NASA 2018 STRATEGIC PLAN

Overview for NASA Advisory Council

March 29, 2018

www.nasa.gov

Office of the Chief Financial Officer (OCFO)/
Strategic Investments Division (SID)

INTRODUCTION

2018 Strategic Plan Overview

NASA's 2018 Strategic Plan is a federally mandated 64 page plan outlining NASA's vision for 2018-2021. The plan emphasizes space exploration, while reaffirming NASA's commitment to the advancement of science and aeronautics. The plan focuses on the three strategic themes of *Discover*, *Explore*, and *Develop*, as well as a fourth theme focused on the activities that will *Enable* NASA's mission.

NASA published the 2018 Strategic Plan on February 12, 2018, concurrent with the publication of the FY2019 President's Budget Request and the FY2019 Annual Performance Plan. The 2018 Strategic Plan will lay the foundation for NASA's externally reported performance management activities for the next 4 years.

Federal agencies are required to produce a strategic plan every four years, timed to coincide with Presidential terms, as mandated by the Government Performance and Results Act Modernization Act of 2010 (GPRAMA). Additional tactical guidance is provided annually by the Office of Management and Budget (OMB).

Multiple stakeholders supported the development of this strategic plan, including the Administration, as well as all HQ Offices/Directorates and NASA Centers, ensuring a clear, unified, and long-term direction for all of NASA's activities. Document development was co-led by OCFO/Strategic Investments Division and OA/Office of Strategy and Plans.

2018 Strategic Plan Overview

NASA's 64-page Strategic Plan is organized around 4 themes and their related Strategic Goals.

Vision

To discover and expand knowledge for the benefit of humanity.

Mission

Lead an innovative and sustainable program of exploration with commercial and international partners to enable human expansion across the Solar System and bring new knowledge and opportunities back to Earth. Support growth of the Nation's economy in space and aeronautics, increase understanding of the Universe and our place in it, work with industry to improve America's aerospace technologies, and advance American leadership.

Strategic Goals

- ***DISCOVER*** EXPAND HUMAN KNOWLEDGE THROUGH NEW SCIENTIFIC DISCOVERIES.
- ***EXPLORE*** EXTEND HUMAN PRESENCE DEEPER INTO SPACE AND TO THE MOON FOR SUSTAINABLE LONG-TERM EXPLORATION AND UTILIZATION.
- ***DEVELOP*** ADDRESS NATIONAL CHALLENGES AND CATALYZE ECONOMIC GROWTH.
- ***ENABLE*** OPTIMIZE CAPABILITIES AND OPERATIONS.

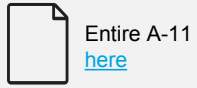
PLAN DEVELOPMENT

Document Requirements

The Strategic Plan is a federally mandated publication. Tactical publication requirements are communicated by OMB via Circular A-11, which is updated annually.

What is OMB A-11?

- OMB Circular A-11 contains instructions from OMB on various federally required processes and publications
- OMB Circular A-11 Part 6 focuses on Strategic Plan requirements
- SID has developed a requirements tracker to easily file and isolate requirements by product, type, section, and process



Entire A-11
here

Perf. Reqs Tracker
3/13/2018

A-11
by parts
here

Process Requirements

Paraphrased from OMB Circular A-11

1. **Hyperlinks -** Should link to other more detailed plans, evaluations, or other related studies (i.e. Volume of Integrated Performance)
2. **Stakeholder Engagement -** Outline input from internal sources (i.e. working group, Executive Council), public (i.e. agency reform plan commentary, and externally (i.e. Space Policy Directive 1, Space Council, Congress, and industry leaders)
3. **Cross-Agency Collaboration -** Includes developing CAP goals and sharing process functionalities
4. **Evidence Building** - Strategies or approaches that have been proven effective, potentially including schedules of future studies and evaluations

Content Requirements

Paraphrased from OMB Circular A-11

1. **Mission Statement** - Should be a one-sentence, easy-to-understand narrative, defining the basic purpose of the agency
2. **Strategic Goals with Overviews** - General, outcome-oriented, long-term goals for the major functions and operations of the agency
3. **Strategic Objectives with Overviews** - Reflect the outcome or management impact the agency is trying to achieve, including the agency's role
4. **Agency Priority Goals (APGs)** - Selected performance goals with emphasized relationships to the strategic objectives
5. **Cross Agency Performance (CAP) Goals** -A tool used to accelerate priority areas with implementation across multiple agencies
6. **Management Priorities, Challenges, and Risks** - Should describe or cross-reference the agency's efforts to deliver greater impact through innovation, increasing effectiveness and efficiency, address management challenges, and better customer service

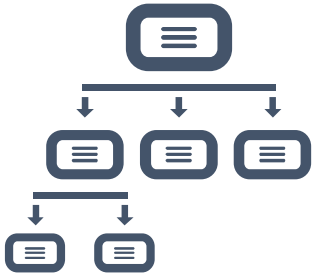
Development Challenges

Four core challenges influenced the 2018 Strategic Plan throughout its development lifecycle.

