National Aeronautics and Space Administration

FY 2015 Summary of Performance and Financial Information

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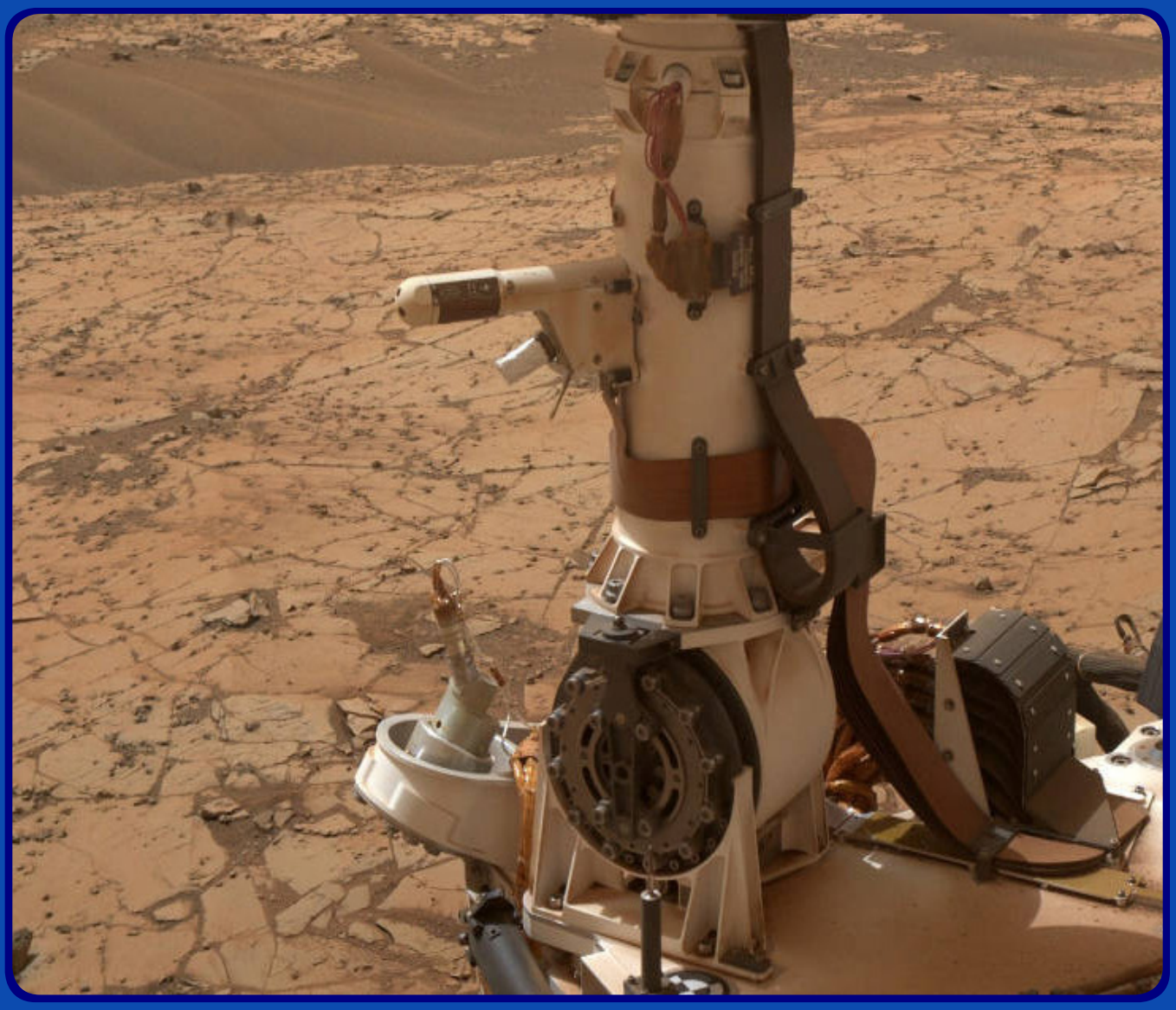


Cover Image Captions and Credits

Front Cover:

Outside Front Main Image: Artist's concept, Reach New Heights, Benefit All Humankind, Reveal The Unknown. (Credit: NASA)

Outside Front Bottom Images (left to right): The Ikhana UAS soars over the Mojave Desert during a flight from NASA Armstrong Flight Research Center, Edwards, California. (Credit: NASA Photo/Carla Thomas) ; Engineers Clean Mirror with Carbon Dioxide Snow. (Credit: NASA); Rocket Sled Tests May Lead to Mars. (Credit: NASA)

Inside Front: Mars Weather-Station Tools on Rover's Mast. (Credit: NASA)

Rear Cover:

Outside Rear**:** Solar Arrays on the International Space Station. (Credit: NASA)

Message from the Administrator

February 11, 2016

I am proud to present NASA's Fiscal Year (FY) 2015 Summary of Performance and Financial Information, summarizing our financial performance and progress toward achieving our goals. This report also summarizes our progress toward achieving NASA's Mission to *drive advances in science, technology, aeronautics, and space exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of Earth.*

Efficient and effective financial management makes our mission possible. We received an unmodified "clean" audit opinion on our FY 2015 financial statements, with no material weaknesses. The report of the independent auditors is included in NASA's FY 2015 Agency Financial Report. I am able to provide reasonable assurance that the performance and financial information in this report is reliable and complete.

Our long-term goal is to send humans to Mars, and to enable that goal we are undertaking a sustainable campaign and developing new systems for the human exploration of deep space. In FY 2015, NASA accomplished the successful Orion Exploration Flight Test (EFT)-1 in December 2014. This was the first test flight of the Orion spacecraft, which is designed to take humans on deep space missions in the future. Orion did not carry any people into space on this flight, but it became the first human-rated spacecraft to leave low Earth orbit since the Apollo 17 mission. This year we also accomplished major milestones in the development of the new Space Launch System (SLS), including the first qualification booster test. With support from the Exploration Ground Systems program, these new capabilities will carry astronauts into deep space.

Even in the face of cargo resupply setbacks in FY 2015, we continued vital research and technology development activities on the International Space Station (ISS). In FY 2015, NASA initiated the U.S.-Russian joint one-year human health and performance research project and the Identical Twins Study. The one-year crew mission is the latest step in the ISS' role as a platform for preparing humanity for exploration into deeper space. In addition, Boeing and SpaceX, NASA's Commercial Crew Program partners, have made great strides to re-establish America's capability to launch astronauts to the ISS, including constructing the infrastructure needed to safely launch and operate crew space transportation systems, refining designs, and starting to build test vehicles.

Our robotic explorers also continued to astound in FY 2015, including the New Horizons mission's accomplishment of the historic first-ever flyby of Pluto, and the Dawn mission's exploration of the dwarf planet Ceres. We added to our scientific and exploration capabilities by launching several missions, including the Magnetospheric Multiscale (MMS) mission and the significant achievement of launching five Earth-observing missions in one calendar year.

Transformative capabilities and cutting-edge technologies are being developed, tested, and flown by NASA today. Our space technology programs advanced several technologies, including the second near-space test flight of the Low Density Supersonic Decelerator (LDSD), a technology that could enable larger payloads to Mars and set the stage for future human explorers, and printing the first 3D-printed object in space on the ISS. Our technologies, partnerships, and education for the next generation contribute to the Nation's innovation economy. NASA accomplished a number of Federal government "firsts" this year, including the public release of NASA's technology portfolio (TechPort) system and the release of NASA's software catalog with an extensive collection of codes available for use at no charge.

NASA's mission success is thanks to our multi-disciplinary team of diverse, talented people across our Centers. We are committed to nurturing an innovative environment that fosters teamwork and excellence. For the third year in a row, employees named NASA the Best Place to Work in the Federal Government among large agencies.

As shown in this report, we strive to put your tax dollars to efficient and innovative use. In the year ahead, NASA will continue to push the boundaries of exploration. Along the way, we will make new scientific discoveries, develop new technologies and capabilities, and deliver tangible benefits to the public. Additional details on these achievements are provided in this report, and if you would like more information on our progress toward achieving our strategic goals, I invite you to read our Annual Performance Report, which will be released concurrently with NASA's Budget Estimates in early calendar year 2016.

Charles F. Bolden, Jr.
Administrator

Table of Contents

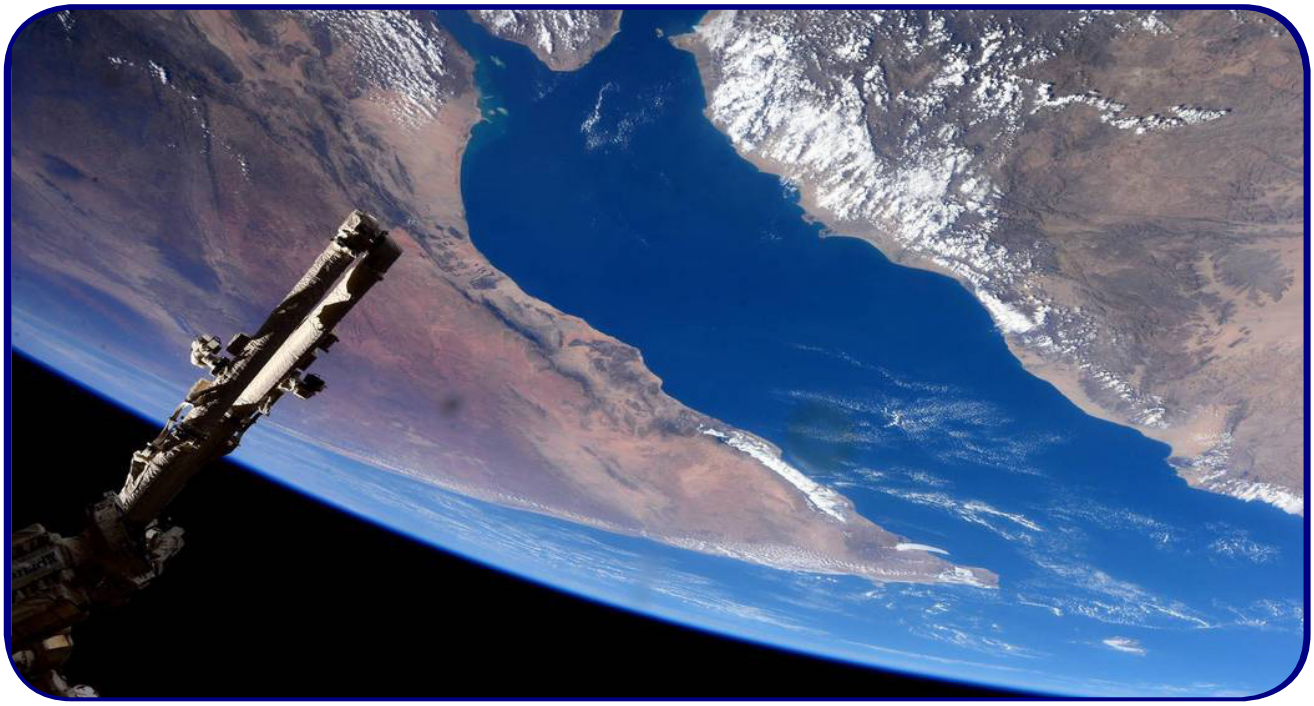
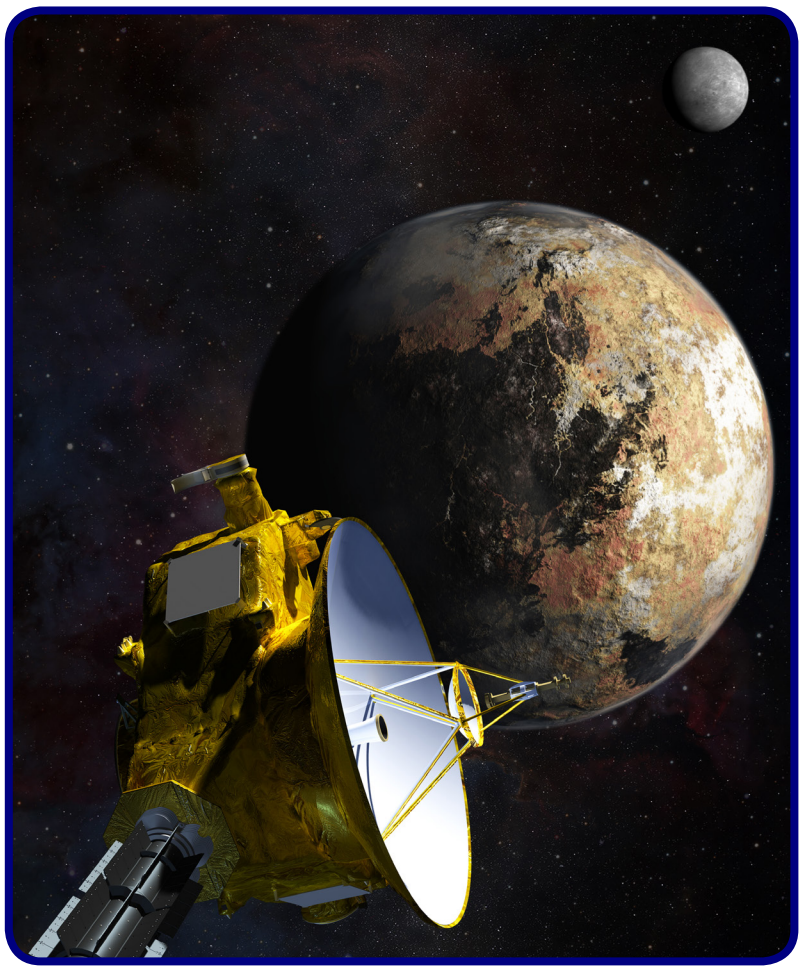


Image Caption: European Space Agency (ESA) astronaut, Samantha Cristoforetti, photographed the Gulf of Aden and Horn of Africa from the International Space Station. (Credit: NASA)

Welcome to NASA.....1
Vision and Mission Statement.....5
Organization.....7
Workforce.....11
Core Values.....12
FY 2015 In Review.....13
Mission Performance.....15
Performance Overview.....15
Performance Summary.....18
Strategic Goals and Highlights.....24
Strategic Goal 1: Expand the frontiers of knowledge, capability, and opportunity in space.....24
Strategic Goal 2: Advance understanding of Earth and develop technologies to improve the quality of life on our home planet.....34

Strategic Goal 3: Serve the American public and accomplish our Mission by effectively managing our people, technical capabilities,and infrastructure.....42
Financial Performance.....**49**
CFO Letter.....49
Financial Highlights.....51
Overview of Financial Position.....*51*
Sources of Funding.....*54*
Net Cost of Operations.....*55*
Limitations of the Financial Statements.....59
Systems, Controls and Legal Compliance.....**61**
NASA's Internal Control Framework.....63
Management Assurances.....65
Financial Systems Strategies.....67
Looking Forward.....**69**

Welcome to NASA



Introduction....3
Vision and Mission Statement....5
Organization....7
Workforce....11
Core Values....12

Image Caption: Artist's concept of the New Horizons spacecraft as it approaches Pluto and its largest moon, Charon, in July 2015. The craft's miniature cameras, radio science experiment, ultraviolet and infrared spectrometers, and space plasma experiments will characterize the global geology and geomorphology of Pluto and Charon, map their surface compositions and temperatures, and examine Pluto's atmosphere in detail. (Credit: NASA)

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Flying over an Aurora. (Credit: NASA)

Introduction

NASA has chosen to produce an Agency Financial Report (AFR) and Annual Performance Report (APR). NASA will publish its Fiscal Year (FY) 2015 APR concurrently with its Congressional Budget Justification and will post it on NASA's Web site at http://www.nasa.gov by February 2016.

This FY 2015 Summary of Performance and Financial Information provides an overview of NASA's major programmatic and financial results for FY 2015. It integrates financial and program performance to demonstrate stewardship and accountability and highlights FY 2015 achievements.

NASA demonstrates stewardship of its resources and accountability for results through compliance with the Chief Financial Officers Act (CFO Act) and the Government Performance and Results Act Modernization Act of 2010 (GPRAMA). Financial aspects of the Agency's business operations are accounted for according to U.S. generally accepted accounting principles and Federal Accounting Standards Advisory Board standards.

NASA presents both performance and financial results of operations by strategic goal. Highlights of key program activities contribut-

ing to each strategic goal are provided in the Mission Performance discussion (page 15). A high-level summary of the linkage between program results and the cost of operations is provided in the Statement of Net Cost (SNC), which can be found in the Financials section of the AFR (page 73). The SNC presents comparative net cost of operations during FY 2015 and FY 2014 by strategic goal and for the Agency as a whole. In addition, the Financials section explains any significant changes in NASA's financial condition from FY 2014 to FY 2015.

Financial systems that meet requirements of the Federal Financial Management Improvement Act (FFMIA) are vital to NASA's financial management program. The AFR describes NASA's compliance with the FFMIA, as well as the built-in checks and balances required by the Office of Management and Budget's (OMB) Circular A-123. OMB Circular A-123 places responsibility for internal controls over financial reporting on Agency management for the purpose of safeguarding assets and improving efficiency and effectiveness of operations.

Finally, the AFR presents the Agency's audited FY 2015 and FY 2014 financial statements and the related independent auditor's financial statements audit opinion. The FY 2015 AFR can be found on NASA's Web site at: http://www.nasa.gov/news/budget/.

Image Caption: This NASA/ESA Hubble Space Telescope image presents the Arches Cluster, the densest known star cluster in the Milky Way. (Credit: NASA/ESA)

Vision and Mission Statement

The National Aeronautics and Space Act of 1958 created NASA to provide for research into problems of flight within and outside the Earth's atmosphere and to ensure that the United States conducts activities in space devoted to peaceful purposes for the benefit of humankind.

In 2010, the President and the Congress unveiled an ambitious new direction for NASA, laying the groundwork for a sustainable program of exploration and innovation. This new direction extends the life of the International Space Station (ISS), supports the growing commercial space industry, and addresses important scientific challenges while continuing our commitment to robust human space exploration, science, and aeronautics programs. The strong bipartisan support for the NASA Authorization Act of 2010 confirms our essential role in addressing the Nation's priorities.

In 2014, NASA released a new Strategic Plan that builds upon the groundwork established in 2010 by outlining the Agency's vision for the future and providing a clear, unified, and long-term direction for all of NASA's activities. The Strategic Plan is the foundation on which NASA will build and measure the success of its programs and projects. The Strategic Plan can be found on NASA's Web site at:
http://www.nasa.gov/sites/default/files/files/FY2014_NASA_SP_508c.pdf.

As established in the strategic plan, NASA's Vision and Mission are:

The NASA Vision

We reach for new heights and reveal the unknown for the benefit of humankind.

The NASA Mission

Drive advances in science, technology, aeronautics, and space exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of Earth.

