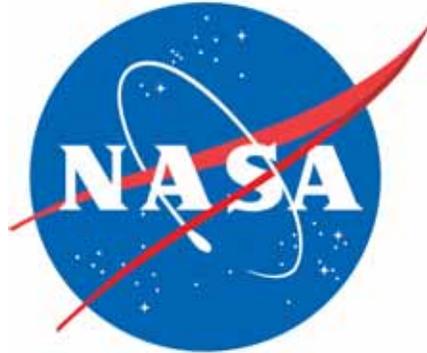


NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



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Making Progress Implementing the Vision

On January 14, 2004, President George W. Bush announced A Renewed Spirit of Discovery: The President's Vision for U.S. Space Exploration, a new directive for the Nation's space exploration program. The fundamental goal of this directive is "to advance U.S. scientific, security, and economic interests through a robust space exploration program." In issuing this directive and in accordance with the NASA Authorization Act of 2005, the President and Congress committed the Nation to a journey of exploring the solar system and beyond: completing assembly of the International Space Station using the minimum number of Space Shuttle flights until its retirement by 2010; flying the Crew Exploration Vehicle no later than 2014, and potentially much sooner; having astronauts return to the Moon by the end of the next decade followed by future human missions to Mars and beyond. Along with this, NASA would continue a robust program of scientific discovery and aeronautics research within the resources provided. The President and Congress further challenged NASA to establish new and innovative programs to enhance understanding of our Earth, other planets, asteroids, and comets in our solar system, as well as the search for potential life around other stars. NASA's scientific inquiry is to answer questions that are as old as mankind and to ask new questions in the process. As President Bush said during a speech at NASA Headquarters, "Mankind is drawn to the heavens for the same reason we were once drawn into unknown lands and across the open sea. We choose to explore space because doing so improves our lives, and lifts our national spirit. So let us continue the journey."

Over the past two years since that announcement, NASA has made great progress in implementing the Vision for Space Exploration and carrying out national priorities of scientific discovery and aeronautics research. The FY 2007 budget for NASA identifies the resources necessary to carry out those priorities identified by the President and Congress. NASA's exploration roadmap is provided in Figure 1.

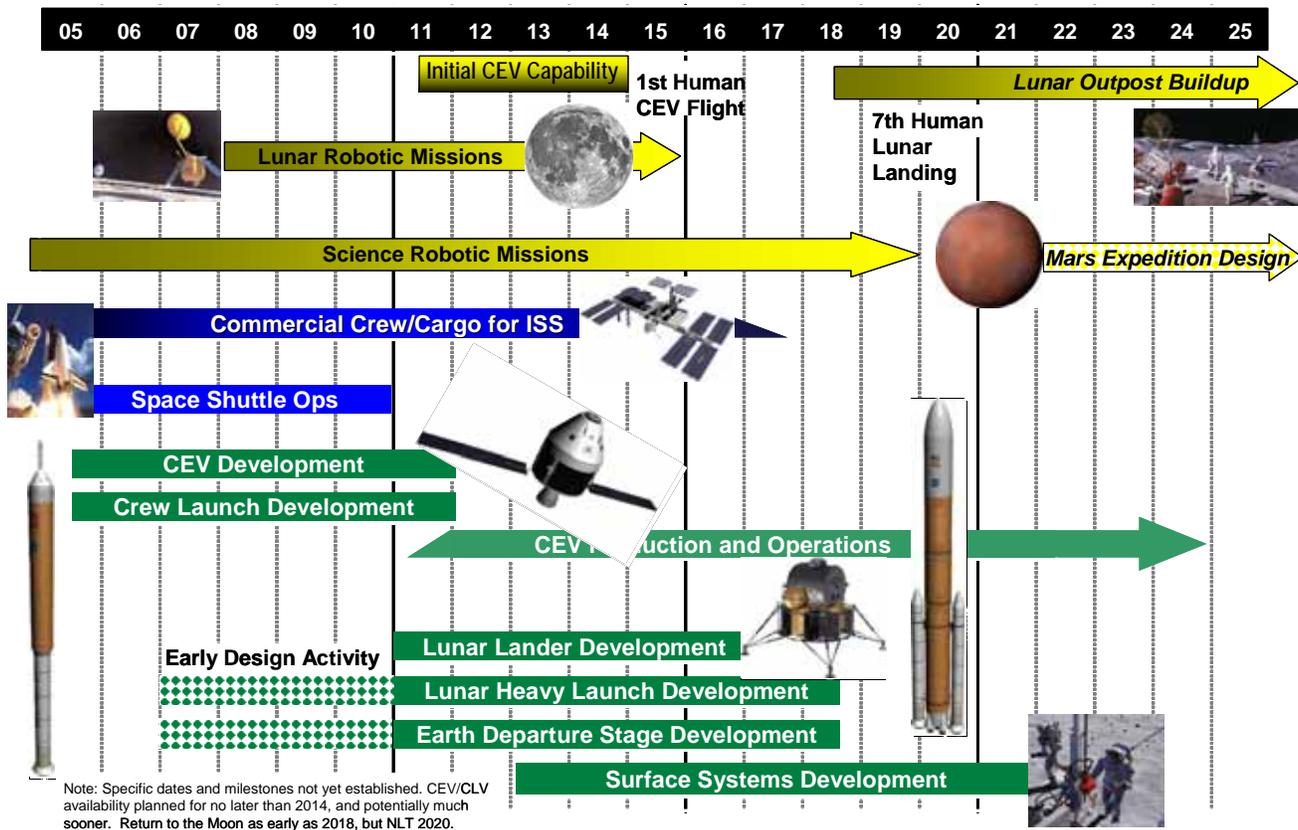


Figure 1: NASA's exploration roadmap summarizes plans over the next two decades.

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To support NASA's exploration mission, NASA is initiating development of the Crew Exploration Vehicle and the Crew Launch Vehicle. Launches of these two paired vehicles should be safer and more reliable than the Space Shuttle and will support our astronauts' journeys to the International Space Station, the Moon, a lunar outpost, and eventually human missions to Mars and other destinations. The Crew Launch Vehicle, as well as a future Heavy Lift Launch Vehicle for the launch of other exploration cargo, is to be built from components of the Space Shuttle. This approach will allow NASA to use tried and tested components, benefit from an experienced workforce, and smoothly transition operations to the CEV/CLV when the Space Shuttle is retired by 2010.

NASA will continue to develop several satellite and robotic missions to explore the solar system and universe. The Lunar Reconnaissance Orbiter is scheduled to launch in the fall of 2008 to map the surface of the Moon and search for future landing sites. NASA's recent successful robotic investigations of Mars and Saturn will be followed by missions that will explore some of the least-known areas of the solar system, like Mercury, the asteroids, and Pluto. The Mars Science Laboratory is scheduled to launch in 2009 to sharpen scientific understanding of the Red Planet, and future spacecraft will conduct research and test technologies to support human exploration of Mars.

The Agency also will build on a legacy of revolutionizing astronomy. NASA will continue to operate space telescopes, including Hubble, Chandra, and Spitzer, while planning for the next generation of spacecraft that will enhance researchers' ability to find planets around other stars and peer deep into the history of the universe to understand its origins and structure. NASA will also continue to play a major role in the interagency Climate Change Science Program and the international Global Earth Observing System of Systems, retaining critical investments in satellites, technologies, and research that will improve forecasting of the weather, monitoring of forest fires, and tracking the spread of pollutants on Earth. The Agency also will continue to develop space probes to study the Sun's influence on Earth and the space environment.