New Administration

First time under the GPRAMA framework that strategic plans are published during a **presidential transition year.**

New Strategic Framework



All major activities in FY 2018-21 are required to be aligned to the **2018 Strategic Framework**, which establishes the performance management framework for external reporting purposes.

Guidance

Flexibility was required as the Administration and Agency leadership considered **adjustments to Agency direction and/or priorities.**

Bandwidth

Concurrent release of the FY 2019 President's Budget Request, end-of-year performance reports, the Reform Plan, and the President's Management Agenda presented bandwidth challenges for both agencies and OMB.

Development Guidance

NASA leadership outlined three overarching principles for developing the content for the Strategic Plan.

- **The Strategic Plan Working Group** (SPWG), comprised of representatives from all HQ Offices/Directorates and NASA Centers, implemented this guidance by:

1. Employ a Hybrid Development Approach

2. Align Strategic Goals to 4 timeless "Themes"

3. Emphasize 6 Critical Elements Throughout the Document

Foundations of The Strategic Plan - 4 Timeless Themes

This plan aligns the Agency's future activities along three strategic themes of Discover, Explore, and Develop, as well as a fourth theme focused on the activities that will Enable our mission.

- ***DISCOVER*** references NASA's enduring purpose of scientific discovery.
- ***EXPLORE*** references NASA's push to expand the boundaries of human presence in space.
- ***DEVELOP*** references NASA's broad mandate to promote the technologies of tomorrow.
- ***ENABLE*** references the capabilities, workforce, and facilities that allow NASA to achieve its Mission.

Development Methodology

The development lifecycle of the 2018 Strategic Plan follows five steps from inception to publication.

1. Framework Development

Initial leadership direction received. Strategic Plan Working Group (SPWG) convenes to develop new Strategic Goal and Objectives, as well as identification of associated stakeholders.

2. Document Generation and Compilation

The SPWG gathered narrative submissions from all MDs and Centers for their associated Strategic Goals and Objectives, compiled initial draft, and oversaw initial draft submission to OMB.

3. Draft Review and Resubmission

Administration feedback (to include OMB, OSTP, and the National Space Council) received and distributed to select SPWG representatives; document revisions continued.

4. Senior Leadership Approval

Leadership reviewed and approved the document a various stages utilizing the Agency's various management councils.

5. Final Review Process

OMB provided final document clearance on behalf of the Administration prior to publication.

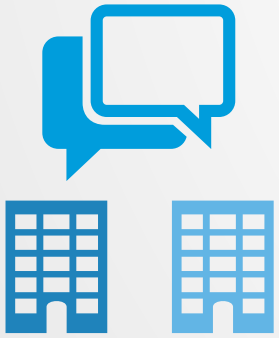
Document published concurrent with the President's Budget Request.

Stakeholder Engagement

Multiple stakeholders were consulted throughout the document development lifecycle.

STAKEHOLDER ENGAGEMENT

- Internal – Agency senior leadership provided initial direction and provided feedback and concurrent at key milestones. NASA's Strategic Plan Working Group (SPWG) collaboration included representatives from every Headquarters office and across all 10 Centers.
- External – Administration feedback provided by OMB, the Office of Science and Technology Policy, and the National Space Council at key milestones. The NASA Transition Authorization Act of 2017 provided additional Congressional direction. Finally, NASA's Hill Oversight Committees were provided opportunities to preview the new plan.
- Public – Collected, analyzed, and incorporated (where possible) 2400+ public comments collected during the initial development of the Agency Reform Plan (ARP).



COORDINATION ACROSS AGENCIES

- OMB Working Group – NASA representatives actively participated in all monthly working group meetings of this OMB-led body called together to coordinate best practices and production efforts with other Federal agencies. Lessons-learned, as well as OMB guidance, communicated during these discussions was captured and relayed to the rest of NASA's internal SPWG for consideration throughout the development process.

DOCUMENT OVERVIEW

Strategic Plan Contents

The majority of the document describes NASA's four Strategic Goals and 13 Strategic Objectives.

Abbreviated Table of Contents Screenshot

TABLE OF CONTENTS

Introductory Material

Introduces the Strategic Plan, the foundations of NASA's strategic planning, NASA's Vision and Mission, and the Strategic Performance Framework.

