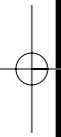


National Aeronautics and Space Administration

NOVEMBER 2004

Real Property Management Plan



Administrator's Message



On January 14, 2004, the President set a new direction for America's space exploration program—a plan to explore space and extend a human presence across our solar system. We are challenged to build new ships to carry us forward into the universe, to gain a new foothold on the Moon, and to prepare for new journeys to worlds beyond our own. Our employees are motivated and committed to this new mandate. We will advance global knowledge and drive scientific progress to enhance the quality of life for humankind. NASA's uniqueness resides with the complex nature of our Mission, our highly specialized workforce, and our safe, reliable, affordable, and environmentally sound facilities.

NASA's real property (land and facilities) constitutes a significant and important capital investment. Each NASA Center has a unique mission and facilities needs. Much of NASA's real property portfolio reflects an infrastructure based on the business model and technological environment of the Apollo era of the 1960s. By 2005, 75 percent of NASA's facilities will be at least 35 years old. Many real property assets are no longer effectively aligned with, or responsive to, our new Vision for Space Exploration.

The excellent management of our facilities is integral to accomplishing our Vision and Mission safely. Our challenges in meeting the President's mandate are as follows:

- Provide sustainable facilities that keep pace with technology and new program requirements;
- Leverage the real property of other Federal agencies, industry, and academia;
- Leverage the value of underutilized property; and
- Provide excellent life-cycle stewardship of all real property that remains under NASA ownership.

Consistent with the President's Management Agenda, we must look at these challenges as an opportunity to improve the management and performance of our programs. In order to continue to provide quality support for future NASA missions, we must exploit new technologies and capabilities and pursue prudent, yet creative, solutions to our real property challenges.

I am fully committed to achieving real property excellence as outlined in NASA's Strategic Plan by using new technologies to move our physical infrastructure beyond brick-and-mortar facility solutions and leveraging the Nation's industrial and intellectual capital. Opportunities include innovative and creative teaming approaches such as partnerships with the commercial sector and other Government agencies. The facilities may be owned or operated by NASA or others, but those facilities that we decide NASA should retain as core capabilities must be sustained. Improving the condition of our facilities not only allows us to achieve our Mission safely, but also helps us attract and retain a high-performing workforce.

The following comprehensive management plan will set the stage for integrating real property considerations into the corporate decisionmaking process. Real property is a valuable resource that, if managed well, can contribute enormously to our Mission success for the benefit of Americans and people around the world.

Sean O'Keefe
Administrator



The NASA Vision

To improve life here,
To extend life to there,
To find life beyond.

The NASA Mission

To understand and protect our home planet,
To explore the universe and search for life,
To inspire the next generation of explorers
... as only NASA can.

NASA Values

We value:

SAFETY We are committed, individually and as a team, to protecting the safety and health of the public, our partners, our people, and those assets that the Nation entrusts to us. Safety is the cornerstone upon which we build mission success.

THE NASA FAMILY We are a diverse team who are bound together in the most challenging and rewarding of endeavors. We respect each other, trust each other, support each other, mourn together, celebrate together, and dream together.

EXCELLENCE We are committed to achieving the highest standards in engineering, science, management, and leadership as we pioneer the future. We thrive on new ideas, experiences, and continuous learning. We are always rigorous in our operations. We demonstrate and communicate an unquenchable spirit of ingenuity and innovation.

INTEGRITY We embrace truthfulness and trust and have the moral courage and obligation to be open, honest, and ethical in all that we do. We treat everyone with dignity and respect. We recognize our responsibility and are accountable for the important work entrusted to us to better our society for future generations.

... which lead to mission success in our journey of exploration and discovery.

Introduction

Real property must fully contribute to NASA's Mission, and, thus, the Agency has addressed real property in the Implementing Strategies of the NASA 2003 Strategic Plan. As defined in the Strategic Plan, real property includes land, buildings, facilities, roads, and utility systems. Together, these constitute a significant and important capital investment. NASA is the ninth largest Federal Government property holder, owning more than 100,000 acres of real estate, over 3,000 buildings, and 3,000 other structures, totaling over 44 million square feet. The current replacement value for NASA real property is over \$20 billion. Real property also has a major impact on employee morale and productivity. NASA strives to achieve excellence in the management of its real property in order to make the best use of its resources for the American people.