Figure 2 below reflects the 10-year budget totals to implement key program elements for human and robotic exploration of the Moon and Mars. Based on studies completed thus far, NASA believes that the cost between now and FY 2011, the current budget horizon, will be approximately \$30 billion. This includes the cost associated with design and development of the Crew Exploration Vehicle and Crew Launch Vehicle; demonstration and payment for commercial crew and cargo transport to support the International Space Station; development of a Heavy Lift Launch Vehicle, Earth Departure Stage, Lunar Lander, and supporting Launch and Mission control systems and infrastructure; as well as requirements verification testing that will be accomplished prior to the first crew flights of the CEV in the 2010-2014 timeframe.

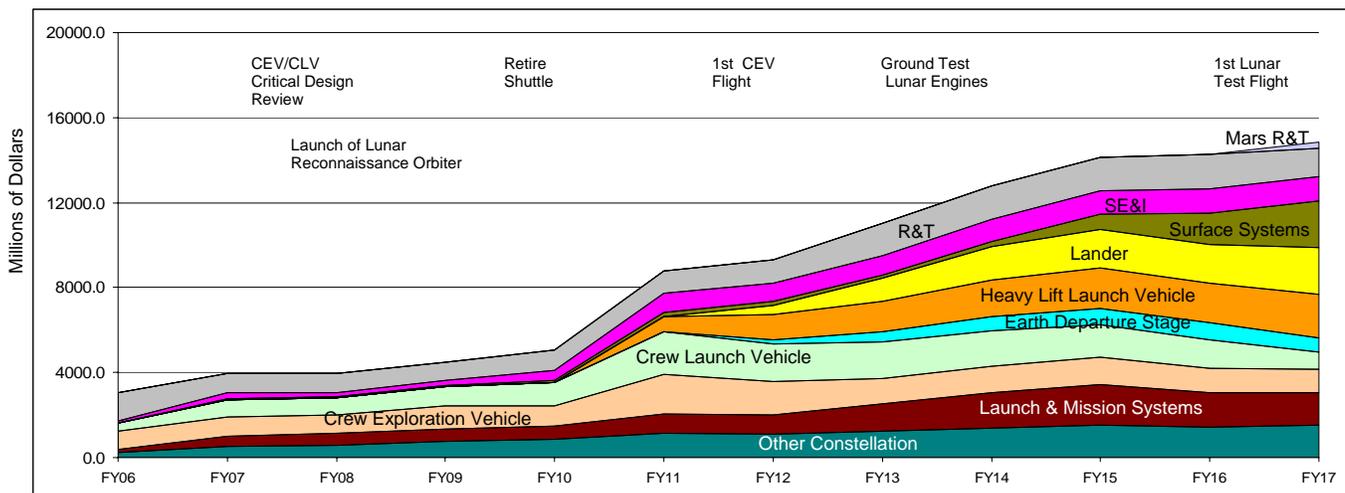


Figure 2: 10-year budget totals for Exploration Systems to implement the vision of human and robotic exploration of the Moon and Mars.

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Over the coming year of 2006, as NASA engages its field centers and industry more fully, and as the level of design detail matures, these cost estimates will be improved. However, the current costs estimates include what NASA believes are conservative budget reserve to address problems that occur with such complex projects.

Cost estimates for the years beyond 2011 have greater uncertainty due to a variety of unknown factors, such as the number of CEV/CLV missions that may be flown each year as back-up capability for a commercial crew and cargo capability; the definition of a lunar outpost, the extent to which in situ resources on the Moon can be used to "live off the land" and other unknowns associated with long range planning.

FY 2005 Highlights

NASA completed a successful year of milestones and discoveries in 2005 as the Agency made progress in implementing the Vision for Space Exploration. Achievements included returning the Space Shuttle to flight, making architecture plans and decisions for the Crew Exploration Vehicle and Crew Launch Vehicle, and achieving other major milestones.

- Space Shuttle Discovery successfully completed a Return-To-Flight experimental test mission to the International Space Station, the first Shuttle mission since the Columbia accident in 2003. The mission included breathtaking maneuvers, spacewalks, and tests of new procedures and safety equipment.
- NASA and the International Space Station Partners marked the fifth anniversary of continuous crewed operations in November 2005. NASA scientists have gathered vital information in the Space Station's unique microgravity environment, an orbiting laboratory that cannot be duplicated on Earth.
- NASA announced plans for the next generation spacecraft and launch system that will be capable of delivering crew and supplies to the International Space Station (but only as a back-up capability for commercial crew and cargo transport to the ISS), carrying four astronauts to the Moon, and supporting up to six crewmembers on future missions to Mars.
- The Deep Impact spacecraft traveled approximately 268 million miles to meet comet Tempel 1 when the impactor collided with the target's nucleus giving researchers the best-ever comet data and images.
- The Mars Exploration Rovers continued studying the harsh Martian environment. The rover Spirit discovered the composition of rock outcrops likely altered by water, and the rover Opportunity found evidence that water once flowed across the Martian surface. Both have completed a full Martian year of geological exploration.
- The Huygens probe successfully descended through the murky atmosphere of Saturn's largest moon, Titan. Huygens discovered that this moon is remarkably Earth-like. The probe found evidence of methane rain, erosion, drainage channels, dry lake beds, volcanism, and very few craters. The Cassini spacecraft also sent back breathtaking photographs of Saturn's icy satellite moons.
- NASA's latest Mars mission launched August 12, 2005, will rendezvous with Mars on March 10, 2006. The Mars Reconnaissance Orbiter will view the planet from low orbit and provide more data than all previous Martian missions combined.
- Voyager 1 entered the solar system's final frontier. After traveling approximately 8.7 billion miles from the Sun, it entered the heliosheath, the vast, turbulent expanse where the Sun's influence ends and the solar wind crashes into the thin gas between stars.
- Using the Hubble Space Telescope, astronomers discovered that Pluto may have three moons. The discovery could offer insights into the nature and evolution of the Pluto system and the Kuiper Asteroid Belt. Hubble's resolution and sensitivity to ultraviolet light also helped researchers look for important minerals on Earth's Moon that could be critical for a sustained human presence.
- NASA's Spitzer Space Telescope captured the first light ever detected from two planets orbiting stars other than the sun. Spitzer picked up the infrared glow from the Jupiter-sized planets. The findings mark the beginning of a new age of planetary science in which extra-solar planets can be directly measured and compared.
- Through coordination of observations from several ground-based telescopes and NASA'S Swift and other satellites, scientists solved the 35-year-old mystery of the origin of powerful, split-second flashes of light

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called short gamma-ray bursts. The flashes are brighter than a billion suns, yet last only a few milliseconds. They had been too fast for earlier instruments to catch.

Science Mission Directorate

The Science Mission Directorate (SMD) seeks answers to fundamental questions about the Universe, the solar system, and the Earth. Some of these questions are as old as humanity, and some are as recent as today's headlines. SMD seeks to understand:

- How the universe began, how it became the way it is today, and its final destiny;
- How do planets and their moons form, and how they evolved over the lifetime of the solar system;
- What conditions allowed life to arise on Earth, and whether there are similar conditions present elsewhere;
- Whether life, and possibly intelligent life, exists elsewhere;
- How the Sun affects conditions and life on Earth;
- How to predict the Sun's behavior well enough to protect human space travelers;
- How to predict changes in the Earth's system of land, oceans, atmosphere, and life and
- How human activity is affecting conditions and life on Earth.

To answer these and other questions, many of which are directly relevant to the Vision for Space Exploration, SMD engages the nation's science community, sponsors scientific research, and develops and deploys satellites and probes. SMD also cooperates closely with other U.S. government agencies, and with NASA's partners around the world. SMD missions and research continue to return spectacular and important results, which excite and inspire Americans of all ages.

