources) of those entrusted to implement their independent oversight function.

Technical excellence requires:

- The development and maintenance of sound engineering, safety and mission assurance, and health and medical techniques, practices, and analytical methods.
- The training and development of NASA's technical workforce, to include technical decision-making and technical risk management practices.
- The maintenance and evolution of engineering, safety and mission assurance, and health and medical facilities, equipment, and information systems.
- The development and maintenance of NASA and Center technical standards and best practices.
- A robust safety culture that enables open communication throughout all levels of the organization and is conducive to understanding and reducing risk.
- An organizational support structure and required subject matter expertise for the successful implementation of Technical Authority.
- Discipline-level expertise to provide value-added independent review of technical products and/or associated oversight of technical products.

Technical Excellence also relies on two fundamental responsibilities: a) personal accountability whereby every individual must understand and believe that they are responsible for the success of the Agency's mission, and b) organizational responsibility to provide the proper training, tools, and environment.

3.5.3 Independent Life-Cycle Review Process

The independent life-cycle review process guarantees a comprehensive assessment of programs and projects at key milestones by competent individuals who are not dependent on or affiliated with the program or project. The purpose of these reviews is to provide:

- The program/project team with a credible, objective assessment of overall and individual elements, including findings and recommendations;
- NASA senior management with an independent view of program/project performance compared to baselined and current plans; and

- A credible basis for a decision whether to proceed with the next phase of the life cycle, including conditions for approval.

The independent review also provides vital assurance to external stakeholders that NASA's basis for or against proceeding is sound.

3.5.4 Requirements' Tailoring Process

It is NASA policy that all prescribed requirements (requirements levied on a lower organizational level by a higher organizational level) are complied with unless relief is formally granted. Tailoring is the process used to adjust or seek relief from a prescribed requirement to meet the needs of a specific program, project, or activity. Among other things, it enables agility without sacrificing necessary rigor in development and testing. Tailoring is both an expected and accepted part of establishing proper requirements, as it is recognized that each program, project, or activity has unique aspects that may warrant a modification from the nominal process without sacrificing the likelihood of achieving success in a safe, efficient, and economical manner. Tailoring requests are addressed during program/project formulation to reduce the need to process individual waivers / deviations later in the project life-cycle; nonetheless, it is accepted that situations arise where requests for additional waivers must be considered in later phases. In all cases, tailoring processes are transparent -- inclusive of key stakeholders and programmatic and institutional authorities -- and implemented to provide timely approval decisions to support program/program formulation milestones.

Governing processes for tailoring requirements include:

- The organization at the level that established the requirement must approve the request for tailoring of that requirement unless this approval responsibility has been formally delegated elsewhere.
- Management at the next higher level is informed in a timely manner of the request for tailoring. Higher-level management then has the option of concurring with or overruling the lower-level decision.
- Approved tailoring requests must be documented and become part of the retrievable program, project, or activity records.

All tailoring authorizations are approved and concurred by the appropriate Programmatic and Institutional Authorities.

3.5.5 Formal Dissent Process

NASA supports full and open discussion of issues of any nature (e.g., programmatic, institutional), including alternative and divergent views. Diverse views are to be fostered and respected in an environment of integrity and trust with no suppression or retribution. In the team environment in which NASA operates, team members often have to determine where they stand on a decision. In assessing a decision or action, a member has three choices: agree, disagree but be willing to fully support the decision, or disagree and raise a Formal Dissent.

A "Formal Dissent" is a substantive disagreement with a decision or action that an individual judges is not in the best interest of NASA and is of sufficient importance that it warrants a timely review and decision by higher-level management. For disagreements that rise to this level of importance, NASA has formalized the Formal Dissent process.

Key steps of the Formal Dissent process are:

- The individual raising the dissent must specifically request that the dissent be recorded and resolved by the Formal Dissent process.
- Disagreeing parties must jointly establish the facts agreed upon and their respective positions, rationale, and recommendations. A Formal Dissent must be supportable and based on a clear and sound rationale (not on vague or unyielding opposition).
- The parties jointly and transparently present their views to the next higher level of the involved authorities (e.g., the Programmatic Authority, Technical Authority, and/or Institutional Authority, as applicable).
- If the dissenter is not satisfied with the process or outcome, the dissenter may appeal to the next higher level of management. The dissenter has the right to take the issue upward through the organization, even to the NASA Administrator, if necessary.
- A Center Director may, at his or her discretion, request expedited hearing of a Formal Dissent at any level within the Agency up to and including the NASA Administrator based upon his or her judgement that a rapid resolution of the Formal Dissent is in the best interests of the Agency and the dissenting individual/organization.

All authorities may be involved in decision-making in items that represent differences or formal dissents. In the event an authority chooses to (1) overrule a lower-level authority's decision, or (2) non-concur with any formal dissent pending appeal, transparency in decision-making requires that they explain it to the person raising the issue and those above them in the authoritative chain.

CHAPTER 4. STRATEGIC MANAGEMENT SYSTEM

The governance system discussed in the first part of this document defines the principles that guide NASA's decision-making and the second part of the document defines responsibilities and accountability of its leaders, highlighting the important aspect of organizational checks and balances. Both are coupled with the Strategic Management System that defines how NASA leadership establishes its goals and missions and ensure high levels of performance to meet internal and external stakeholder expectations.

NASA's Strategic Management System is a collective set of processes forming the framework that enables the Agency to establish goals and objectives, formulate and implement strategies, allocate resources effectively, and manage safe and successful programs and projects in accordance with applicable laws and policies. NASA's stakeholders expect the Agency to make strategic investments in both workforce and infrastructure to accomplish its objectives, develop performance metrics to measure progress towards its strategic goals, and deliver on its performance commitments while operating effectively and efficiently.
These processes incorporate external requirements that come to Federal agencies in the form of public laws and Presidential directives, as well as internally generated requirements. See Figure 4.0-1.