Purpose

The Agency has conducted 15 facilities studies since 1990. All of them have confirmed in one way or another that NASA has large and growing capital repair needs. Critical attention to maintenance and recapitalization is required to ensure our ability to safely and effectively achieve our Vision and Mission. In addition, the average age of NASA's facilities is approaching 40 years. A strategy is needed to reshape our real property to meet the needs of current and future Agency programs.

This Real Property Management Plan sets a visionary approach for managing NASA real property, describes how real property should be integral to the NASA Mission, and guides Agencywide real property decisions. It is one of our goals that real property can be considered, and managed, as an integral part of the NASA Mission—not just as a supporting role. We must establish and maintain a close link between NASA's programs and projects, and its corporate business and real property strategies.

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Strategic Real Property Plan

The 70-meter diameter antenna is the largest, and therefore most sensitive, Deep Space Network antenna. It is capable of tracking a spacecraft traveling more than 16 billion kilometers from Earth.

Goldstone, California

Drivers

NASA Strategic Plan

The Real Property Management Plan sets Agency goals and improvement initiatives to support the NASA Strategic Plan Implementing Strategy to “achieve management and institutional excellence comparable to NASA’s technical excellence” (IS-1).

Specifically, this plan supports the Strategic Plan objective that “NASA will improve the institutional management of capital assets to ensure that NASA’s real property, personal property, processes, and systems are sustained and optimized to support NASA’s missions and the capabilities required for today and tomorrow.” The Strategic Plan affirms that:

Achieving excellence in the institutional management of our [real property], including the implementation of best practices, ensures that NASA has the necessary [real property] in place. It also ensures that [NASA’s real property assets] are safe and environmentally sound, are affordable, are of the right type and size, and are in operating condition. We will use new technologies to move our physical infrastructure beyond brick-and-mortar facility solutions, and will leverage the Nation’s industrial and intellectual capital. To ensure that NASA’s [real property] assets are properly aligned with the NASA Mission, excess capability will be removed and new capabilities will be pursued with an emphasis on using innovative and creative teaming approaches, including partnerships with the commercial sector and other Government agencies.

Executive Order 13327 and the President’s Management Agenda

On June 5, 2003, the Office of Management and Budget (OMB) testified before the Committee on Government Reform, U.S. House of Representatives, that “there is substantial evidence of weaknesses in the Federal Government’s management of assets, including acquiring and retaining unneeded or poorly performing assets, excess holding costs, and ineffective asset disposal. Agencies are hampered in their efforts to identify and correct these problems by the lack of strategies, procedures, information, and incentives needed to manage a wide range of assets.” On February 6, 2004, the President signed Executive Order (EO) 13327—Federal Real Property Asset Management. The purpose of the EO is to improve overall management of Federal real property assets on a Governmentwide level. Specifically, the EO:

- Promotes the efficient and economical use of America’s real property assets;
- Ensures management accountability for implementing Federal real property management reforms; and
- Directs executive branch departments and agencies to recognize the importance of real property resources through increased management attention, the establishment of clear goals and objectives, improved policies and levels of accountability, and other appropriate actions.



Along with the EO, the President added the “Federal Real Property Asset Management” Program Initiative to the President’s Management Agenda. According to OMB, the expected results of this new focus include “expanded asset portfolio tracking and analysis capabilities, comprehensive asset management strategies, increased sales of underperforming assets, and reduced maintenance and operating costs.” The Scorecard Criteria will include whether the management of Agency property assets is consistent with the Agency’s overall strategic plan.

Full-Cost Management

The Agency recently began to manage in a full-cost environment. Budget requests at all levels, including program and project levels, are in full cost. They include support costs and a share of Agency and Center general and administrative expenses. Mission Directorates are responsible for allocating resources for the full cost of each program, including real property. Full-cost management will stimulate the need for programs to include real property requirements and associated life-cycle costs in program/project budgets from the early planning stages.