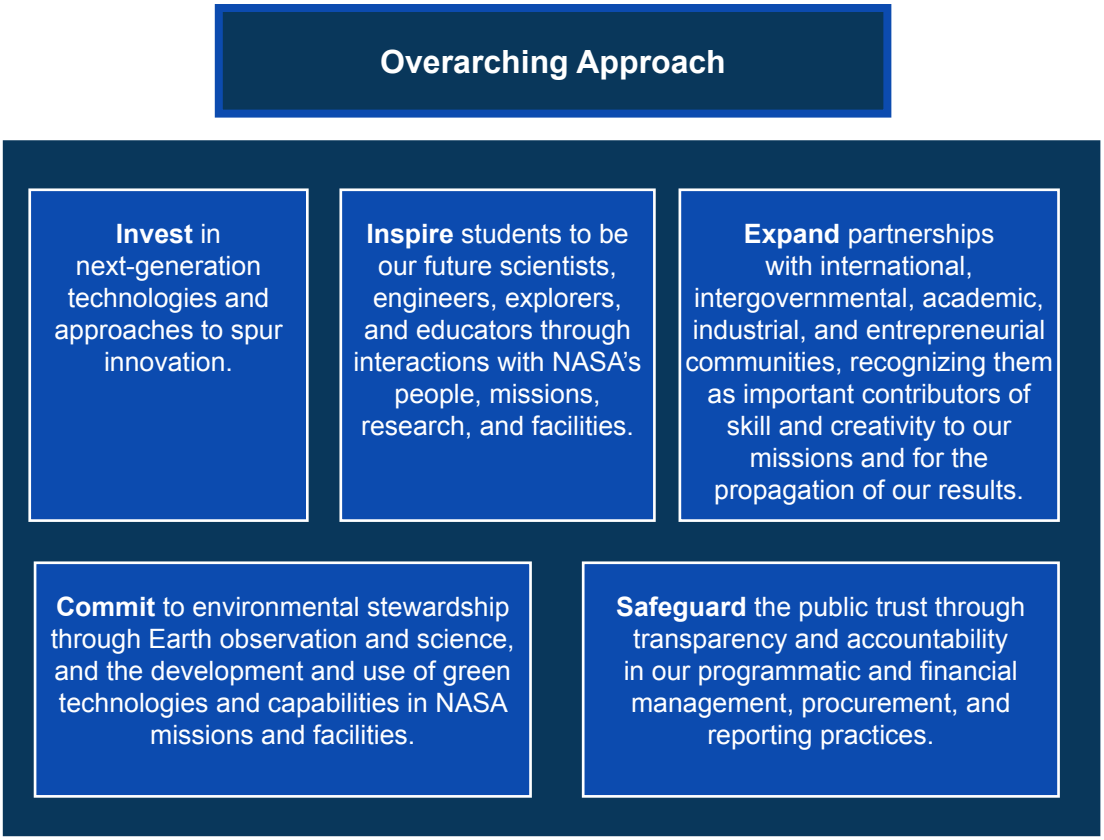
NASA's three strategic goals are:

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.

NASA's overarching approach for achieving the Mission contains five key strategies for governing the management and conduct of the Agency's aeronautics and space programs. These strategies are the standard practices that each organization within NASA employs in developing and executing their plans to achieve the Mission. They also provide a framework that guides NASA's support for other areas of national and Administration policy: government transparency; science, technology, engineering, and mathematics (STEM) education; energy and climate change; innovation; and increased citizen and partnership participation to help address the multitude of challenges faced by the Nation. The strategies listed below help strengthen the Agency and support U.S. competitiveness on a global scale.



NASA developed four agency priority goals for FY 2014 - FY 2015, consistent with the requirements of GPRAMA. The statements for each FY 2014 - FY 2015 agency priority goal are in the following graphic. NASA will continue the four themes from the FY 2014 - FY 2015 goals with new agency priority goals for FY 2016 - FY 2017. More information is available at: http://www.performance.gov/agency/national-aeronautics-and-space-administration?view=public#overview.

FY 2014 - FY 2015 Agency Priority Goals

Human Exploration and Operations, Commercial Crew Program: By September 30, 2015, the Commercial Crew Program will complete the first phase of certification efforts with Commercial Crew Transportation partners and will make measurable progress toward the second certification phase with industry partners while maintaining competition.

Human Exploration and Operations, International Space Station Program: By September 30, 2015, NASA will increase the utilization of the International Space Station internal and external research facility sites with science and technology payload hardware to 70 percent.

Science, James Webb Space Telescope Program: By October 2018, NASA will launch the James Webb Space Telescope, the premier space-based observatory. To enable this launch date, NASA will complete the James Webb Space Telescope primary mirror backplane and backplane support structures and deliver them to the Goddard Space Flight Center for integration with the mirror segments by September 30, 2015.

Human Exploration and Operations, Exploration Systems Development: By September 30, 2015, NASA will complete the Space Launch System, Orion, and Exploration Ground Systems Critical Design Reviews (CDRs), allowing the programs to continue to progress toward Exploration Mission (EM)-1 and EM-2 missions.

Organization

NASA's organizational structure is designed to accomplish its Mission and provide a framework for sound business operations, management controls, and safety oversight. The Office of the Administrator provides the overarching vision and strategic direction for the Agency. The Agency's science, research, and technology development work is implemented through four mission directorates supported by the Mission Support Directorate:

Science Mission Directorate (SMD) manages the Agency's science portfolio budget account and focuses on programmatic work on Earth, planetary, astrophysics, and heliophysics research. SMD engages the U.S. science community, sponsors scientific research, and develops and deploys satellites and probes in collaboration with NASA's international partners and other agencies (through the Joint Agency Satellite Division) to answer fundamental scientific questions and expand understanding of space. Additional information on SMD is available at: http://science.nasa.gov/.

Aeronautics Research Mission Directorate (ARMD) manages the budget account for the Agency's aeronautics research portfolio, which enables technology innovation and development allowing the U.S. aviation industry to continue to grow and maintain global competitiveness. Research programs conduct cutting-edge research at both the fundamental and integrated systems levels to address national and global challenges. ARMD guides its research efforts using a strategic vision that embraces the multiple roles of aviation and expands the understanding of those roles to the global stage, while working to address tomorrow's challenges. Additional information on the ARMD is available at: http://www.nasa.gov/topics/aeronautics/index.html.

Space Technology Mission Directorate (STMD) manages the Space Technology budget account, which also funds the crosscutting activities of the Office of the Chief Technologist. STMD pioneers new technologies and capabilities needed by the Agency and commercial sector. It develops technologies that support the broader space economy and other Government missions in space and complements technology development in NASA's other mission directorates, delivering solutions to NASA's technology needs for future science and exploration missions. Additional information on the Office of the Chief Technologist is available at: http://www.nasa.gov/offices/oct/home/index.html.

Human Exploration and Operations Mission Directorate (HEOMD) manages the budget account for the Exploration and Space Operations portfolio. HEOMD manages development of the Space Launch System (SLS), the Orion spacecraft, and future exploration technologies. It works with U.S. commercial space industry partners to develop commercial systems for providing crew and cargo transportation services to and from low Earth orbit. HEOMD also manages operations and research for the ISS, and communications systems and networks that enable deep space and near-Earth exploration. Additional information on the HEOMD is available at: http://www.nasa.gov/directorates/heo/home/index.html.

The **Mission Support Directorate (MSD)** supports all NASA missions in a crosscutting manner. For example, MSD manages the Safety, Security and Mission Services (SSMS) and Construction and Environmental Compliance and Restoration (CECR) accounts, in addition to functions such as procurement and financial management, which cut across all mission directorates. SSMS and CECR accounts fund operations at Headquarters and the Centers as well as institutional and programmatic construction of facilities. MSD reports progress on major national initiatives to the Administrator and other senior Agency officials, provides independent reviews and investigations, and liaises with the public and other Federal agencies. MSD is based at Headquarters, but has representatives at the Centers to provide coordination and control. Additional information on the MSD is available at: http://msd.hq.nasa.gov/.

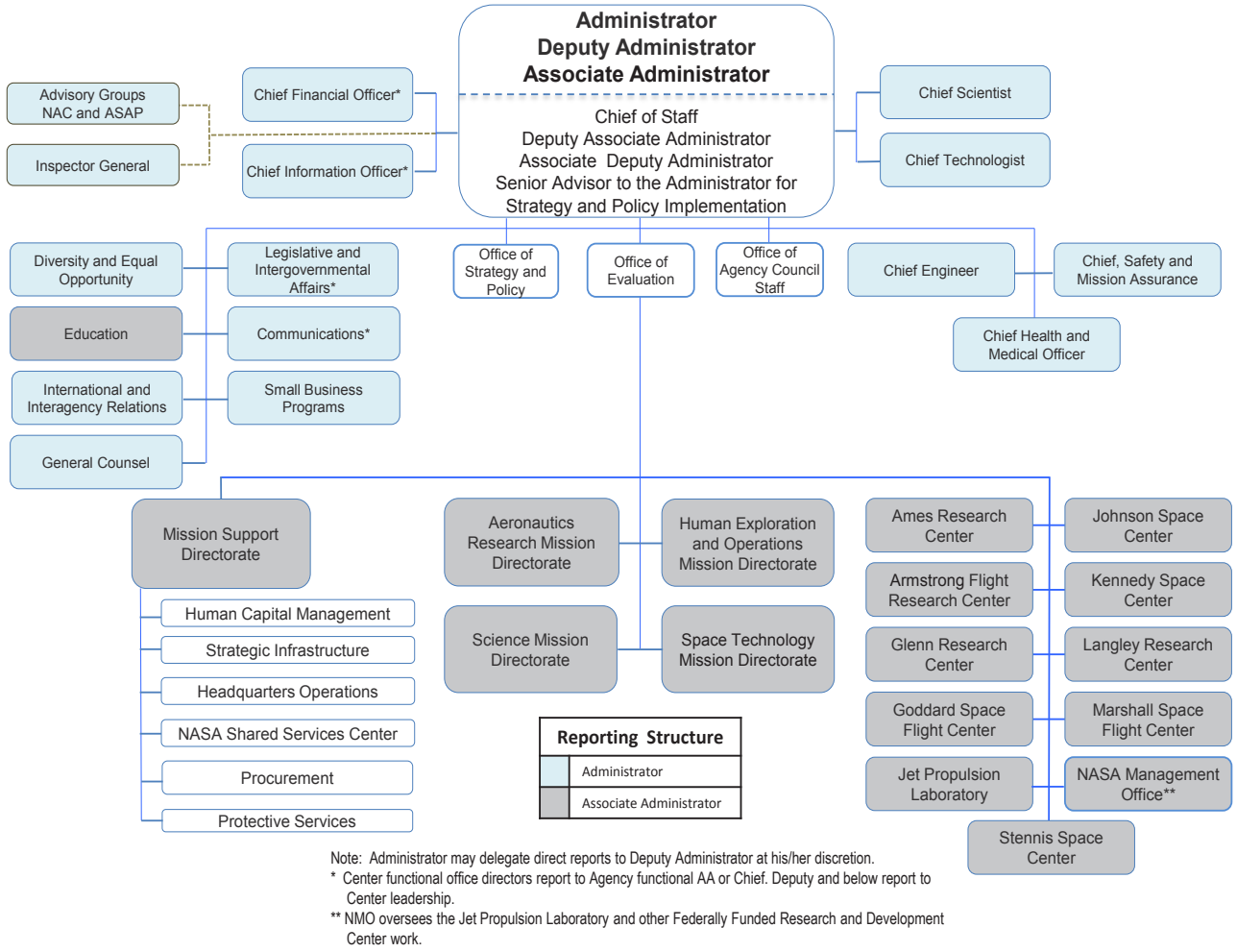
Office of Education (Education) develops and manages a portfolio of educational programs for students and teachers at all levels. Education seeks to develop a vibrant pool of future workforce for sustainable support of national and NASA missions by attracting and retaining students in STEM disciplines and raising public awareness of NASA's activities. To achieve these goals, Education works in partnership with other Government agencies, non-profit organizations, museums and the education community at large. Additional information on the Office of Education is available at:

http://www.nasa.gov/offices/education/about/.

The **Administrator's Staff Offices** support the Administrator's administrative responsibilities by providing a range of high-level guidance and support in critical areas like safety and mission assurance, technology planning, equal opportunity, information technology, financial administration, small business administration, international relations, and legislative and intergovernmental affairs. Additional information on the Administrator's staff offices is available at: http://www.nasa.gov/about/org_index.html.

NASA comprises Headquarters in Washington, DC, nine operating Centers located across the country, and the Jet Propulsion Laboratory, a Federally Funded Research and Development Center operated under a contract with the California Institute of Technology. NASA works in partnership with academia, the private sector, state and local governments, other Federal agencies, and a number of international organizations to support and achieve its Mission.

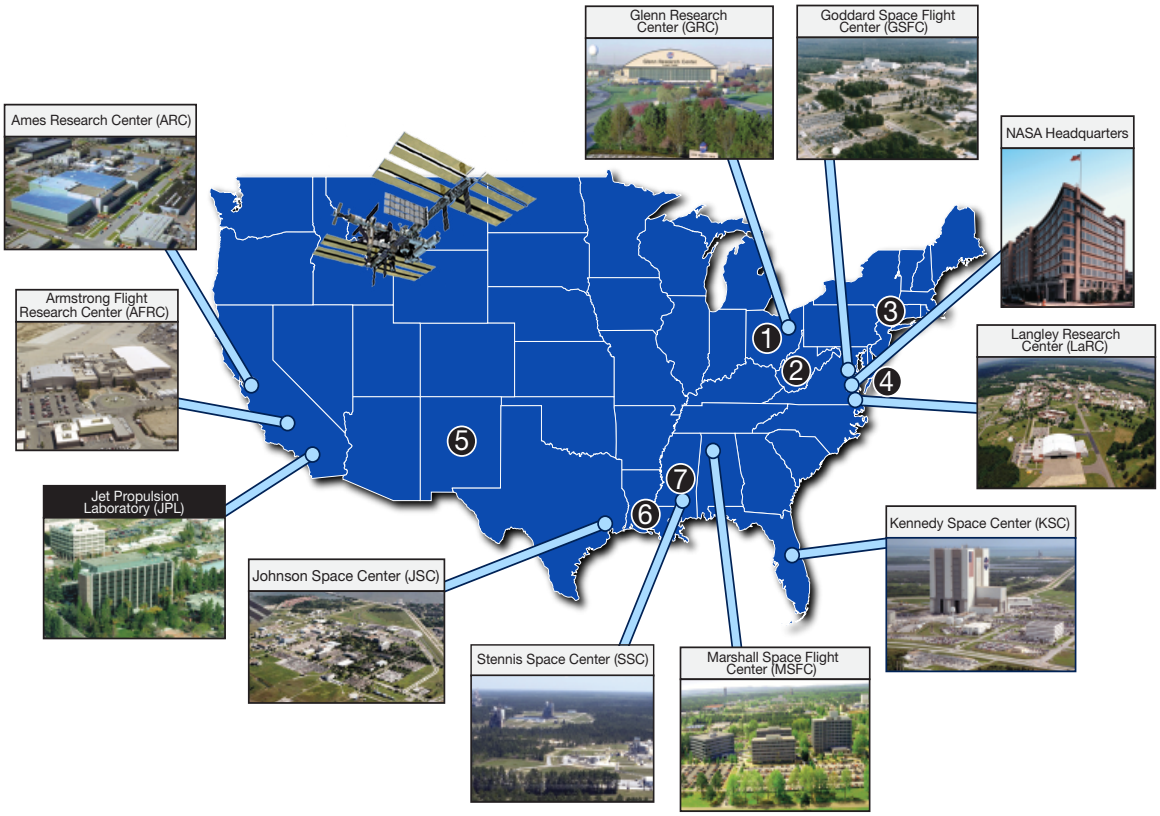
Organizational Structure



Note: Administrator may delegate direct reports to Deputy Administrator at his/her discretion.
* Center functional office directors report to Agency functional AA or Chief. Deputy and below report to Center leadership.
** NMO oversees the Jet Propulsion Laboratory and other Federally Funded Research and Development Center work.

Centers and Facilities Nationwide

Under the leadership of the Administrator, NASA's mission directorates, MSD, and staff offices at Headquarters provide overall guidance and direction to the Agency. NASA's Centers and installations conduct the Agency's day-to-day work in laboratories, on airfields, in wind tunnels, in control rooms, and in NASA's other one-of-a-kind facilities.



Select NASA Facilities
(noted by numbers on map)

1) Plum Brook Station, Sandusky, OH, managed by GRC
2)Software Independent Verification and Validation Facility, Fairmont, WV, managed by GSFC
3) Goddard Institute for Space Studies, New York, NY, managed by GSFC
4) Wallops Flight Facility, Wallops, VA, managed by GSFC
5) White Sands Test Facility and Space Network, White Sands, NM, managed by JSC
6) Michoud Assembly Facilities, New Orleans, LA, managed by MSFC
7) NASA Shared Services Center, Stennis Space Center, MS, managed by SSC

Note: JPL is a federally funded research and development center in Pasadena, California. The California Institute of Technology manages JPL.

The NASA Shared Services Center (NSSC) was established in March 2006 to provide all NASA Centers timely, accurate, and cost-effective support services in the areas of financial management, human resources, information technology, procurement, and business support services.

Workforce

As of the end of FY 2015, NASA employed more than 17,300 civil servants, including full-time, part-time, term appointee, student, and other non-permanent workers at its nine Centers, Headquarters, and NSSC. In addition, approximately 4,800 full-time equivalent employees perform NASA-funded work as employees of the Jet Propulsion Laboratory, operated by the California Institute of Technology. More information about NASA's workforce is available at: https://wicn.nssc.nasa.gov/. The NASA Office of Human Capital Management (OHCM) is responsible for planning and managing the Agency's workforce to ensure that the right skills are available to support NASA's Mission.

Talented and engaged people are NASA's greatest resource. NASA's Mission requires great responsibility and the continued need for a highly skilled, agile, inclusive, and innovative workforce. While many drivers of a positive workplace culture contribute to employee engagement and mission accomplishment, analysis has shown that three areas have the greatest potential to increase innovation given the current environment. The NASA Strategic Management Council will focus on the following three principal areas that will help to embed innovation in the NASA culture:

- Recognizing and rewarding innovative performance: Reward and appreciate employees for their innovative performance and contributions to their workplace.
- Engaging and connecting the workforce: Engage employees in the NASA Mission and enable them to cooperate, collaborate, and network with one another.
- Building model supervisors and leaders: Develop supervisors and leaders who view developing employees as an important and productive use of time.

NASA cares about the environment in which employees work. Direct attention to the NASA work environment, workforce, and culture through both inclusion and innovative strategies are critical to achieving NASA's Mission.

Image Caption: Members of the New Horizons science team react to seeing the spacecraft's last and sharpest image of Pluto before closest approach later in the day, Tuesday, July 14, 2015 at the Johns Hopkins University Applied Physics Laboratory (APL) in Laurel, Maryland. (Credit: NASA/Bill Ingalls)

Core Values

NASA's tradition of excellence is rooted in the four uncompromising shared core values of safety, integrity, teamwork, and excellence, as well as the firm belief that failure is not an option.

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 us.

Integrity: NASA is committed to maintaining an environment of trust, built upon honesty, ethical behavior, respect, and candor. Our leaders encourage this virtue in the NASA workforce by fostering an open flow of communication on issues among all employees without fear of reprisal. At NASA, we regard and reward employees for demonstrating integrity. Building trust through ethical conduct as individuals and as an organization is a necessary component of mission success.

Teamwork: NASA's most powerful asset for achieving mission success is a multidisciplinary team of diverse, competent people across NASA Centers. Our approach to teamwork is based on a philosophy that each team member brings unique experience and important expertise to project issues. 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 both the ordinary and the extraordinary.