Solar System Exploration Theme

People have been watching planets, moons, and comets wander amongst the stars for millennia. Yet, it was always "look, don't touch" until the 1960s, when NASA sent robotic landers, followed by humans, to Earth's Moon--and brought back lunar rock and soil for scientists to study. Since those first steps, NASA has broadened its reach with an increasingly sophisticated series of explorers that have landed on asteroids, tasted the swirling gases of Jupiter's atmosphere, and collected the breath of the Sun. Just in the past year, SMD has:

- Excavated the interior of a comet, by smashing into it with a robotic probe;
- Captured pieces of the sun in the form of solar wind particles, and returned them to earth;
- Gathered nearly irrefutable evidence that Mars once had salty seas, and a changing climate that varied from desert to wet conditions;
- Captured incredibly detailed photographs of Saturn and its moons and rings.

In the next few decades, NASA intends to deepen our understanding of the solar system, with spacecraft fanning out to destinations from the innermost planet to the very edge of the Sun's influence. Some spacecraft will stay in orbit around Earth, others will follow looping one-way trajectories through the gravitational forces of the planets, and a few will come back carrying scientifically priceless pieces of other worlds.

OVERALL BUDGET

The FY 2007 request is \$1,610.2M, a \$27.9M (or 1.8 percent) increase from the FY 2006 budget request:

- \$90.5M for Phoenix Mars lander, scheduled for launch in August 2007.
- \$347.9M for the Mars Science Laboratory, scheduled for launch in 2009.
- \$85.4M for operations of existing spacecraft at Mars.
- \$119.5M for operations of the Cassini spacecraft at Saturn, the MESSENGER mission to Mercury, and the New Horizons mission to Pluto and the Kuiper Belt.

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- \$72.6M for development of in-space propulsion and radioisotope power system technologies.
- \$202.1M for operation of the Deep Space Network communication systems.

Major Activities Planned for FY 2007:

- The 2007 Mars Scout (Phoenix) mission is scheduled for launch in August 2007.
- Down-select up to 2 Discovery mission(s) for development
- Mars Science Laboratory (MSL) to be confirmed into the implementation phase, and to successfully complete Critical Design Review by FY 2007.
- Juno will successfully complete Preliminary Design Review by the end of FY 2007.
- Select the second Mars Scout; a fully competed, peer-reviewed, and PI-led mission.

The Universe Theme

People have gazed at the stars, given them names, and observed their changes for thousands of years. NASA joined the ancient pursuit of knowledge of the universe comparatively recently. Nevertheless, in 40 years of space science, NASA has contributed to numerous major advances in astronomy, including:

- The identification of planets around other stars.
- Observations of an atmosphere of a planet outside the solar system.
- Proof of the existence of black holes.
- Determination of the age of the universe.
- Discovery that dark energy is accelerating the expansion of the universe.

Even so, the Universe Theme still has many perplexing and important puzzles to solve:

- How did the universe begin?
- Does time have a beginning and an end?
- Are we alone?

To help answer these questions, NASA is planning a series of missions linked by powerful new technologies and complementary approaches to shared science goals. In the first few decades of this new century, astronomers will greatly advance the study of classical cosmology, the description of the universe on the largest scales and how it works. SMD also will begin to read the opening chapter of the story of galaxies, witnessing the actual birth of the stars within.

OVERALL BUDGET

The FY 2007 request is \$1,509.2M, a \$1.3 M (or 0.1 percent) increase from the FY 2006 budget request:

- \$85.4 M for the Gamma-ray Large Area Space Telescope to complete its development.
- \$443.1 M for the James Webb Space Telescope to complete formulation and enter development.
- \$336.7 M for Hubble operations and data analysis, and for preparations for a Shuttle servicing mission in early Fiscal Year 2008.
- \$98.5 M for the Space Interferometer Mission to continue formulation progress.

Major Activities Planned for FY 2007:

- Spitzer Space Telescope will celebrate 5 years of spectacular observations, exceeding cryogen life expectations by 2.5 years.
- GLAST is scheduled to launch in September of 2007.
- Results from GP-B data analysis will be released. GP-B was designed to test Einstein's theories about the universe; the spacecraft ceased operating in September of 2005.

Earth-Sun System Theme

NASA uses the unique vantage point of space to explore the Earth and the Sun as a connected system. The Sun is an active, variable star, and we live within its extended atmosphere. From that location, we are protected from harmful solar and cosmic radiation by Earth's magnetic field and atmosphere. And life on Earth prospers through a climate powered by energy from the Sun. The Earth-Sun System Theme seek to understand how the Earth system is changing, to probe the connection between the Sun, Earth and the rest of the solar system, and to understand and predict the consequences for life on Earth.

Using a constellation of spacecraft making measurements with remote sensing instruments, NASA provides accurate, objective scientific data and analyses to advance our understanding of the Earth-Sun System. Practical benefits include improved prediction and response capabilities for climate, weather, natural hazards, and human-induced disasters, as well as the protection of spacecraft and human explorers from the effects of hazardous radiation.

OVERALL BUDGET

The FY 2007 request is \$2,210.6 M, a \$47.1 M (or 2.2 percent) increase from the FY 2006 budget request:

- \$166.0 M for Solar Dynamics Observatory, to complete integration and test of the spacecraft.
- \$65.5 M for continued development through critical design and initial test of Aquarius, a satellite to measure global ocean surface salinity for the first time.
- \$52.0 M for continued development of the Glory mission.
- \$98.1 M for the Landsat Data Continuity Mission.
- \$70.1 M for the NPOESS Preparatory Project.
- \$40.9 M for the Magnetospheric Multiscale mission.
- \$68.2 M for the Orbiting Carbon Observatory mission.
- \$189.4 M for Earth-Sun system research and analysis, to support algorithm development and improvement, and laboratory and field experiments to validate satellite-based observations.

Major Activities Planned for FY 2007:

- Retrieve/distribute scientific data from CloudSat and CALIPSO.
- Continue development of Orbiting Carbon Observatory, Aquarius, and Glory.
- Solar Dynamics Observatory Integration and Test.
- Launch THEMIS.

Exploration Systems Mission Directorate

The nation is setting forth on a journey that will mark the beginning of a sustained human presence in the solar system. The Vision for Space Exploration seeks answers to fundamental questions about our existence, responds to recent discoveries, and puts in place technologies and capabilities to inspire our Nation, the world and the next generation.

The role of the Exploration Systems Mission Directorate (ESMD) is to develop a constellation of new capabilities and supporting technologies that enables sustained and affordable human and robotic exploration of the Moon, Mars, and beyond.

The Vision is a long-term strategy for increasing our knowledge of, and presence in, our solar system and worlds beyond. Instead of setting a single, fixed goal and relying on large budget increases, the Vision provides a series of goals with the schedule flexibility necessary to sustain a long-term program of space exploration.

Over the next century, The Vision for Space Exploration will set in motion activities to inspire new generations to pursue math and science. We'll see new industries and technologies evolve that will benefit all humankind. Technologies developed for and discoveries yielded from exploration will underpin and advance the U.S. economy, help ensure national security, and inspire future generations.

The ESMD currently consists of three Themes that will function cooperatively to enable exploration and scientific discovery. Those Themes are Exploration Systems Research and Technology, Human System Research and Technology, and Constellation Systems. The Theme formerly known as Prometheus Nuclear Systems and Technology will become a program under Exploration Systems Research and Technology starting in fiscal year 2007.