Strategic Goals and Objectives

The "bulk" of the plan, each goal includes an overview "goal statement". Goals are separated by full-page dividers, and objectives are separated by NASA photo banners.

Field Centers and FFRDC Contributions

Each Center contributes to nearly all Strategic Goals, and their contributions are listed out in this section. This section was promoted from the Appendix into the body of the document for 2018.

Appendix

Includes additional information, as well as responses to reporting requirements that are not addressed in other sections of the document.

Vision and Mission Statements

The 2018 Strategic Plan establishes NASA's new Vision and Mission, which outline NASA's goals for the next four years.

Vision

To discover and expand knowledge for the benefit of humanity.

Mission Statement

Lead an innovative and sustainable program of exploration with commercial and international partners to enable human expansion across the Solar System and bring new knowledge and opportunities back to Earth. Support growth of the Nation's economy in space and aeronautics, increase understanding of the Universe and our place in it, work with industry to improve America's aerospace technologies, and advance American leadership.

Strategic Goals

Four Strategic Goals codify NASA's efforts to achieve its Vision and Mission.

Strategic Objectives

NASA's four Strategic Goals are supported by 13 nearer term Strategic Objectives, promoting achievable and measurable results.

Theme	Strategic Goal	Strategic Objective	Lead Office(s)
DISCOVER	**EXPAND HUMAN KNOWLEDGE THROUGH NEW SCIENTIFIC DISCOVERIES.**	1.1: Understand the Sun, Earth, Solar System, and Universe.	SMD / HEOMD
		1.2: Understand Responses of Physical and Biological Systems to Spaceflight.	HEOMD
EXPLORE	**EXTEND HUMAN PRESENCE DEEPER INTO SPACE AND TO THE MOON FOR SUSTAINABLE LONG-TERM EXPLORATION AND UTILIZATION.**	2.1: Lay the Foundation for America to Maintain a Constant Human Presence in Low Earth Orbit Enabled by a Commercial Market.	HEOMD
		2.2: Conduct Exploration in Deep Space, Including to the Surface of the Moon.	HEOMD
DEVELOP	**ADDRESS NATIONAL CHALLENGES AND CATALYZE ECONOMIC GROWTH.**	3.1: Develop and Transfer Revolutionary Technologies to Enable Exploration Capabilities for NASA and the Nation.	ER&T
		3.2: Transform Aviation Through Revolutionary Technology Research, Development, and Transfer.	ARMD
		3.3: Inspire and Engage the Public in Aeronautics, Space, and Science.	MSD / OCOM
ENABLE	**OPTIMIZE CAPABILITIES AND OPERATIONS.**	4.1: Engage in Partnership Strategies.	MSD
		4.2: Enable Space Access and Services.	HEOMD
		4.3: Assure Safety and Mission Success.	Technical Authorities
		4.4: Manage Human Capital.	MSD / OHCM
		4.5: Ensure Enterprise Protection.	Principal Advisor for Enterprise Protection / OCIO
		4.6: Sustain Infrastructure Capabilities and Operations.	MSD

FY2018-19 Agency Priority Goals (APGs)

Five APGs outline near-term accomplishments that will advance progress toward the achievement of NASA's Strategic Goals and Strategic Objectives. These APGs reflect performance priorities for the Agency, but do not reflect the full scope of NASA's Mission.

1. **James Webb Space Telescope (Strategic Objective 1.1)**

   Revolutionize humankind's understanding of the Cosmos and humanity's place in it. The James Webb Space Telescope (Webb) will study every phase in the history of our universe, ranging from the first luminous glows after the Big Bang, to the formation of other stellar systems capable of supporting life on planets like Earth, to the evolution of our own solar system. By September 30, 2019, NASA will initiate on-orbit commissioning of Webb after launch.

2. **Mars 2020 (Strategic Objective 1.1)**

   Seeking signs of life on Mars: Explore a habitable environment, search for potential biosignatures of past life, collect and document a cache of scientifically compelling samples for eventual return to Earth, and contribute to future human exploration of Mars. By August 5, 2020, NASA will launch the Mars 2020 rover. To enable this launch date, NASA will deliver the instrument payload for spacecraft integration by September 30, 2019.

3. **International Space Station (Strategic Objective 2.2)**

   Use the ISS as a testbed to demonstrate the critical systems necessary for long-duration missions. Between October 1, 2017, and September 30, 2019, NASA will initiate at least eight in-space demonstrations of technology critical to enable human exploration in deep space.