FY 2015 In Review

NASA astronaut Scott Kelly captured this image of Aurora trailing a colorful veil over Earth, taken from the International Space Station on August 15, 2015. (Credit: NASA)

Mission Performance.....15
Performance Overview.....15
Performance Summary.....18
Strategic Goals and Highlights.....24
Strategic Goal 1: Expand the frontiers of knowledge, capability, and opportunity in space 24
Strategic Goal 2: Advance understanding of Earth and develop technologies to improve the quality of life on our home planet.....34
Strategic Goal 3: Serve the American public and accomplish our Mission by effectively managing our people, technical capabilities, and infrastructure.....42
Financial Performance.....49
CFO Letter.....49
Financial Highlights.....51
Overview of Financial Position.....51
Sources of Funding.....54
Net Cost of Operations.....55
Limitations of the Financial Statements.....59

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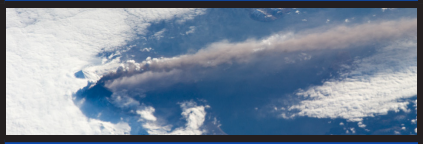
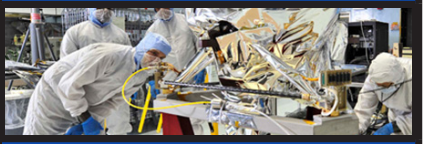
Mission Performance

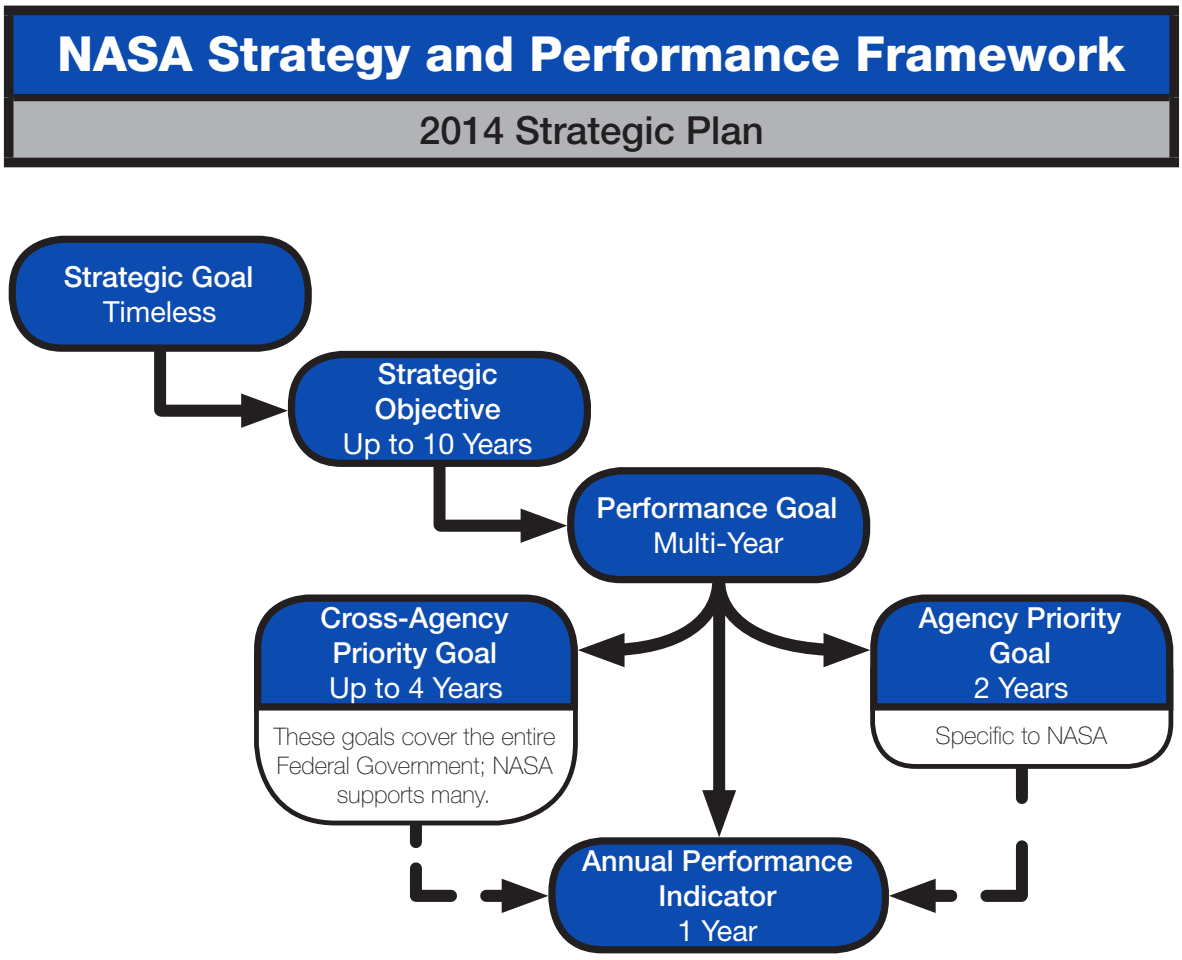
Performance Overview

NASA's strategic goals and strategic objectives, as established in NASA's 2014 Strategic Plan, are as follows:

Strategic Goal 1	Strategic Goal 2	Strategic Goal 3
		
Expand the frontiers of knowledge, capability, and opportunity in space.	**Advance understanding of Earth and develop technologies to improve the quality of life on our home planet.**	**Serve the American public and accomplish our Mission by effectively managing our people, technical capabilities, and infrastructure.**
By empowering the NASA community to…	By engaging our workforce and partners to…	By working together to…
Objective 1.1: Expand human presence into the solar system and to the surface of Mars to advance exploration, science, innovation, benefits to humanity, and international collaboration.	**Objective 2.1:** Enable a revolutionary transformation for safe and sustainable U.S. and global aviation by advancing aeronautics research.	**Objective 3.1:** Attract and advance a highly skilled, competent, and diverse workforce, cultivate an innovative work environment, and provide the facilities, tools, and services needed to conduct NASA's missions.
Objective 1.2: Conduct research on the International Space Station (ISS) to enable future space exploration, facilitate a commercial space economy, and advance the fundamental biological and physical sciences for the benefit of humanity.	**Objective 2.2:** Advance knowledge of Earth as a system to meet the challenges of environmental change, and to improve life on our planet.	**Objective 3.2:** Ensure the availability and continued advancement of strategic, technical, and programmatic capabilities to sustain NASA's Mission.
Objective 1.3: Facilitate and utilize U.S. commercial capabilities to deliver cargo and crew to space.	**Objective 2.3:** Optimize Agency technology investments, foster open innovation, and facilitate technology infusion, ensuring the greatest national benefit.	**Objective 3.3:** Provide secure, effective, and affordable information technologies and services that enable NASA's Mission.
Objective 1.4: Understand the Sun and its interactions with Earth and the solar system, including space weather.	**Objective 2.4:** Advance the Nation's STEM education and workforce pipeline by working collaboratively with other agencies to engage students, teachers, and faculty in NASA's missions and unique assets.	**Objective 3.4:** Ensure effective management of NASA programs and operations to complete the mission safely and successfully.
Objective 1.5: Ascertain the content, origin, and evolution of the solar system and the potential for life elsewhere.		
Objective 1.6: Discover how the universe works, explore how it began and evolved, and search for life on planets around other stars.		
Objective 1.7: Transform NASA missions and advance the Nation's capabilities by maturing crosscutting and innovative space technologies.		

At the heart of NASA's strategic goals and strategic objectives are the core missions of human space exploration, Earth and space science, aeronautics, and technology development. NASA is building capabilities for human space exploration, commercial space transportation, and the use of the International Space Station (ISS) for research, while also developing the James Webb Space Telescope (Webb).

NASA sets near-term performance goals (PGs), which are targets for the next several years, as well as annual performance indicators (APIs) to measure and communicate progress towards achieving the Agency's Vision and Mission. These PGs and APIs are aligned to the strategic goals and objectives. Together, the strategic goals, strategic objectives, PGs, and APIs, along with cross-agency priority (CAP) goals and Agency priority goals (APGs), form NASA's strategy-performance framework. More information can be found in our 2014 Strategic Plan, at nasa.gov/budget, and at performance.gov.



In this Summary of Performance and Financial Information, NASA presents a high-level summary of performance, reflecting year-end assessments of progress towards the PGs and APIs. More detailed information is provided in the Annual Performance Report (APR), published in February 2016 at nasa.gov/budget.

NASA determines these ratings based on a series of internal assessments that are part of ongoing monitoring of NASA's program and project performance. External entities, such as scientific peer review committees and aeronautics technical evaluation bodies, validate select ratings prior to publication in the APR.

For reporting purposes, NASA uses a color-coded system to represent the assessment and rating of performance. Every performance metric has specific, individualized rating criteria. The generic rating criteria in the table below are illustrative of the types of individualized criteria assigned to each performance measure, and broadly apply to the performance metrics.

Generic Performance Goal and Annual Performance Indicator Rating Criteria

Green	On Track or Complete	NASA completed or expects to complete this performance measure within the estimated timeframe.
Yellow	Slightly Below Target and/ or Behind Schedule	NASA completed or expects to complete this performance measure, but is slightly below the target and/or moderately behind schedule.
Red	Significantly Below Target and/or Behind Schedule	NASA did not or does not expect to complete this performance measure within the estimated timeframe. The program is substantially below the target and/ or significantly behind schedule.
White	Cancelled or Postponed	NASA senior management cancelled or postponed this performance measure. The Agency no longer is pursuing activities related to this performance measure, or the program did not have activities during the fiscal year.

Note: These are generic criteria provided for informational purposes only. NASA develops measure-specific criteria to rate all of the Agency's performance goals and annual performance indicators.

Performance Summary

In FY 2015, NASA reviewed progress toward 73 multi-year performance goals and 110 annual performance indicators – in total, progress against 183 performance metrics. NASA provided the FY 2015 Performance Plan online at nasa.gov in March 2014.

The summary of NASA's assessment of progress is provided below.

FY 2015 Ratings Overview

All Performance Metrics

Number of Performance Metrics		183
Green	*Yellow*	*Red*
163	16	4
89%	9%	2%

Performance Metrics by Strategic Goal

Strategic Goal 1	Strategic Goal 2	Strategic Goal 3
		
Expand the frontiers of knowledge, capability, and opportunity in space.	Advance understanding of Earth and develop technologies to improve the quality of life on our home planet.	Serve the American public and accomplish our Mission by effectively managing our people, technical capabilities, and infrastructure.

Number of Performance Metrics								
76			47			60		
Green	Yellow	Red	Green	Yellow		Green	Yellow	Red
64	11	1	46	1		53	4	3
84%	15%	1%	98%	2%		88%	7%	5%

Green — On Track or Complete

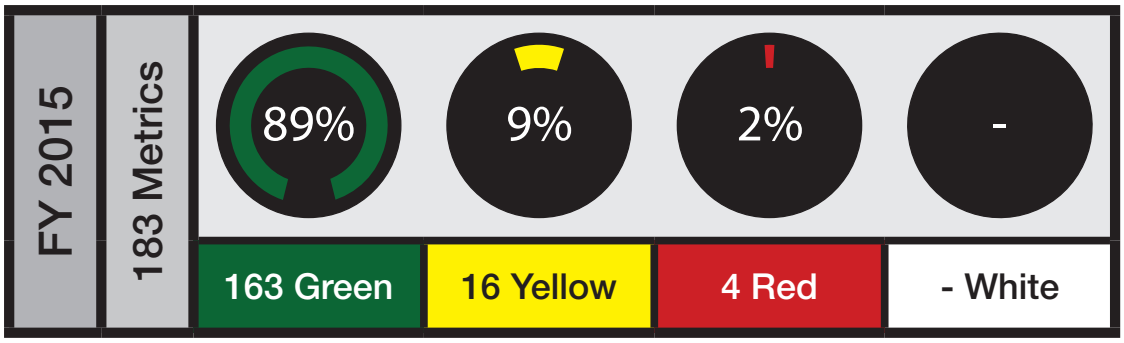
Yellow — Slightly Below Target and/or Behind Schedule

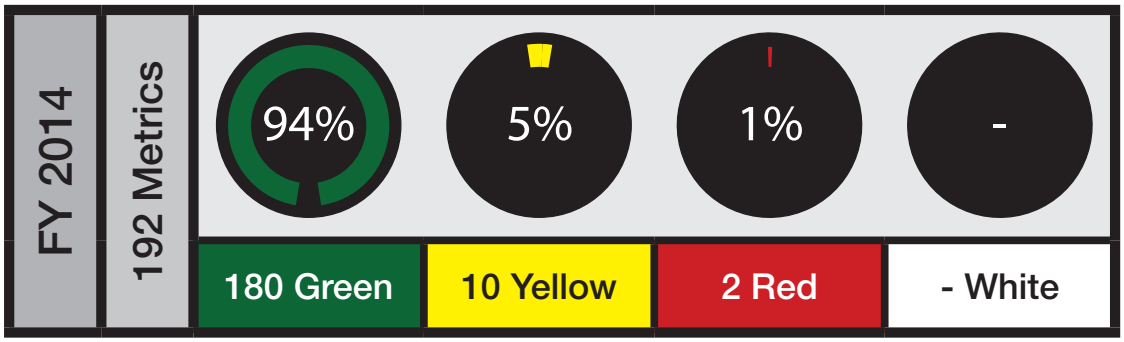
Red — Significantly Below Target and/or Behind Schedule

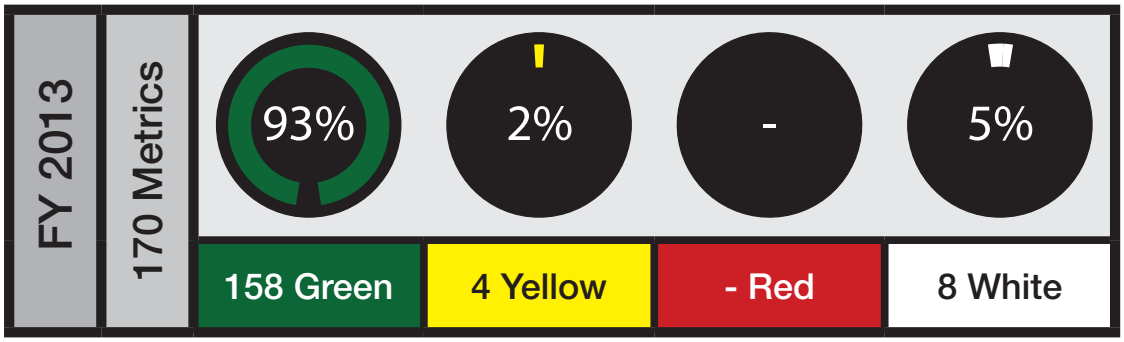
White — Cancelled or Postponed

Performance Metric Trending

Rating Trending Over Last Three Fiscal Years







Year	Total Metrics	Green	Yellow	Red	White
FY 2015	183	163	16	4	-
FY 2014	192	180	10	2	-
FY 2013	170	158	4	-	8

Green	On Track or Complete
Yellow	Slightly Below Target and/or Behind Schedule
Red	Significantly Below Target and/or Behind Schedule
White	Cancelled or Postponed

Ratings by Strategic Goal and Objective

FY 2015 PG and API Ratings

Strategic Goal 1

Expand the frontiers of knowledge, capability, and opportunity in space.

Green	Yellow	Red
24 PGs	5 PGs	-
83%	17%	-
40 APIs	6 APIs	1 API
84%	13%	3%

Strategic Objective 1.1

Expand human presence into the solar system and to the surface of Mars to advance exploration, science, innovation, benefits to humanity, and international collaboration.

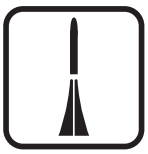
Green	Yellow
2 PGs	1 PG
67%	33%
5 APIs	1 API
83%	17%

Strategic Objective 1.2

Conduct research on the International Space Station (ISS) to enable future space exploration, facilitate a commercial space economy, and advance the fundamental biological and physical sciences for the benefit of humanity.

Green	Yellow	Red
2 PGs	4 PGs	-
33%	67%	-
6 APIs	3 APIs	1 API
60%	30%	10%

Strategic Objective 1.3



Facilitate and utilize U.S. commercial capabilities to deliver cargo and crew to space.

Green
2 PGs
100%
3 APIs
100%

Green	On Track or Complete
Yellow	Slightly Below Target and/or Behind Schedule
Red	Significantly Below Target and/or Behind Schedule
White	Cancelled or Postponed

Strategic Objective 1.4

Understand the Sun and its interactions with Earth and the solar system, including space weather.

Green
4 PGs
100%
7 APIs
100%

Strategic Objective 1.5

Ascertain the content, origin, and evolution of the solar system and the potential for life elsewhere.

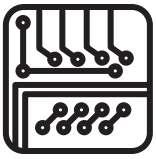
Green	Yellow
6 PGs	-
100%	-
8 APIs	1 API
89%	11%

Strategic Objective 1.6

Discover how the universe works, explore how it began and evolved, and search for life on planets around other stars.

Green
5 PGs
100%
6 APIs
100%

Strategic Objective 1.7



Advance knowledge of Earth as a system to meet the challenges of environmental change, and to improve life on our planet.

Green	Yellow
3 PGs	-
100%	-
5 APIs	1 API
83%	17%

Green	On Track or Complete
Yellow	Slightly Below Target and/or Behind Schedule
Red	Significantly Below Target and/or Behind Schedule
White	Cancelled or Postponed

Strategic Goal 2

Advance understanding of Earth and develop technologies to improve the quality of life on our home planet.

Green	Yellow
20 PGs	-
100%	-
26 APIs	1 API
96%	4%

Strategic Objective 2.1

Enable a revolutionary transformation for safe and sustainable U.S. and global aviation by advancing aeronautics research.

Green	Yellow
6 PGs	-
100%	-
6 APIs	1 API
86%	14%

Strategic Objective 2.2

Advance knowledge of Earth as a system to meet the challenges of environmental change, and to improve life on our planet.

Green
8 PGs
100%
14 APIs
100%

Strategic Objective 2.3

Optimize Agency technology investments, foster open innovation, and facilitate technology infusion, ensuring the greatest national benefit.

Green
2 PGs
100%
2 APIs
100%

Strategic Objective 2.4

Advance the Nation's STEM education and workforce pipeline by working collaboratively with other agencies to engage students, teachers, and faculty in NASA's missions and unique assets.

Green
4 PGs
100%
4 APIs
100%

Green	On Track or Complete
Yellow	Slightly Below Target and/or Behind Schedule
Red	Significantly Below Target and/or Behind Schedule
White	Cancelled or Postponed

Strategic Goal 3

Serve the American public and accomplish our Mission by effectively managing our people, technical capabilities, and infrastructure.

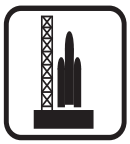
Green	Yellow	Red
21 PGs	2 PGs	1 PG
88%	8%	4%
32 APIs	2 APIs	2 APIs
88%	6%	6%

Strategic Objective 3.1

Attract and advance a highly skilled, competent, and diverse workforce, cultivate an innovative work environment, and provide the facilities, tools, and services needed to conduct NASA's missions.

Green	Yellow
7 PGs	2 PGs
78%	22%
14 APIs	2 APIs
88%	12%

Strategic Objective 3.2



Ensure the availability and continued advancement of strategic, technical, and programmatic capabilities to sustain NASA's Mission.

Green
7 PGs
100%
8 APIs
100%

Strategic Objective 3.3

Provide secure, effective, and affordable information technologies and services that enable NASA's Mission.

Green	Red
5 PGs	1 PG
83%	17%
5 APIs	2 APIs
71%	29%

Strategic Objective 3.4

Ensure effective management of NASA programs and operations to complete the mission safely and successfully.

Green
2 PGs
100%
5 APIs
100%

Green	On Track or Complete
Yellow	Slightly Below Target and/or Behind Schedule
Red	Significantly Below Target and/or Behind Schedule
White	Cancelled or Postponed

Strategic Goals and Highlights

Strategic Goal 1:
Expand the frontiers of knowledge, capability, and opportunity in space.

NASA's enduring and core goal, for over 50 years, is to expand the frontiers of knowledge, capability, and opportunity in space and continually challenge the boundaries of science, technology, and imagination. This goal includes NASA's strategic objectives for human exploration, the International Space Station (ISS), partnerships with U.S. industry, heliophysics, planetary science, astrophysics, and space technology development.

Strategic Objective 1.1: Expand human presence into the solar system and to the surface of Mars to advance exploration, science, innovation, benefits to humanity, and international collaboration.

NASA is entering a new era in human spaceflight: exploration beyond low Earth orbit, implementing a multiple destination exploration strategy with a capability-driven approach. The Human Exploration and Operations Mission Directorate's (HEOMD's) Exploration Systems Development programs are creating the first components of the architecture needed for human exploration beyond low Earth orbit. The first, foundational elements include the Orion spacecraft, the Space Launch System (SLS), and Exploration Ground Systems (EGS). Programs within this strategic objective also develop the technologies and capabilities for in-space propulsion, in-space operations, long-duration habitation, and other systems to support humans in hostile environments.