Constellation Systems Theme

Through the Constellation Systems Theme NASA will develop, demonstrate, and deploy the collection of systems that will enable sustained human exploration of the Moon, Mars, and beyond. These include the Crew Exploration Vehicle (CEV) for the transport and support of human crews traveling to destinations beyond low Earth orbit, as well as launch vehicles for transport of the CEV and cargo to low Earth orbit, and any ground or in-space support infrastructure for communications and operations.

The Earth Orbit, Lunar Landing, Extended Lunar Stay, and Mars Landing Capability Programs will be replaced by one program called Constellation. It is established to develop capabilities outlined in the 2005 Exploration Systems Architecture Study.

OVERALL BUDGET

The FY 2007 request is \$3,057.6 million; a \$1,324.0 million (or 76 percent) increase from the FY 2006 budget request. Major features of this budget include:

- Funding to support the development activities for Crew Exploration Vehicle (CEV) and Crew Launch Vehicle (CLV) Projects that support initial operations no later than 2014 but as close to 2010 as possible and a lunar surface expedition as early as 2018 but no later than 2020.
- Funding for the development of a Commercial Crew/Cargo Project capable of transporting humans and cargo to the ISS. The orbital cargo and human transportation demonstrations are scheduled for 2008 and 2010 respectively.
- Funding for the Launch and Mission Systems Project activities to provide support to the CEV and CLV launch and operations
- Funding for the Exploration Communications and Navigation (ECANS) Project for development of the communications infrastructure supporting near-Earth and trans-lunar operations.

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- Funding for the Program level Systems Engineering and Integration efforts to establish rigor and control for development and integration of constellation and research and technology Themes, Programs and Projects.

MAJOR ACTIVITIES PLANNED FOR FY 2007:

- Preliminary Design Review of the initial Constellation Systems capabilities required to support the ISS, resulting in approval to begin detailed design.

Exploration Systems Research and Technology Theme

The Exploration Systems Research and Technology (ESR&T) Theme represents NASA's commitment to investing in the technologies and capabilities that will make the national vision for space exploration possible. The goals of solar system exploration, not just for ESMD, but for all of NASA, will be the primary focus of Theme activities and will demand a robust, ongoing commitment to focused innovation. Within the Theme there are four programs: Exploration Technology, Centennial Challenges, Robotic Lunar Exploration and Prometheus. The Exploration Technology Program leads the exploratory research and development of new high-leverage technologies and concepts and assures their timely transition into Exploration Systems mission development programs. The Centennial Challenges Program establishes purse awards to stimulate innovative technical accomplishments that could advance the state of civil space exploration and aeronautics. The Robotic Lunar Exploration Program develops precursor missions to characterize the lunar environment. The Prometheus program develops nuclear technologies for power and propulsion. The ESR&T Theme is working closely with other government agencies, industry, academia and other partners to leverage common requirements and identify innovative ideas.

OVERALL BUDGET

The FY 2007 request is \$646.1 million; a \$46.4 million (or 7 percent) decrease from the FY 2006 budget request. Major features of this budget include:

- Funding for these programs changed based on the results of the ESAS, which realigned programs to focus on existing programs and cancelled or deferred programs and projects that were not required in the near term.
- Funding for the technology projects in twelve focus areas to be managed and directed at NASA Centers, with partnerships in industry and academia. The development of key components for a thermal protection system for CEV is an example of activities planned.
- Funding for the Robotic Lunar Exploration Program to complete the Critical Design Review for the Lunar Reconnaissance Orbiter mission.

MAJOR ACTIVITIES PLANNED FOR FY 2007:

- Develop key components for a liquid oxygen-methane propulsion system for the Crew Exploration Vehicle.
- Develop ablative thermal protection system for the Crew Exploration Vehicle.
- Develop non-toxic auxiliary power system for the Crew Launch Vehicle.
- Complete the Critical Design Review for the Lunar Reconnaissance Orbiter.
- Conduct lunar lender trade studies, for the Robotic Lunar Exploration (RLE) Program, that will better define the mission, based on their further-developed requirements.

Human Systems Research and Technology Theme

The Human Systems Research and Technology (HSR&T) Theme continues to have a requirements-driven product-delivery focus. The Theme focuses on ensuring the health, safety, and security of humans through the course of solar system exploration. Programs within this Theme advance knowledge and technology critical for supporting long-term human survival and performance during operations beyond low-Earth orbit, with a focus on improving medical care and human health

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maintenance. Within the Theme there are three programs: Life Support and Habitation; Human Health and Performance; and Human Systems Integration. The Life Support and Habitation Program conducts research and develops technology for life support and other critical systems for spacecraft operations. The Human Health and Performance Program delivers research on questions about human biology and physiology relevant to the human exploration of the solar system, and delivers technology to help maintain or improve human health in the space environment. The Human Systems Integration program focuses on optimizing human-machine interaction in the operation of spacecraft systems.

OVERALL BUDGET

The FY 2007 request is \$274.6 million; a \$349.3 million (or 56 percent) decrease from the FY 2006 budget. This significant drop in budget was predicated on the results of the ESAS which prioritized technology development programs by requirements and schedules. This led to a realistic set of requirements instead of the capability-based programs of the past. By adopting a requirements-based philosophy in the redirection of its Exploration programs NASA will be able to reprioritize ISS research and realize efficiencies in its investments by focusing them on technologies applicable to human exploration of the solar system. Such efficiencies allow NASA to adjust the investment profile for HSR&T and still return significant benefits to the space program.

MAJOR ACTIVITIES PLANNED FOR FY 2007:

- Renal stone countermeasure transition from research to medical operations.
 - Continue testing bone and cardiovascular countermeasures in space; bone bisphosphonate countermeasure ISS clinical trial.
 - Initiate ISS medical data exchange among the International Partners.
 - Demonstrate the ability of the advanced spacecraft air monitoring system to detect 90% of the high-priority air contaminants in ground testing.
 - Develop a revised space material flammability characterization test method and update NASA-STD-6001 accordingly.
-

Aeronautics Research Mission Directorate

Aeronautics Technology Theme

In order to ensure the continued viability of a vibrant, healthy Aeronautics program, not just within NASA but across the nation, NASA has outlined in the Agency FY 2007 budget a reshaped Aeronautics Program under a new budget structure that allows us to achieve the following goals:

- Refocus the Agency on "intellectual stewardship of the core competencies of aeronautics for the Nation," which will involve "mastery of all flight regimes, from subsonic all the way up to hypersonic;"
- Focus Aeronautics research on activities appropriate to NASA's unique capabilities rather than research more appropriately performed or funded by other Agencies or Industry; and
- Preserve our NASA Wind Tunnel facilities as critical assets to the Agency and the Nation.

NASA's Aeronautics Theme consists of three integrated research programs as well as a new National Assets Program that preserves the NASA Research Center wind tunnel infrastructure.

- The Fundamental Aeronautics Program will provide continual, long-term investment in the fundamental research and build upon that investment to develop system-level, multidisciplinary capabilities that will enable both civilian and military communities to build platforms that meet their specific needs.
- The revectorized Aviation Safety Program will focus NASA research on safety areas that are more appropriate to its unique capabilities and will address the Nation's aviation safety challenges of the future.
- The Airspace Systems Program is being realigned to directly address the needs of the Next Generation Air Transportation System (NGATS) as defined by the Joint Planning and Development Office (JPDO).
- The Aeronautics Test Program is a new Aeronautics program whose purpose is to ensure the strategic availability of a critical suite of wind tunnels which are necessary to meet Aeronautics, Agency, and National needs.