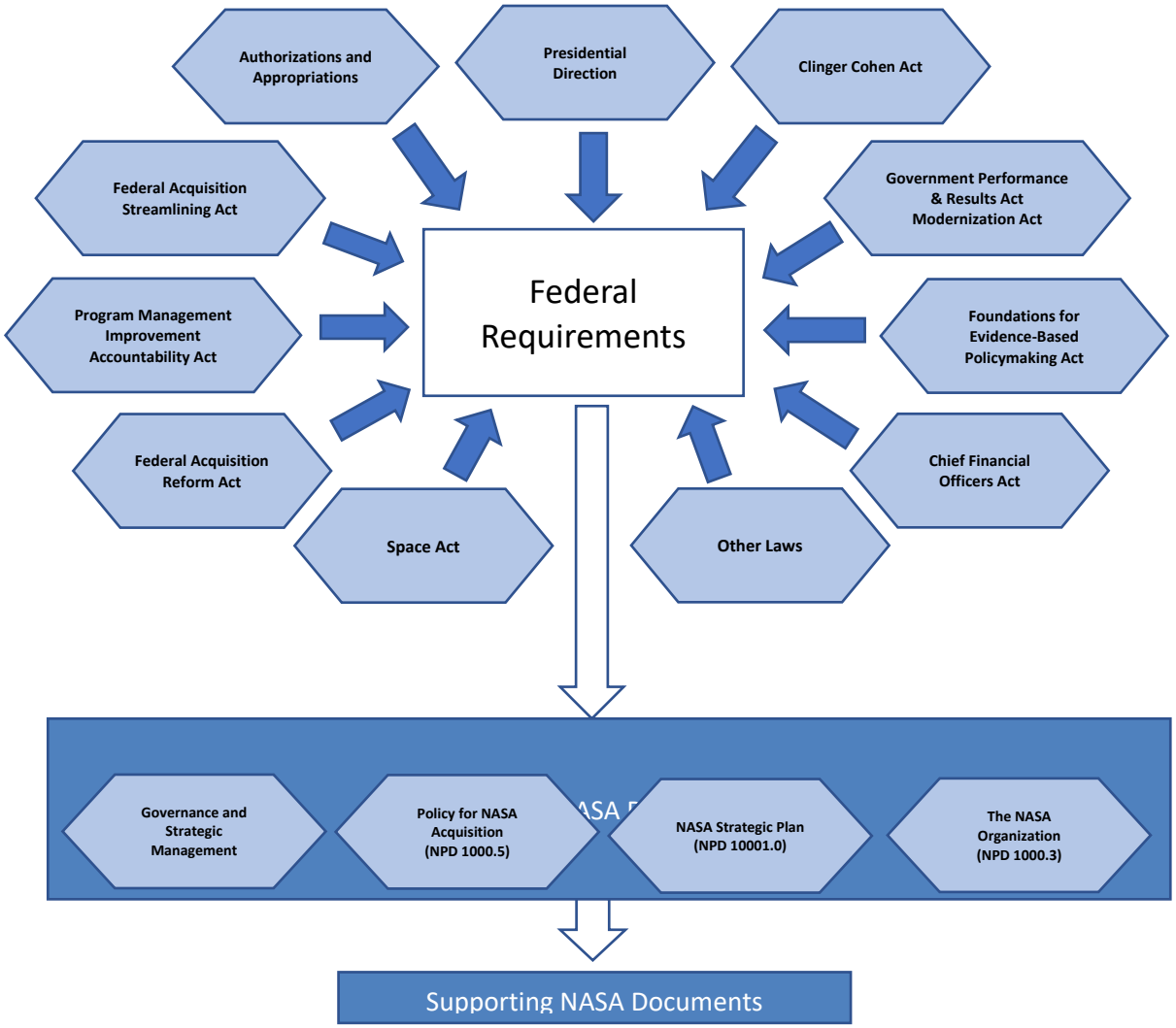

Figure 4.0-1: Strategic Management Requirements. A number of external and internal requirements shape the way NASA plans and conducts its missions and operations. Four primary NASA documents embody the Agency's strategic management system and are used to guide all other supporting documents developed to manage the Agency.

An example of an external requirement, the GPRA Modernization Act requires all Agencies to designate an Agency Chief Operating Officer (COO) and Performance Improvement Officer (PIO) for managing Agency performance. The NASA COO function is fulfilled by the Associate Administrator who provides organization leadership to monitor and improve performance. The COO is responsible for conducting Agency performance reviews that assess progress toward program and project plans and address cross-cutting concerns that may impact mission performance against an approved plan. The PIO function is fulfilled by the Director of the Strategic Investments Division who reports to the COO / AA on achievements of the Agency's missions and goals. NASA's COO and PIO annually review progress towards strategic objectives by assessing impact of strategies and implementation of key activities (including multi-year performance goals, Agency Priority Goals, and cross-agency priority goals) and by leveraging evidence, evaluation, studies, and analyses to identify challenges, risks, and opportunities to ensure mission success.

Internally, there are four NASA policy documents that establish the foundation for the Strategic Management System: this NPD; NPD 1000.5; NPD 1001.0; and NPD 1000.3. Additional guidance on the policies, requirements, processes, and procedures may be found in supporting documents, such as the NASA Procedural Requirements (NPRs) that fall under these NPDs. These policy documents and processes ensure that all components of NASA are aligned with its strategic goals and direction; all programs and supporting functions are executable; and progress toward plans is measurable.

NASA uses laws, executive orders, governance, and best management practices to promote a culture of results and accountability. Accountability is realized through a dynamic process of collecting evidence (data, research, or end product) and conducting rigorous independent evaluations of the evidence. These processes of verification and validation determine general accuracy and reliability of performance information, which feed strategic planning and course correction. Collectively, the culture, independent evaluation, and adherence to process provide a level of confidence to stakeholders that the information the Agency provides is credible.

The Strategic Management System is divided into four complementary process phases consisting of planning, programming, budgeting, and execution (PPBE). Figure 4.0-2 (a and b) provides an overview of these phases annually and over a series of years. Although these phases occur sequentially as part of a single cyclic system, planning and execution activities are, by their nature, continual. This results in concurrent phases focused on different time periods. The different levels of data and information fidelity, organizational perspectives, and spans of time treated in the planning phase determine the timing and type of input provided to the programming and budgeting phases. Similarly, the evaluation and reporting that take place during the execution phase are used as input to the planning, programming, and budgeting phases.