Key Achievement in FY 2015: Orion's Successful Exploration Flight Test-1

In December 2014, NASA launched the

Image Caption: NASA's Orion spacecraft awaits the U.S. Navy's USS Anchorage for a ride home. Orion splashed down in the Pacific Ocean after its successful first flight test, where a combined team from NASA, the Navy, and Orion prime contractor Lockheed Martin retrieved the capsule. (Credit: U.S. Navy)

Image Caption: The first test fire of the booster for NASA's SLS rocket. (Credit: NASA)

Orion spacecraft on Exploration Flight Test (EFT)-1, aboard a Delta IV Heavy rocket. This was Orion's first flight test, which sent the vehicle 3,600 miles into space during a two-orbit, 4.5-hour test. One of the objectives was to test how the spacecraft would fare returning to Earth at high speeds and temperatures. The test also provided important insight into key separation events, including whether the Launch Abort System and protective fairings came off at the right times, how the parachutes assisting Orion during its descent fared, and how the operations to recover Orion from the Pacific Ocean progressed.

Orion's flight test yielded millions of elements of data, every piece of which is providing unique insight into how to improve the spacecraft's design so that it can safely send astronauts on their way to Mars and return them home.

Key Achievement in FY 2015: SLS Booster Test

At Orbital ATK's Promontory, Utah, test facility, engineers fired the booster for NASA's SLS rocket for a two-minute test on March 11, 2015. The test is one of two that will qualify the booster for flight before SLS begins carrying NASA's Orion spacecraft and other potential payloads to deep space destinations.

The Exploration Systems Development Web site provides further information about the development of Orion, SLS, and the ground systems to support operations.

Strategic Objective 1.2: Conduct research on the International Space Station (ISS) to enable future space exploration, facilitate a commercial space economy, and advance the fundamental biological and physical sciences for the benefit of humanity.

The ISS is the world's only orbiting, microgravity research and development laboratory, where researchers can perform multidisciplinary research and technology development to prepare for our exploration of the solar system. The Administration recently announced the decision to extend operations of the ISS through at least 2024.

Image Caption: On January 19, 2015, Expedition 45/46 Commander, Astronaut Scott Kelly (right) and his twin brother, former Astronaut Mark Kelly (left), spoke to news media outlets at the Johnson Space Center about Scott Kelly's upcoming One-Year mission aboard the International Space Station. (Credit: Robert Markowitz)

Continuing ISS operations are critical to achieving NASA's and the Nation's goals in science, technology, and human spaceflight.

Key Achievement in FY 2015: Start of the One-Year Mission

In March 2015, U.S. Astronaut Scott Kelly and Russian Cosmonaut Mikhail Kornienko started a one-year mission on the ISS, which is twice as long as typical U.S. missions. The one-year crew mission is the latest step in the ISS' role as a platform for preparing humanity for exploration into deeper space. These investigations are expected to yield beneficial knowledge about the medical, psychological, and biomedical challenges faced by astronauts during long-duration spaceflight.

While astronaut Scott Kelly is in space, NASA will also undertake unprecedented twin studies with Scott's identical twin brother, retired astronaut Mark Kelly. These studies will be unique investigations into the genetic aspects of spaceflight.

Updates on current ISS operations, crew information, photos and video, positional information, and live-streamed high-definition views of Earth are available on the ISS Web site.

Strategic Objective 1.3: Facilitate and utilize U.S. commercial capabilities to deliver cargo and crew to space.

U.S. commercial space transportation capabilities will provide safe, reliable, and cost

Image Caption: SpaceX conducts the pad abort test for the Crew Dragon spacecraft on May 6, 2015. (Credit: NASA)

effective access to and from low Earth orbit and the ISS for crew and cargo. NASA's partnerships with American industry also will stimulate commercial industry, promote job growth, and expand knowledge. Through HEOMD's Commercial Crew program, NASA is providing technical and financial support to industry providers during the development phase of their crew transportation systems, while certifying providers' transportation systems to carry NASA astronauts to and from the ISS.

Key Achievement in FY 2015: SpaceX Demonstrates Astronaut Escape System for Crew Dragon Spacecraft

In May 2015, SpaceX completed a successful pad abort test of its Crew Dragon spacecraft. The spacecraft traveled 3,561 feet up before jettisoning its trunk and safely splashing down under three main parachutes in the Atlantic Ocean. The Crew Dragon launch escape capabilities demonstrated the spacecraft's ability to save astronauts in the unlikely event of a life-threatening situation on the launch pad.

Key Achievement in FY 2015: Construction of CST-100 Crew Access Tower

In FY 2015, Boeing and United Launch Alliance started assembly of a crew access tower a few miles from Space Launch Complex 41 at Cape Canaveral Air Force Station in Florida. The work is critical in readying the launch site for a crew flight test to certify their systems for operational missions to the ISS for NASA's Commercial Crew program. Once assembled, the crew access tower

Image Caption: The first crew access tower tiers begin to take shape at Space Launch Complex-41 for flights aboard the Boeing CST-100. (Credit: NASA/Jim Grossman)

will stand about 200 feet and will provide safe access to Boeing's Crew Space Transportation (CST)-100 spacecraft as it stands on the pad atop a United Launch Alliance Atlas V rocket.

Strategic Objective 1.4: Understand the Sun and its interactions with Earth and the solar system, including space weather.

The domain of heliophysics ranges from the interior of the Sun, to the upper atmosphere and near-space environment of Earth (above 31.1 miles, or 50 kilometers), and outward to a region far beyond Pluto, where the Sun's influence wanes against the forces of interstellar space. Earth and the other planets of the solar system reside in this vast extended atmosphere of the Sun, called the heliosphere, which is made of electrified and magnetized matter entwined with penetrating radiation and energetic particles. The emerging science of interplanetary space weather is also crucial to NASA's human and robotic exploration objectives beyond Earth's orbit.

Key Achievement in FY 2015: NASA Launches the Magnetospheric Multiscale Mission

In March 2015, NASA launched four identical spacecrafts that make up the Magnetospheric Multiscale (MMS) mission. MMS is the first mission dedicated to studying the mystery of how magnetic fields around Earth connect and disconnect, explosively releasing energy via a process known as magnetic reconnection. The four spacecrafts will fly in a pyramid formation through space to take unprecedented measurements of magnetic reconnection phenomenon as it occurs in different areas of Earth's magnetosphere. Magnetic reconnection is a common process throughout the universe: occurring in space near Earth, in the atmosphere of the Sun and other stars, in the vicinity of black holes and neutron stars, and at virtually any boundary between space plasmas, includ-

Image Caption: The four MMS observatories were processed for launch in a clean room at the Astrotech Space Operations facility in Titusville, Florida. (Credit: NASA/Ben Smegelsky)

ing the boundary between the solar system's heliosphere and interstellar space. It is one of the most important drivers of space weather events. Eruptive solar flares, coronal mass ejections, and geomagnetic storms all involve the release, through reconnection, of energy stored in magnetic fields. Space weather events can affect technology systems such as communications networks, GPS navigation, and electrical power grids.

Key Achievement in FY 2015: NASA's Solar Probe Plus Mission Successfully Completed Its Critical Design Review

NASA's Solar Probe Plus mission, a spacecraft that will fly closer to the Sun than any before, reached a major milestone in March 2015 when it successfully completed its Critical Design Review, or CDR. An independent NASA review board met at the Johns Hopkins University Applied Physics Laboratory (APL) to review all aspects of the mission plan. APL has designed and will build and operate the spacecraft for NASA. The CDR certifies that the Solar Probe Plus mission design is at an advanced stage and that fabrication, assembly, integration, and testing of the many elements of the mission may proceed. Solar Probe Plus is scheduled to launch in the later half of calendar year 2018.

Scientists have long wanted to send a probe through the Sun's outer atmosphere, or corona, to better understand the solar wind and the material it carries into the solar system. The primary science goals for the Solar Probe Plus mission are to trace the flow of energy and understand the heating of the solar corona and to explore the physical mechanisms that accelerate the solar wind and energetic particles. To meet these goals, Solar Probe Plus will carry four instrument suites into the corona and study the solar wind and energetic particles as they blast off the surface of the star. The instruments will study magnetic fields, plasma, and energetic particles, and will image the solar wind. The spacecraft and instruments will be protected from the Sun's heat by a 4.5-inch-thick carbon-composite shield.

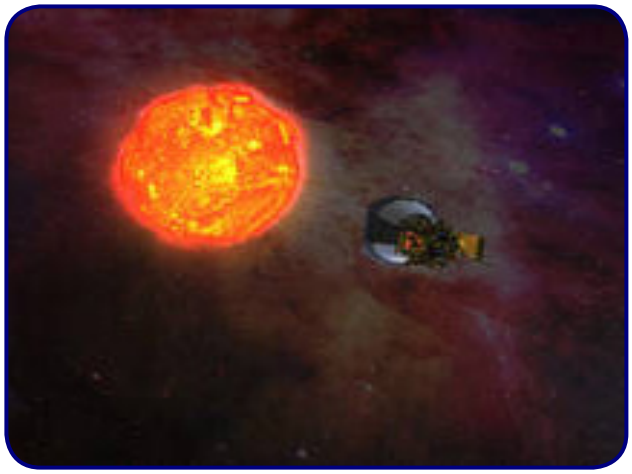


Image Caption: An artist's rendering of Solar Probe Plus shows the solar panels folded into the shadows of its protective shield, as it gathers data on its approach to the Sun. (Credit: NASA/ JHU-APL)

During the closest passes around the Sun, temperatures outside the spacecraft will reach nearly 2,500 degrees Fahrenheit.

Strategic Objective 1.5: Ascertain the content, origin, and evolution of the solar system and the potential for life elsewhere.

Planetary science is a grand human enterprise that seeks to understand the history of the solar system and the distribution of life within it. NASA is at the frontier of a journey of scientific discoveries that are yielding a profound new understanding of the solar system. Robotic exploration is the current approach to planetary science and is the necessary precursor to the expansion of humanity beyond Earth. Ground-based research and observations supplement NASA's space-based assets. NASA's Planetary Science Division continues to expand knowledge of the solar system, with active missions and Earth-based research programs exploring all the way from Mercury to Pluto and beyond.

Key Achievement in FY 2015: New Horizons Arrives at Pluto

In FY 2015, the New Horizons mission accomplished the historic first-ever flyby of Pluto. The New Horizons mission will increase understanding of worlds at the edge of the solar system by making the first reconnaissance of the dwarf planet Pluto and by venturing deeper into the distant, mysterious Kuiper Belt, a relic of solar system formation. New Horizons traveled more than nine years and three billion miles to reach Pluto.

Image Caption: Pluto nearly fills the frame in this image by NASA's New Horizons spacecraft, taken on July 13, 2015, when the spacecraft was 476,000 miles (768,000 kilometers) from the surface. This is the last and most detailed image sent to Earth before the spacecraft's closest approach to Pluto on July 14. The image is dominated by the large, bright feature, informally named the "heart," which measures approximately 1,000 miles (1,600 kilometers) across. (Credit: NASA/APL/SwRI)

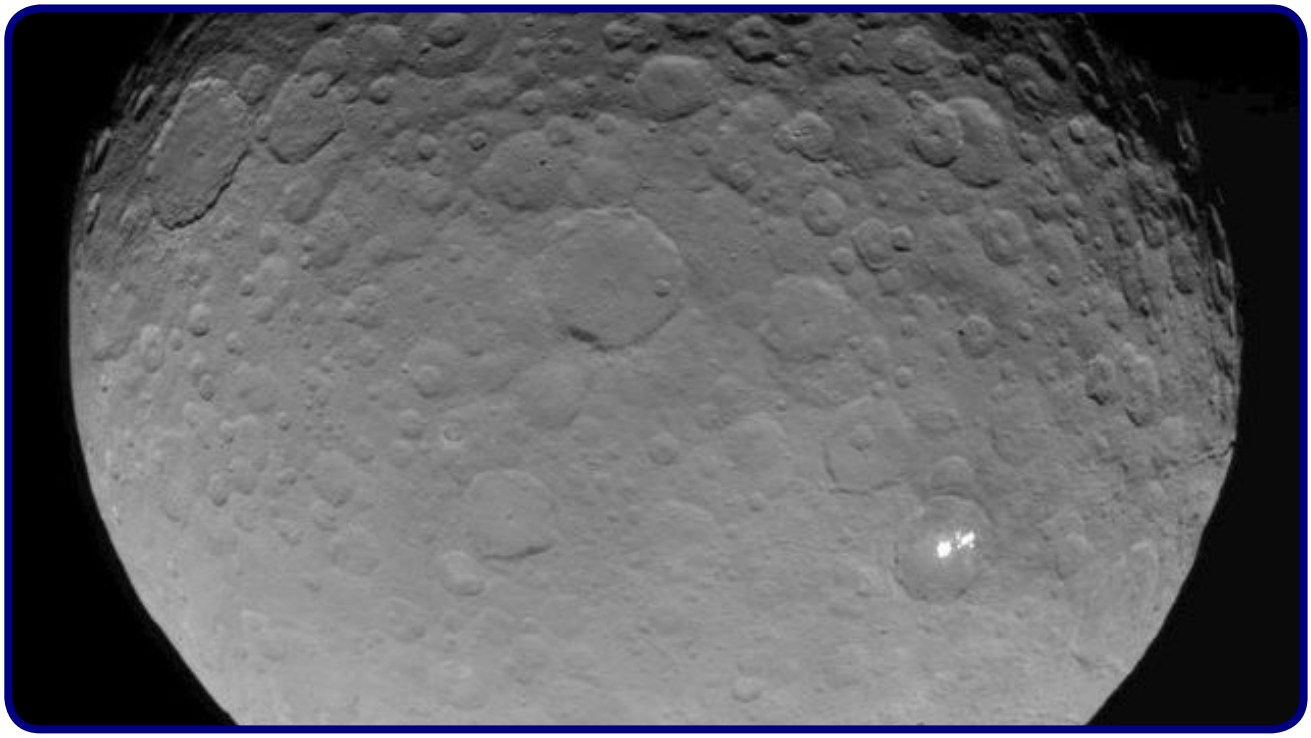


Image Caption: A cluster of mysterious bright spots on dwarf planet Ceres can be seen in this image, taken by NASA's Dawn spacecraft on May 4, 2015. (Credit: NASA/JPL-Caltech/UCLA/MPS/DLR/IDA)

Key Achievement in FY 2015: Dawn Arrives at Ceres

NASA's Dawn spacecraft arrived at Ceres, the largest object in the main asteroid belt between Mars and Jupiter, on March 6, 2015. Dawn is the first mission to visit a dwarf planet, and the first to orbit two distinct targets in the solar system. Dawn launched in 2007 and previously explored the protoplanet Vesta for 14 months, from 2011 to 2012.

Dawn has provided images of mysterious and unique features on Ceres, including bright spots and a mountain with steep slopes protruding from a relatively smooth area of the dwarf planet's surface.

Strategic Objective 1.6: Discover how the universe works, explore how it began and evolved, and search for life on planets around other stars.

NASA leads the Nation and the world on a continuing journey to answer some of the most profound questions that touch the hearts of all humanity: How does the universe work? How did we get here? Are we alone? The scope of astrophysics is truly breathtaking, ranging from the birth of the universe and the development of stars and galaxies over cosmic time, to the search for life on planets around other stars. Often in cooperation with ground-based observatories, NASA astrophysics missions exploit the full range of the electromagnetic spectrum

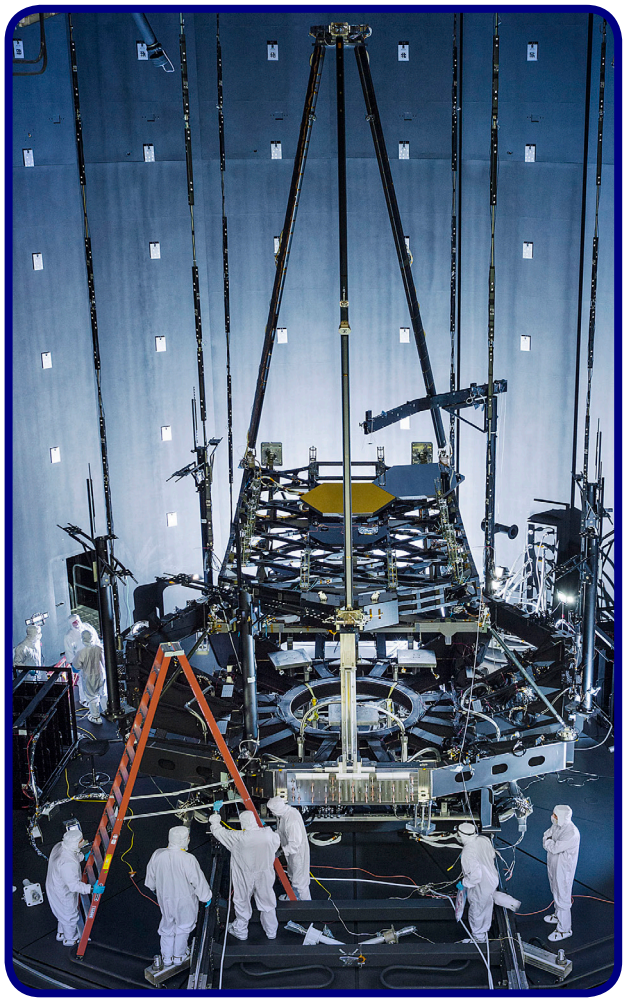


Image Caption: The pathfinder (or test model) of the Webb backplane is prepared for test inside Chamber A at NASA's Johnson Space Center. (Credit: NASA)

and the physics of high-energy subatomic particles to understand the broad diversity of objects in the universe.

Key Achievement in FY 2015: Webb Pathfinder Telescope Tested in Cryovacuum Chamber

The James Webb Space Telescope (Webb) will be a large infrared telescope with a 6.5-meter primary mirror. NASA continues to make progress toward the planned October 2018 launch date. A key step in FY 2015 was the test of the pathfinder (or test model) of the Webb backplane inside NASA's giant thermal vacuum chamber (Chamber A), located at NASA's Johnson Space Center in Houston, Texas. Previously used for manned spaceflight missions, this historic chamber is now being readied for a cryogenic test, which will simulate the frigid temperatures the Webb telescope will encounter in space.

Webb will be the premier observatory of the next decade, serving thousands of astronomers worldwide. It will study every phase in the history of the universe, ranging from the first luminous glows after the Big Bang, to the formation of solar systems capable of supporting life on planets like Earth, to the evolution of Earth's solar system.

Key Achievement in FY 2015: TESS Mission Confirmed to Proceed into Development

NASA has officially confirmed the Transiting Exoplanet Survey Satellite (TESS) mission, clearing it to move forward into the development phase. This marks a significant step for the TESS mission, which will search the entire sky for planets outside the solar system, known as exoplanets. TESS is expected to find more than 5,000 exoplanet candidates, including 50 Earth-sized planets. It will also find a wide array of exoplanet types, ranging from small, rocky planets to gas giants. Some of these planets could be the right sizes, and orbit at the correct distances from their stars, to support life. TESS is an ideal follow-up to the Kepler mission, which searches for exoplanets in a fixed area of the sky, and will complement several other critical space-based missions and ground-based observations.

Strategic Objective 1.7: Transform NASA missions and advance the Nation's capabilities by maturing crosscutting and innovative space technologies.

For decades, NASA's investment in space technology has helped make the United States the global leader in space exploration and scientific discovery, while significantly contributing to the technology-based U.S. economy. NASA's Space Technology Mission Directorate (STMD) continues that legacy today with a portfolio that spans a broad range of technical areas and various stages of technical maturity, from early stage concepts through flight demonstration. Through STMD, NASA advances technologies to improve capabilities for future human exploration and science missions (e.g., SLS, Orion, outer planetary exploration). In addition, STMD collaborates with other Government agencies to transform the Nation's capabilities in key technology areas; academia and other organizations to advance early stage concepts and technology development; and industry to advance technologies with potential to benefit the U.S. commercial space sector. The following are just a few examples of recent accomplishments:

- Advanced Orion compression pads, a game changing woven thermal protection system technology tailored to the needs of the Orion spacecraft. This technology has completed mission infusion review for Exploration Mission 1.

- The second near-space test flight of the Low Density Supersonic Decelerator (LDSD), a technology that could enable larger payloads to Mars and set the stage for future human explorers.

- The first in-space, 3D-printed object (aboard the ISS), paving the way to future long-term space expeditions.