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Strategic Real Property Plan

This aerial view highlights the Space Shuttle infrastructure from the 525-foot-high Vehicle Assembly Building and Complex (foreground) along the crawler-way to the two NASA Shuttle launch pads (top of photo).

Kennedy Space Center, Florida



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National Aeronautics and
Space Administration

*This is an aerial view of
Ames Research Center,
which is located in the
heart of California's
silicon valley.*

*Ames Research Center,
California*

Facilities Tiger Team

Benchmarking activities conducted by the Facilities Tiger Team (FTT) in October 2002 concluded that facilities planning should be embedded in the strategic planning process and that facilities costs must be an integral consideration in the development of the Agency Strategic Plan.

Other Drivers

Many other forums, organizations, and reports have indicated the critical need to invest strategically in NASA's real property infrastructure. The Aerospace Safety Advisory Panel and the Columbia Accident Board both noted the rising backlogs of facility repair needs and the aging of NASA infrastructure. The Government Accountability Office recently added the management of Federal real property to its high-risk list. All have recognized the need to transform the management of real property to address issues of aging, deterioration, and quantity imbalance, thus ensuring that facilities continue to operate safely, efficiently, and in support of the Mission.



Real Property Strategy

Real property is integral to achieving NASA's Vision and Mission in science, technology, and discovery. NASA provides value to its programs and workforce through excellence in real property management by ensuring real property assets meet Agency goals. NASA also provides appropriate stewardship of these assets to achieve the best value for the American taxpayers' investment. The Agency must strive to identify and develop innovative real property management solutions and to construct and operate only the real property required to conduct NASA programs, maintain its core capabilities, and meet national responsibilities.

REAL PROPERTY GOALS AND IMPROVEMENT INITIATIVES

The following are the Agency's real property goals and associated improvement initiatives for achieving excellence in the management of real property.

REAL PROPERTY GOAL 1

NASA will identify and address real property requirements as an integral part of Agency, Mission Directorate, program, and project planning.

NASA will implement the following improvement initiatives:

- A. Include real property requirements and associated life-cycle costs in program/project budgets from the early planning stages.
- B. Ensure facility program/project managers participate as members of the mission/program team from the inception of the program.
- C. Ensure Mission Directorates and program managers continually review real property requirements throughout the program life cycle and address changing requirements.
- D. Identify capability shortages and determine how they will be addressed.
- E. Ensure Agency- and/or Mission Directorate-validated strategic (future) capabilities are maintained.

The In-Situ Instruments Laboratory provides the test beds and infrastructure needed to successfully complete lander and rover missions. These devices will be delivered to the surface of planets, satellites, and asteroids to study their physical and chemical properties.

Jet Propulsion Laboratory, California

REAL PROPERTY GOAL 2

NASA will construct and operate new real property to meet mission requirements only when existing capabilities cannot be effectively used or modified.

NASA will implement the following improvement initiatives:

Seek alternatives to new construction by using the following approach:

- A. Consider advanced technologies as alternatives to brick-and-mortar facility solutions.
- B. Use/modify existing NASA real property.
- C. Leverage the resources (fiscal and physical) of other Federal agencies, industry, and academia.

When construction is needed, NASA will do the following:

- A. Plan, design, and construct facilities for sustainability to ensure new facilities are of the right size and type; are safe, secure, and environmentally sound; provide quality workplaces; and operate efficiently and effectively.
- B. Advocate for appropriate construction, operation, and deconstruction funds.
- C. Use advanced technologies for NASA master planning, design, construction, and facility operations.

REAL PROPERTY GOAL 3

NASA will continually evaluate its real property assets to ensure alignment with the NASA Mission.

NASA will implement the following improvement initiatives:

- A. Identify and address real property requirements as an integral part of Agency strategic planning.
- B. Conduct and periodically update a corporate analysis that correlates mission requirements with real property infrastructure.
- C. Identify real property capability gaps and determine how to fulfill the capability.
- D. Identify and eliminate redundant and excess real property capabilities.
- E. Demolish/deconstruct unneeded facilities.
- F. Develop and maintain Center Master Plans that ensure the future physical development of each Center effectively and efficiently supports the NASA Mission.