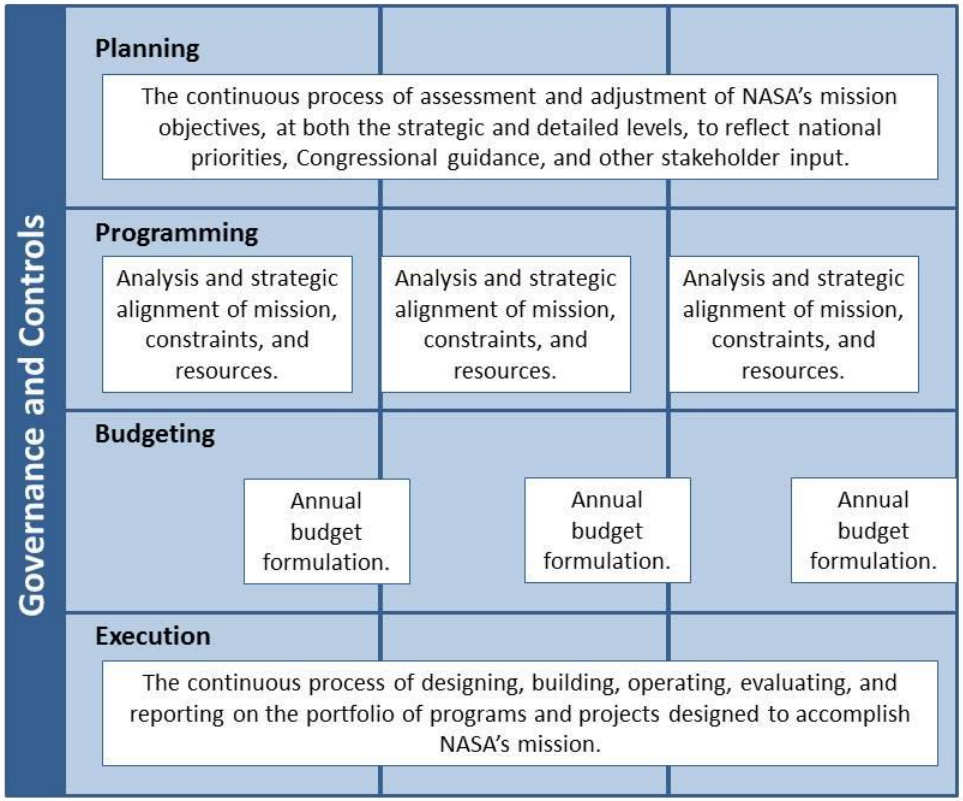

Figure 4.0-2a: NASA Strategic Management System Phases **--** These phases are guided by external and internal controls. The relationship of actions and activities between them creates a disciplined management approach, placing an emphasis on planning, performance, and results.

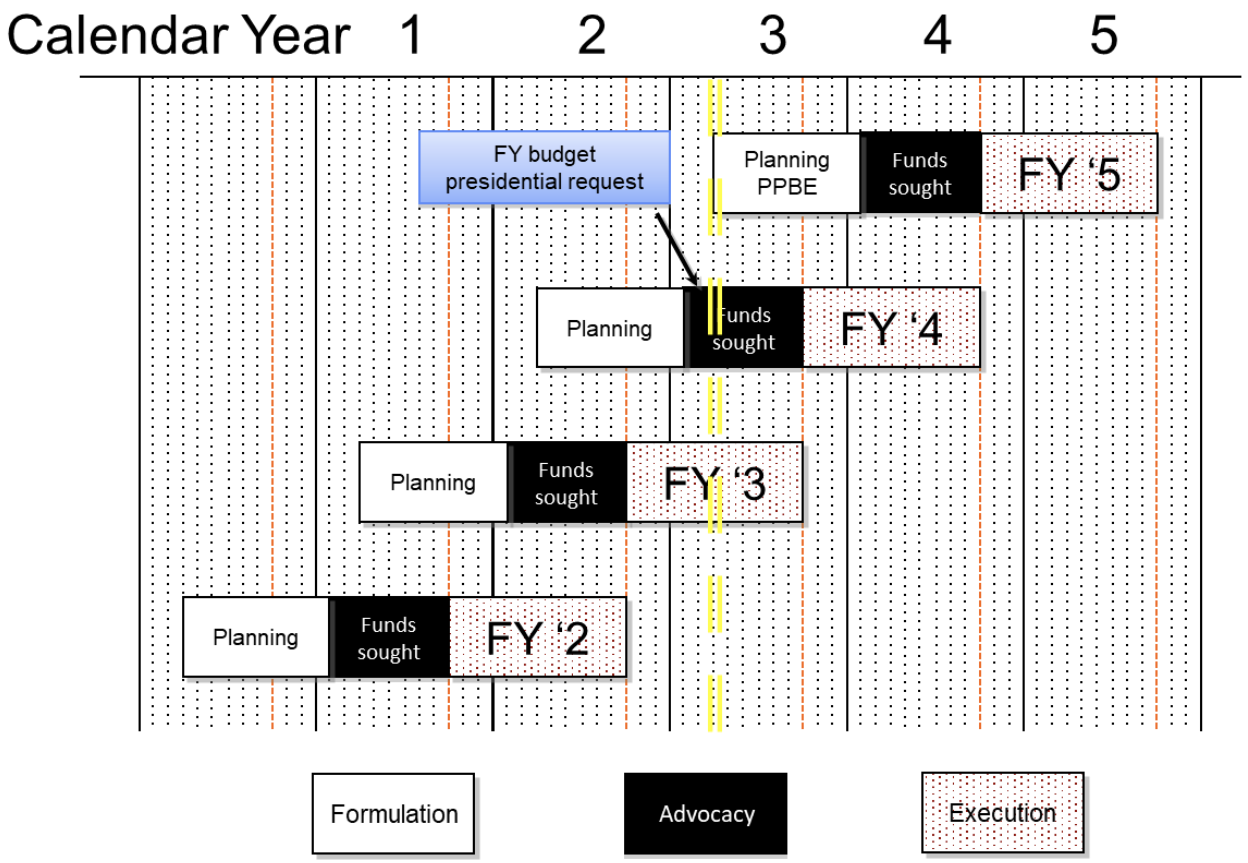

Figure 4.0-2b: NASA Strategic Management System Phases, Multi-Year -- As can be seen, at any one moment in time, three budgets are being developed, planned, or executed, each utilizing the Strategic Management System.