Key Achievement in FY 2015: NASA Advances the State of the Art in High Power Solar Arrays

High power solar arrays represent a key STMD technology investment that can significantly benefit future NASA missions, other U.S. Government agencies, and commercial space. In 2012, NASA selected two companies – Alliant Techsystems, Inc. (now Orbital ATK) and Deployable Space Systems (DSS) – to develop solar arrays to enable future electric propulsion systems. Each company has a distinct design for its array. The Orbital ATK MegaFlex design is a circular array that opens axially like a fan. The DSS Mega-ROSA (i.e., Roll-Out Solar Array) design features a rectangular shape with flexible, modular "winglets" attached to a composite boom that can be rolled in or out like a window shade. These novel arrays are sized to provide approimately 20 kilowatts of power per wing, offering significant benefits over current systems. Compared to those on current commercial satellites, for example, these solar arrays can produce electricity with half the mass, a quarter of the stowed volume, and four times the radiation tolerance. Additionally, automated manufacturing of the new arrays could reduce cost by 35 percent.

There are many potential applications. Together with advanced thrusters and other novel technologies, these arrays will enable high-power solar electric propulsion for future NASA missions. These missions could include planetary or cis-lunar science missions, deep space human exploration, satellite servicing, orbital debris removal, and

Image Caption: ATK's MegaFlex and DSS's Mega-ROSA high power solar arrays. (Credit: NASA)

payload delivery. Additionally, another infusion application includes a functional space demonstration of large, advanced solar arrays on the ISS as an upgrade for increased power.

These systems are of interest for commercial satellite applications, as well. Current commercial satellites use large composite fold-out panels. The reduced mass and stowage volume afforded by these new solar arrays can lower satellite launch costs and eliminate the need for large, expensive launch shrouds. Similarly, these arrays offer potential costs savings and operational benefits for military satellite missions, and therefore are of interest to the U.S. Department of Defense.

Both teams have made great progress on their array designs, and possible applications for these systems continue to unfold. These high power solar arrays are only two examples of STMD's investment in a broad range of technologies with crosscutting, transformative payoffs.

Strategic Goal 2:
Advance understanding of Earth and develop technologies to improve the quality of life on our home planet.

NASA's accomplishments advance the understanding of Earth and help to improve life for its inhabitants, whether developing new aircraft technologies for safer, more efficient air travel, uncovering the complexities of Earth's natural systems, or transferring technologies to the commercial marketplace. This goal includes NASA's objectives for aeronautics research, Earth science, technology portfolio optimization, and science,

technology, engineering, and mathematics (STEM) education.

Strategic Objective 2.1: Enable a revolutionary transformation for safe and sustainable U.S. and global aviation by advancing aeronautics research.

The Aeronautics Research Mission Directorate (ARMD) contributes unique innovations to aviation through research activities that help sustain and advance the U.S. civil aviation industry. The results of these activities will enable a revolutionary transformation of the aviation system to improve quality of life and productivity on Earth.

ARMD established a new strategic vision in the 2014 NASA Strategic Plan, identifying six new strategic research thrusts: safe, efficient growth in global operations; innovation in commercial supersonic aircraft; ultra-efficient commercial vehicles; transition to low-carbon propulsion; real-time, system-wide safety assurance; and assured autonomy for aviation transformation.

Key Achievement in FY 2015: NASA completes the Environmentally Responsible Aviation Project

The Environmentally Responsible Aviation project concluded its final year having successfully completed eight Integrated Technology Demonstrations that support a NASA goal to enable industry to build advanced, ultra-efficient commercial vehicles. For airplanes that will be flying in the 2020-2025 timeframe, NASA research is aimed at cutting fuel use in half, reducing emissions up to 75 percent during takeoff and landing, and quieting aircraft noise 42 decibels below current standards. Two of these demonstrations took place this year aboard Boeing's ecoDemonstrator 757, a flying laboratory that allows researchers to try out aeronautical innovations in real-world conditions. The first of the two demonstrations studied how small jets embedded in an aircraft's vertical tail and blowing air over its surfaces could provide enough force to safely allow smaller tails on future aircraft designs. That would save weight, reduce drag and drop fuel usage up to 0.5 percent – a small number that quickly adds up to big savings for an airline operating hundreds of flights each day.

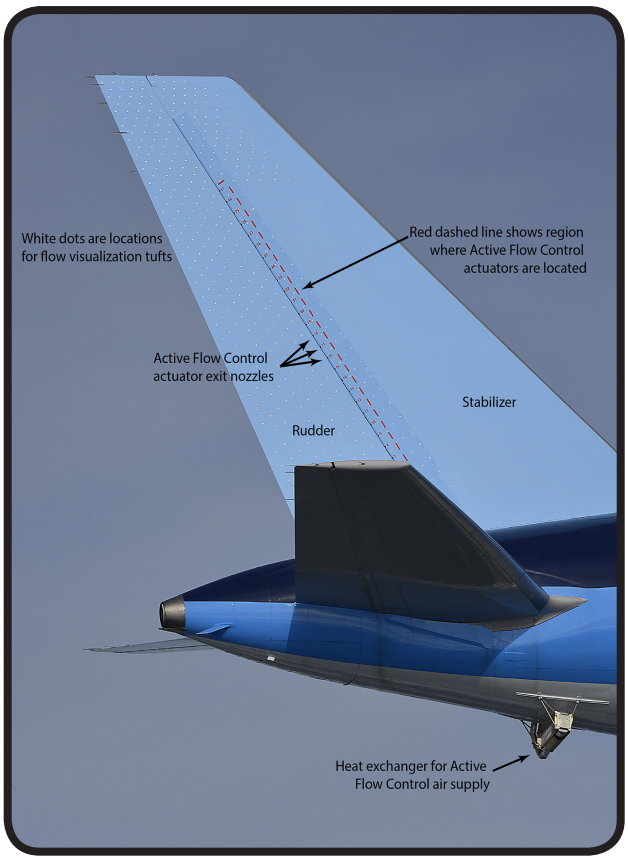


Image Caption: NASA's recent green aviation tests included the Active Flow Control Enhanced Vertical Tail Flight Experiment, for which 31 small devices called sweeping jet actuators were installed on the tail of a Boeing 757 ecoDemonstrator aircraft to determine what, if any, impact the devices had on the aerodynamics of the tail. (Credit: NASA/Boeing)

Image Caption: Materials scientist Mia Sioch (left) and systems engineer Mike Alexander (center), both from NASA's Langley Research Center, join Boeing technician Felix Boyett on a scissor lift so they can count insect residue on the right wing of Boeing's ecoDemonstrator 757 aircraft as part of NASA non-stick bug coating research in Shreveport, Louisiana. (Credit: NASA/Paul Bagby)

Find out more about ARMD's first demonstration with Boeing's ecoDemonstrator in their press release, "NASA Wraps Up First Green Aviation Tests on Boeing ecoDemonstrator."

The other demonstration studied how well special coatings worked to prevent sticky bug residue from building up on the leading edge of an airplane wing and increasing drag. Less bug residue would smooth airflow and help reduce fuel consumption. NASA knowledge gained through the ecoDemonstrator research will be publicly available to benefit industry.

Find out more about ARMD's second demonstration with special coatings in their press release, "NASA Tests Aircraft Wing Coatings that Slough Bug Guts."

Strategic Objective 2.2: Advance knowledge of Earth as a system to meet the challenges of environmental change, and to improve life on our planet.

NASA's Earth Science programs shape an interdisciplinary view of Earth, exploring the interaction among the atmosphere, oceans, ice sheets, land surface interior, and life itself, which enables scientists to measure global and climate changes and to inform decisions by government, organizations, and people. NASA's global observations provide a unique vantage point from which to study and gain understanding of changes in the planet. Since the Agency's inception in 1958, NASA has established itself as a world leader in Earth science and climate studies.

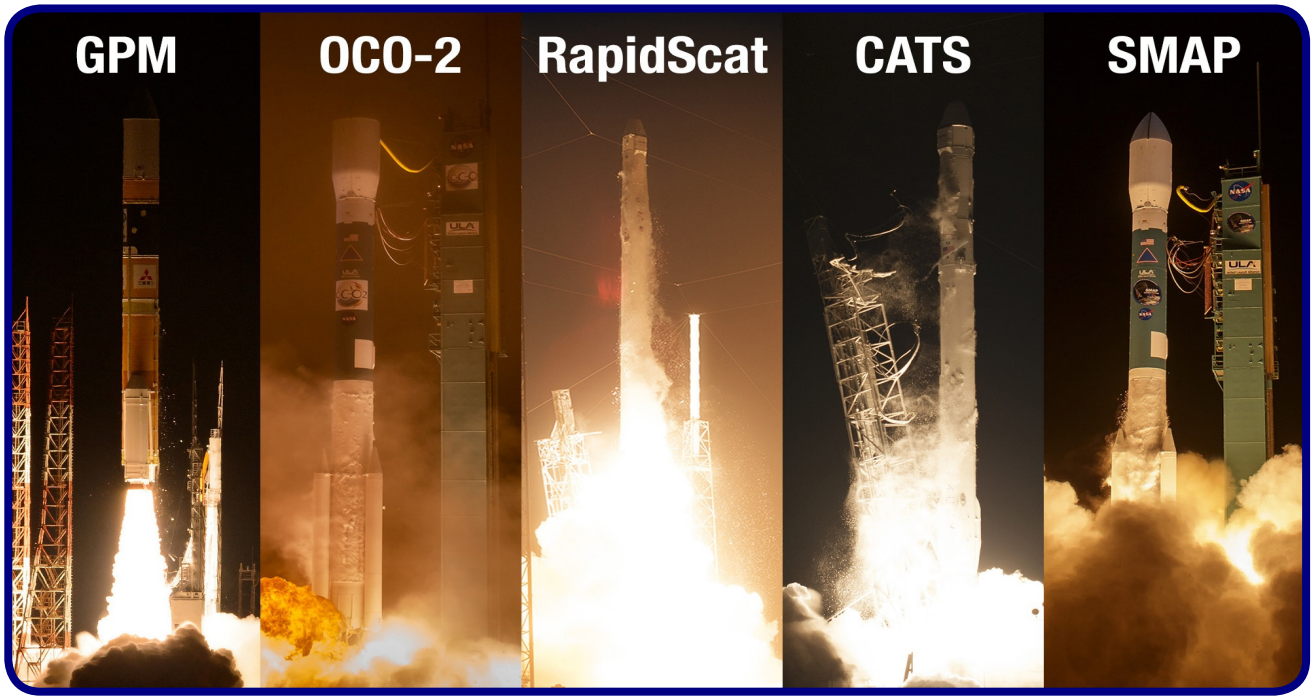


Image Caption: NASA successfully completed the launch of five new Earth-observing missions in less than a year. (Credit: NASA)

NASA does more than develop and build Earth-observing spacecraft and sensors. The Agency's multidisciplinary team of scientists, engineers, and computer modelers also analyze vast archives of data for insights into Earth's interconnected systems—atmosphere, ocean, ice, land, biosphere—and openly provide that data to the global community. NASA designs and deploys airborne, ground-based, and ocean-going field campaigns that complement, enhance, and improve space-based observational capabilities. NASA also works with other government agencies and partner organizations to apply Earth science data and computer models to improve decision making and solve problems.

Key Achievement in FY 2015: SMAP Launch Completes Five Launches in 11 Months

With the launch of Soil Moisture Active Passive (SMAP) on January 31, 2015, NASA successfully completed the launch of five new Earth-observing missions in less than a year. In addition to SMAP's measurements of soil moisture to improve climate and weather forecasts, the new missions are making ground-breaking observations of carbon dioxide (Orbiting Carbon Observatory-2, or OCO-2), ocean winds (ISS-RapidScat), clouds and aerosols (Cloud Aerosol Transport System, or CATS) and precipitation (Global Precipitation Measurement, or

GPM). Three of these missions, RapidScat, CATS, and SMAP launched in FY 2015.

These new missions will use the vantage point of space to give scientists the data they need to better understand Earth as a whole system. With these missions, including two instruments mounted on the exterior of the ISS, NASA now has 18 Earth-observing space missions in operation, providing the world with an improved global view of this changing planet. Observations from these missions, like all NASA data, will be freely available to the international scientific community and decision makers in the United States and abroad.

Key Achievement in FY 2015: NASA Satellites Provide Critical Information on Extent of California Drought

Working with the California Department of Water Resources (CDWR) and other state and Federal agencies, a NASA Applied Sciences project team applied Landsat, Terra, and Aqua satellite observations to create monthly fallowed-area maps of the Central Valley of California. The maps depict crop development on more than 200,000 fields in the valley, and a key innovation was the monthly production during the growing season. In 2014 and 2015, CDWR used the maps and other data to gauge idle agricultural land and inform state authorities about the extent of a drought. The information helped inform the allocation of drought emergency funds to food banks and social services agencies in affected counties, to provide support for farmworkers and their families.

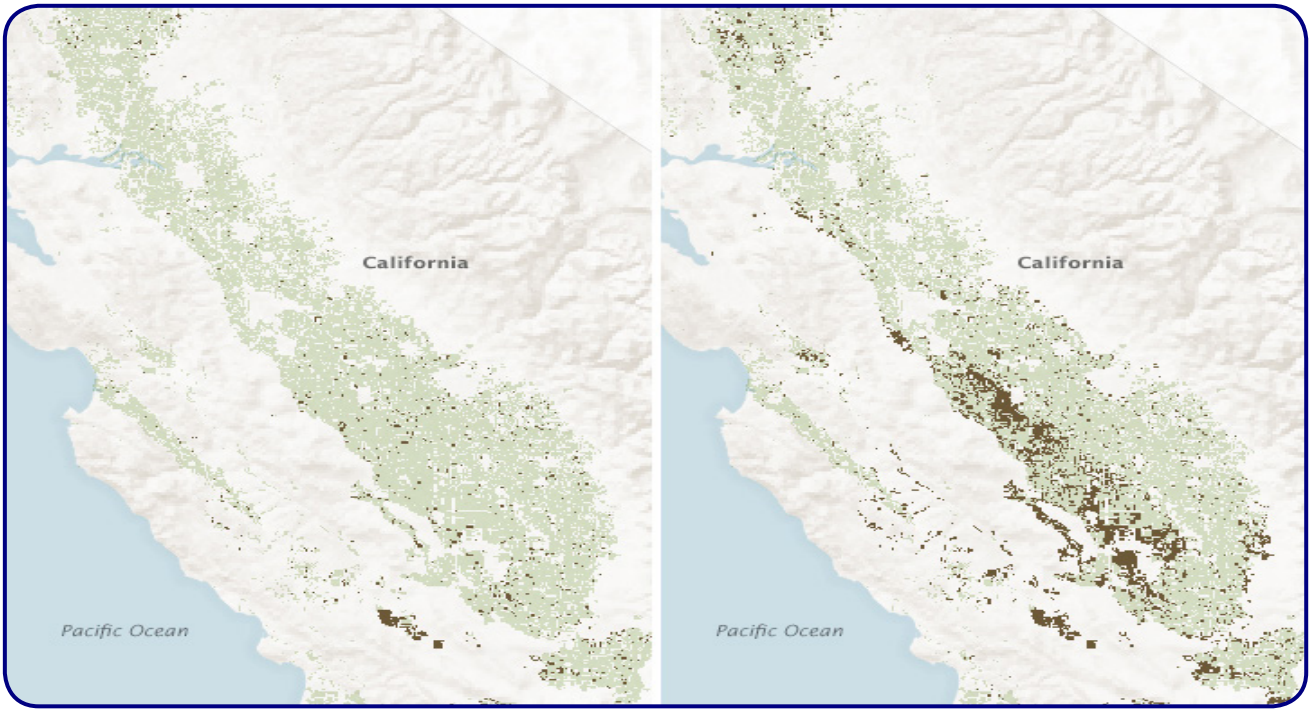


Image Caption: The statewide map of California is based on data from the Landsat series of satellites and from NASA's Terra and Aqua satellites. They show changes in crop cultivation and idle agricultural lands in California in August 2011 (on the left) and August 2014 (on the right). Brown pixels depict farms and orchards that have been left fallow, or "idled," since January 1 in each year. Green pixels show plots where at least one crop was grown during the calendar year. (Credit: NASA Earth Observatory image by Joshua Stevens, based on data from Forrest Melton, California State University, Monterey Bay)

Image Caption: NASA's TechPort is an integrated, Agency-wide software system designed to capture, track, and manage NASA's portfolio of technology investments. (Credit: NASA)

Image Caption: The NASA Software Catalog offers an extensive portfolio of software products for a wide variety of technical applications. (Credit: NASA)

Strategic Objective 2.3: Optimize Agency technology investments, foster open innovation, and facilitate technology infusion, ensuring the greatest national benefit.

NASA's Office of the Chief Technologist (OCT) enables critical technology development and open innovation, optimizes NASA's technology portfolio, and maximizes the transfer of NASA technology to U.S. partners. This work is performed under the Partnership Development and Strategic Integration program.

Key Achievement in FY 2015: NASA Releases TechPort

In FY 2015, NASA publicly released the Technology Portfolio System (TechPort), which is NASA's first comprehensive resource for locating information about NASA-funded technology development activities. NASA's technology development activities cover a broad range of areas, such as propulsion, nanotechnology, robotics, and human health. TechPort contains a variety of useful information on these activities, including technology descriptions, images, and locations where work is being performed.

This beta system enables the public to explore NASA's technology portfolio and learn about technology programs and projects as NASA works to mature technologies for aeronautics, space exploration, and scientific discovery missions. NASA is offering the public the opportunity to give this beta system a trial run and then provide feedback. Users' input will enhance the system design and the type of information provided in future versions.

Key Achievement in FY 2015: NASA Releases Second Edition of the NASA Software Catalog

In 2015, OCT released the second edition of the NASA Software Catalog, a downloadable collection of software programs providing cutting-edge solutions for a wide array of industrial, academic, government, and public applications.

The catalog includes more than 1,000 software codes organized into 15 categories, available for use at no charge. It enables NASA projects, government agencies, and other users to save money and time by using ready-made coding tools rather than buying or building their own. Since the catalog de-

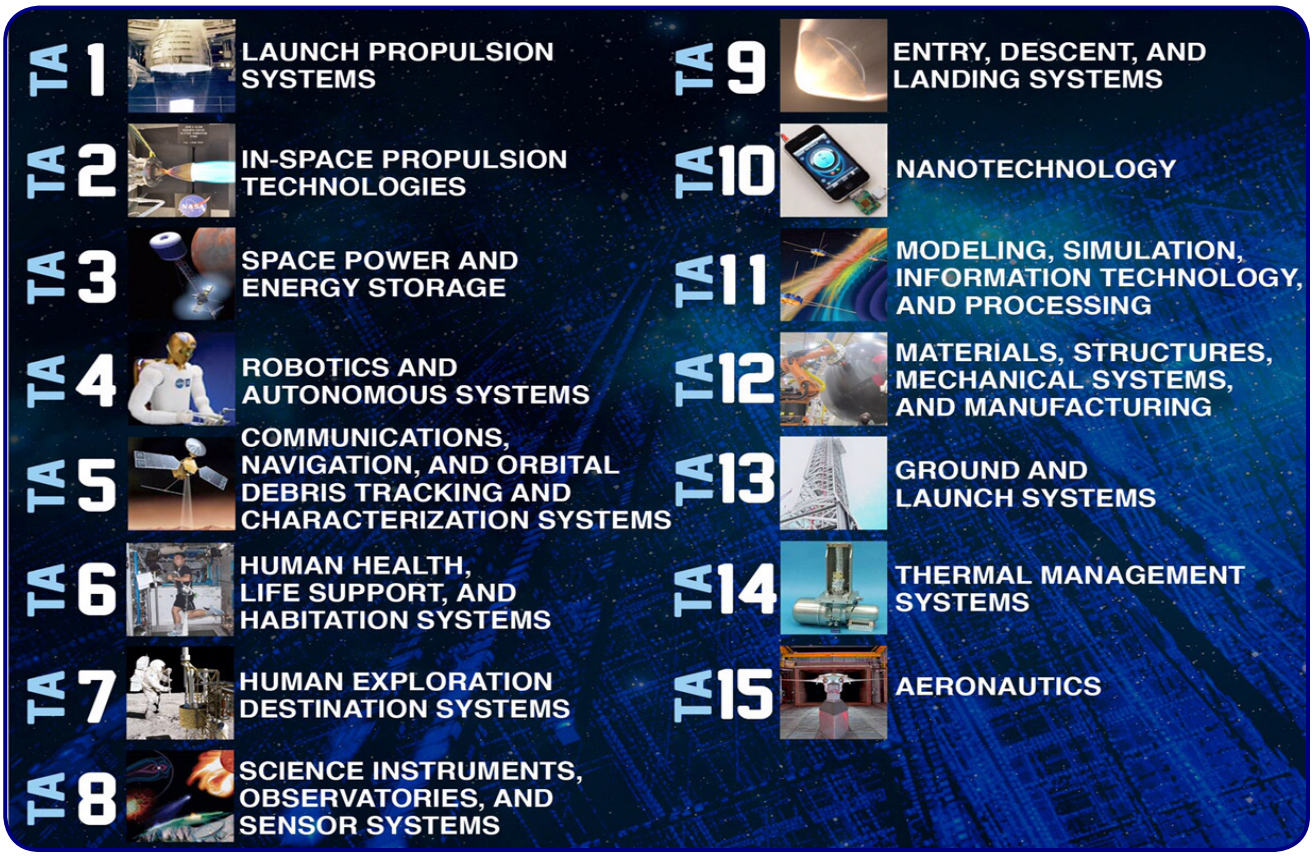


Image Caption: The 2015 NASA Technology Roadmaps are comprised of 15 distinct Technology Area roadmaps. (Credit: NASA)

buted in 2014, NASA has seen a dramatic increase in code sharing across government projects, and more than 100,000 downloads of the catalog and millions of visitors to the Web site to date.