REAL PROPERTY GOAL 4

NASA will leverage its real property to its maximum potential.

NASA will implement the following improvement initiatives:

- A. Seek alternatives to NASA ownership of real property where feasible and economically viable.
- B. Seek alternative uses for its underutilized real property, including outleasing and consolidation of functions.
- C. Make full use of authorities that allow public/private agreements and cost sharing, such as enhanced-use leasing authority and Space Act agreements.
- D. Seek third-party financing/services-in-kind opportunities, including privatization, for facility management (e.g., transfer NASA utilities to commercial entity and purchase services).

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Strategic Real Property Plan

This testing facility for large rocket engines is the largest in the U.S.A. and, therefore, the most robust engine testing facility. It is capable of testing rockets with up to 10 million pounds of thrust.

*Stennis Space Center,
Mississippi*



- E. Market temporarily available capacity to non-NASA customers.
- F. Divest real property when appropriate.
- G. Seek adaptive re-use of historical facilities wherever possible.

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National Aeronautics and
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The National Transonic Facility (NTF) provides flight Reynolds number aeronautical data to the research, industry, and DoD communities. The NTF is a high-pressure, cryogenic, closed-circuit wind tunnel having a test section length of 25 feet. Tests with models in wind tunnels allow the study of aircraft designs without risk to a pilot or the expense of building a new full-size aircraft.

*Langley Research Center,
Virginia*

REAL PROPERTY GOAL 5

NASA will sustain, revitalize, and modernize its real property as required by the NASA Mission.

NASA will implement the following improvement initiatives:

- A. Define target levels for NASA facilities conditions.
- B. Determine and allocate the resources to achieve the target levels.
- C. Use advanced technologies and best practices for NASA sustainment, revitalization, and modernization.
- D. Implement sustainment best practices for all facility requirements, including maintaining historical facilities, environmental stewardship, and safety and health considerations.



The Space Shuttle Endeavour lifts off the launch pad where it arrived early that morning after being rolled out of the Vehicle Assembly Building the night before.

Kennedy Space Center, Florida



“Within the Earth Observing System Data and Information System (EOSDIS) building, NASA collects, transmits, processes, and archives data downloaded each day from orbiting spacecraft. Using satellites and sensors, a coordinated synoptic view — a systems approach — to understanding Earth processes is achieved.”

Goddard Space Flight Center, Maryland



Implementation

A companion document to the Real Property Management Plan (RPMP), the Real Property Implementation Plan is being developed and will contain detailed action plans for the goals and improvement initiatives previously identified. To help implement this plan, the Agency will use new tools, such as Integrated Asset Management, to optimize its real property business operations. Increasing effectiveness and efficiency will reduce life-cycle costs, maximizing the budget available for mission expenditures. This is critical as we embark upon the President's new vision to enable human and robotic exploration across the solar system.

The RPMP will be factored into the Agency's strategic planning process to ensure that real property issues are truly integrated into Agency planning and decisionmaking. The goals and objectives of the President's Vision for Space Exploration, Agency Strategic Plan, Mission Directorate Strategies, and Center Implementation Plans cannot be met without considering the real property element.

Development and updates of these documents, therefore, will support NASA's achievement of excellence in real property management.