4.1 Planning

The planning phase consists of continuous assessment and adjustment of NASA's mission objectives at both the strategic and detailed levels to reflect national priorities, Congressional guidance, other stakeholder input, and emerging trends. Forming the foundation of the Strategic Management System are the efforts required for strategic long- and near-term planning. These activities take into account differing time spans

and the complex interactions of high-level guidance and specific requirements, independent assessments and analyses, and individual needs of a multi-faceted organization. Strategic long-term planning analyses and initiatives are focused on the timeframes of ten years or beyond, and provide context and input to the NASA Strategic Plan and near-term planning efforts.

The Strategic Plan consists of Strategic Goals (10-20 years and beyond) and Strategic Objectives (up to 10 years). In accordance with Government Performance and Results Act Modernization Act of 2010 (GPRAMA), NASA also delivers its Agency Priority Goals (APG) with its Strategic Plan (2-year goals). NASA's annual performance plan sets near-term targets for the performance goals (PG) to measure the progress of the outcomes established in the strategic plan. Additionally, Office of Management and Budget (OMB) identifies Federal Government cross-agency goals (2 to 4 years).

4.1.1 Factoring External Guidance

The Agency's external guidance comes in the form of national policies, legislation, OMB, and Presidential directives, which reflect priorities in space, aeronautics, and science (e.g., the Space Policy Directive (SPD-1), the NASA Authorization Act) to define the Agency's mission and strategic goals. Other legislation and Presidential directives set requirements for demonstrating programmatic and management performance, accountability, and transparency.

4.1.2 Leveraging Internal Analyses and Assessments

The NASA Administrator may commission independent assessments, strategic architecture and portfolio trade studies that explore strengths, weaknesses, opportunities, and threats to achieving the strategic goals. The study results shape NASA's direction and its annual budget request, and may serve to inform internal and external stakeholders.

4.1.3 Utilizing Strategic Planning Processes

NASA's strategic planning processes convert external guidance, internal studies and assessments, and the Agency's vision and mission statements into an articulation of the Agency's strategic direction. Programmatic and institutional priorities and commitments derive from this strategic direction, and enable detailed planning of mission directorate portfolios. Examples of long-term strategic planning processes include strategic acquisition (see section 3.4.3), NASA Strategic Plan development, strategic assessments and portfolio analysis.

4.1.3.1 Strategy Implementation Planning Process

The SIP process transforms high-level Agency strategy into guidance for implementing NASA's portfolio and planning budget distribution. The SIP brings together representatives from the Mission Directorates, the Centers, and key Headquarters offices to discuss, debate, and resolve programmatic and/or pervasive issues affecting long-term planning. The SIP process affords an early view of potential major acquisitions (described below); it also enables the Administrator to provide guidance that ensures any new Agency and Administration initiatives are appropriate, current portfolio risk and implications to the future portfolio are understood, and strategic and operational aspects for placement of work in-house versus out-of-house as part of high-level make or buy strategy.

4.1.3.2 Strategic Acquisition Process

The governance principle in Section 3.4.3 establishes a process for making the complex deliberations and trades necessary for strategic acquisition planning. The Policy for NASA Acquisition, NPD 1000.5, provides the foundation for NASA's acquisition process. Key to the process are the ASIP and ASM meetings (see Section 3.4.3) attended by Agency senior leaders who exchange preliminary acquisition plans, portfolio requirements, and programmatic options and perspectives. These exchanges enable and assure acquisition decisions consider Agency goals and needs rather than a single mission directorate priority, and seek to align Agency and Center resources over a multi-year timeframe in the most effective and efficient use of these resources. Decisions flow from this Agency-wide strategy development to acquisition strategies that best meet identified needs and goals, and finally to the execution of the selected strategy.

While the perspective of this process is long term, it is recognized that NASA must make near-term decisions regarding workforce and facilities and services at the Centers. As such, these decisions are reflected in the annual guidance of the PPBE budget cycle.

4.1.3.3 Strategic Plan Development

The NASA Strategic Plan, NPD 1001.0C, is the foundation for all other plans in NASA. It represents a set of commitments by the Administration defining NASA's vision, mission, strategic goals, and objectives that support and drive NASA's activities. The plan is updated every four years and is delivered in the year after a Presidential election, as mandated by the GPRAMA.

The Strategic Plan communicates the details of NASA's strategic direction through priorities, goals, and overarching approach for the next decade. It outlines NASA's vision for the future and long-term goals to make that future a reality. Strategic objectives reflect the outcomes the Agency is trying to achieve to pursue our mission. Based on the Strategic Plan, Mission Directorates, Centers, and Headquarters offices subsequently develop their implementation approach.

Developing NASA's Strategic Plan involves representation across NASA organizations as well as from other Government agencies, industry, advisory committees, and academia. This collaboration ensures that NASA draws from a broad base of experience and expertise in setting the Agency's course for the future. Longstanding examples include the commissioning of the National Academies of Science and Engineering and the National Academy of Public Administration to identify emerging trends and recommend initiatives and investments in their specialties. The Executive Branch identifies a limited number of cross-agency priority goals to improve coordination and best practice sharing government wide. OMB works with each agency to designate its areas of contribution to these Federal goals.

Agency senior leadership establishes the Vision and Mission for NASA at the outset of a Strategic Plan development cycle. Senior leadership will also outline the direction the initial alignment of the Agency's new strategic goals. An intra-agency planning team then develops and recommends the objectives, key management strategies, and Agency Priority Goals that support the strategic direction provided by senior leadership, and submits all material for the Administrator's approval. Agency Priority Goals consider two-year horizons and are finalized during

the budget cycle of their initial execution year. NASA then reports annually on metrics for agency and cross-agency priority goals, as well as the progress toward accomplishing its strategic objectives. These reports leverage assessments of multi-year performance goals, and analyses related to strategies, implementation, challenges and risks, opportunities, and other events that may have affected progress. Assessments are reported through https://performance.gov, NASA's combined Annual Performance Plans and Annual Performance Report included in the Congressional Justification (CJ).

4.1.4 Implementation Planning

Mission Directorates conduct multi-year mission implementation planning activities to support the achievement of NASA's strategic goals. They develop program and project plans with the Centers to articulate the commitments of each appropriate NASA organization to ensure that the specified resources can be used to meet the identified priorities and plans. Performance commitments are key deliverables tied to the baseline budget and schedule presented in the plans. To complete the chain of accountability, NASA supervisors and managers link individual employee performance plans to the Agency's performance measures through the annual employee evaluation process.

