MANAGEMENT AND PERFORMANCE

OVERVIEW

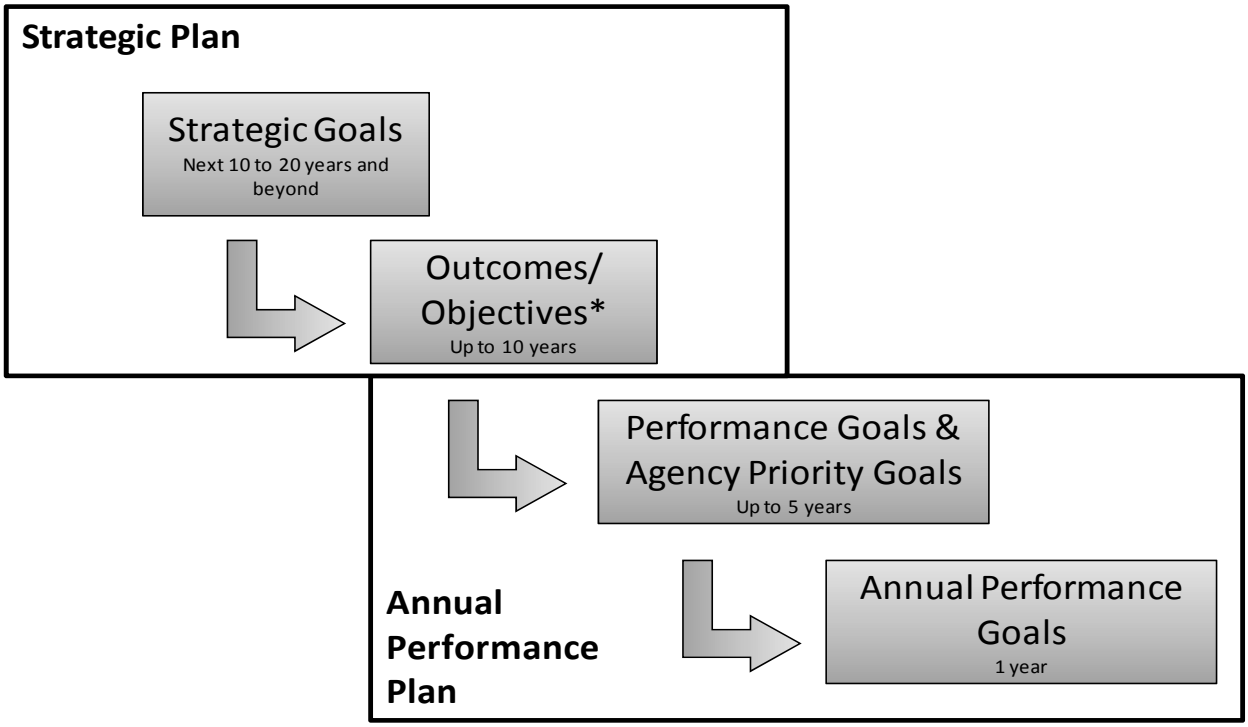
PERFORMANCE FRAMEWORK

This section provides a comprehensive record of the past and planned performance for NASA's programs and projects. It discusses:

- NASA's performance framework, budget by strategic goal, performance management approach, and verification and validation of performance information;
- Performance improvement initiatives;
- 2012 Major Program Annual Report (MPAR); and
- FY 2012 and FY 2013 Performance Plans, including Agency Priority Goals and performance trends.

NASA's *2011 Strategic Plan* sets the direction and establishes the framework for the Agency's performance. The performance framework consists of five levels of performance measures as seen in Figure 1. The strategic goals form the top of the framework, with four levels supporting the achievement of outcomes, objectives, performance goals, Agency Priority Goals, and annual performance goals. Each level in the framework is associated with a specific timeframe. The tactical plans of individual offices within NASA flow from the framework. The plans are generally internal to the Agency and guide each component to achieving performance goals and annual performance goals.

Figure 1. Performance Framework



Note: *Objectives are not explicitly called out in the performance plan, consistent with information reflected in performance.gov and the FY 2011 PAR.*

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The Strategic Plan sets the top three levels in the performance framework—strategic goals, outcomes, and objectives—which reflect NASA's long-term plans for the next 10 to 20 years and beyond. The Strategic Plan represents the overall direction of the Agency and is the result of rigorous internal planning and external consultation with the Agency's stakeholders. Each strategic goal may be supported by multiple NASA organizations, and requires internal stakeholder commitments and support to ensure success.

While the Strategic Plan focuses on long-term activities, NASA's performance goals, Agency Priority Goals, and annual performance goals, set quantifiable targets for NASA's programs, projects, and offices. Performance goals and Agency Priority Goals focus on planned progress over the next 18 months to five years. Annual performance goals align to NASA's themes and programs in the Congressional Justification (CJ). These measures are published in annual performance plans, which also identify each responsible program or office. The FY 2012 and FY 2013 Performance Plans are included in this section. NASA identifies the operational processes, training, skills and technology, as well as the human capital, information technology, resources, and strategies required to meet the performance goals listed in the program and project pages of the CJ.

Certain NASA offices and mission directorates develop tactical plans to guide them in meeting performance commitments made to the public. They flow from the performance framework, and NASA makes these plans publicly available as often as possible. For example, in FY 2012, the Office of Human Capital Management will update the Agency's plan for human capital programs, initiatives, and projects that will advance agency performance goals. The corresponding annual performance goals for this office are published in the FY 2012 and FY 2013 Performance Plans. Additional information on NASA's human capital efforts is available at http://nasapeople.nasa.gov/. In addition, the NASA Office of Education developed NASA's *Fiscal Years 2011 and 2012 Annual Plan to Assist Historically Black Colleges and Universities (HBCU).* The plan facilitates research and development activities at HBCUs that contribute substantially to NASA's Mission, prepares faculty and students at HBCUs to successfully participate in the competitive research and educational processes of NASA's mission directorates, engages underrepresented minority students, educators, and researchers in NASA's education program, and partners with HBCUs to increase the number of students who successfully complete the curriculum requirements for undergraduate degrees in NASA-related fields.