OVERALL BUDGET

The FY 2007 request is \$724.4 million, an 18 percent decrease from the FY 2006 Budget:

- \$447.2M is for Fundamental Aeronautics projects including subsonics (rotary and fixed wing), supersonics, and hypersonics.
- \$102.2M is for Aviation Safety to increase aircraft safety technologies.
- \$120.0M is for Airspace Systems to research and develop innovative solutions for a safe, efficient, high-capacity airspace system in the air and on the ground.
- \$55.0M is for the Aeronautics Test Program to ensure availability of critical Aeronautics research center wind tunnel infrastructure.

MAJOR ACTIVITIES PLANNED FOR FY 2007:

- Baseline state-of-the-art analysis methods and tools to address aeronautics challenges within hypersonics, subsonics (rotary and fixed wing), and supersonics.
- Determine fundamental propulsion system integration design issues for existing and advanced rotorcraft configurations.
- Complete baseline assessment of state-of-the-art Integrated Vehicle Health Management (IVHM) and Flight Deck systems capabilities and establish prioritized technical requirements to meet NGATS safety challenges.
- Conduct systems analysis for the development of a plan that describes incremental concept, technological, and operational changes and research needs to reach NGATS 2025 concept of operations.
- Investigating and recommending a standard format for reporting ATP wind tunnels/ground test facilities fixed costs across all Field Centers.

Cross-Agency Support Programs

This new direct budget category provides focus to several ongoing activities and establishes an improved model for managing NASA's unique facilities. This budget area consists of four Themes: Education, Advanced Business Systems, Innovative Partnerships Program (IPP), and Shared Capabilities. Under this umbrella, NASA's education activities have a renewed focus on priorities and metrics. Within the Advance Business Systems, the Integrated Enterprise Management Program (IEMP, formerly IFMP) is established as a separate direct program to improve management information and financial management. The Innovative Partnership Program has been moved from the Exploration Systems Mission Directorate to better address agency-wide needs. Shared Capabilities has been established to ensure that NASA's unique facilities are adequately funded to address NASA's strategic needs.

OVERALL BUDGET

The FY2007 request is \$491.7 million:

- \$153.3M for Education
- \$108.2M for Advanced Business Systems (IEMP)
- \$197.9M for Innovative Partnerships Program
- \$32.2M for Shared Capabilities

MAJOR ACTIVITIES PLANNED FOR FY 2007:

- Within the Education Theme, (1) continue to emphasize a seamless pipeline for all education programs that encourages students to excel in STEM disciplines and (2) ensure that NASA's Education portfolio addresses the needs of the Nation by extending students affiliation, thereby expanding the human resource pool, primarily in the STEM disciplines.
- Within the Advance Business Systems, (1) roll out the SAP Version Upgrade to all ten Centers; (2) continue implementation of the JSC Aircraft Management Information System and identify the solutions for the remaining Asset Management functional areas of Logistics, Facilities, and Environment; and (3) continue Contract Management Module implementation across the Agency.
- Within the Innovative Partnerships Program, (1) implement an IPP program that integrates formerly distinct Technology Transfer (T2), Space Products Development (SPD), Small Business Innovative Research (SBIR), Small Business Technology transfer Program (STTR), and University Research Engineering and Technology Institute (URETI) program elements such that the former distinct elements complement and leverage each other; (2) achieve partnership development primarily through a single contractor that would replace the former network of external agents; (3) implement inter-field center and intra-field center dual use technology development investment funding initiatives, where funding allocations would be performance based; (4) develop and manage to standard performance metrics; and (5) build core competencies.
- Within Shared Capabilities, (1) prioritize funding requirements with the Thermal Vacuum Chamber asset class and assess budgets for thermal vacuum chambers within Mission Directorates and/or the SCAP budget line as appropriate; (2) support agency assessment of all aircraft requirements (research program & passenger aircraft), the results of which will determine the basis for proposals to include select aircraft in SCAP; (3) prioritize funding requirements and select classes of assets for inclusion in the Shared Capability Assets Program; and (4) identify re-investment/re-capitalization opportunities within and among classes of assets and execute the approved changes.

Education Theme

Achieving NASA's mission depends upon educated, motivated people with the ingenuity to invent new tools, the passion to solve problems, and the courage to ask the difficult questions. It is not enough to depend on the excitement generated by NASA images. NASA must use its discoveries and achievements to engage students and the education community. To do so, NASA provides meaningful, educational, and content-rich programs to inspire and motivate students at all levels to

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pursue careers in science, technology, engineering, and mathematics (STEM). NASA Education partners with academia, professional associations, industry, and other agencies to provide teachers and faculty with experiences that capitalize on the excitement of NASA's missions to spark student interest and involvement. Education Programs provides opportunities for involvement in NASA's research efforts to encourage students to pursue higher education in STEM areas. To ensure a pipeline of highly trained people prepared to meet mission requirements within NASA, as well as in industry and academia, NASA must: motivate students to pursue careers in science, technology, engineering, and mathematics; provide educators with unique teaching tools and compelling teaching experiences; ensure that public resources are invested wisely; and fully engage minority and under-represented students, educators, and researchers in NASA's education programs. The Office of the Chief Education Officer will strive to reach the masses of young people in the Nation to connect with, excite, and inspire the next generation of scientists, inventors, technicians, and explorers. For more information see: <http://www.education.nasa.gov/home/index.html>.

OVERALL BUDGET

The FY 2007 request is \$153.3M, or a \$9.1M or 5.6 percent decrease from the FY 2006 budget:

- \$47.2M for Elementary & Secondary Education
- \$54.0M for Higher Education
- \$9.0M for e-Education
- \$2.5M for Informal Education
- \$40.6M for Minority University Research & Education

MAJOR ACTIVITIES PLANNED FOR FY 2007:

- Continue to emphasize a seamless pipeline for all education programs that encourages students to excel in STEM disciplines.
- Ensure that NASA's Education portfolio addresses the needs of the Nation by extending students affiliation, thereby expanding the human resource pool, primarily in the STEM disciplines.

Advanced Business Systems Theme

The Advanced Business Systems Theme is a new theme established in FY 2006 to reflect the implementation of business systems as a direct program. Prior to FY 2006, business systems were buried within Corporate and Center General and Administrative (G&A) and did not provide the visibility as to the financial improvements being made at NASA in support of the President's Management Agenda. Since last year's budget submission, NASA's Integrated Enterprise Management Program (IEMP) has undergone several changes due to renewed focus and commitment on improving financial management practices and performance.

Three significant changes to this critical Program are described below.

- The name, Integrated Financial Management Program (IFMP), was updated to Integrated Enterprise Management Program (IEMP). The investment that NASA is making in the Program is principally aimed at improving how the Agency manages its investments and controls the operating costs of the Agency.
- Budgeting and funding for all development, implementation, and sustaining activities are managed from a single program fund source instead of the existing numerous Corporate and Center General and Administrative (G&A) funding sources as recommended by Congress.
- NASA has re-assessed its strategy for ensuring success in all of the President's Management Agenda (PMA) commitments. A key element to this improvement is the upgrade of its Core Financial system during FY 2006 in order to achieve full compliance with the Federal Financial Management Act of 1996 (FFMIA), and to implement critical process changes related to NASA's financial tracking, reporting, and other elements which contribute to its audit opinion. NASA's Integrated Asset Management (IAM) project was delayed in order to not impact the financial upgrade and to also re-assess the overall development and deployment strategy of IAM with a goal to reduce cost and complexity.

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- The Agency time and attendance system (Web TADS) has been transferred into the IEMP for operations and sustaining support. This allows for more efficient operations and maintenance as well as continues the initiative to move NASA business systems under centralized management.