The Mission Support Directorate leads Agency efforts to identify institutional risks to the missions and establish investment and funding priorities as inputs to Agency planning. Of particular importance to NASA is the effective management of its workforce and capital assets to ensure that it continues to have the scientific and technical expertise and facilities necessary to preserve the Nation's role as a leader in aeronautics, exploration, Earth and space science, and technology.

Implementation planning requires that these Directorates and Centers establish metrics and performance indicators to determine how progress toward their program and project goals and objectives will be monitored and reported during the execution phase. Internally, in partnership with NASA's PIO, each organization develops or updates its implementation plans and performance indicators to align with the Agency Strategic Plan and the Agency's annual budget decisions. To reinforce the budget and performance link, Agency teams collaborate to develop the performance measures and negotiate content with OMB as part of the annual budget development process.

4.2 Programming

The programming phase is an annually updated process to analyze and align mission, constraints, and resources. This includes converting the objectives and implementation plans into executable programs and projects with milestones and resource allocations planned for the next five-year period. The process involves detailed analyses from different Agency perspectives as well as meetings for issue resolution and decision-making. The resulting resource and workforce allocations across the Agency are then used during the budgeting phase.

The major activities in the programming phase occur over several months. This phase begins each February with the internal release of the NASA Strategic Programming Guidance (SPG). The SPG consolidates and documents the information developed in the preceding planning phase. It

aligns with the NASA Strategic Plan and incorporates information from planning activities such as SIP guidance, acquisition guidance, and studies and assessments that affect the upcoming budget phase. The SPG incorporates outcomes of decisions from the governance structure as well as Agency-level decision bodies. It identifies or references the specific strategic performance indicators that Control Account Managers (CAMs) must address in their analyses. Each CAM releases a supporting Program and Resources Guidance (PRG) document that translates the SPG into detailed guidance for the program and project managers to use to ensure effective programming across the Agency, including at the Centers.

Programming is an iterative analysis process providing a high level of data fidelity on workforce and institutional capabilities and resource constraints as applied to planning priorities and other internal or external factors. Mission Directorates and Centers are central to ensuring executable programs and projects through their analyses of proposed plans against resources. This phase concludes annually in late July when decisions on issues have been finalized. The resulting resource and workforce allocations enable the Agency to begin constructing its submission to the Office of Management and Budget for inclusion in the President's budget.

4.3 Budgeting

NASA is an Executive Branch Agency and follows the Federal budget process described in OMB Circular No. A-11 for the formulation and execution of an annual budget. The budget requested is for two years in advance of the period of performance. The intent of this "performance budget" is to communicate to the OMB and Congress, the performance commitments NASA makes for the requested funds.

The Office of the Chief Financial Officer (OCFO) releases updated budget control numbers and guidance for the Agency organizations to construct the detailed assignment of resources for the Agency activities. The Control Account Managers must identify and explain any impacts resulting from changes in program content, milestones, or events that affected the Agency budget. The OCFO submits the proposed budget to OMB each September.

OMB and NASA deliberate over the budget until a decision is reached. The budgeting phase ends with the creation and submission of the Congressional Budget Justification (aka CJ) and includes NASA's annual President's Budget Request and Annual Performance Plan and Annual Performance Reports. The budget document is formally submitted to Congress as NASA's fiscal year "Budget Estimates." The CJ provides detailed budget plans, justifications, and other information that supports Congressional decision-making on NASA appropriations.

4.4 Execution

The execution phase is the continuous process of executing the budget to design, build, integrate, test, operate, evaluate, and report on the portfolio of programs and projects necessary to accomplish NASA's mission. NASA leadership requires near-real-time access to planning, budgeting, and programmatic data and the accompanying evaluations to enable timely decision-making, corrective actions, and the ability to respond to the President, OMB, Congress, and mission requirements. The Strategic Management System enables rigorous ongoing monitoring

and reporting during the execution phase to measure actual results against anticipated results, along with causes of variances and, if necessary, plan corrective actions. This iterative review and engagement throughout the Agency ensures proper management controls and that performance evaluation occurs to rapidly address issues or concerns as they arise.

4.4.1 Controls

NASA managers and employees at all levels are responsible for establishing and maintaining programmatic, institutional, and financial controls to maximize the effectiveness and efficiency of its programs and operations and to ensure compliance with applicable laws and regulations. An annual evaluation by all NASA organizational units culminates with the Administrator's Annual Statement of Assurance Letter to the President and Congress asserting to the Agency's internal controls in accordance with the Federal Managers' Financial Integrity Act (FMFIA) of 1982. Such controls are meant to ensure the effectiveness, efficiency, safety, and accountability of Agency operations; safeguard our assets from unauthorized use or disposition; and ensure compliance with applicable laws, regulations, policies, and other standards.

4.4.2 Monitoring, Evaluating, and Reporting on Performance Progress

NASA holds its leadership at all levels fully accountable for meeting near-term performance standards and metrics as well as progress toward long-term objectives established during the planning phase. As noted earlier (section 3.1), NASA conducts a monthly Baseline Performance Review to facilitate Agency performance monitoring and inform senior leadership. The meeting considers all NASA mission areas through rotating reviews and discusses / resolves crosscutting mission-support issues. The meeting is also the forum for the Agency's annual Strategic Review assessment, which provides senior leadership with a forward-looking analysis of NASA's progress made against each of the strategic objectives established in its Strategic Plan.

External evaluators include the following advisory groups, many previously mentioned: NASA Advisory Council (NAC), the National Academies, Office of Personnel Management (OPM), the Aerospace Safety Advisory Panel (ASAP), the Government Accountability Office (GAO), the National Academy of Public Administration, and independent auditors. The Office of Inspector General (OIG) also conducts audits, reviews, and investigations of NASA programs to prevent and detect fraud, waste, abuse, and mismanagement and to assist NASA management in promoting economy, efficiency, and effectiveness.

NASA reports performance against its strategic goals, objectives, Agency Priority Goals, as well as its financial performance to OMB, Congress, and the public. NASA also reports progress against other external metrics as required by laws, regulations, or Executive Orders. OMB and Congress use the external reviews and reporting by Federal agencies in their annual budget decisions.

4.5 Feedback into Planning and Programming

The Strategic Management System is composed of a set of continuous processes that, as a whole, allow NASA to assess the allocation of its resources in achieving its planned performance goals. The system's emphasis on program performance and results uses the findings from

internal and external reviews and evaluations as input to successive planning and programming processes. To the extent that a program or mission support area fails to meet its performance goals, governing councils may make decisions to adjust directions and resources as appropriate. In addition, the knowledge gained by lessons of past practices are captured in Agency and Center policies, standards, procedures, and practices to support continuous improvement in implementing NASA missions.