NASA's performance framework also provides a means to communicate with stakeholders and the public. Through this framework, NASA holds itself accountable for the Nation's investment in its programs and missions, reporting on achievements as well as shortfalls, and informing the performance plan for the next year. NASA reports progress in its performance plan to Congress and the public in the Agency's annual Performance and Accountability Report (PAR), which supports programmatic decision-making at a government-wide level. NASA leverages this reporting process to monitor progress against the performance plan on a quarterly basis. This feedback allows NASA leaders to make course corrections through the year and to maintain alignment with strategic goals.

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BUDGET BY STRATEGIC GOAL

NASA's activities are guided by six strategic goals:

- Strategic Goal 1: Extend and sustain human activities across the solar system.
- Strategic Goal 2: Expand scientific understanding of the Earth and the universe in which we live.
- Strategic Goal 3: Create the innovative new space technologies for our exploration, science, and economic future.
- Strategic Goal 4: Advance aeronautics research for societal benefit.
- Strategic Goal 5: Enable program and institutional capabilities to conduct NASA's aeronautic and space activities.
- Strategic Goal 6: Share NASA with the public, educators, and students to provide opportunities to participate in our Mission, foster innovation, and contribute to a strong national economy.

To reflect the budget for each strategic goal, NASA maps its annual approved budget authority to its strategic goals. This process involves mapping mission directorate, mission support, and Education accounts, and their supporting programs, to their respective strategic goals. This performance-to-budget alignment is indicated in the Agency's annual performance plan that links each annual performance goal, and responsible program, to the strategic goals.

Figure 2 illustrates how NASA's FY 2013 budget request aligns to its strategic goals.

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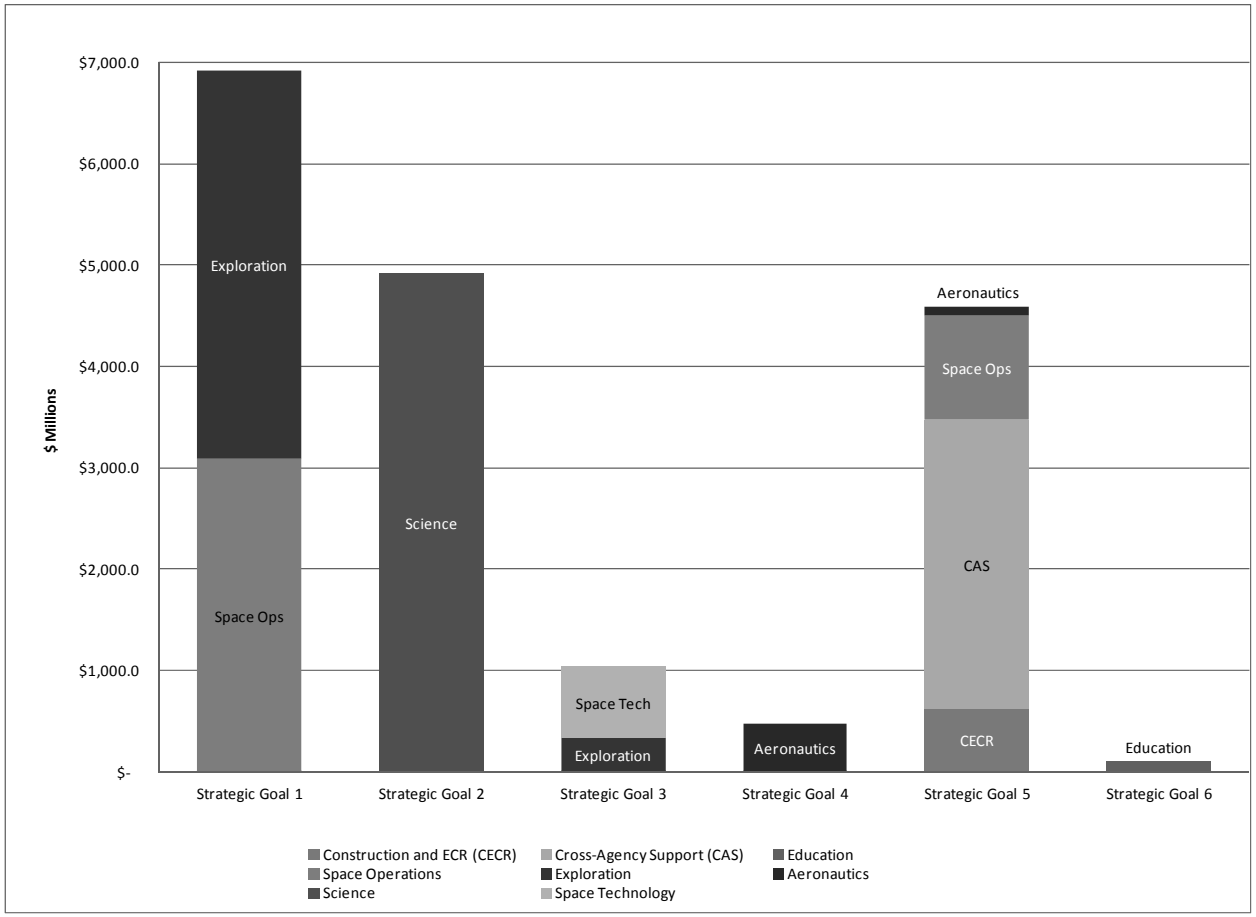
Figure 2. FY 2013 Budget by Strategic Goal