4. **Exploration (Strategic Objective 2.2)**

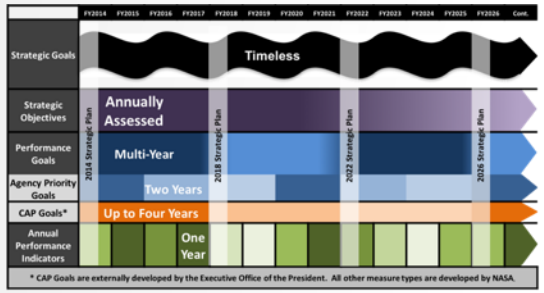
   Achieve critical milestones in the development of new systems for the human exploration of deep space. By September 30, 2019, NASA will conduct the Ascent Abort-2 test of the Orion Launch Abort System, perform the green run hot-fire test of the Space Launch System's Core Stage at the Stennis Space Center, and roll the Mobile Launcher to the Vehicle Assembly Building to support the start of Exploration Mission-1 stacking operations.

5. **Commercial Crew Program (Strategic Objective 4.2)**

   Facilitate the development of and certify U.S. industry-based crew transportation systems while maintaining competition, returning International Space Station crew transportation to the United States. By September 30, 2019, the Commercial Crew Program, along with its industry partners, will complete at least one Certification Review, following un-crewed and crewed test flights to the ISS.

Strategy-Performance Framework

NASA Performance Framework
2018 Strategic Plan



Strategic Goals (4)
Timeless

Strategic Objectives (13)
Up to 10 years

Strategic Objectives*: Every CFO Act agency is required to conduct annual Strategic Reviews. These reviews highlight those strategic objectives where the agency has made "noteworthy progress" or are "focus areas for improvement". These annual reviews are intended to provide input into the budget formulation process and require the COO/PIO to determine final categorizations.

CAP Goals*: Administration priority areas that require active collaboration between multiple departments and agencies because they address long-standing challenges for which no one agency has sole responsibility.

Performance Goals
Up to 5 years

Agency Priority Goals*: Target areas where agency leaders want to achieve near-term performance acceleration through focused senior leadership attention.

Cross-Agency Priority Goals
Up to 5 years – reporting schedule varies

Agency Priority Goals (5)
2 years – report quarterly

Annual Performance Indicators
1 year – report 3rd and 4th quarter

*Requirements mandated by the GPRA Modernization Act of 2010 and OMB Circular A-11 (updated annually).

QUESTIONS?

APPENDIX A

PROGRAM/PROJECT ALIGNMENT

Program/Project Alignment to 2018 Strategic Plan

NASA's programs and projects also align to the new strategic framework.

	Objective	Contributing Programs / Projects
Strategic Goal 1	**Objective 1.1**	Cosmic Origins, JWST, Exoplanet Exploration, Physics of the Cosmos, Mars Exploration, Outer Planets, Astrophysics Research, Astrophysics Explorer, New Frontiers, Discovery, Planetary Defense, Planetary Research, Heliophysics Explorer, Heliophysics Research, Living With a Star, Solar Terrestrial Probes, Earth Systematic Missions, Earth System Science Pathfinder, Earth Science Research, Earth Science Multi-Mission Operations, Applied Sciences, Earth Science tech, Planetary tech, and Suborbital Research
	Objective 1.2	ISS Research
Strategic Goal 2	**Objective 2.1**	ISS Systems Operations and Maintenance, Human Space Flight Operations
	Objective 2.2	SLS, ISS, Orion, Exploration Ground Systems, Human Research Program, Advanced Exploration Systems,
Strategic Goal 3	**Objective 3.1**	Space tech R&D, Small Business Innovation Research / Tech Transfer, Agency Tech and Innovation.
	Objective 3.2	Transformative Aero Concepts, Integrated Aviation Systems, Airspace Operations and Safety, Advanced Air Vehicles
	Objective 3.3	Aerospace Research and Career Development, STEM Education and Accountability, Office of Communications, Office of the Chief Scientist, Office of Diversity and Equal Opportunity
Strategic Goal 4	**Objective 4.1**	Office of Procurement, Partnerships Office, Office of International and Interagency Relations, and Office of Small Business Programs
	Objective 4.2	Launch Services, Crew and Cargo, Commercial Crew, Rocket Propulsion Test, Space Communications and Navigation, Strategic Capabilities Asset Program (and Space Environments Testing Management Office)
	Objective 4.3	OSMA, including NASA Safety Center and Independent V&V Program; Office of the Chief Engineer, including NASA Engineering and Safety Center; Office of the Chief Health and Medical Officer
	Objective 4.4	Office of Human Capital Management, Office of Diversity and Equal Opportunity, Center Management and Operations
	Objective 4.5	Enterprise Protection Program, Agency Information tech Services, Office of Protective Services, Office of Strategic Infrastructure
	Objective 4.6	Center Management and Operations, Strategic Capabilities Assets Programs, all Construction of Facilities (CoF), Environmental Compliance and Restoration, Aeronautics Evaluation and Test Capabilities Project