Visit the Technology Transfer Program web site to find out more about NASA technologies, read success stories, explore additional resources, and to view the Patent Portfolio.

Key Achievement in FY 2015: NASA Unveiled the Latest Technology Roadmaps for Future Agency Needs

NASA has released the Agency's 2015 technology roadmaps, laying out the promising new technologies that will help NASA achieve its aeronautics, science, and human exploration missions for the next 20 years, including the NASA's journey to Mars.

NASA released a Request for Information, seeking public comment on the draft roadmaps to increase awareness, generate innovative solutions for space exploration and scientific discovery, and inspire public involvement in the U.S. space program. Public input was received and incorporated into the roadmaps. The final roadmaps were posted on OCT's Web site in July 2015.

The roadmaps are a key part of NASA's Strategic Technology Investment Plan. They lay out the strategy, guiding principles, and priorities for developing technologies that are essential to NASA's Mission and

help achieve national goals. Many of the technologies developed will also help meet the needs of other government agencies, as well as support the growth of the U.S. commercial space industry.

Strategic Objective 2.4: Advance the Nation's Science, Technology, Engineering, and Math (STEM) education and workforce pipeline by working collaboratively with other agencies to engage students, teachers, and faculty in NASA's missions and unique assets.

NASA's education programs work in collaboration with other Federal agencies to improve the quality of STEM education in the United States, which supports both NASA's Strategic Plan and the Administration's STEM policy. To maintain a globally competitive Nation, the Office of Education's programs develop and deliver activities that support the growth of NASA's and the Nation's STEM workforce, help develop STEM educators, engage and establish partnerships with institutions, and inspire and educate the public.

Key Achievement in FY 2015: NASA Hosts Rocket Week at Wallops Flight Facility

Rocket Week, held in June 2015 at NASA's Wallops Flight Facility in Virginia, provided student and educator participants with the

Image Caption: On June 25, 2015, NASA successfully launched a Terrier-Improved Orion suborbital sounding rocket from NASA's Wallops Flight Facility. It carried student experiments developed through the RockOn/RockSat-C programs. More than 200 middle school and university students and instructors participating in Rocket Week at Wallops were on hand to witness the launch. (Credit: NASA)

opportunity to learn about rocketry, developing experiments for space flight, team work, and how to apply these lessons in the classroom and to careers.

About 150 university and community college students and instructors built and flew experiments on a NASA suborbital rocket through the RockOn and RockSat-C programs. Conducted in collaboration with the Colorado and Virginia Space Grant Consortia, RockOn is in its eighth year, while RockSat-C is in its seventh year. In addition, 20 high school educators examined how to apply rocketry basics into their curriculum through the Wallops Rocket Academy for Teachers (WRATS), which is in its fifth year.

Strategic Goal 3:

Serve the American public and accomplish our Mission by effectively managing our people, technical capabilities, and infrastructure.

NASA maintains a dedicated, knowledgeable workforce and cutting-edge facilities and capabilities to carry out the ambitious tasks for its Mission. The programs under Strategic Goal 3 support all of NASA's space-, air-, and Earth-based research and innovation activities, producing the best return on the Nation's investment. Strategic Goal 3 includes NASA's strategic objectives for the Mission Support Directorate (MSD), technical capabilities, information technology (IT) services, and Safety and Mission Success programs.

Strategic Objective 3.1: Attract and advance a highly skilled, competent, and diverse workforce, cultivate an innovative work environment, and provide the facilities, tools, and services needed to conduct NASA's missions.

NASA is dedicated to innovation, bold ideas, and excellence, which enable the Agency to provide the day-to-day operations required to support and achieve its missions. Programs aligned with Strategic Objective 3.1 ensure effective management of human capital, finance, information technology, infrastructure, acquisitions, security, real and personal property, occupational health and safety, equal employment opportunity and diversity, small business programs, external relations, internal and external communications, stakeholder engagement, and other essential corporate functions.

Key Achievement in FY 2015: NASA named the Best Place to Work in the Federal Government for the Third Consecutive Year

NASA's most powerful asset for achieving mission success is a multidisciplinary team of diverse, talented people across NASA Centers. For the third consecutive year, NASA was voted the Best Place to Work in the Federal Government, according to the Partnership for Public Service. Based on 2014 Employee Viewpoint Survey results, this survey also named NASA the top-ranked large agency on innovation. These results are a testament to the excellence of NASA's workforce and their determination to maintain America's leadership in space exploration.

Information on careers at NASA, benefits, retirement information, and the Human Capital Program are available on the NASA People Web site.

Image Caption: Buildings are demolished at NASA's Santa Susana Field Laboratory in California. (Credit: NASA)

Key Achievement in FY 2015: NASA achieves success in freezing the footprint from FY 2012 to FY 2015

NASA identifies underutilized assets and demolishes facilities as part of its facilities strategy to renew and modernize the Agency's facilities and to sustain capabilities. Since 2004, NASA has demolished or disposed of 1,380 facilities, and since FY 2012, when the Office of Management and Budget issued the Freeze the Footprint policy for the Federal Government, NASA has achieved a 2.2 percent total reduction in square footage for office and warehouse space. In concert with demolition activities, NASA also consolidates facilities, uses public-private partnerships to offset operating costs, and requires offsets for new construction. These policies, activities, and investments reduce long-term facilities sustainment, utilities, and other support requirements, allowing NASA to focus on renewing and modernizing facilities and capabilities.

Strategic Objective 3.2: Ensure the availability and continued advancement of strategic, technical, and programmatic capabilities to sustain NASA's Mission.

NASA's technical capabilities and assets support NASA missions, as well as the work of others outside of the Agency. The programs under Strategic Objective 3.2 ensure that the Agency's key capabilities and critical assets will be available in the future to support the missions that require them, such as launch services to NASA and civil sector

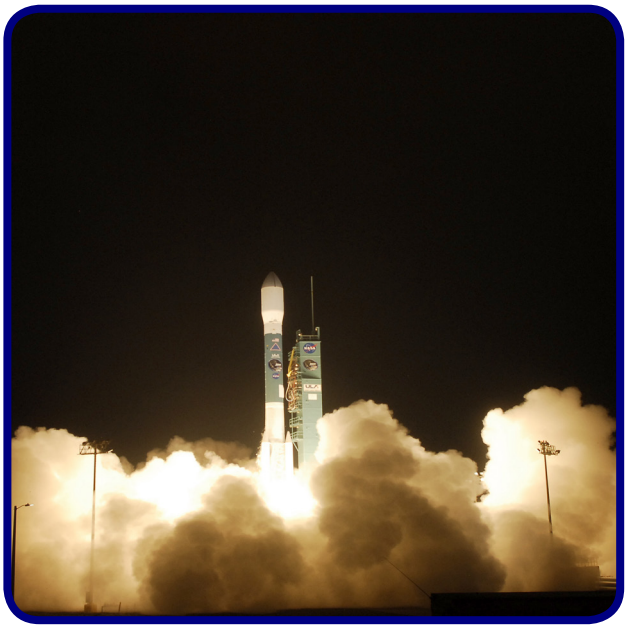


Image Caption: NASA's SMAP observatory launches aboard a United Launch Alliance Delta II rocket on January 31, 2015, at Space Launch Complex-2, Vandenberg Air Force Base, California. (Credit: NASA/Kim Shiflett)

missions, as well as an uninterrupted, reliable space communications network to allow data transmissions to Earth from space.

Key Achievement in FY 2015: Successful launches of Expendable Launch Vehicles for NASA Missions

The Launch Services program achieved a 100 percent success rate in FY 2015 with the successful launch of two NASA missions. This included the launch of the SMAP observatory on a United Launch Alliance Delta II rocket on January 31, 2015.

Key Achievement in FY 2015: Successful Series of Tests for the Space Launch System (SLS) RS-25 Rocket Engine

During FY 2015, the RPT program performed 453 tests for a total of 116,262 seconds of test time, while maintaining 98.7 percent test stand availability. RPT's customers included the SLS program's series of tests of the RS-25 developmental engine as part of the engine's preparation for a return to deep-space missions aboard the new SLS rocket. NASA is designing the SLS to carry humans deeper into space than ever before, to such destinations as an asteroid and Mars. Four RS-25 engines will power the core stage of the new vehicle. RS-25 engines formerly served as the Space Shuttle's main engines. They will be operated at slightly higher power levels to provide the additional thrust needed to power the SLS. The main goal of the series was to test the engine under simulated temperature, pressure, and other changes required by the SLS design. The first test in the series was in January, and the series concluded successfully at the end of the fiscal year.

Image Caption: Engineers conducted an SLS RS-25 rocket engine test fire at NASA's Stennis Space Center, Mississippi, in June 2015. (Credit: NASA)

Image Caption: An artist's concept of TDRS-L shows the satellite in orbit. (Credit: NASA)

Key Achievement in FY 2015: Initial Operational Capability achieved for TDRS-L

In FY 2015, NASA completed Initial Operational Capability for the Tracking and Data Relay Satellite (TDRS)-L, which was launched in January 2014. TDRS-L is the latest element in the communications network that links NASA's ground controllers to orbiting spacecraft, including the Hubble Space Telescope, the ISS, and NASA's Earth-observing missions.

Strategic Objective 3.3: Provide secure, effective, and affordable information technologies and services that enable NASA's Mission.

Information technology is a critical component of NASA's infrastructure to enable mission success. The Agency IT Services (AITS) program provides the policy and management for NASA's enterprise IT services, including end user services, business applications, network management, computing platforms and data centers, and Web services for the Agency's Web sites. IT security is a crucial element within the delivery of these services to ensure the confidentiality, integrity, and availability of NASA's information assets. The AITS program provides innovative IT solutions to assist NASA's scientists, engineers, and analysts with cost-effectively achieving their mission. The program also improves public access to NASA's scientific and technical information and increases public participation in NASA's diverse activities.

Key Achievement in FY 2015: Leveraging NASA's Data

NASA released over 30,000 datasets and 40 application programming interfaces during FY 2015 through its public online portal at https://data.nasa.gov/, supporting the Federal cross-agency priority goal on open government data. Datasets available on NASA's data portal are automatically listed on the Government-wide Web site, data.gov. NASA's data portal includes developer resources to help users build applications that utilize NASA's data, as well as robust data visualization tools to increase the public understanding of the datasets. Additionally, participants in the 2015 International Space Apps Challenge used NASA datasets for their challenge submissions across four areas: Earth, Outer Space, Humans, and Robotics. To obtain a clearer understanding of the demand for NASA's data, the Agency introduced a new capability at data.nasa.gov that allows the public to request specific datasets. Furthermore, in order to improve the accessibility of certain key data, NASA's Open Innovation team provided fully machine-readable datasets on NASA's intellectual property and user facilities on data.gov. Previously, these data were stored in

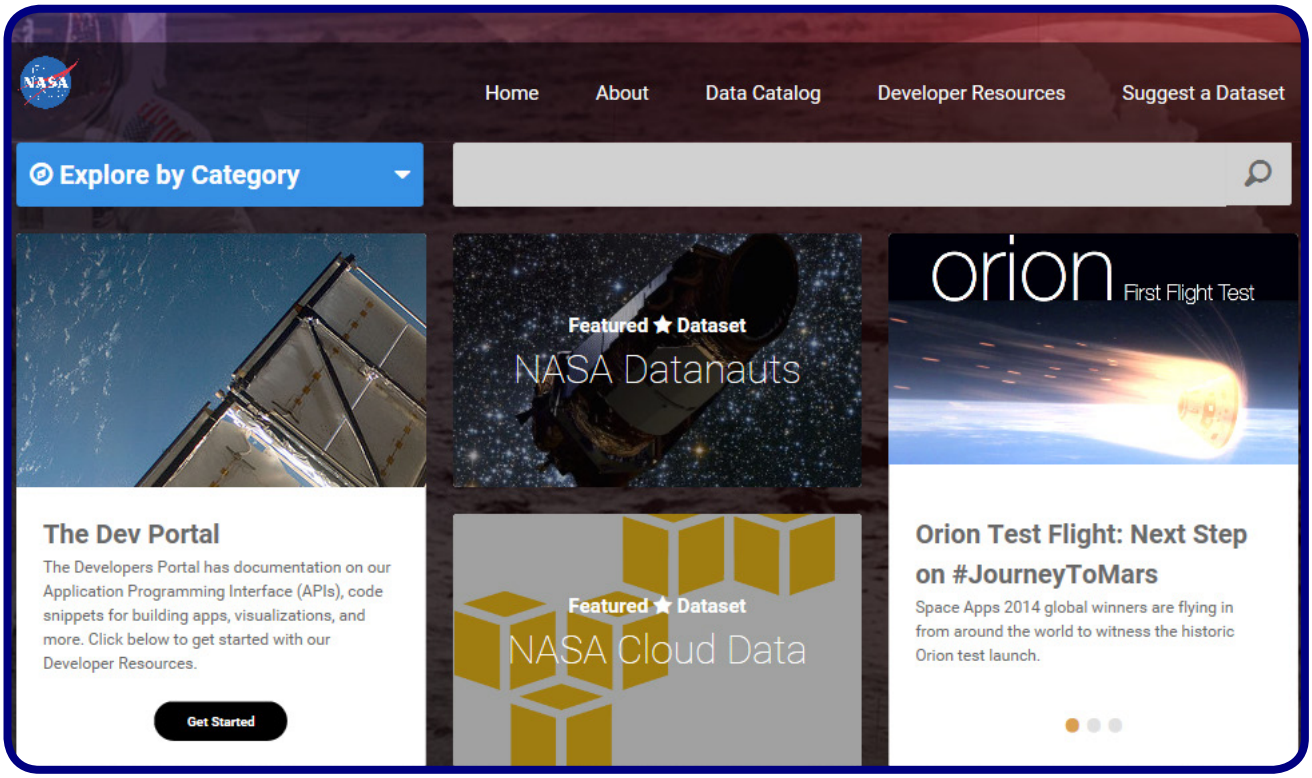


Image Caption: NASA's data portal, located at http://data.nasa.gov, is a continually growing catalog of publically available NASA datasets, Application Programming Interfaces (APIs), visualizations, and more. (Credit: NASA)

separate databases and in non-machine readable formats. The user facilities dataset alone has been viewed over 2,000 times on data.gov.

NASA also took strides to use its data more effectively to improve mission performance. On July 16, 2013, there was a near catastrophic incident during NASA's 224th spacewalk, or extravehicular activity (EVA). A Mishap Investigation Board (MIB) later identified the EVA data and data systems as one of the root-causes that required correction since inability to quickly access a previous failure mode resulted in the team relying on data from memory. The MIB recommended the integration of EVA data systems to provide EVA users with easy access to complete, accurate, and up-to-date data, which led to the initiation of the EVA Data Integration (EDI) project. The EVA Management Office turned to the Office of the Chief Information Officer (OCIO) for help in solving this data integration challenge. Through this collaboration, the EDI project developed a vision and integration plan that leverages OCIO's cloud computing and data architecture initiatives to solve the problems of the traditional stove-piped data systems. Ultimately, the EDI project reduces data complexity, increases value of data through unified systems, improves timely availability of data, makes data collaboration easier, and allows for smarter mission decisions.

Key Achievement in FY 2015: Upgrades to the Security Operations Center

NASA completed a set of upgrades in FY 2015 for the Security Operations Center

(SOC) at Ames Research Center. The upgrades spanned across 27 Intrusion Detection Systems, increasing the Agency's readiness to combat cyber threats. These technology upgrades improve the SOC's capability to detect and prevent security incidents, increasing the ability to analyze system and network vulnerabilities across the enterprise as compared to known and evolving cyber threats.

Strategic Objective 3.4: Ensure effective management of NASA programs and operations to complete the mission safely and successfully.

Safety and Mission Success (SMS) programs protect the health and safety of the NASA workforce and improve the likelihood that NASA's programs, projects, and operations will be completed safely and successfully. NASA's commitment to safety and mission success encompasses its employees, contractors, commercial partners, and the American public. SMS activities are conducted by the Office of the Chief Engineer (OCE), Office of Safety and Mission Assurance (OSMA), and Office of the Chief Health and Medical Officer (OCHMO).

SMS successfully implemented its strategic objective of enhancing mission success of NASA's programs, projects, and operations, while ensuring the safety and health of the public and the NASA workforce in FY 2015. SMS demonstrated this through the following:

- Zero fatalities or permanent disabling injuries to the public resulting from NASA activities.
- Maintaining a Total Case Rate and Lost Time Case Rate that exceeded the goals of the President's Protecting Our Workers and Ensuring Reemployment initiative.
- Reducing the non-mission failure damage to NASA assets.
- Ensuring 100 percent of Category 1 and 2 projects used Agency SMS policy, procedures, and independent assessments focused on both technical and programmatic mission success.
- Ensuring that 100 percent of the engineering and programmatic workforce had access to the standards and knowledge base needed to maintain and build their skills.

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Financial Performance

CFO Letter

February 11, 2016

On behalf of the National Aeronautics and Space Administration (NASA), I am pleased to present the Fiscal Year (FY) 2015 financial highlights and financial statements. As demonstrated throughout this Summary of Performance and Financial Information (SPFI), NASA is committed to the highest standards of financial accountability in support of the Nation's aeronautics and space missions executed around the world. The SPFI is the cornerstone of NASA's efforts to provide transparent, meaningful financial information to the American public and to demonstrate the Agency's effective stewardship of the finite resources entrusted to it.

More importantly, the SPFI culminates the work and dedication displayed every day by the Agency's workforce, the Office of Inspector General, and our independent external auditor. The SPFI represents the intersection between NASA's programs and financial management. As the complexity and diversity of our mission portfolio grows, the Agency's financial systems and processes are also evolving to meet expanding program, management, and other stakeholder information needs.

NASA operates world-wide, with nine operating Centers and associated component facilities and one Federally Funded Research and Development Center. The SPFI represents the complexity of financing our operations, through a combination of public-private partnerships and relationships/agreements with a multitude of other Federal agencies to achieve our respective missions. Similar to the progress in our mission portfolios, NASA continues to make progress in the effectiveness of our financial management practices and systems. For example, this year NASA:

- Initiated a business process documentation and streamlining effort with the goal of defining consistent, effective core business processes across our diversified Centers and facilities. NASA focused on the travel and reimbursable agreement processes in FY 2015 and additional areas will be added in the future.