Measurement

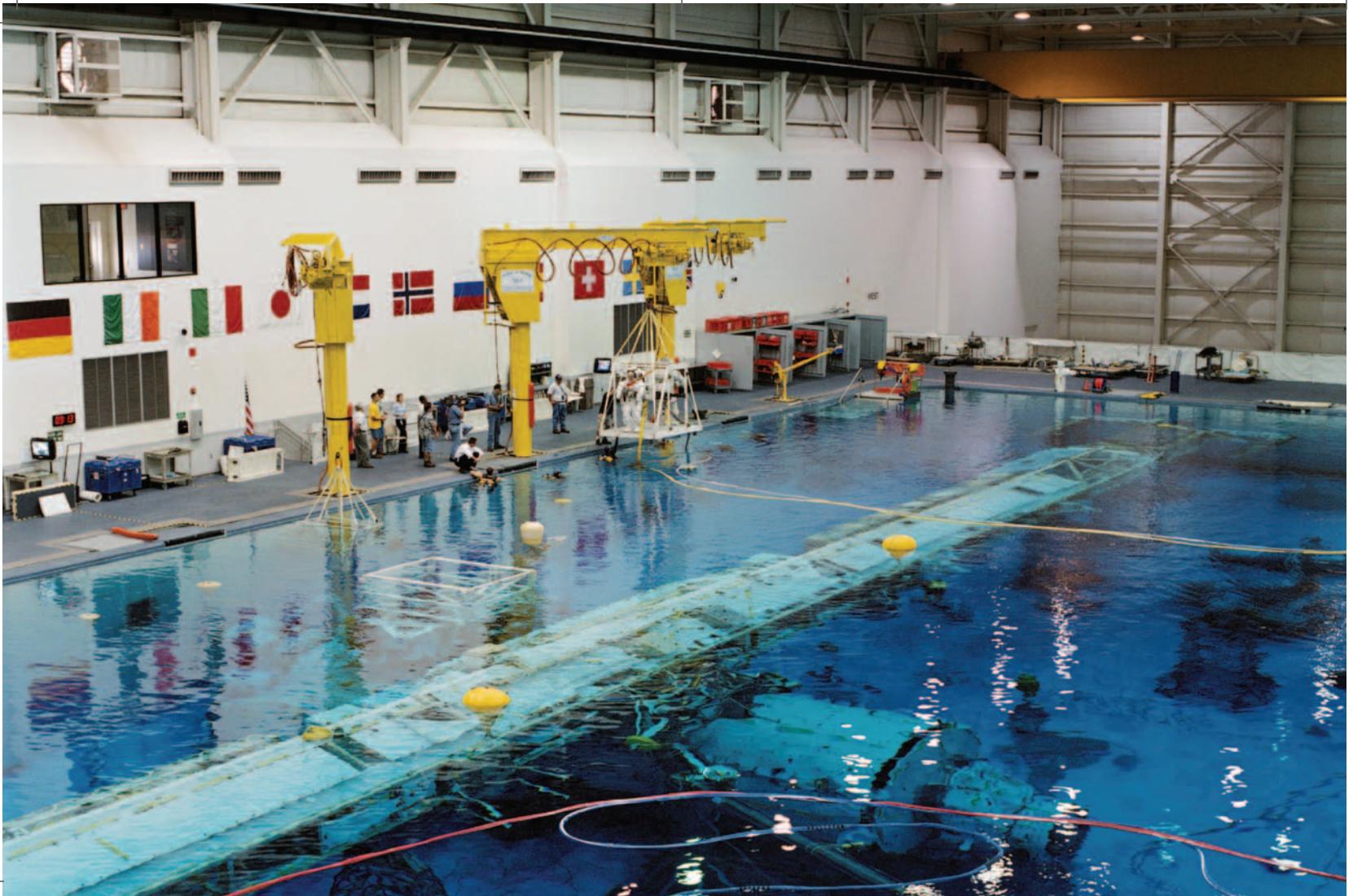
NASA will periodically assess performance against these goals and improvement initiatives. Currently, NASA uses the following metrics to determine real property budget requirements and justification:

Facility Sustainment Model (FSM): NASA uses this DOD-developed parametric model to determine minimum NASA-wide facility maintenance requirements (funding floor). The model is modified to fit NASA.

Deferred Maintenance (DM): DM is NASA's replacement for the standard Backlog of Maintenance and Repair (BMAR) measurement. DM is calculated using a parametric model based on an Agencywide

The Saturn V, lying on its side in the foreground (length 364 feet), anchors the entrance into the Johnson Space Center (JSC) main campus that supports human operations in space. Other JSC locations include the Sonny Carter Training Facility, Ellington Field, and White Sands Test Facility.

Johnson Space Center, Texas



inspection. It is currently conducted on an annual basis, but that may change in the future based on the rate of change experienced. DM is used to track the backlogs of NASA repair on a NASA-wide basis.