PERFORMANCE MANAGEMENT

NASA governs performance through four Agency-level councils with distinct charters and responsibilities. Specific details on the roles of the councils can be found in *NASA's Governance and Strategic Management Handbook*. In FY 2011, NASA redesigned the governance council structure, creating a focused Executive Council, to address strategic and policy issues. The Strategic Management Council, which includes representatives from all parts of NASA, now makes recommendations on various issues to the Executive Council. Moreover, the Mission Support Council was modified to streamline processes that address Mission enabling issues; no changes were made to the Program Management Council. NASA will update the *Governance and Strategic Management Handbook* in 2012. The update will include current roles and processes, while maintaining the governance principles and strategic management system.

NASA develops, implements, and continuously measures the Agency's progress in pursuit of its strategic goals, outcomes, and performance measures through its strategic management system. This system includes planning and performance management processes that are essential for transparency and

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accountability. NASA's integrated system provides data and information to decision makers through assessments of performance in relation to annual plans. The cycle requires programs to plan, develop and implement strategy; monitor, assess, and evaluate performance toward commitments; identify issues; and gauge programmatic and organizational progress.

The performance data from NASA's strategic management system provides a foundation for both programmatic and institutional decision-making processes and key investment decisions. Specific program and project pages provide additional details on how specific goals will be achieved. NASA's planning and performance management processes provide this data to senior leadership through various formats, including:

- Ongoing monthly and quarterly analysis and reviews of Agency activities;
- Annual assessments in support of budget formulation (for budget guidance and issue identification, analysis, and disposition);
- Annual reporting of performance, management issues, and financial position;
- Periodic, in-depth program or special purpose assessments; and
- Recurring or special assessment reports to internal and external organizations.

NASA's performance management system aligns internal management needs with the guidance and requirements of external stakeholders, including the Government Performance and Results Act (GPRA) Modernization Act and Executive Order 13450, "Improving Government Program Performance." Examples of recent performance improvement activities are provided in Performance Improvement.

In addition, NASA continues to find value in and improve upon its monthly forum, the Baseline Performance Review (BPR). As an integrated review of institutional and program activities, interrelated issues that impact performance and program risk are highlighted and actions are assigned for resolution. The BPR forum fosters communication across organizational boundaries to address mutual concerns and interests.

ACCURACY AND RELIABILITY OF NASA'S PERFORMANCE DATA

In accordance with the GPRA Modernization Act, NASA ensures that performance data is accurate, complete, consistent, and current. Building on efforts in previous years, NASA also continues to promote robust verification and validation processes for all its performance measures to support the Agency's internal decision-making and external reporting requirements.

Data management provides the backbone for NASA's performance management processes. The mission directorates and mission support offices collect data to assess performance and assign ratings to its performance goals and annual performance goals. Given the varying types of performance measures across mission directorates, sources of data, collection methods and record keeping, NASA has established a verification and validation methodology to meet each mission directorate's needs.

Each quarter, program officials submit to NASA management the supporting performance information that justifies each rating, and NASA managers review this data in periodic meetings. NASA also conducts additional reviews and evaluations of reported performance data to assess whether the information submitted is consistent with information reported at other internal reviews or assessments by external

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independent entities, and is complete enough to portray an accurate picture of NASA's performance. The quarterly reporting process contributes to the development of the Congressional Justification and performance plans by highlighting progress to date, cross-cutting coordination efforts, and effectively addressing areas of concerns, including but not limited to data quality limitations. The quarterly performance reporting and supporting verification processes culminate in the PAR.

LOW PRIORITY PROGRAM ACTIVITIES

The 2013 Cuts, Consolidations, and Savings (CCS) volume of the President's Budget identifies the lower-priority program activities under the GPRA Modernization Act, 31 U.S.C. 1115(b)(10). The public can access the volume at: http://www.whitehouse.gov/omb/budget.

PERFORMANCE IMPROVEMENT

DESCRIPTION OF PERFORMANCE IMPROVEMENT

Performance improvement is a critical element of NASA's performance management. NASA engages in a continuous performance improvement process in which it monitors performance against goals and baselines to identify areas for improvement, leverages results from external assessments, including those of NASA's Office of Inspector General (OIG), the Government Accountability Office (GAO), and independent evaluations, and then undertakes specific actions to improve areas identified by the performance reporting. This section highlights some of the methods, both internal and external, that NASA has recently employed to assess performance improvement opportunities, and the resulting actions NASA has conducted in order to better achieve its performance goals.

Internally, NASA engages in a number of activities to identify performance improvement opportunities, with a continuing focus in FY 2013 on improving the measures and analysis processes for monitoring and reporting on program performance. In FY 2011, NASA began performing quarterly performance assessments of progress made toward measures listed in the Agency's FY 2011 Performance Plan. The quarterly assessments culminated in the FY 2011 PAR, which NASA published on November 15, 2011. The FY 2011 PAR provides a comprehensive view of NASA's performance challenges as identified by external assessments, as well as challenges monitored through Agency-managed performance reviews. The Performance Improvement Plan section of PAR details how the Agency is addressing such challenges. In addition to PAR, NASA conducts a number of other internal activities to gauge and improve performance. The Major Program Annual Report that follows is another reporting tool used to determine how well NASA manages and plans the life cycle cost and schedule of missions.