OVERALL BUDGET

The FY 2007 request is \$108.2 million; a \$48.1 (or 31 percent) decreases from the FY 2006 request. Highlights include:

- \$16.1M to complete the Core Financial Upgrade to a new version of the SAP software, My SAP;
- \$17.2M to continue the implementation of the Asset Management solutions;
- \$10.3M to finish the implementation of the Contract Management Module;
- \$48.8M to support operating and sustaining of the current IEMP Projects; and
- \$15.8M to provide infrastructure support not directly related to a Project.

MAJOR ACTIVITIES PLANNED FOR FY 2007:

- The Agency will roll out the SAP Version Upgrade to all ten Centers providing a newer software version and correctives fixes in SAP for FFMI compliance.
- NASA will continue implementation of the JSC Aircraft Management Information System as the solution for recording and tracking aircraft maintenance and Astronauts qualifications currency to comply with safety requirements. The Agency will also identify the solutions for the remaining Asset Management functional areas of Logistics, Facilities, and Environment.
- The Contract Management Module implementation will continue across the Agency to provide a comprehensive tool to support contract writing, contract administration, procurement workload management, and data reporting/management.

Innovative Partnerships Program Theme

IPP's primary mission is to provide leveraged technology alternatives for Mission Directorates, Programs, and Projects through joint partnerships with industry, academia, government agencies, and national laboratories. Accordingly, IPP integrates the following program elements so that they complement each other to achieve the Program's mission objectives: Technology Transfer (T2), Space Products Development (SPD), SBIR/STTR, and four of NASA's University Research Engineering & Technology Institutes (URETI's). T2, SPD, and SBIR/STTR are all based upon leveraging NASA's resources with private or other external resources for the primary purpose of developing new technology for NASA mission use, with the technology also having strong potential for commercial application. The primary goal of the URETI's is to provide a sustained dialogue with the academic community regarding cutting edge areas, such as nanotechnology. Therefore, all of IPP's functions primarily serve NASA's mission interests, both in the near term and long term, and with respect to a broad range of technologies and technology readiness levels. Similarly, IPP's functions target and invite a broad spectrum of U.S. industrial and non-profit interests. IPP, by virtue of all of its program elements, provides the opportunity for grass roots direct involvement, nationwide, in NASA's Exploration and other missions.

OVERALL BUDGET

The FY 2007 request is \$197.9 million; a \$16.9 million (or 8 percent) decrease from the FY 2006 budget request:

- \$102.6M for SBIR
- \$12.3M for STTR
- \$35.9M for Technology Transfer
- \$14.5M for Space Product Development
- \$12.3M for Enterprise Engine

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MAJOR ACTIVITIES PLANNED FOR FY 2007:

- Implement an IPP program that integrates formerly distinct Technology Transfer, Space Product Development, and SBIR/STTR program elements such that the former distinct elements complement and leverage each other.
- Achieve partnership development primarily through a single contractor that would replace the former network of external agents.
- Implement inter-field center and intra-field center dual use technology development investment funding initiatives, where funding allocations would be performance based.
- Develop and manage to standard performance metrics.
- Build core civil servant in-house competencies.

Shared Capabilities Theme

The corporately managed Shared Capabilities Assets Program (SCAP) was established in FY 2006 through Operating Plan changes. The integrated budget process will decide SCAP asset budgets which will be subject to agency prioritization and decision-making. SCAP was established to ensure key capabilities and assets availability for future missions. SCAP will be used to identify and prioritize critical assets and make strategic investment decisions to replace, modify, or disposition assets. Four specific key capability/asset classes have been identified to ensure that NASA retains specialized assets and skills required for missions. These include the Aeronautics Test Program (ATP, Aeronautics) wind tunnels, rocket propulsion testing (RPT, Space Ops), thermal vacuum chambers (TVC), and High End Computing Columbia (HECC, Science). The Real Property Management Plan supports the goal of preserving key capabilities and assets critical to current/future missions. After Agency nomination, review, and selection, assets will be added to or withdrawn based on prioritization and balance among assets, and within the overall constraints of Agency priorities and resources. Note that the ATP, RPT and HECC asset classes are not in the central SCAP budget line; they are located in the discrete budgets of the Mission Directorate primarily responsible for the management and allocation of the asset class. While some asset classes may be funded centrally in the SCAP budget in the future, the funding for ATP, RPT and HECC are in the Mission Directorate that is the predominant user or has relevant expertise in the asset class. Note that the TVC budget assessments are not complete and funding within Mission Directorate(s) is not identified. No FY 2007 funding is identified for the central SCAP budget. This budget line is a placeholder to retain funding for future assets classes that are more appropriate to fund in the central SCAP account.

OVERALL BUDGET

The FY 2007 request is \$32.2M:

- \$32.2M for High-End Computing Columbia

This \$32.2M funding request is a portion of the funding for High-End Computing Columbia. The balance of the funding for this asset class is in the Science Mission Directorate.

This represents only a portion of total funding is subject to oversight and decision-making by the Shared Capabilities Assets Program. The balance of the funding is within Mission Directorate Budgets as follows: Aeronautics Test Program – ARMD, Rocket Propulsion Test – SOMD, High-End Computing Columbia – SMD as mentioned previously.

MAJOR ACTIVITIES PLANNED FOR FY 2007:

- Prioritize funding requirements and select classes of assets for inclusion in the Shared Capability Assets Program.
- Identify re-investment/re-capitalization opportunities within and among classes of assets and execute the approved changes (e.g., reallocate funds, upgrade facilities, etc.).

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Space Operations Mission Directorate

Space Operations Mission Directorate (SOMD) programs ensure that the Nation will have reliable, safe, and affordable access to space for NASA's human and robotic explorers while opening new exploration and research opportunities through the extension of human presence in space. SOMD enables NASA to achieve its goals by providing transportation systems such as the Space Shuttle, operational research facilities in space such as the International Space Station (ISS); and space communications systems and supporting space infrastructure. SOMD also provides the unique system--the human system--necessary to open the space frontier to the broadest extent possible.

International Space Station Theme

This Theme supports the construction and operations of a research facility in low Earth orbit as NASA's first step in achieving the Vision for Space Exploration. The ISS provides a unique, continuously operating capability to develop medical countermeasures for long-term human space travel: develop and test technologies and engineering solutions in support of exploration; and provide ongoing practical experience in living and working in space. It also supports a variety of pure and applied research for the U.S. and its International Partners. ISS assembly will be completed by the end of the decade. NASA is examining configurations for the Space Station that meet the needs of both the new space exploration vision and our international partners using as few Shuttle flights as possible. The FY 2007 ISS submission also reflects the realignment of crew and cargo services to ESMD and changes to the ISS logistics philosophy that are driven by the retirement of the Space Shuttle in FY 2010.

OVERALL BUDGET

The FY 2007 request is \$1,811.3 million; a \$57.9 million (or 3 percent) increase from the FY 2006 appropriation as reflected in the initial operating plan. Major features of this budget include:

- NASA plans to continue assembly of the ISS including build out of the truss and power segments.
- NASA plans to aggressively pursue U.S. commercial cargo and crew services at the earliest availability.
- NASA also plans to work with the International Partners to develop sustainable cargo supply transportation architecture for the post-Shuttle era.

MAJOR ACTIVITIES PLANNED FOR FY 2007:

- NASA plans to continue assembly of the ISS including build out of the truss and power segments.
- NASA plans to aggressively pursue U.S. commercial cargo and crew services at the earliest availability.
- NASA also plans to work with the International Partners to develop sustainable cargo supply transportation architecture for the post-Shuttle era.

Space Shuttle Theme

The Space Shuttle is currently the only launch capability owned by the United States that enables human access to space, and the only vehicle that can support the assembly of the International Space Station (ISS). NASA will phase-out the Space Shuttle in 2010 when its role in ISS assembly is complete.