Facility Condition Index (FCI): The FCI is assessed at the same time the DM assessment is completed. FCI is a 5-point scale, with 5 being a facility that has little to no repair requirements, and 1 being a building that should be or is condemned. FCI is assessed for each of nine systems in a NASA facility, and the facility FCI is a weighted average of the system condition ratings. NASA uses FCI to track facility condition. NASA also has used the FCI as a basis for major repair funding by estimating the funding required to raise the NASA average FCI (currently 3.6) to a set target (currently 4.3). FSM, DM, and FCI metrics use Current Replacement Value (CRV) as a major input to the models.

Facility Revitalization Rate (FRR): The FRR is calculated as the NASA total active facility CRV divided by the total NASA revitalization (repair and renovation) annual funding, and, expressed in years, NASA uses the FRR as another measure to justify major revitalization funding. NASA has chosen the DOD target of 67 years for the FRR. NASA also collects the standard facility management measurements, including, but not limited to, space utilization percentage, total maintenance spending and spending per square foot, obligation rates, BMAR, construction contract performance, and safety incidents. In addition to these metrics, measures identified in the Real Property Implementation Plan will be used to track progress toward implementation and to determine ultimate success for each goal and improvement initiative. These metrics will be maintained by an assigned organization, while the Facilities Engineering and Real Property Division will be responsible for reporting progress to senior management. The Centers, through the Headquarters offices with oversight responsibility, will be responsible for collecting and reporting Center supporting data.

The Neutral Buoyancy Laboratory provides controlled neutral buoyancy operations which simulate the zero-g (weightless) condition that is experienced by spacecraft and crew in space. The facility, which holds 6.2 million gallons of water, was awarded the American Society of Civil Engineers 1997 Texas Outstanding Civil Engineering Award.

Johnson Space Center,
Texas

Accountability and Responsibilities for Achieving Results

Achieving results is the shared responsibility of all organizations at all levels. Clear and unambiguous assignments of responsibilities for facility investment, stewardship, and divestment are imperative. Effective implementation and integration of this plan into the Agency's day-to-day operations require the commitment of the entire NASA organization.

The Associate Administrator for Institutions and Management (AA/IM) serves as the principal integrator and advisor to the Administrator and the Deputy Administrator on policy and management of real property assets and institutional operations. In this capacity, the AA/IM ensures that processes, plans, and management systems are developed and implemented to align our institutional programs with the NASA Vision, Mission, goals, and objectives to provide the best value to the Nation. Additionally, the AA/IM serves as the Agency focal point for integrating institutional planning with the Agency's tactical and strategic planning.

The Office of Infrastructure, Management, and Headquarters Operations, Facilities Engineering and Real Property Division, and the Agency real property community serve as strategic advisors to Agency and Center management on real property issues. They provide leadership, consulting services, a wide range of enabling and analysis tools, and insight for NASA's real property.

Line managers are responsible for making effective use of real property data, programs, practices, and tools and for identifying impediments to and opportunities for improving the institutional management of real property.

The Agency's real property strategies and improvement initiatives cannot be achieved, however, without direct and active Mission Directorate and Center management. They manage the Agency's real property on a day-to-day basis. They determine what real property needs must be met to successfully and safely execute programs and projects and to what extent they use the real property tools made available to them. As a result, they are ultimately accountable for ensuring real property excellence.

Associate Administrator for Institutions and Management (AA/IM)

- The AA/IM is the Administrator's and the Deputy Administrator's principal advisor on all real property management issues.
- The AA/IM provides policy recommendations and advocacy on managing real property and facility operations.
- The AA/IM ensures that processes, plans, and management systems are developed and implemented to align NASA's real property program with the NASA Vision, Mission, goals, and objectives to provide the best value to the Nation.
- The AA/IM ensures that adequate resources are provided for proper execution of Functional Support Office responsibilities.

Mission Directorate Associate Administrators (MDAAs)

- MDAAs are responsible for program and project results. As such, they are responsible for ensuring programs address real property requirements.
- MDAAs ensure validated strategic (future) capabilities are maintained.
- MDAAs identify capability shortages and excesses, and determine how they will be addressed.