- Expanded the use of the Department of Defense's Wide Area Workflow (WAWF) eInvoicing system. WAWF is an electronic invoicing, receipt and acceptance system that will improve NASA's cash flow management, eliminate lost documents and, ultimately, reduce operating costs.

- Improved the budget formulation and execution systems to better align with mission needs and to increase the usage of those systems across the Agency. These systems provide a consistent means for developing, maintaining and tracking NASA's budget and budget decisions.

- Continued to meet Improper Payments Information Act (IPIA) and Improper Payments Elimination and Recovery Act (IPERA) compliance requirements over the last nine years. NASA has reviewed all of its programs annually and has not identified significant improper payments for any of its programs.

As evidence that our efforts continue to have tangible results, I am pleased to report that NASA remains in substantial compliance with the Federal Financial Management Improvement Act (FFMIA). I also take great pride in reporting that for the fifth year in a row NASA received an unmodified "clean" audit opinion of our FY 2015 financial statements, with no material weaknesses. This year's opinion identifies two significant deficiencies, one related to information technology and the other to NASA's asbestos liability estimate, and non-compliance with the Single Audit Act. We take these issues seriously and have developed plans toward remediating the underlying issues as soon as possible.

The financial highlights that follow explain how we used the funds entrusted to us to perform our mission and achieve the results described in this SPFI's Performance section. In the Financial section, we provide our audited financial statements, accompanying notes, and the independent auditor's opinion on our financial statements.

I am pleased with our achievements and remain committed to ensuring sound financial management that delivers reliable and actionable information for both internal and external decision makers and stakeholders. I appreciate the immense dedication of the entire Agency, with special thanks to the Office of Inspector General.

David P. Radzanowski
Chief Financial Officer

Financial Highlights

This section provides highlights of NASA's financial performance for fiscal year (FY) 2015. The highlights explain the financial results of program and operational decisions. Key components of this section include:

Overview of Financial Position — Balance Sheet
Sources of Funding — Statement of Budgetary Resources
Net Cost of Operations — Statement of Net Cost

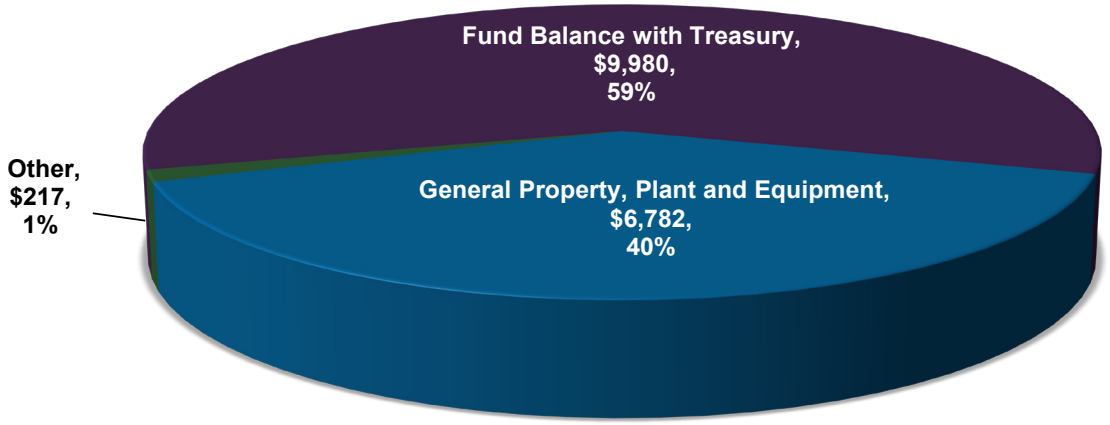
Overview of Financial Position

NASA's Balance Sheet provides a comparable snapshot of the Agency's financial position as of September 30, 2015 and September 30, 2014. It displays amounts in three primary categories:

- Assets, which are the future economic benefits owned or available for use by NASA;
- Liabilities, which are amounts owed by NASA but not yet paid; and
- Net Position, which reflects the sources and uses of Agency funding.

Balance Sheet Categories *(In Millions of Dollars)*	2015	2014	Percent (%) Change
Total Assets	**$ 16,979**	**$ 18,155**	**(6)**
Fund Balance with Treasury	9,980	10,293	(3)
General Property, Plant and Equipment	6,782	7,679	(12)
Other	217	183	19
Total Liabilities	**$ 4,811**	**$ 4,560**	**6**
Accounts Payable	1,455	1,565	(7)
Environmental and Disposal Liabilities	1,412	1,274	11
Other Accrued Liabilities	1,372	1,185	16
Other Liabilities	529	488	8
Federal Employee and Veteran's Benefits	43	48	(10)
Total Net Position	**$ 12,168**	**$ 13,595**	**(10)**
Unexpended Appropriations	6,988	7,413	(6)
Cumulative Results of Operations	5,180	6,182	(16)

Asset by Type for FY 2015
(in Millions of Dollars)



Assets were the largest of the three categories (Total Liabilities plus Total Net Position will always equal Total Assets). NASA's asset balance at the end of FY 2015, was $17 billion, 6 percent lower than in FY 2014.

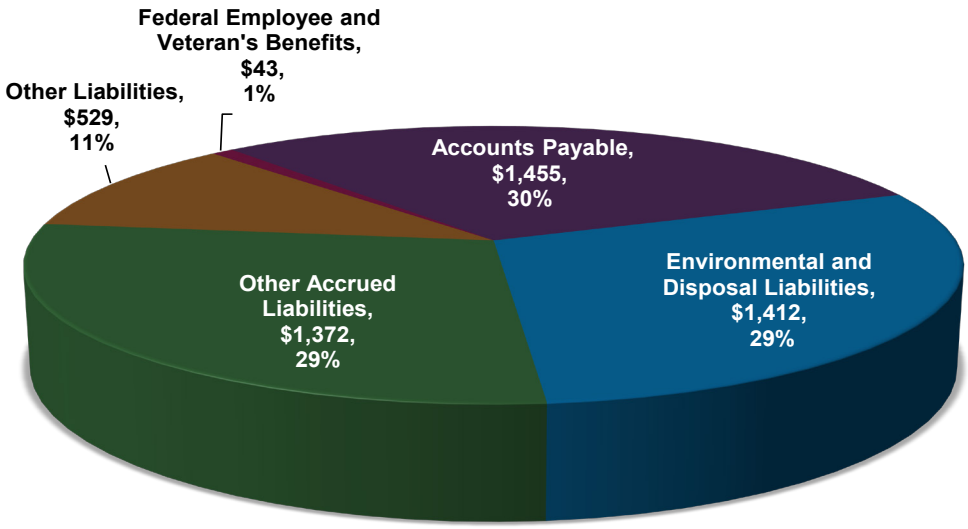
The Agency's Fund Balance with Treasury (FBWT) and its General Property, Plant and Equipment (G-PP&E) were the two primary components of the total asset balance.

FBWT, which represents NASA's cash balance with the U.S. Department of the Treasury, was the largest asset at $10 billion, 59 percent of total assets. This cash balance included Congressional appropriations funds available for NASA's mission work (for example, employee labor or purchased goods and services from contractors) that have not yet been paid.

NASA's G-PP&E had a net book value of $6.8 billion as of September 30, 2015, which was a decrease of $897 million, 12 percent lower than in FY 2014. The decrease was driven by depreciation of the International Space Station (ISS).

The Other category represents the amount of Investments, Accounts Receivable, and Other Assets at the end of FY 2015. The increase of $34 million, 19 percent higher than in FY 2014, is primarily due to launch services supporting National Oceanic and Atmospheric Administration (NOAA) Geostationary Operational Environmental Satellite-R (GOES-R). As the launch date is approached, milestone requirements increase in value. This increase is most apparent in the launch year and the two years before launch. GOES-R is slated to launch in early 2016.

Liabilities by Type for FY 2015
(in Millions of Dollars)



Liabilities as of September 30, 2015, were $4.8 billion. Accounts Payable, Environmental and Disposal Liabilities, and Other Accrued Liabilities represent the majority of NASA's liabilities.

Accounts Payable, which represents amounts owed to other entities, was $1.5 billion, a decrease of $110 million, or 7 percent, compared to FY 2014. The decrease is primarily due to contract closeout activities in FY 2015 which resulted in payment of invoices, thereby reducing the accounts payable balance compared to FY 2014.

Environmental and Disposal Liabilities of $1.4 billion, represents the estimated cost to cleanup both known and projected environmental hazards. These liabilities increased by $138 million, or 11 percent, from FY 2014. The increase was primarily due to higher estimated cleanup costs for existing environmental restoration projects.

Other Accrued Liabilities with public entities were $1.4 billion, an increase of $187 million, or 16 percent, compared to FY 2014. This increase was related to the straight-line cost accrual process used for specific types of contracts and purchase orders that are accrued monthly and which will disburse over the period of performance.

Other Liabilities represents various amounts, including Advances to Others, Unfunded Annual Leave and Accrued Funded Payroll. The increase of $41 million, 8 percent higher than in FY 2014, is primarily due to more advance payments being received for the Planetary Ventures lease in FY 2015. This agreement did not exist in FY 2014. Additionally, more advances were received in FY 2015 from the Department of Homeland Security for NASA to provide application development and computing infrastructure support for the Automated Behavior Analysis (AuBA) system.

Federal Employee and Veteran's Benefits are amounts the Department of Labor estimates on behalf of NASA for future workers' compensation liabilities for current employees. The estimate for future

workers' compensation benefits includes the expected liability for death, disability, medical and miscellaneous costs for approved compensation cases, plus a component of claims incurred but not reported.

Net Position, comprised of Unexpended Appropriations and Cumulative Results of Operations ("net worth"), decreased by $1.4 billion, 10 percent from FY 2014. Unexpended Appropriations, at $7 billion, was down by 6 percent from FY 2014 balances. This was primarily due to a decrease in unobligated balances available in FY 2015 compared to FY 2014. Cumulative Results of Operations, at $5.2 billion, was down by 16 percent from FY 2014 balances, primarily due to the increase in depreciation expense associated with the ISS and higher costs to execute NASA missions.

Sources of Funding

The Statement of Budgetary Resources provides information on the budgetary/funding available to NASA. NASA's resources consist primarily of funds received from two sources:

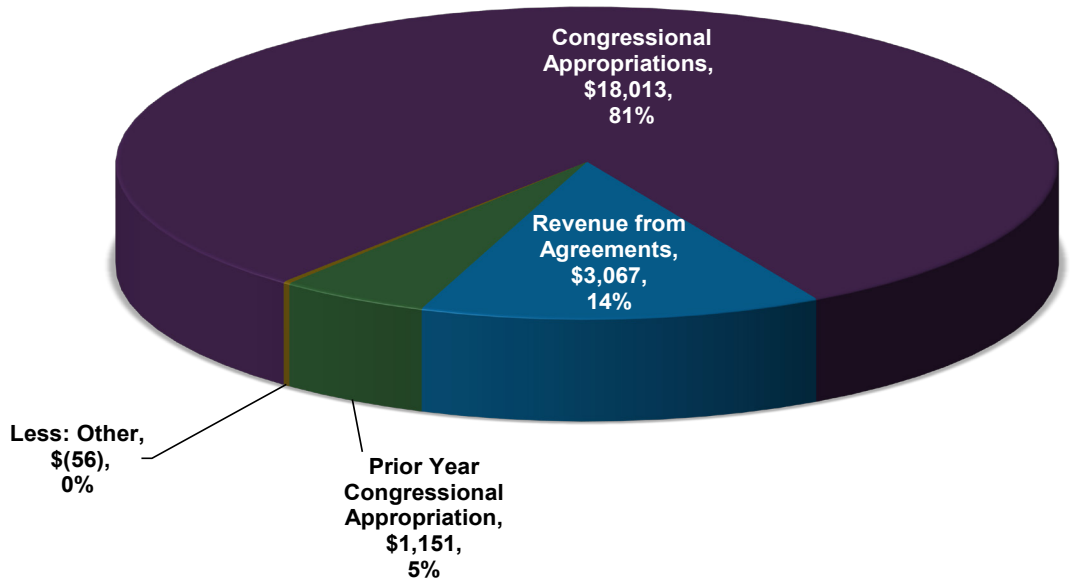
- Appropriations from Congress for the current fiscal year and unobligated balances from prior fiscal years; and
- Revenue from agreements with other governmental organizations or private entities

In FY 2015, the total funds available for use by the Agency were $22.2 billion.

Appropriations from Congress for FY 2015, at $18 billion, comprised 81 percent of the funds available for use by the Agency. Congress designates the funding available to the Agency for a specific NASA mission or purpose. Appropriations that remained available from prior years comprised $1.2 billion, 5 percent of NASA's available resources in FY 2015.

NASA's funding also included $3.1 billion in FY 2015 from revenue earned from agree-

Sources of Funding by Type for FY 2015
(in Millions of Dollars)



ments of $2.8 billion and recoveries of prior year obligations of $256 million. Earned revenues with other governmental organizations or private entities were received under NASA's authority to provide goods, services, or use of facilities to other entities on a reimbursable basis.

Of the $22.2 billion funding available to NASA in FY 2015, NASA obligated $21.1 billion for programmatic and institutional use. An obligation results from an agreement that binds the Government to make an expenditure (or outlay) of funds, and reflects a reservation of budget authority that will be used to pay for a contract, labor, or other items. The remaining $1.1 billion remains available for obligation until the funds expire.

Net Cost of Operations

The Statement of Net Cost presents Net Cost of Operations by strategic goal and for NASA overall. NASA's strategic goals are described in the Mission Performance section of the Agency Financial Report. The Net Cost of Operations represents gross cost incurred less revenue earned for work performed for other government organizations or private entities. As of September 30, 2015, NASA's gross cost was $21.9 billion, an increase of $1.5 billion from FY 2014. Earned Revenue from other government organizations or private entities was $2.3 billion, 10 percent of gross costs, leaving NASA with a FY 2015 net cost of $19.6 billion, an increase of $1.4 billion from FY 2014.

Gross Cost of Operations

NASA's day-to-day operations are performed at NASA and contractor offices and facilities around the globe and in space.

Gross Costs of Operations is presented in the following table, detailing select NASA programs that supported each strategic goal. Gross Cost of Operations includes expenses incurred for NASA's R&D investments that are expected to maintain or increase national economic productive capacity or yield other future benefits. See the Required Supplemental Stewardship Information section of the AFR (page 99) for further discussion. Highlights of NASA program activities

Net Cost of Operations by Strategic Goal
(In Millions of Dollars)

Gross Cost by Strategic Goal *(In Millions of Dollars)*	2015	2014	Percent (%) Change
Strategic Goal 1	**$ 12,962**	**$ 11,788**	**10**
International Space Station	3,941	2,921	35
Space Launch System	1,753	1,825	(4)
Orion Multi-Purpose Crew Vehicle	1,319	1,041	27
Other NASA Programs	5,949	6,001	(1)
Strategic Goal 2	**$ 3,741**	**$ 3,646**	**3**
Science Mission Directorate Reimbursable	1,493	1,474	1
Earth Systematic Mission	633	590	7
Earth Science Research	424	420	1
Other NASA Programs	1,191	1,162	2
Strategic Goal 3	**$ 5,158**	**$ 4,895**	**5**
Center Management and Operations	1,877	1,993	(6)
Space Communications and Navigation	514	566	(9)
Science & Engineering	496	363	37
Other NASA Programs	2,271	1,973	15
Total Gross Costs by Strategic Goal	**$ 21,861**	**$ 20,329**	**8**

as of September 30, 2015, that contributed to gross costs are provided for each strategic goal. A discussion of activities and costs that were reimbursed primarily by other government organizations or private entities (for example, earned revenue) is also provided.

Strategic Goal 1: Expand the frontiers of knowledge, capability, and opportunity in space.

Gross Costs for Strategic Goal 1 were $13 billion, an increase of $1.2 billion, 10 percent over FY 2014 costs. The costs for this strategic goal represent 59 percent of total Agency gross cost. The three primary programs that support this goal International Space Station (ISS), Space Launch System (SLS), and Orion contributed over 50 percent of the cost for Strategic Goal 1:

- The ISS Program had costs of $3.9 billion, $1 billion higher costs in FY 2015 compared to FY 2014, and were largely driven by the launches of two domestic commercial cargo transportation systems.
- The SLS program had costs of $1.8 billion, $72 million lower cost in FY 2015 compared to FY 2014. SLS completed a key milestone ground test in preparation for future missions to help propel NASA's SLS rocket and Orion Spacecraft while continuing the development of the SLS heavy-lift rocket.
- The Orion program incurred costs of $1.3 billion, $278 million higher costs in FY 2015 compared to FY 2014. The primary increase in Orion program costs resulted from a successful first orbital uncrewed test flight, and continued work to launch another uncrewed test flight in FY 2018.

Strategic Goal 2: Advance understanding of Earth and develop technologies to improve the quality of life on our home planet.

Gross Costs for Strategic Goal 2 were $3.7 billion, an increase of $95 million, 3 percent over FY 2014 costs. The costs for this strategic goal represent 17 percent of total Agency gross cost. Almost half of the costs incurred for Strategic Goal 2 were in support of activities performed for other government organizations or private entities who reimburse NASA for these costs (earned revenue). The primary reimbursable activities

are described in the earned revenue discussion below.

The largest NASA organization and programs supporting Strategic Goal 2 were the Science Mission Directorate, Earth Systematic Mission, and Earth Science Research.

- The Science Mission Directorate Reimbursable organization incurred costs of $1.5 billion, $19 million higher costs compared to 2014. NASA conducted the "fit check" between the Joint Polar Satellite System (JPSS)-1 spacecraft and the Payload Attach Fitting to assure both components are mechanically compatible in preparation of mating the components at launch.

- The Earth Systematic Mission program incurred costs of $633 million, $43 million higher costs in FY 2015 compared to 2014. The Gravity Recovery and Climate Experiment Follow-On (GRACE-FO) project completed development and design phase of the GRACE-FO satellites, which are scheduled to launch in 2017.

- The Earth Science Research program incurred costs of $424 million, $4 million higher costs in FY 2015 compared to 2014. The Scientific Computing project embarked on various experiments to test and improve onboard computing and reliability for the next generation of NASA's Earth, Space and Planetary Science missions.

Strategic Goal 3: Serve the American public and accomplish our Mission by effectively managing our people, technical capabilities, and infrastructure.

Gross Costs for Strategic Goal 3 were $5.2 billion, an increase of $263 million, 5 percent over FY 2014 costs. The costs for this strategic goal represent 24 percent of total Agency gross cost. Three of the largest NASA programs supporting Strategic Goal 3 were Center Management and Operations (CMO), Space Communications and Navigation (SCaN), and Science and Engineering (S&E).

- CMO had costs of $1.9 billion, $116 million lower costs in FY 2015 compared to 2014. This is related to costs provided to the CMO for Agency programs and projects that reside at and are executed, along with the care of institutional assets, establishing and maintaining the staff and their competencies, and the maintenance and operation of facilities required by current and future programs and projects at the Centers.

- SCaN had costs of $514 million, $52 million lower costs in FY 2015 compared to 2014.

- S&E program had costs of $496 million, $133 million higher costs in FY 2015 compared to 2014. The increase was due to an engineering services contract award at NASA's Goddard Space Flight Center.

Earned Revenue

Total earned revenue, which represents work performed by NASA for other government organizations or private entities, was $2.3 billion in FY 2015, an increase of $156 million from FY 2014. Two programs accounted for over half of NASA's earned revenue in FY 2015: JPSS and GOES-R.

- NASA supports JPSS in partnership with NOAA. JPSS had earned revenue of $805 million, an increase of $46 million from 2014, primarily due to the completion of "fit check" for the JPSS-1 spacecraft. In addition, a delivery order was awarded for the Rapid Spacecraft Acquisition III (Rapid III) contract for the JPSS-2 spacecraft.
- Earned Revenue from GOES-R was $603 million, an increase of $39 million from 2014, primarily due to completion of the development of the GOES-R series satellite. The first satellite in the GOES-R series is scheduled for launch in early 2016.