4.6 Process Communications

The Strategic Management System as described yields several defined outputs. Table C shows the relationship between products and associated schedules that communicate results to NASA employees so that they may carry out their responsibilities. Products with an external requirement source must be readily accessible, typically through the Internet, for external audiences such as OMB, Congress, and the public. The organizational responsibility for each product, the line of authority for review or approval, and schedule are provided as an indication of the interactions within the processes and governance relationships.

	Products	Requirement Source	Responsibility for Product	For Approval or Review By	Schedule
Planning	NASA Governance and Strategic Management Handbook (NPD 1000.0)	Internal	Office of the Associate Administrator	Administrator	As required
	NASA Strategic Plan (NPD 1001.0C)	External	Office of the Chief Financial Officer (OCFO); Office of the Associate Administrator	Administrator	Quadrennially
	The NASA Organization (NPD 1000.3)	Internal	Office of the Associate Administrator	Administrator, Deputy Administrator, Associate Administrator	As required
	Multi-year Program and Project Plans	Internal	Program and Project Managers	MD Associate Administrators	At Key Decision Points
	Program and Project Reviews	Internal	Mission Directorates (MDs)	MD Associate Administrators or Center Directors	Quarterly or as required
	Mission Architecture	Internal	MDs	Associate Administrators or MD Associate Administrators	As required
Programming	Strategic Programming Guidance	Internal	OCFO	Administrator	Annually (February)
	Program and Resource Guidance	Internal	MDs	MD Associate Administrators	Annually
	Program Analyses and Alignment	Internal	OCFO	Chief Financial Officer	Annually
	Programmatic and Institutional Guidance	Internal	OCFO	Administrator	Annually
Budgeting	NASA Fiscal Year Budget Estimates (also referred to as the Congressional Justification, or CJ)	External	OCFO	Administrator	Annually (first Monday in February)
	Annual Performance Plan (submitted with CJ)	External	OCFO; MDs	Chief Operating Officer (COO); Performance Improvement Officer (PIO)	Annually (February)
Execution	Strategic Reviews	External	OCFO; MDs	COO; PIO	Annual
	Agency Program Baseline Assessments (i.e. Baseline Performance Review (BPR))	Internal	Office of the Chief Engineer, OCFO, Office of Safety and Mission Assurance	Associate Administrator	Monthly
	Operating Plan	External	OCFO	Administrator	As required
	Annual Performance Report (submitted with CJ)	External	OCFO; MDs	COO; PIO	Annually (February)
	Agency Priority Goals	External	OCFO; MDs	Goal Leaders, COO; PIO	Quarterly
	Agency Financial Report	External	OCFO	Administrator	Annually (November)
	Major Program Annual Reports (submitted with CJ)	External	OCFO	Administrator	Annually (February)
	Program and Project Life Cycle Reviews	Internal	Mission Directorates (MDs)	Governing Decision Authority (AA or MDAA)	As required

Table C: Products and Associated Schedules

ATTACHMENT A: DEFINITIONS

- **Acquisition**: Obtaining, or advancing the development of, the systems, research, services, construction, and supplies to fulfill the Agency's mission and other activities that advance the Agency's statutory objectives.
- **Agency Priority Goal (APG**): A limited number of goals, usually 2–8, identified by CFO Act agencies or as directed by OMB. An APG advances progress toward longer term, outcome-focused goals in the Agency's Strategic Plan, near-term outcomes, improvements in customer responsiveness, or efficiencies. An APG is a near-term result or achievement that leadership wants to accomplish within approximately 24 months that relies predominantly on agency implementation (as opposed to budget or legislative accomplishments). APGs reflect the top near-term performance improvement priorities of agency leadership, not the full scope of the agency mission.
- **Approval**: Authorization by a required management official to proceed with a proposed course of action. Approvals must be documented.
- **Assessment:** The evaluation of a program, project, or institutional initiative with respect to its accomplishments and performance in meeting requirements.
- **Assure:** To promise or say with confidence. It is more about saying than doing. (Example: I assure you that you'll be warm enough.)
- **Audit**: An assessment and analysis of program performance and/or financial information.
- **Authorize**: To give power, permission, or authorization; to invest with authority.
- **Competition**: An acquisition strategy whereby more than one Center or contractor is sought to bid on a service or function; the winner is selected on the basis of criteria established by the organization for which the work is to be performed. The law and NASA policy require maximum competition throughout the acquisition life cycle.
- **Concurrence**: A documented agreement by a management official that a proposed course of action is acceptable.
- **Cross Agency Priority (CAP) Goals**: A statement of the long-term level of desired performance improvement for Government-wide goals set or revised at least every four years. These include outcome-oriented goals that cover a limited number of crosscutting policy areas and management goals addressing financial management, strategic human capital management, information technology management, procurement and acquisition management, and real property management.
- **Ensure**: To do or have what is necessary for success. (Example: These blankets ensure that you'll be warm enough.)
- **Goal**: A statement of the result or achievement toward which effort is directed. Goals can be long or short-term and may be expressed specifically or broadly. Progress against goals should be monitored using a suite of supporting indicators. For the purpose of this NPD, there are CAP, strategic goals, strategic objectives, APG, and performance goals, all of which have uniquely defined properties.
- **Government Performance and Results Act Modernization Act of 2010 (GPRAMA):** Legislation that updated the Government Performance and Results Act (GPRA) of 1993. This update took into consideration numerous GAO reports and evolution of agency practices as well as increased public access to agency performance information via performance.gov. GPRAMA created a more defined performance framework by defining a governance structure and by better connecting plans, programs, and performance information. The new law requires more frequent reporting and reviews (quarterly instead of annually) that are intended to increase the

use of performance information in program decision making. New elements include (but are not limited to): a) revised agency strategic planning requirements; b) revised agency performance planning and reporting requirements; c) creation of chief operating officers, performance improvement officers, and goal leaders roles.