OVERALL BUDGET

The FY 2007 request is \$4,056.7 million; a \$720.8 million decrease from the FY 2006 appropriation (-\$371.0 million or -8.4% not including the FY 2006 hurricane supplemental) as reflected in the initial operating plan. This budget will enable:

- Safe return to flight;

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- Continue activities leading to an orderly phase-out of the Space Shuttle program and transition to future exploration system by 2010.

MAJOR ACTIVITIES PLANNED FOR FY 2007:

- Safely fly the planned Space Shuttle manifest.
- Continue activities leading to an orderly phase-out of the Space Shuttle program and transition to future exploration system.

Space and Flight Support Theme

This theme encompasses Space Communications, Launch Services, Rocket Propulsion Testing, and Crew Health and Safety. Space Communications consists of (1) the Tracking and Data Relay Satellite System (TDRSS), which supports activities such as the Space Shuttle, ISS, Expendable Launch Vehicles, and research aircraft, and (2) the NASA Integrated Services Network, which provides telecommunications services at facilities, such as flight support networks, mission control centers and science facilities, and administrative communications networks for NASA Centers. The Launch Services program focuses on meeting the Agency's launch and payload processing requirements by assuring safe and cost-effective access to space via the Space Shuttle and expendable launch vehicles. Rocket propulsion testing supports a core of highly trained rocket test and engineering crews and test facilities. The Crew Health and Safety Program provide oversight and accountability for the total scope of health and safety of NASA's astronaut corps. Plum Brook Decommissioning was realigned to Corporate G&A beginning in FY 2006.

OVERALL BUDGET

The FY 2007 request is \$366.5 million; a \$27.6 million (or 8 percent) decrease from the FY 2006 appropriation as reflected in the initial operating plan. The budget supports:

- Communications support of human and science missions;
- Launch services and support
- Rocket propulsion testing; and
- Crew Health & Safety

MAJOR ACTIVITIES PLANNED FOR FY 2007:

- Complete first element of the Space Network Expansion (SNE) project.
- Launch eight Expendable Launch Vehicles (ELV) primary payloads.
- Develop and refine a standardized battery of clinical and physiological test for all crew members and continue to develop and maintain environmental standards for all space exploration platforms.
- Test capabilities implemented and upgraded for the Vision for Space Exploration will be made operationally ready to begin testing propulsion capabilities required to support missions beyond LEO.
- Complete Space Communications plan as directed in FY 2006 NASA Authorization Bill.

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Mission Support

As a function of full cost management, the following mission support activities are included in the preceding Mission Directorate budgets as Institutional Investments charges, or as Center or Corporate General and Administrative (G&A) charges. These areas are summarized below to document the resources provided for these activities.

Center G&A

Center G&A costs include the following basic Center management and operations functions that are required to support the performance of the Agency's programs, cannot be directly identified or tied to a specific program or project requirement, but are necessary for efficient and effective administration:

- Center management, procurement, finance, human resources, public affairs, and other personnel costs, and
- Center operations such as logistics, environmental management, safety, and physical security.

FY 2007 highlights include \$1,155 million total as shown in the table below.

Center	FY 2007 (\$ in millions)
Ames Research Center	103
Dryden Flight Research Center	37
Glenn Research Center	95
Goddard Space Flight Center	188
Johnson Space Center	189
Kennedy Space Center	217
Langley Research Center	119
Marshall Space Flight Center	171
Stennis Space Center	36
Total, Center G&A	1,155

Corporate G&A

Corporate G&A provides for the management and oversight of Agency missions, functions, and centers, and the performance of some Agency-wide administrative activities. The responsibilities include the determination of programs and projects; establishment of management policies, procedures, and performance criteria; evaluation of progress; and the coordination and integration of all phases of the Agency's mission.

The majority of the budget, \$367M, supports the NASA Headquarters Mission Directorates and Mission Support Offices in the performance of those duties, and the facilities and services to enable them. Most of the remainder of Corporate G&A provides agency-wide activities and services for specific mission support projects, and provides the funding for their performance by NASA personnel and contractors at the NASA centers. Corporate G&A costs include the following Headquarters operations and Agency-wide functions:

- Corporate Management and Operations including headquarters personnel salaries, benefits, and travel; and operational costs such as rents, IT support, and facility services;
- Chief Information Officer providing agency-wide tools and systems for efficient operations, IT security, and agency E-Gov initiatives;
- Office of the Chief Engineer including engineering standards and system engineering;

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- Office of Safety and Mission Assurance providing safety, reliability, maintainability, and quality mission assurance, risk management, & probabilistic risk assessments;
- Agency Operations providing agency-wide support including, training, awards, and payroll information services;
- Center Workforce Planning activities;
- Independent Verification and Validation Facility providing software quality assurance and validation;
- Program Analysis and Evaluation including the independent assessment of Agency programs, strategic planning functions, and the performance evaluation and analyses of programs, operational readiness and strategic investments;
- Corporate Security, including Headquarters physical security, and Agency-wide security initiatives and counterintelligence; and
- Office of the Chief Health and Medical Officer including Agency occupational health; and research of subject protection and medicine of extreme environments.

FY 2007 highlights include \$682 million total, as shown in the tables below.

Corporate G&A	FY 2007 (\$ in millions)
Corporate Management and Operations	367
Chief Information Officer	69
Office of Chief Engineer	37
Office of Safety and Mission Assurance	54
Agency Operations	45
Center Workforce Planning	41
Independent Verification and Validation Facility	27
Program Analysis and Evaluation	27
Corporate Security	10
Chief Health and Medical Officer	5
Total, Corporate G&A	682

Corporate G&A by Center	FY 2007 (\$ in millions)
NASA Headquarters	452
Kennedy Space Center	12
Johnson Space Center	13
Jet Propulsion Laboratory	10
Goddard Space Flight Center	59
Marshall Space Flight Center	37
Ames Research Center	27
Langley Research Center	45
Glenn Research Center	32
Dryden Flight Research Center	3
Stennis Space Center	1
Total, Corporate G&A	682

Institutional Investments

Effective in FY 2006, funds were transferred from Corporate and Center G&A to establish the Institutional Investments account. Institutional Investments includes non-programmatic Discrete and Minor Revitalization Construction projects previously funded in Center G&A, Facility Demolition projects, previously funded in Corporate G&A, and Environmental Compliance and Restoration activities, previously funded in Corporate G&A. FY 2007 highlights include:

Construction of Facilities, \$179.8 million for non-programmatic Construction of Facilities (CoF); includes:

- \$29.4 million for non-programmatic discrete projects;
- \$112.5 million for non-programmatic Minor Revitalization and Construction projects; and

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- \$10.8 million for a Facility Demolition initiative, to remove unused buildings at the NASA field Centers; and

Environmental Compliance and Restoration:

The ECR program NASA employs is a phased approach that prioritizes Agency requirements for environmental remediation measures that must be implemented within the next several years, as well as needed requirements for other environmental compliance measures and management system initiatives. Among factors considered are relative urgency, safety, and potential health hazards.

\$60.0 million for Environmental Compliance and Restoration. Activities with the highest priority requirements planned for accomplishment in FY 2007 include:

- Plum Brook nuclear test reactor decommissioning and cleanup
- Remediation of groundwater contamination at JPL
- Remediation of groundwater contamination at White Sands Test Facility"
- \$60.0 million for Environmental Compliance and Restoration.