In FY 2011, NASA completed the first phase of another internal initiative with the aim of identifying improvement opportunities, which resulted in ongoing actions to improve performance. The Explanation of Change study, which has the goal of understanding the primary reasons for changes in cost and schedule estimates, first examined typical flight projects. A second phase of the study is underway to investigate flagship missions. The study resulted in 10 recommendations made to NASA leadership, based on analysis of documentation and interviews with key project personnel. Some of the recommendations have already been implemented such as Joint Confidence Level estimating, or are being incorporated in the latest revision of NASA Procedural Requirements (NPR) 7120.5: NASA Space Flight Program and Project Management Requirements. NPR 7120.5 version E is under policy review for final distribution expected July 2012. Others still being implemented include the incorporation of cost and schedule threats into a project's formulation plans, and requiring more senior project representation on-site during the integration and test phase of the project.

NASA also continues to engage in an Administration pilot program for impact evaluations, and in NASA's case, evaluates changes in decision-making performance by partner organizations due to the availability of NASA products, primarily through a value-of-information or cost-benefit approach. NASA selected the Applied Sciences Program as its pilot, which completed impact analyses of two projects during FY 2011, initiated another three analyses in FY 2011, and will start at least one more in FY 2012. Information about the analyses will be posted to the Applied Sciences Program website when available. Also in FY 2012, NASA will publish a primer for the Earth science community on socioeconomic benefits and impacts assessments. In solicitations for decision support projects, the Applied Sciences Program will include language requiring impact analyses, including the budget and schedule to conduct them, as part of the projects.

PERFORMANCE IMPROVEMENT

In addition to internal monitoring, NASA uses external assessments to identify areas for potential improvement. In November 2011, NASA's OIG identified five areas that pose the top management and performance challenges to NASA leadership: the future of U.S. space flight, project management, infrastructure and facilities management, acquisition and contracting management, and information technology security and governance. More information on OIG's assessment can be found in the Management Challenges letter from NASA's OIG located in the FY 2011 PAR. GAO previously identified high risk factors along the same vein, including managing information technology, antiquated financial management systems, poor cost estimating, underestimated risks associated with development of major systems, and inadequate acquisition management in view of persistent cost growth and schedule slippage in the majority of projects. More details on GAO assessments are available on the GAO Web site.

Once NASA has identified opportunities for performance improvement, it then makes changes in strategy, budget, and resource management aimed at meeting its improvement goals. One method NASA uses to initiate change involves performance improvement planning. When a NASA program does not meet its commitment as stated in the annual performance plan, responsible program officials must explain performance shortfalls and provide an improvement plan to address the issues impacting performance. In FY 2011, in an effort to set better performance improvement plans, NASA assessed the explanations of performance shortfalls and looked for trends in root causes to inform senior management on any cross-cutting corrective actions that may be warranted. The FY 2011 PAR details these shortfalls, resulting improvement plans, and responsible organizations.

NASA's acquisition management practices present another opportunity for far-reaching improvement. NASA is currently pursuing Agency-wide actions to improve program and project management, including life cycle cost estimating, and acquisition practices to address challenges in life cycle cost and schedule management. NASA used information gathered on management and performance challenges, including the High Risk List identified by NASA's OIG and the GAO, to help guide these actions, and then implemented a number of initiatives over the past seven years to reform and to improve NASA's acquisition practices including:

- In 2008, the Agency developed the NASA Policy Directive (NPD) 1000.5A to provide a framework for linking budgeting to decisions on life cycle cost and schedule baselines.
- In 2005, NASA implemented and began refining a new cost analysis and estimation processes, the Cost Analysis Data Requirement (CADRe) and Joint Confidence Level estimation. NASA expects the application of the JCL process to increase the insight of project and program managers and others into uncertainties and contingencies within an integrated cost and schedule plan.
- NASA improved its earned value management capabilities, starting with the codification in Agency policy in 1998. This technique has evolved over the past decade, and currently focuses on measuring the performance of the civil servant staff for a more holistic picture of a NASA project, which often consists of both externally procured and in-house design and development.
- NASA recently established and piloted of leading technical indicators at the Preliminary Design Review (PDR), the review just prior to committing to a cost and schedule baseline, to assess a project's maturity.

NASA will continue ongoing assessments of its performance to discover opportunities for improvement. The regularity of these assessments keeps decision makers informed on the latest challenges with programs, projects, and the Agency, allowing them to improve strategy, budget, and resource

management choices. Through this ongoing process, NASA continues to strive to meet or exceed its performance goals.

2012 MAJOR PROGRAM ANNUAL REPORT (MPAR) SUMMARY

2012 MPAR SUMMARY

The 2012 MPAR is provided to meet the requirements of section 103 of the NASA Authorization Act of 2005 (P.L. 109-155; 42 U.S.C. 16613). The 2012 MPAR consists of this summary and FY 2013 Budget Estimate pages of MPAR Projects in Development. These project pages constitute each project's Annual Report, or, if this is the first year for which it is in reporting, baseline report. The MPAR summary also includes the confidence level of achieving the commitments as requested in the Conference Report accompanying the FY 2010 Consolidated Appropriations Act (P.L. 111-117).

CONFIDENCE LEVELS

NASA uses a confidence level approach to budgeting. This approach incorporates program and project risks into cost and budget estimates and, as such, is suited to NASA's complex, high-risk portfolio. This approach affords project managers the necessary flexibility to manage and mitigate technical and other risks associated with NASA's missions. The likelihood of meeting any given estimate is referred to as the confidence level (CL).