- **Implementation**: To put in place the necessary resources and take action to execute a program or project.
- **Indicator**: A measurable value that indicates the state or level of an activity.
- **Institutional Authority**: Institutional Authority encompasses all those organizations and authorities not in the Programmatic Authority. This includes Engineering, Safety and Mission Assurance, and Health and Medical organizations; Mission Support organizations; and Center Directors. Individuals in these organizations are the official voices for their respective areas and set, oversee, and ensure conformance to applicable institutional requirements.
- **Metric**: A measurement taken over a period of time that communicates vital information about a process or activity.
- **OMB Circular A-11:** A policy document from the Office of Management and Budget that offers annual guidance on the requirements Federal agencies must meet for budget submission performance planning, performance reporting, and Strategic Planning. A policy from the Office of Management and Budget that offers annual guidance related to the budget process (formulation, justification, and execution). It also describes requirements under GPRA Modernization Act and the Administration's approach to performance management, including a) requirements for agency strategic plans, annual performance plans and reports on a central Web site; b) APG and CAP goals; c) reviews of agency performance; d) Federal Program Inventory; and e) elimination of unnecessary agency plans and reports.
- **Oversight**: To actively monitor the implementation of assigned actions, policy, and procedures. Headquarters officials with an oversight role have the responsibility to establish and track performance parameters to ensure assignees are properly implementing their actions, policies, and procedures.
- **Performance Goal**: A target level of performance at a specified time or period (usually 4-5 years) expressed as a tangible, measurable outcome against which actual achievement can be compared, including a goal expressed as a quantitative standard, value, or rate. A performance goal is comprised of targets and timeframes. The distinction between “long term” and “annual” refers to the relative time frames for achievement of the goals. Performance goals are set in NASA’s Annual Performance Plan.
- **Performance Indicators:** Indicators, statistics, or metrics used to gauge program performance, in support of performance goals. These are generally established in an annual basis to correspond with the budget process.
- **Performance Management**: Use of goals, measurement, evaluation, analysis, and data-driven reviews to improve results of programs and the effectiveness and efficiency of agency operations. Performance management activities often consist of planning, goal setting, measuring, analyzing, reviewing, identifying performance improvement actions, reporting, implementing, and evaluating. The primary purpose of performance management is to improve performance and then to find lower cost ways to deliver effective programs.
- **Performance Measures**: Indicators, statistics, or metrics used to gauge program performance.
- **Program**: A strategic investment by a Mission Directorate or Mission Support Office that has a defined architecture, and/or technical approach, requirements, funding level, and a management structure that initiates and directs one or more projects.

- **Programmatic Authority**: Programmatic Authority includes the mission Directorates and their respective program and project managers. Individuals in these organizations are the official voices for their respective areas and set, oversee, and ensure conformance to applicable programmatic requirements.
- **Project**: A specific investment having defined goals, objectives, requirements, life-cycle cost, a beginning, and an end. A project yields new or revised products or services that directly address NASA's strategic goals. They may be performed wholly in-house, by Government, industry, academic partnerships, or through contracts with private industry. (This is a general definition for a NASA project. Specific project definitions are in the program/project management procedural requirements unique to project investment area.)
- **Stakeholder**: An individual or organization that is materially affected by the outcome of a decision or deliverable but is outside the organization doing the work or making the decision.
- **Strategic Goal**: A statement of aim or purpose that is included in a Strategic Plan. Strategic goals articulate clear statements of what the Agency wants to achieve to advance its mission and address relevant national problems, needs, challenges and opportunities. These outcome-oriented strategic goals and supporting activities should further the Agency's mission.
- **Strategic Management**: A series of integrated activities that enable the Agency to establish and execute strategy, make decisions, allocate resources, formulate and implement programs and projects, and measure their performance.
- **Strategic Objectives**: mission Strategic Objectives reflect the outcome or management impact the agency is trying to achieve. Each objective is tracked through a suite of performance goals. Strategic objectives and performance goals should facilitate prioritization and assessment for planning, management, reporting, and evaluation purposes. Strategic objectives are used to help decide which indicators are most valuable to provide leading and lagging information, monitor Agency operations, show how employees contribute to the organization's mission, determine program evaluations needed, communicate Agency progress, and consider the impact of external factors on the agency's progress. The set of all Agency strategic objectives together should be comprehensive of all agency activity. Objectives are usually outcome-oriented as it relates to the Agency's mission; however, management and other objectives may be established to communicate the breadth of Agency efforts.
- **Strategic Plan**: The Strategic Plan presents the long-term objectives an Agency hopes to accomplish, set at the beginning of each new term of an Administration. It describes general and longer-term goals the Agency aims to achieve, what actions the Agency will take to realize those goals and how the agency will deal with the challenges likely to be barriers to achieving the desired result. An Agency's Strategic Plan should provide the context for decisions about performance goals, priorities, and budget planning, and should provide the framework for the detail provided in Agency annual plans and reports.
- **Tailoring**: The process used to adjust or seek relief from a prescribed requirement to accommodate the needs of a specific task or activity (e.g., program or project).
- **Technical Authorities**: The individuals within the technical authority process who are funded independent of a program or project and who have formally delegated Technical Authority traceable to the Administrator. The three organizations who have Technical Authorities are Engineering, Safety and mission Assurance, and Health and Medical.
- **Vision**: A concise description of the future where the leadership desires the Agency to go. The Vision statement is set in NASA's Strategic Plan.

ATTACHMENT B: ACRONYMS

APMC	Agency Program Management Council
APG	Agency Priority Goals
ASAP	Aerospace Safety Advisory Panel
BPR	Baseline Performance Review
CAM	Control Account Manager
CAP	Cross Agency Priority
CJ	Congressional Justification
COO	Chief Operating Officer
EC	Executive Council
FMFIA	Federal Managers' Financial Integrity Act
GAO	Government Accountability Office
GPRAMA	Government Performance and Results Act Modernization Act of 2010
IT	Information Technology
KDP	Key Decision Point
MSC	Mission Support Council
NAC	NASA Advisory Council
NPD	NASA Policy Directive
NPR	NASA Procedural Requirements
NODIS	NASA Online Directives Information System
NSC	National Space Council
OCFO	Office of the Chief Financial Officer
OIG	Office of Inspector General
OMB	Office of Management and Budget
OPM	Office of Personnel Management
PIO	Performance Improvement Officer
PPBE	Planning, Programming, Budgeting, and Execution
PRG	Program and Resources Guidance
SAA	Space Act Agreement
SIP	Strategy Implementation Planning
SMC	Senior Management Council
SPG	Strategic Programming Guidance