Image Caption: Engineers prepare to remove the CERES instrument from the Radiometric Calibration Chamber following the completion of thermal vacuum testing at Northrop Grumman's manufacturing facility in Redondo Beach, Calif. This sensor will be integrated onto NOAA's JPSS (Joint Polar Satellite System) spacecraft, scheduled for launch in 2017. (Credit: Northrop Grumman Corporation)

Limitations of the Financial Statements

The principal financial statements have been prepared to report the financial position and results of operations of NASA, pursuant to the requirements of 31 U.S.C. 3515(b). While the statements have been prepared from the books and records of NASA in accordance with generally accepted accounting principles for Federal entities and the formats prescribed by the Office of Management and Budget (OMB) Circular A-136, the statements are in addition to the financial reports used to monitor and control budgetary resources, which are prepared from the same books and records. The statements should be read with the realization that they are for a component of the U.S. Government, a sovereign entity.

Image Caption: Lights of an Aurora From the International Space Station. NASA Astronaut Scott Kelly captured this photo of an aurora from the International Space Station on June 23, 2015. The dancing lights of the aurora provide spectacular views on the ground, but also capture the imagination of scientists who study incoming energy and particles from the Sun. Aurora are one effect of such energetic particles, which can speed out from the Sun both in a steady stream called the solar wind and due to giant eruptions known as coronal mass ejections or CMEs. (Credit: NASA)

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Systems, Controls, and Legal Compliance

NASA's Internal Control Framework.....63
Management Assurances.....65
Financial Systems Strategies.....67

Image Caption: Soyuz Rocket Boosts Expedition 44 Crew to the International Space Station. Soyuz TMA-17M launched from the Baikonur Cosmodrome in Kazakhstan to the International Space Station on July 23, carrying Expedition 44 Soyuz Commander Oleg Kononenko of the Russian Federal Space Agency (Roscosmos), Flight Engineer Kjell Lindgren of NASA, and Flight Engineer Kimiya Yui of the Japan Aerospace Exploration Agency into orbit to begin their five-month mission on the Station. (Credit: NASA)

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Systems, Controls and Legal Compliance

NASA's Internal Control Framework

The Federal Managers' Financial Integrity Act (FMFIA) requires agency heads to evaluate and report on the internal control and financial systems to ensure the integrity of Federal programs and operations. This evaluation aims to provide reasonable assurance that internal controls are operating effectively to ensure efficient operations, reliable financial reporting, and compliance with applicable laws and regulations.

Internal control is at the core of NASA fulfilling its mission and achieving its goals while safeguarding governmental resources. NASA management is responsible for implementing internal control activities that are appropriate to their department's processes. NASA's policy is to comply with Office of Management and Budget (OMB) Circular A-123, *Management's Responsibility for Internal Control*, which provides government-wide requirements for internal control and accountability, based on the FMFIA. OMB Circular A-123 also requires agencies to establish internal controls over their programs, financial reporting, and financial management systems.

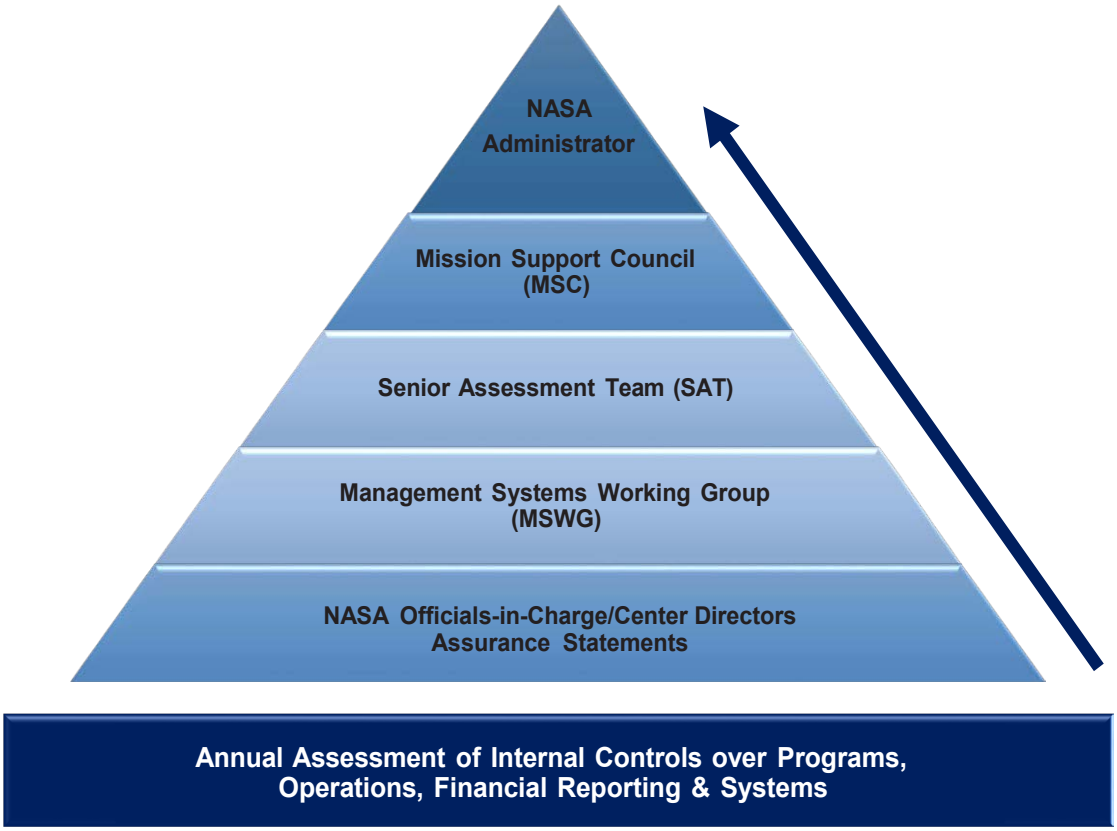
NASA evaluates internal control across the Agency at various levels of the organization to ensure significant risks are identified, and related internal controls are tested and evaluated. NASA evaluates the effectiveness of the internal controls over operations, management systems, and financial reporting with consideration of reviews and other relevant sources of information.

NASA management is responsible for establishing and maintaining effective internal controls in its respective areas of responsibility. As part of this responsibility, management regularly evaluates internal control, and NASA executive leadership provides annual assurance statements reporting on the effectiveness of internal controls at meeting objectives. In addition, the NASA Office of the Chief Financial Officer (OCFO) deploys an extensive annual testing and assessment methodology that evaluates internal controls over financial reporting.

The FMFIA assurance statement is primarily based on individual assurance statements submitted by NASA Officials-in-Charge (OIC). These statements are based upon organizational self-assessments that are

informed by various sources of information such as internal reviews of controls, as well as recommendations for improvements from external audits, investigations, and reviews conducted by the Office of Inspector General (OIG) and the Government Accountability Office (GAO). The Mission Support Council (MSC), the organization responsible for oversight of NASA's Internal Control Program, advises the Administrator on the Statement of Assurance. The Senior Assessment Team (SAT), which is an arm of the MSC, helps to guide the internal control evaluation and reporting process. The Management System Working Group (MSWG) performs the first-level evaluation of annual results and serves as the primary advisory body for NASA internal control activities. The MSWG analyzes the annual assessment results and reports issues that may significantly impact the effective design and operation of internal controls to the SAT. An illustration of the Annual Statement of Assurance process is included below.

The NASA FMFIA Annual Statement of Assurance (SoA) Process



Management Assurances

Administrator's Statement of Assurance

November 13, 2015,

NASA management is responsible for establishing and maintaining effective internal controls and financial management systems that meet the objectives of the Federal Managers' Financial Integrity Act (FMFIA), the Federal Financial Management Improvement Act (FFMIA), as well as all other related laws and guidance. NASA is committed to a robust and comprehensive internal control program. We recognize that ensuring the effective, efficient, economical, and responsible use of the resources that have been provided to the Agency is not only good stewardship, but also the proper approach to maximize our progress toward the realization of our mission goals. Integrity and ethical values are emphasized throughout the Agency and communicated both formally and informally through training, codification in policy, and through organizational norms and culture. As a result, managers and employees throughout the Agency are actively engaged in identifying or updating key control objectives, assessing risks, implementing controls or other mitigating strategies, conducting reviews, and taking corrective actions as necessary.

NASA conducted its Fiscal Year 2015 annual assessment of the effectiveness of internal controls over operations and compliance with applicable laws and regulations in accordance with FMFIA and the Office of Management and Budget (OMB) Circular A-123, *Management's Responsibility for Internal Control*. Based on the results of this evaluation, NASA provides reasonable assurance that its internal controls over the effectiveness and efficiency of operations and compliance with applicable laws and regulations as of September 30, 2015, were operating effectively and no material weaknesses were found in the design or operation of the internal controls.

In addition, NASA's Office of the Chief Financial Officer performed an assessment of the effectiveness of internal controls over financial reporting in compliance with OMB Circular A-123, *Appendix A-Internal Control over Financial Reporting*. Based on the results of the evaluation, there were no material weaknesses identified in the design or operation of these controls. NASA provides reasonable assurance that internal controls over financial reporting were operating effectively, as of June 30, 2015. Finally, in accordance with the requirements of the FFMIA, we assessed the implementation and maintenance of NASA financial management systems. We found that these substantially comply with Federal financial management systems requirements, applicable Federal accounting standards, and the U.S. Government Standard General Ledger at the transaction level.

In conclusion, NASA makes an unqualified statement of assurance that its internal controls for FY 2015 were operating effectively.

NASA will continue its commitment to ensuring a sound system of internal control exists over operations, reporting, and financial systems and will continue to monitor and enhance its quality assurance activities.

Charles F. Bolden, Jr.
Administrator

Financial Systems Strategies

NASA's Core Financial (CF) and budget management systems include the Systems Applications & Products (SAP) Enterprise Resources Planning (ERP) and the e-budget suite of tools. The CF system has served as NASA's financial accounting system of record since 2003, and the e-budget tools have supported budget formulation and congressional presentation/justification since 2007. Both suites of tools provide the foundation for NASA's ability to achieve its financial management objectives and management of the budget.

To date, NASA has implemented the following CF modules: funds management, financial accounting, sales and distribution, investment management, materials management, controlling (cost), project systems, and real estate, as well as a Contractor Cost Reporting (CCR) extension. Collectively, these integrated components make up NASA's financial system of record for financial statements, external reports, project analysis, and management control. Transactions within the integrated modules and interfaces are recorded on a real-time basis. The CF system is supported by other commercial off-the-shelf (COTS) software, NASA developed applications, and interfaces with systems managed by other Federal agencies.

NASA is developing and evaluating options to receive and process all applicable invoices electronically by the end of 2018 in accordance with OMB's directive M-15-19, *Improving Government Efficiency and Saving Taxpayer Dollars Through Electronic Invoicing*. We are working closely with the Procurement community and plan to make a decision regarding a system solution by the spring of 2016. Additionally, we will investigate end-to-end payment process changes to improve payment cycle time, reduce interest penalties, and reduce operating costs.

The Agency has implemented and developed several required Performance Measures Manager (PMM) system enhancements mandated by OMB for Strategic Objective Annual Review (SOAR) related activities, other Agency glossy reports and an updated annual performance plan. In addition, as part of this enhancement cycle, NASA has performed system maintenance to synchronize NASA's system with Treasury's system, Budget Formulation and Execution Manager (BFEM). NASA is continuously levied with evolving OMB requirements for Federal strategic planning, performance management, and reporting. To remain a leader in innovation and in anticipation of OMB requirements, NASA is investigating future initiatives to enhance performance reporting.

Since initial implementations, all of these tools have been continuously enhanced and expanded for changing policies, standards, OMB requirements, and internal assessments to ensure tight controls. As a result of NASA's efforts to continually enhance our Financial and Budgetary tools/systems, we have achieved an unmodified opinion for the last 4 years and have improved budgetary deliverables in accordance with congressional direction.

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Looking Forward

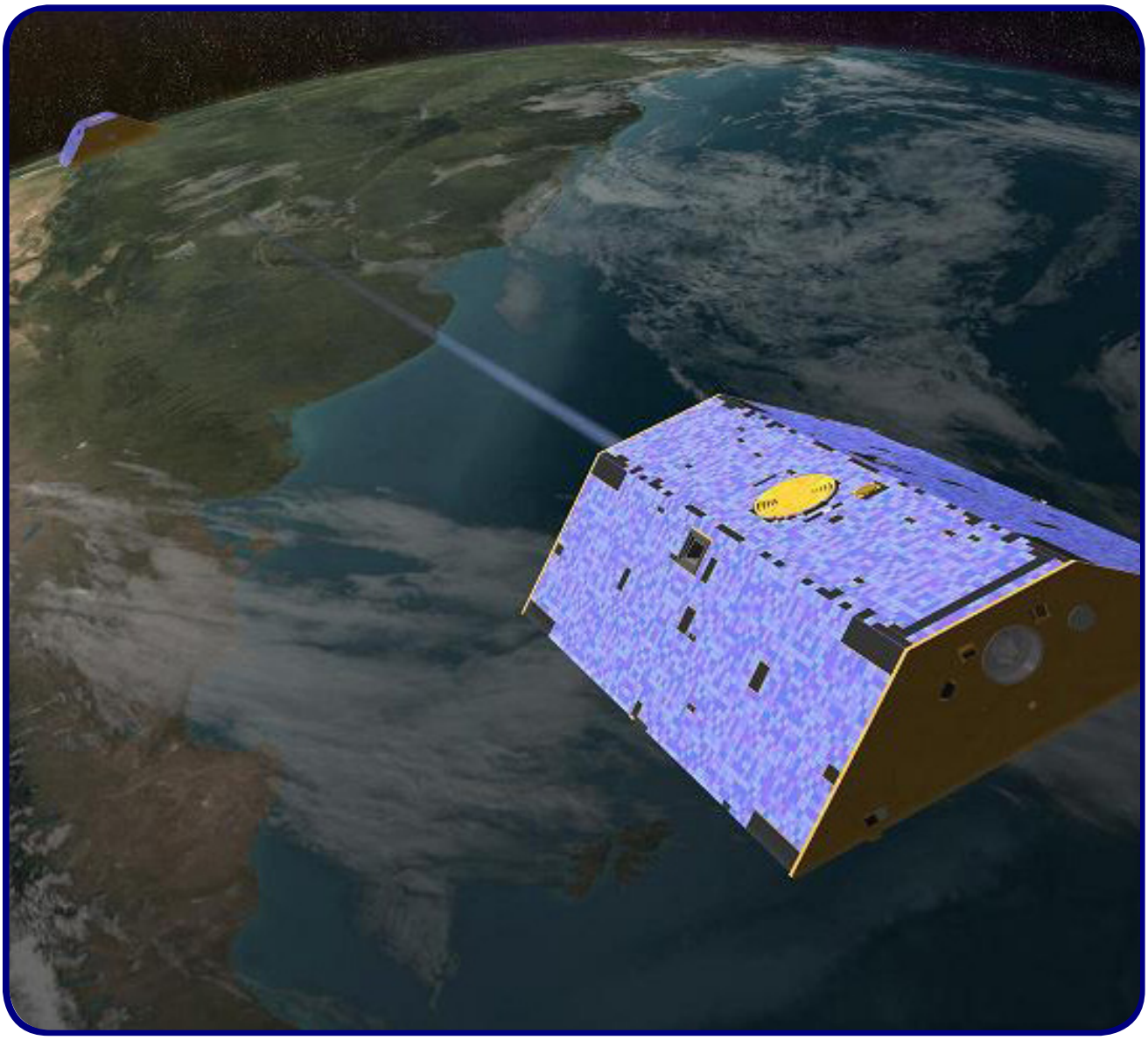

Image Caption: This image shows the Gravity Recovery and Climate Experiment 1 & 2 (GRACE 1 & 2). GRACE provides highly accurate measurements of the gravitational field of the Earth, and determines how this field varies with time. (Credit: NASA)

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Looking Forward

In FY 2016, NASA will build on the successes achieved across FY 2015, as it expands the frontiers of knowledge, capability, and opportunity. NASA, its partners, and the Nation are embarking upon an ambitious exploration program that will incorporate new technologies and leverage proven capabilities as humankind expands its reach out into the solar system. NASA is entering a new era in human spaceflight of exploration beyond low Earth orbit. Next year, the Space Launch System (SLS), Orion, and Exploration Ground Systems (EGS) programs will make progress towards Exploration Mission (EM)-1, an uncrewed test flight to distant retrograde lunar orbit (and the first pairing of Orion with SLS).

In addition, to further knowledge about how humans live and work in space, the joint U.S.-Russian one-year mission will be completed in FY 2016. U.S. astronaut Scott Kelly and Russian cosmonaut Mikhail Kornienko will live on the International Space Station (ISS) for one year, which is twice as long as crew members typically stay on the ISS. The mission's investigation of genetics and the effects of long-duration spaceflight on humans is being assisted through comparisons with astronaut Scott Kelly's identical twin, retired astronaut Mark Kelly, who remains on Earth.

NASA will complete concept refinement studies for the Low Boom Flight Demonstration (LBFD). These studies are elements of a research program over the next decade to focus on overcoming the adverse impact of sonic boom in order to alleviate public concern and environmental impacts. NASA is making progress towards innovation in commercial supersonic transportation, which could be a game changer for transcontinental and intercontinental travel.

NASA's science programs will continue to seek answers to profound questions, address the need to understand humanity's place in the universe, and provide information to policy makers who address issues affecting all life on Earth. NASA is also working to improve its operations and is increasingly launching its science missions on schedule and on budget.

NASA will launch several missions in FY 2016, including the Origins, Spectral Interpretation, Resource Identification, and Security–Regolith Explorer (OSIRIS-REx). OSIRIS-REx will travel to Bennu, a near-Earth asteroid, and bring a small sample back to Earth for study. As planned, the spacecraft will reach its asteroid target in 2018 and return the sample to Earth in 2023. The sample will provide insight into the composition of the very early solar system, the source of organic materials and water that made life possible on Earth, and to better predict the orbits of asteroids that represent collision threats to Earth.

NASA will also continue to make strides in the development of other key science missions for future launches, including the following:

- Solar Probe Plus (SPP)
- Solar Orbiter Collaboration (SOC)
- Ionospheric Connection (ICON)
- Global-scale Observations of the Limb

and Disk (GOLD)
- Transiting Exoplanet Survey Satellite (TESS)
- Neutron star Interior Composition Explorer (NICER)
- Mars 2020
- Ice, Cloud, and land Elevation Satellite (ICESat-2)
- Surface Water and Ocean Topography (SWOT)
- Gravity Recovery and Climate Experiment (GRACE) Follow-On mission
- James Webb Space Telescope (Webb)

NASA expects its innovative research activities and technology development to lead to future spacecraft advancements, support life in space, and enable the next generation air transportation system. U.S. technological leadership is vital to national security, economic prosperity, and global standing. NASA will remain committed to contributing to science, technology, engineering, and mathematics (STEM) education, the Nation's economic vitality, and stewardship of Earth.

Humanity's future in space is bright and NASA is leading the way. NASA reaches for new heights, toward the next giant leap. As a foundational component of this journey, NASA will continue to focus on fiscal responsibility, performance management, and long-term affordability, while addressing management challenges or risks that may pose roadblocks to future success.

NASA Armstrong Flight Research Center currently flies an F-15D Eagle aircraft for research support and pilot proficiency. NASA research support aircraft are commonly called chase planes and fill the role of escort aircraft during research missions. Chase pilots are in constant radio contact with research pilots and serve as an "extra set of eyes" to help maintain total flight safety during specific tests and maneuvers. (Credit: NASA/Jim Ross)

Taking a Closer Look at NASA's Orion Spacecraft After Successful Flight Test. (Credit: NASA)

Artist concept of NASA's Space Launch System (SLS) 70-metric-ton configuration launching to space. (Credit: NASA)

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