Implementation of the confidence level approach varies depending on the type of program. Regarding confidence levels, NASA distinguishes between Space Flight and Ground System projects in development, projects in operations, and Research and Technology projects. All projects currently subject to MPAR reporting fall within the Space Flight category. NASA's acquisition strategy policy (NPD 1000.5A) requires spaceflight programs and projects to develop probabilistic cost estimates for spaceflight projects in development, which incorporate the likely cost impacts of project risks. NASA targets a confidence level of at least 70 percent for most of its programs and projects. NASA has included the confidence level in Table 1, where applicable.

NASA evolved its probabilistic cost estimation from "cost risk only" to a joint cost and schedule approach designed to increase the likelihood of project success at the specified funding level. The application of the joint cost and schedule confidence level (JCL) approach will increase insight into risks and associated contingencies within a project's integrated technical, cost, schedule, and phasing plan.

NASA started developing estimates using the JCL approach during 2010. Many projects entering development before 2010 had baselines established under cost estimating policies that preceded JCL. Only two of the current MPAR projects were baselined before 2010.

Research and technology development programs address technical and science challenges and outcomes. These programs do not include reserves or specific confidence levels within their estimated costs. Rather, the programs operate on a "level of effort" basis, matching progress to available funding and using interim milestones to assess on-going progress towards key research or technology goals.

CHANGES IN MPAR COMPOSITION SINCE THE 2012 NASA BUDGET ESTIMATES

No new projects with estimated life cycle costs greater than $250 million received authority to proceed into development since the 2011 MPAR was prepared for the 2012 NASA Budget Estimates.

2012 MAJOR PROGRAM ANNUAL REPORT (MPAR) SUMMARY

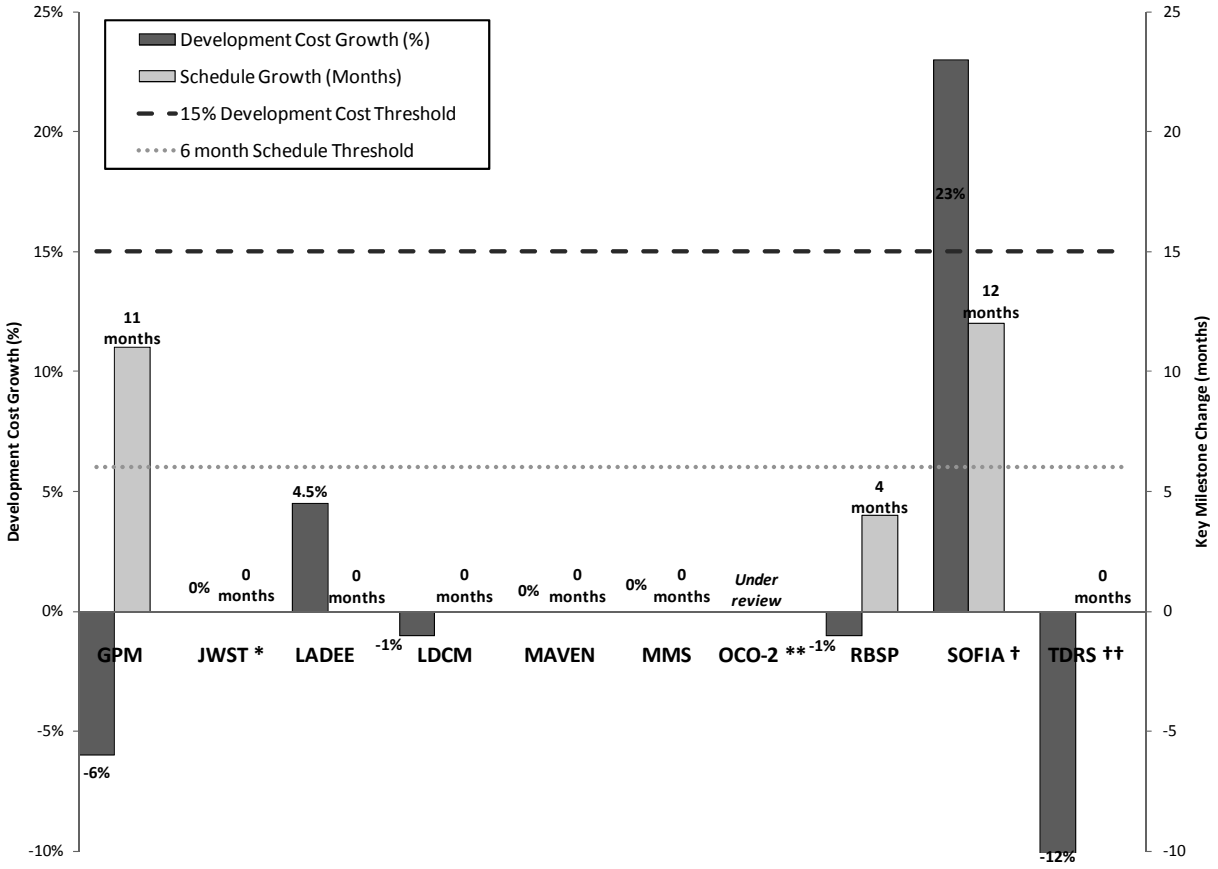
The 2011 MPAR in the 2012 NASA Budget Estimates included six projects that are no longer in MPAR reporting. Those projects are: Aquarius, Glory, GRAIL, Juno, MSL, and NPP. Aquarius, GRAIL, Juno, MSL, and NPP all launched successfully in FY 2011 and early FY 2012. The Glory mission launched in FY 2011 but was lost when the payload fairing from the Taurus XL launch vehicle failed to separate from the rocket.