APPENDIX B

HISTORICAL STRATEGIC PLAN INFORMATION

Historical Vision and Mission Statements

Year	Vision	Mission
1996	NASA is an investment in America's future. As explorers, pioneers, and innovators, we boldly expand frontiers in air and space to inspire and serve America and to benefit the quality of life on Earth.	▪ To advance and communicate scientific knowledge and understanding of the Earth, the solar system, and the universe and use the environment of space for research. ▪ To explore, use, and enable the development of space for human enterprise. ▪ To research, develop, verify, and transfer advanced aeronautics, space, and related technologies.
1998	NASA is an investment in America's future. As explorers, pioneers, and innovators, we boldly expand frontiers in air and space to inspire and serve America and to benefit the quality of life on Earth.	▪ To advance and communicate scientific knowledge and understanding of the Earth, the solar system, and the universe and use the environment of space for research. ▪ To explore, use, and enable the development of space for human enterprise. ▪ To research, develop, verify, and transfer advanced aeronautics, space, and related technologies.
2000	NASA is an investment in America's future. As explorers, pioneers, and innovators, we boldly expand frontiers in air and space to inspire and serve America and to benefit the quality of life on Earth.	▪ To advance and communicate scientific knowledge and understanding of the Earth, the solar system, and the universe ▪ To advance human exploration, use, and development of space ▪ To research, develop, verify, and transfer advanced aeronautics and space technologies
2003	To improve life here, To extend life there, To find life beyond.	To understand and protect our home planet, To explore the universe and search for life, To inspire the next generation of explorers ... as only NASA can.
2006	To advance U.S. scientific, security, and economic interests through a robust space exploration program.	To pioneer the future in space exploration, scientific discovery, and aeronautics research.
2011	To reach for new heights and reveal the unknown, so that what we do and learn will benefit all humankind.	Drive advances in science, technology, and exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of Earth.
2014	We reach for new heights and reveal the unknown for the benefit of humankind.	Drive advances in science, technology, aeronautics, and space exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of Earth.

Historical Strategic Goals

Year	Strategic Goals
1996	N/A – Used “goals” for each Enterprise
1998	N/A – Used “key questions” for each Enterprise
2000	N/A – Used “key questions” for each Enterprise
2003	1. Understand Earth’s system and apply Earth-system science to improve the prediction of climate, weather, and natural hazards. 2. Enable a safer, more secure, efficient, and environmentally friendly air transportation system. 3. Create a more secure world and improve the quality of life by investing in technologies and collaborating with other agencies, industry, and academia. 4. Explore the fundamental principles of physics, chemistry, and biology through research in the unique natural laboratory of space. 5. Explore the solar system and the universe beyond, understand the origin and evolution of life, and search for evidence of life elsewhere. 6. Inspire and motivate students to pursue careers in science, technology, engineering, and mathematics. 7. Engage the public in shaping and sharing the experience of exploration and discovery. 8. Ensure the provision of space access and improve it by increasing safety, reliability, and affordability. 9. Extend the duration and boundaries of human space flight to create new opportunities for exploration and discovery. 10. Enable revolutionary capabilities through new technology.
2006	1. Fly the Shuttle as safely as possible until its retirement, not later than 2010 2. Complete the International Space Station in a manner consistent with NASA’s International Partner commitments and the needs of human exploration 3. Develop a balanced overall program of science, exploration, and aeronautics consistent with the redirection of the human spaceflight program to focus on exploration 4. Bring a new Crew Exploration Vehicle into service as soon as possible after Shuttle retirement 5. Encourage the pursuit of appropriate partnerships with the emerging commercial space sector 6. Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations
2011	1. Extend and sustain human activities across the solar system 2. Expand scientific understanding of the Earth and the universe in which we live 3. Create the innovative new space technologies for our exploration, science, and economic future. 4. Advance aeronautics research for societal benefit 5. Enable program and institutional capabilities to conduct NASA’s aeronautic and space activities 6. Share NASA with the public, educators, and students to provide opportunities to participate in our Mission, foster innovation, and contribute to a strong national economy.
2014	1. Expand the frontiers of knowledge, capability, and opportunity in space. 2. Advance understanding of Earth and develop technologies to improve the quality of life on our home planet. 3. Serve the American public and accomplish our Mission by effectively managing our people, technical capabilities, and infrastructure.