ATTACHMENT C: GUIDE TO FURTHER INFORMATION

Section	NPD 1000.0 Topic	For Further Information	Reference Content or Key Point Description
3.1	Efficient and Effective Governance	NPD 1000.3	NPD 1000.3: The NASA Organization
3.2	Roles, Responsibilities, and Decision-Making	NPD 1000.3	NPD 1000.3: The NASA Organization
3.2.1	Center Roles	NPD 1000.3	NPD 1000.3: The NASA Organization
3.2.2	Roles of Authorities		
3.2.3	Functional Role Realignment (Mission Architecture Program)		
3.2.4	Roles of External Councils and Agencies		
3.3	Strategic Acquisition	NPD 1000. 5, Policy for NASA Acquisition NPR 7120.5, Chapter 1	NPD 1000. 5: Policy for NASA Acquisition NPR 7120.5: NASA Space Flight Program and Project Management Requirements
3.4	Specific Authorities		

3.4.1	Programmatic Authority	NPR 7120.5 NPR 7120.7 NPR 7120.8	NPR 7120.5: NASA Space Flight Program and Project Management Requirements NPR 7120.7: NASA Information Technology & Institutional Infrastructure Program & Project Requirements NPR 7120.8: NASA Research and Technology Program and Project Management Requirements
3.4.2	Institutional-Technical Authority	NPR 7120.5, Chapter 3 NPR 7120.7 NPR 7120.8	NPR 7120.5: NASA Space Flight Program and Project Management Requirements NPR 7120.7: NASA Information Technology & Institutional Infrastructure Program & Project Requirements, regarding institutional NPR 7120.8: NASA Research and Technology Program and Project Management Requirements
3.4.3	Institutional Authority-Mission Support	NPD 1000.3	NPD 1000.3: The NASA Organization
3.4.4	Institutional Authority – Center Director	NPD 1000.3	NPD 1000.3: The NASA Organization
3.5	Authority Roles Regarding Risk	NPD 1000.3, Sect. 4.6.2.3	NPR 8000.4: Agency Risk Management Procedural Requirements NPD 1000.3: The NASA Organization, Specific Role of Safety & mission Assurance, authority to halt work

			NPR 8000.4: Agency Risk Management Procedural Requirements
3.5.1	Risk Leadership		
3.6	Program Management		
3.7	Process-Related Checks and Balances	NPR 7120.5, Chapter 3	NPR 7120.5: NASA Space Flight Program and Project Management Requirements
3.7.1	Independent Life-Cycle Review Process	NPR 7120.5, Chapter 2	NPR 7120.5: NASA Space Flight Program and Project Management Requirements
3.7.2	Requirements Tailoring Process		
3.7.3	Formal Dissent Process	NPR 7120.5, Chapter 3	Specific process steps to record and resolve divergent views by a higher level of NASA management. Columbia Accident Report Section 8.5 (History As Cause: Two Accidents)
4	Strategic Management System	OMB Circular A-11 Part 6 GPRAMA NPD 1001.0	Planning / performance requirements Government Performance and Results Act Modernization Act of 2010 (GPRAMA) NPD 1001.0: NASA Strategic Plan
4.1.1	Factoring External Guidance	National Aeronautics & Space Act of 1958 U.S. National Space Policy (NSPD 49)	Space Act: http://www.nasa.gov/offices/ogc/about/space_act1.html Space Policy: http://www.fas.org/irp/offdocs/nspd/space.html

4.1.2	Leveraging Internal Analyses and Assessments		
4.1.3	NASA Strategic Plan	OMB Circular A-11, Part 6 Section 230 NPD 1001.0, NASA Strategic Plan	Office of Management and Budget: http://www.whitehouse.gov/omb/circulars_a11_current_year_a11_toc
4.2	Programming: Alignment of Resources to Plans	NPR 9420.1 Budget Formulation	NPR 9420.1 consolidates legal, regulatory, and administrative policies into procedures applicable to NASA. The SPG, developed through a strategic decision-making process, provides initial programmatic guidance for budget development.
4.3	Budgeting		
4.4	Execution		
4.4.1	Controls	NPD 1200.1	NPD 1200.1: NASA Internal Control and Accountability
4.4.2	Monitoring, Evaluating, and Reporting on Performance Progress	NPR 7120.5 NPR 7120.8 NPD 7120.6	See applicable chapters Knowledge Policy on Programs and Projects
4.5	Feedback into Planning and Programming		
4.6	Process Communications		

ATTACHMENT D: INDEX

A

Administrator
Associate Administrator
Acquisition
Authorities
Accountability
    Institutional
    Programmatic
    Technical

B

Budgeting

C

Center
Center Roles
Chief, Safety and mission Assurance
Chief Engineer, Office of
Chief Health and Medical Officer
Chief Financial Officer
Chief of Staff
Communication
Formal Dissent
Process Communication
Congressional Justification
Control Account Managers
Controls
Core Values
Councils, governing

D

Deputy Administrator
Formal Dissent

E

External Evaluations and Reporting
Annual Performance Report
Major Program Annual Report
President's Management Agenda
Efficient and Effective Governance

F

Feedback to Planning and Programming

G

Governance
Relationships between NASA's governing councils
Definition
Efficient and Effective Governance
Organizational Balance
Principles
Separation of Programmatic and Institutional Authority
Governance Structure
Government Accountability Office
Government Performance and Results Act Modernization Act of 2010 (GPRAMA)

I

Implementation

Implementation Plans
Independent Assessments and Reviews
Governance framework
Chief Engineer
Technical Authority
Life Cycle Review
External Evaluations
Integrity
Inspector General, Office of
Institutional Authority

L

M

Mission Directorate
Mission Success
Mission Support Office

N

National Aeronautics and Space Act

O

Office of Management and Budget
Office of Personnel Management
OMB Circular A-11

P

Planning, Programming, Budgeting, and Execution
President's Management Agenda
Process-Related Checks and Balances

Program Management
Program Management Council
Programmatic Authority
Programming
Project

R

Reporting
Requirements
Responsibility and Decision-Making
Risk
Risk Leadership

S

Safety and Mission Assurance
Senior Management Council
Strategic Plan
Strategic Planning
Strategic Planning Guidance document
Strategic Management System
Planning
Programming
Budgeting
Execution

T

Teamwork
Technical Authority
Tailoring