Updated cost and schedule estimates are provided in Table 1 for ten projects baselined in previous MPAR reports:

- Global Precipitation Measurement (GPM);
- James Webb Space Telescope (JWST);
- Lunar Atmosphere and Dust Environment Explorer (LADEE);
- Landsat Data Continuity Mission (LDCM);
- Mars Atmosphere and Volatile EvolutioN (MAVEN);
- Magnetospheric MultiScale mission (MMS);
- Orbiting Carbon Observatory 2 (OCO-2);
- Radiation Belt Storm Probes (RBSP);
- Stratospheric Observatory for Infrared Astronomy (SOFIA); and
- Tracking and Data Relay Satellite (TDRS) K and L.

Figure 3 provides a summary of cost and schedule changes against established baselines for the 10 MPAR projects.

Figure 3. Summary of Cost and Schedule Changes for MPAR Projects



** The JWST rebaseline is officially established in the FY 2013 Congressional Justification. The original baseline Development cost was $2,581.1 million and the original LRD was June 2014.*

*** The cost and schedule for OCO-2 are currently under review due to uncertainty regarding the launch vehicle for the mission.*

† In 2010, addressing concerns with SOFIA program performance, NASA approved a revised plan establishing new intermediate milestones that lead to Full Operational Capability (FOC) in December 2014. The plan established high confidence in the new cost estimates and activity schedules that will achieve the FOC milestone and enabled the recent successful completion of the initial science flights. There are no changes to SOFIA from last year.

†† TDRS reflects TDRS K/L only.

NASA has rebaselined JWST and has made significant changes in the project's management in 2011, in response to cost and schedule performance issues and the recommendations of the Independent Comprehensive Review Panel (ICRP) report. As a result of the rebaseline, the launch date moved from 2014 to 2018, and the development cost increased from $2.581 billion to $6.198 billion.

2012 MAJOR PROGRAM ANNUAL REPORT (MPAR) SUMMARY

CHANGES IN COST AND SCHEDULE ESTIMATES FROM THE 2011 MPAR

- Three projects exceeded a cost or schedule threshold since the 2011 MPAR:
- JWST cost and schedule estimates have grown since the baseline in 2009. The FY 2013 Congressional Justification officially establishes a new baseline for JWST consistent with direction in NASA's FY 2012 • Appropriation to cap JWST formulation and development costs at $8.0 billion.
- The GPM project launch date slipped to June 2014 for several reasons. The Japanese Aerospace Exploration Agency (JAXA) is contributing an instrument for the mission, and after the March 2011 earthquake in Japan, JAXA experienced component and delivery issues with the Dual-frequency Precipitation Radar (DPR) instrument. There were also delays in the spacecraft and GPM Microwave Imager (GMI) instrument development. Due to this schedule threshold breach, NASA is completing reporting required by Section 103 (d) of the NASA Authorization Act of 2005, which will provide additional information on the GPM mission, including reasons for changes in schedule, alternatives assessed by the Agency, and the selected actions.
- The OCO-2 satellite was planned to launch on a Taurus XL, which following the failure in March 2011 for the Glory mission, was put on hold pending the outcome of a failure investigation. As a result, the planned launch readiness date will change. The project's cost and schedule are currently under review.

MPAR SUMMARY TABLE

Table 1 provides cost, schedule, and confidence level information for NASA projects currently in development with life cycle cost estimates of $250 million or more.

2012 MAJOR PROGRAM ANNUAL REPORT (MPAR) SUMMARY

Table 1. MPAR Summary Table

Project	Base Year	JCL (%)[1]	Development Cost Est. ($M)		Cost Change (%)	Key Milestone[2]	Key Milestone		Schedule Change (months)	Cost Change	Schedule Change	Factors Contributing to Breaches since 2011 MPAR	
			Base	2012			Base	2012		> 15%[3]	> 6 Mo[3]	Internal	External
GPM	2010	704	555.2	519.3	-6.5	LRD	13-Jul	14-Jun	11		X	Spacecraft/ Instrument delays	March 2011 earthquake in Japan
JWST5	2012	66	6,197.90	6,197.90	0	LRD	18-Oct	18-Oct	0				
LADEE	2011	70	168.2	175.8	4.5	LRD	13-Nov	13-Nov	0				
LDCM6	2010	70	583.4	577.2	-1.1	LRD	13-Jun	13-Jun	0				
MAVEN	2011	70 [7]	567.2	567.2	0	LRD	13-Nov	13-Nov	0				
MMS8	2010	70	857.3	857.3	0	LRD	15-Mar	15-Mar	0				
OCO-29	2011	70 [10]	249	U/R	U/R	LRD	13-Feb	U/R	U/R				
RBSP	2009	70 (CL)	533.9	530.9	-0.6	LRD	12-May	12-Sep	4		X		Taurus XL LV
SOFIA	2007	70	919.5	1,128.40	22.6	FOC	13-Dec	14-Dec	12	†	†		
TDRS-K/L[11]	2010	75 (CL)	209.4	183.6	-12.3	LRD	K: Dec-12 L: Dec-13	K: Dec-12 L: Dec-13	0				