Workforce

NASA currently has about 18,000 full-time civil servant employees. Of that number, approximately 1,000 employees are "uncovered capacity" in that they are not working directly for a specific NASA project or program. This problem with uncovered capacity workforce has been exacerbated in recent years due to lack of strategic planning between projects and programs and NASA center management when hiring civil servant personnel. Some contributing factors to that lack of planning have been a significant reformulation of projects and programs in the Exploration portfolio from primarily research to development, significant growth in Congressionally-directed funds for research projects to be done by organizations outside of the agency resulting in reductions in planned program activities that NASA civil servants would nominally perform, and reductions in aeronautics research done by NASA civil servants due to budget constraints and other agency priorities. Over the past year, NASA has taken specific actions to try to address its workforce problems. Starting in November 2004, NASA implemented employee buyouts to rebalance its workforce and in January 2005 established hiring guidelines to emphasize filling vacancies from within the Agency. NASA is taking significant steps to ensure that NASA's ten field centers have a productive future and to restore and assure the government's required core capabilities to accomplish NASA's mission. With this in mind, all research, technology development, and programs and projects will be directed, to the maximum extent possible, at NASA centers. At the same time, the size of NASA Headquarters, which had grown nearly to historic levels, has been significantly reduced. To sustain the exploration agenda, critical work shall be conducted at all NASA centers. Contractors will participate as appropriate, but the government stewards of the Vision for Space Exploration need to ensure that the government maintains certain in-house intellectual property. NASA is now endeavoring to identify the specific research projects conducted at Centers where uncovered capacity is a minor problem, and shifting those research projects to centers with the skills available to manage the research projects, but where the receiving center suffers from significantly worse uncovered capacity. Also, NASA will be working aggressively to retrain the uncovered capacity workforce.

Management and Performance

NASA's planning and performance management system is key to strategic management at NASA. The Agency has in place an integrated system to plan, monitor, assess, evaluate, and measure performance, identify issues (including the status of resources), gauge the organization's overall health, and provide appropriate data and information to NASA decision-makers. NASA's system produces, and makes available, ongoing monthly and quarterly analyses and reviews, annual assessments in support of budget formulation (for budget guidance and issue identification, analysis and disposition), periodic, in-depth program or special purpose assessments, and recurring and special assessment reports to internal and external organizations.

NASA regularly responds to and reports on the Agency's internally and externally imposed performance measurement and reporting requirements, tools, and practices (e.g., reporting requirements of the Government Performance and Results Act, the President's Management Agenda [PMA], and the Office of Management and Budget's Program Assessment Rating Tool [PART]). NASA tracked six initiatives as part of the PMA this fiscal year: Strategic Management of Human Capital; Competitive Sourcing; E-Government; Budget and Performance Integration; Real Property; and Financial Performance. The latest scores that the Agency has received are summarized below. Each year, OMB uses the PART to review selected NASA programs and the findings are incorporated into NASA's investment strategy. In the coming year, NASA will work with OMB to review the following budget areas: the Solar System Exploration Theme, the Constellation Systems Theme, and the Integrated Management Program within the Advanced Business Systems Theme.

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NASA's President's Management Agenda Scorecard

	Human Capital	Competitive Sourcing	Financial Performance	E-Government	Budget and Performance Integration	Federal Real Property Management
Status	GREEN	GREEN	RED	GREEN	GREEN	YELLOW
Progress	GREEN	GREEN	RED	GREEN	GREEN	GREEN

Scorecard status as of December 31, 2005

Human Capital

NASA has engaged in workforce planning activities to ensure that it has the right mix of employee skills and that competencies are strategically deployed. In support of workforce planning efforts, the Agency managed workforce transformation activities including job fairs, voluntary separation incentives (buyout) or voluntary early retirement (early out), and career transition services to rebalance workforce competencies in support of the President's Vision for Space Exploration. Retention and relocation bonuses have been used to retain employees with mission critical competencies. NASA has maintained an organizational culture that assures its valuable workforce is retained by recognizing excellent performance through an enhanced performance management system and a comprehensive awards system.

Competitive Sourcing

In fiscal year (FY) 2005, NASA achieved a "green" rating from OMB for both progress and status. That rating was achieved due to OMB approving the Agency's "green" plan and the completion of two standard competitions involving 237 positions. The first competition was for the Langley Research Center's Metallic Test Article Development and General and Precision and Machining Services, while the second was for the NASA Shared Services Center (NSSC). The NSSC is an Agency-wide consolidation of multiple business activities at a single location that will allow the Agency to redeploy staff and budget to core mission activities. In addition, the Agency continued to conduct science competitions under its NASA Research Announcements and Announcements of Opportunity whereby NASA scientists and engineers compete against those in academia, industry, and other Government agencies for research opportunities. In FY 2005, more than 400 FTE were exposed to competition through this process. NASA received the President's Quality Award for Innovation and Exemplary Practices for its science competitions.

Financial Performance

NASA continues to face significant challenges in improving the quality of its financial reporting; however, the Agency has developed and issued a strategic initiatives document to help guide the overall improvement in NASA's financial management including the identification of corrective actions to reduce material weaknesses and improve internal controls. Further, NASA has established a Senior Advisory Group, composed of senior government executives from several federal agencies, to provide NASA expert advice and suggestive corrective actions to improve NASA's overall financial management.

E-Government

NASA continues significant progress and success in meeting E-Government criteria. The Agency has submitted its plan to close IT workforce skills gaps and assure successful performance by Agency personnel performing services in project management, IT security, enterprise architecture (EA), solutions architecture, and IT capital planning and investment. To ensure that the Agency continues to enhance its protections for the privacy of personal information, NASA recently

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completed Privacy Impact Assessments on all required IT systems, and provided authorization for public-facing Web sites to employ persistent tracking technology in situations where this use is justifiable. NASA has also made progress in ensuring that its e-government – and other IT investments – are reviewed and integrated with the Agency’s product lifecycle management, security, Capital Planning and Investment Control (CPIC), and strategic planning policy to assure a uniform approach to the business management of Agency systems and services. NASA’s formal EA review process was launched earlier this year, and Version 4 of NASA’s EA (based on the Federal Enterprise Architecture and associated supporting reference models) was released in August 2005, linking NASA’s strategic IT focus areas to the needs of the Agency’s missions and programs. Finally, NASA is currently participating in sixteen of the original twenty-four Presidential Electronic Government (E-Gov) initiatives applicable to the Agency, plus the E-Authentication crosscutting initiative; NASA is also actively engaged in five of the six Federal Lines of Business (LoB) initiatives. Highlights of the Agency’s PMA efforts include: recent vendor selections for both E-Training and E-Travel; posting of grant applications to Grants.gov; implementing Recruitment One-Stop’s online application process and migrating from NASA JOBS to the ROS site; and continuing implementation activities for E-Rulemaking.

Budget and Performance Integration

NASA has integrated strategic, performance, budget and program planning and reporting processes and documents, to ensure the Agency is guided by a single framework to translate strategy into executable budgets. The Agency continues to assure the process, tools and forums for monitoring and reporting performance toward its goals, and makes decisions based on that performance within these. Further, NASA incorporates past PART review findings and those of external experts into investment decisions. NASA continues to strive to find new ways to use program performance information to support decisions on strategy and budget. A main focus of NASA is on improving the policy, metrics and analysis processes for life cycle cost and schedule performance monitoring and reporting.

Federal Real Property Management

NASA is a leader in promoting efficient and economical use of its real property assets as evidenced by its real property initiatives and the approval of its Real Property Asset Management Plan. NASA uses its Asset Management Plan as a tool to integrate real property considerations into the Agency’s corporate decision-making process. NASA is also an active participant on the Federal Real Property Council, which helps inform and develop government-wide best practices.