[1] The confidence level (CL) estimates reported here reflect an evolving process as NASA improves its probabilistic estimation techniques and processes. Each estimate reflects the practices and policies at the time it was developed. Estimates that include combined cost and schedule risks are denoted as Joint Confidence Level (JCL) estimates; all other CLs reflect cost confidence without necessarily factoring the potential impacts of schedule changes on cost.
[2] Key Milestone definitions: LRD = Launch Readiness Date; FOC = Full Operational Capability
[3] An "X" indicates new changes compared to the 2011 MPAR. A "†" represents a change that occurred prior to the 2011 MPAR.
[4] For GPM, the JCL reflects the KDP-C Replan JCL, approved in October 2011.
[5] The JWST rebaseline is officially established in the FY 2013 Congressional Justification. The original baseline development cost was $2,581.1 million and the original LRD was June 2014. Construction of Facilities funds are included in the project's MPAR Cost Estimate.
[6] For LDCM, the confidence level estimate addresses the full partnership; the development cost reflects the NASA portion of project costs.
[7] For MAVEN, the JCL included schedule risk of the launch vehicle but used the Headquarters-provided launch vehicle cost as a pass-through number per agreement with the Standing Review Board (SRB).
[8] For MMS, the confidence level estimate addresses the full partnership; the development cost reflects the NASA portion of project costs.
[9] The cost and schedule for OCO-2 are currently under review (U/R) due to uncertainty regarding the launch vehicle for the mission.
[10] For OCO-2, the JCL was performed for Phases C and D, excluding project managed unallocated future expenses, JPL fees, launch services, and low-level fixed cost activities at GSFC.
[11] For TDRS, the confidence level (done for TDRS K/L) estimate addresses the full partnership; the development cost reflects the NASA portion of project costs. While current baseline costs are solely for TDRS K/L, TDRS M will be added to the project's scope in FY 2012 pursuant to direction in the FY 2012 Consolidated and Further Continuing Appropriations Act (P.L. 112-55); accordingly, NASA will revise the TDRS baseline cost estimate in the coming months.

2012 MAJOR PROGRAM ANNUAL REPORT (MPAR) SUMMARY

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AGENCY PRIORITY GOALS

AGENCY PRIORITY GOALS

Per the GPRA Modernization Act, 31 U.S.C. 1115(b)(10), requirement to address Federal Goals in the agency Strategic Plan and Annual Performance Plan, please refer to Performance.gov for information on Federal Priority Goals. NASA supports the Federal Priority Goals through various activities, including those focused on education. NASA's education portfolio is aligned with the priorities identified in the Committee on STEM's Five-Year Strategic Plan. The Education Performance Goals under NASA Strategic Goals 5 and 6 are supportive of the Administration's priorities and represent NASA's contribution toward achievement of Federal efforts, including related Cross Agency Priority Goal(s).

In FY 2010, NASA began tracking its two-year Agency Priority Goals, formerly called High Priority Performance Goals, which were developed in response to the GPRA Modernization Act and a White House initiative for building a high-performing government. While the Agency Priority Goals do not provide a complete representation of all high profile activities within NASA, they do represent important near-term priorities. Further details are available in the Agency Overview. For FY 2012 to FY 2013, NASA identified four new Agency Priority Goals which represent challenging, near-term targets that the Agency will reach to benefit the American people in the areas of space operations, human spaceflight, planetary science, and space technology. Though these goals represent activities already planned by NASA in that timeframe, NASA will be tracking more detailed action plans and quarterly milestones for these selected goals. This section lists the goals and milestones. More information can be found at http://www.performance.gov. NASA will publish an addendum to its Strategic Plan to reflect these new Agency Priority Goals.

AGENCY PRIORITY GOALS

Agency Priority Goal Statement:

Impact Statement: Sustain operations and full utilization of the International Space Station (ISS).
Key Indicator: By the end of FY 2013, NASA will complete at least three flights delivering research and logistics hardware to the ISS by U.S.-developed cargo delivery systems.

Description: The ISS is a major stepping stone in achieving NASA's exploration goals across the solar system. It provides a space-based research and development laboratory to safely perform multidisciplinary, cutting-edge research. The continuously crewed laboratory—the Nation's newest National Laboratory—enables the ongoing evolution of research and technology objectives and ensures that the benefits of this multinational investment can be realized.

In order to provide cargo transportation to and from ISS—for the Agency and for users of the Station in its capacity as a National Laboratory —NASA will depend on U.S. industry to provide commercial resupply services following the retirement of the Space Shuttle. These commercial services are planned to help support U.S. operations and utilization of the ISS to meet NASA mission objectives, NASA obligations for international utilization cargo under the ISS Memoranda of Understanding (MOUs), and the needs of other civil and commercial users of the Space Station.

Goal Leader: Mark Uhran, Director, International Space Station Division	**Contributing Programs:** International Space Station, ISS Crew and Cargo Transportation, Federal Aviation Administration (FAA)

Supports Strategic Goal 1:
Extend and sustain human activities across the solar system.

Supports Outcome 1.1:
Sustain the operation and full use of the International Space Station (ISS) and expand efforts to utilize the ISS as a National Laboratory for scientific, technological, diplomatic, and educational purposes and for supporting future objectives in human space exploration.

AGENCY PRIORITY GOALS

Agency Priority Goal Statement:

Impact Statement: Develop the Nation's next generation Human Space Flight (HSF) system to allow for travel beyond low-Earth orbit (LEO).
Key Indicator: By September 30, 2013, NASA will finalize cross-program requirements and system definition to ensure that the first test flight of the Space Launch System (SLS) and Multi-Purpose Crew Vehicle (MPCV) programs is successfully achieved at the end of 2017 in an efficient and cost effective way.

Description: NASA's Human Exploration Operations Mission Directorate (HEOMD) has been charged with developing the nation's next generation Human Space Flight (HSF) system as mandated in the NASA Authorization Act of 2010 (P.L. 111-267). The next generation of HSF vehicles, which include the Orion Multi-purpose Crew Vehicle (MPCV) and the Space Launch System (SLS), are making significant progress on once again returning Americans to beyond low-Earth orbit (LEO). The Exploration Ground Systems (EGS) program provides support for these vehicles as well as other users of launch systems at the Kennedy Space Center (KSC).

NASA's plan calls for the initial destination for human spaceflight beyond LEO to target an asteroid by the middle of the next decade. Other destinations could include cis-lunar space (the region between the Earth's atmosphere and the Moon) such as the Earth-Moon Lagrange points, the lunar surface, and eventually Mars and its moons. All of these destinations are scientifically compelling and rich in data that will provide continuous expansion of human knowledge of the universe and inspire humankind.

Goal Leader: William Hill, Assistant Deputy Associate Administrator, Exploration Systems Division	**Contributing Programs:** Space Launch Services, Orion Multi-Purpose Crew Vehicle, Exploration Ground Systems, Office of the Chief Technologist, Human Exploration and Operations Mission Directorate Advanced Exploration Systems division, Department of Defense (DoD), other government agencies, domestic, commercial, and international partners

Supports Strategic Goal 1:
Extend and sustain human activities across the solar system.

Supports Outcome 1.3:
Develop an integrated architecture and capabilities for safe crewed and cargo missions beyond low Earth orbit.

AGENCY PRIORITY GOALS

Agency Priority Goal Statement:

Impact Statement: Use the Mars Science Laboratory Curiosity Rover to explore and quantitatively assess a local region on the surface of Mars as a potential habitat for life, past or present.
Key Indicator: By September 30, 2013, NASA will assess the biological potential of at least one target environment on Mars by obtaining chemical and/or mineralogical analysis of multiple samples of its surface.

Description: The Mars Science Laboratory (MSL) launched on November 26, 2011, with the overall science objective of exploring and quantitatively assessing a local region on the surface of Mars as a potential habitat for life, past or present. This mission will use ten science instruments carried on a rover platform that will operate under its own power and telemetry and is expected to remain active for one Mars year (687 days). Mars, one of four terrestrial planets, provides the opportunity to answer many of the key questions concerning solar system history, planetary evolution, and the potential for life. Mars provides the opportunity to possibly answer origin and evolution of life questions, with its clear potential for past and possibly present biological activity. Furthermore, the Red Planet has a record of its climate and geologic evolution exposed over much of the surface – an incomparable treasure trove of ancient planetary processes, including those possibly leading to the origin of life. On Earth, rocks preserved from the first billion years are extremely rare and have been altered by weather and geologic processes.

As the first roving analytical laboratory sent to another planet and the first astrobiology mission since Viking, the Curiosity rover will assess the biological potential of the site by investigating discovered organic and inorganic compounds and the processes that might preserve them. Also, the rover will characterize the site's geology and geochemistry, including chemical, mineralogical, and isotopic composition. With the combination of remote sensing and analytical instrumentation, the rover team will be able to investigate the role of water, atmospheric evolution, and modern weather/climate. Curiosity will be able to characterize the spectrum of surface radiation, important to understanding the surface chemistry and the environment for future human exploration of Mars. Because of the tremendous analytical capabilities of Curiosity, what is discovered in the region of the landing site will provide ground truth for our orbital observations and enhance our understanding of mineral distributions planet–wide.

Goal Leader: Doug McCuistion, Director, Mars Exploration Program	**Contributing Programs:** Science Mission Directorate (SMD), Human Exploration and Operations Mission Directorate (HEOMD), Ames Research Center, Goddard Space Flight Center, Jet Propulsion Laboratory, Kennedy Space Flight Center, United Launch Alliance, U.S. Department of Energy, Los Alamos National Laboratory, the Southwest Research Institute, Canadian, Russian, Spanish, French and German space agencies

Supports Strategic Goal 2:
Expand scientific understanding of the Earth and the universe in which we live.

Supports Outcome 2.3:
Ascertain the content, origin, and evolution of the solar system and the potential for life elsewhere.

AGENCY PRIORITY GOALS

Agency Priority Goal Statement:

Impact Statement: Enable bold new missions and make new technologies available to Government agencies and U.S. industry.
Key Indicator: By September 30, 2013, document the maturation of new technologies by completing 4,065 technology-related products, including patents, licenses, and mission use agreements.

Description: Our Nation's competitiveness is due in large part to decades of investment in technology and innovation. These investments allow NASA to achieve the increasingly challenging and complex science, exploration, and aeronautics mission goals that will enable new missions never before possible. Through collaboration and partnership which has been a vital component of NASA's mission, we are building tomorrow's technologies today. Our efforts are advancing the technological capabilities and systems available to government agencies and U.S. industry. This investment creates high-tech jobs in the United States and will strengthen the U.S. global leadership in technology and innovation.

NASA strives to make the latest technologies available to industry and other government agencies as soon as they are developed. This transfer of technology provides countless opportunities for private industry to develop new innovative commercial products and services ensuring the greatest benefit from the Nation's investment in Space Technology.

NASA's plan implements a robust effort that matures technologies so that they are used by NASA missions as well as other government agencies and the private sector. NASA identifies and patents those technologies that are promising while industry licenses existing patents. Some technologies also are distributed via other collaborative research partnerships. Through this Agency Priority Goal, NASA will illustrate its success in developing and transferring innovations from the inventors to the users while contributing to U.S. economic growth.

Goal Leader: Mason Peck, Chief Technologist	**Contributing Programs:** Human Exploration Operations Mission Directorate (HEOMD), Science Mission Directorate (SMD), Aeronautics Research Mission Directorate (ARMD), Office of the Chief Engineer (OCE), Office of the Chief Health and Medical Officer (OCHMO), Office of Safety and Mission Assurance (OSMA), Office of General Counsel (OGC), NASA Centers, additional partnerships with other government agencies, industry, and international entities

Supports Strategic Goal 3:
Create the innovative new space technologies for our exploration, science, and economic future.

Supports Outcome 3.4:
Facilitate the transfer of NASA technology and engage in partnerships with other government agencies, industry, and international entities to generate U.S. commercial activity and other public benefits.

AGENCY PRIORITY GOALS

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