Mission Directorate Associate Administrators as Headquarters Center Executive (HCE) AAs

- Serving in the role of HCE, the MDAAs ensure that Centers can meet functional commitments, Agency goals and objectives, and long-term mission responsibilities in a safe, environmentally sound, and effective manner.
- HCEs ensure Centers have the necessary real property capabilities to carry out their program assignments.
- The HCE looks beyond the interests and priorities of his/her own Mission Directorate, working closely with the Centers, other MDAAs, the AA/IM, and the Functional Support Offices, to ensure that the Agency operates and constructs only the minimum set of facilities and infrastructure required to conduct NASA programs and meet national responsibilities. As such, HCEs continually assess real property needs against NASA's current infrastructure, seek alternatives to new capability construction wherever possible, and identify, plan, and implement options to eliminate unnecessary real property through divestment, demolition, or other innovative programs.

Assistant Administrator for Infrastructure, Management, and Headquarters Operations (AA/IMHO)

- The AA/IMHO manages, leads, and coordinates the real property function Agencywide.
- The AA/IMHO represents the Agency, in the area of real property, to external entities such as the Office of Management and Budget and Congress.
- The AA/IMHO serves as the Agency's Senior Real Property Officer as required by Executive Order 13327—Federal Real Property Asset Management.



The Space Experiment Research and Processing Laboratory (SERPL) was constructed in 2003 at Kennedy Space Center under a 30-year "Land Use Agreement" with the Florida Space Authority (FSA, a state agency). NASA will not own the SERPL facility, but will retain ownership of the underlying land.

*Kennedy Space Center,
Florida*



Institutional Planning and Investment Office (IPIO), Office of Institutions and Management

- The IPIO is responsible for budget coordination and integration of the Agency's entire institutional program, including real property.
- The IPIO supports the AA/IM in his/her role as advocate for Agency real property management activities.

Facilities Engineering and Real Property (FERP) Division, Office of Infrastructure, Management, and Headquarters Operations

- The FERP Division provides Agencywide functional leadership, consulting, and oversight; develops policies; and advocates for resources for Agencywide real property programs including facility design and construction, maintenance and repair, utilities systems and supplies, operations, utilization, and real estate acquisition and disposal management.
- The FERP Division advises the AA/IM and the AA/IMHO and works in partnership with the Mission Directorate Associate Administrators and Center Directors to ensure that Agency real property activities are being conducted in accordance with all statutory and regulatory requirements, including fiduciary responsibilities.
- The FERP Division advises the AA/IM and the AA/IMHO and other senior managers of potential efficiencies to be gained through Agencywide standardization and consolidation across the real property function.
- The FERP Division provides a wide range of enabling and analysis tools, and insight for NASA's real property to ensure that NASA: (a) seeks alternatives to new construction where feasible and, (b) when new construction is needed, plans, designs, and constructs facilities for sustainability to ensure new facilities are of the right size and type; are safe, secure, and environmentally sound; provide quality workplaces; and operate efficiently and effectively.
- The FERP Division ensures performance assessments are conducted to measure the Agency's success in achieving excellence in real property management.

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Strategic Real Property Plan

This manufacturing facility (left), which houses 43 acres under one roof, is used to fabricate, assemble, and test the external fuel tanks for the Space Shuttle. The vertical assembly building (adjacent) is used to do proof testing, pressure vessel cleaning, and application of spray on foam insulation (SOFI).

Marshall Space Flight Center/Michoud Assembly Facility, Louisiana



Center Directors

- Center Directors are responsible for program and project results at their Centers. In this capacity, they manage their real property to ensure that it is available to perform the assigned mission, in accordance with statutory and regulatory requirements for management of such real property.
- Center Directors operate and construct only the minimum set of facilities and infrastructure required to conduct NASA programs and meet national responsibilities. As such, Center Directors continually assess real property needs against current infrastructure, seek alternatives to new capability construction wherever possible, and identify, plan, and implement options to eliminate unnecessary real property through divestment, demolition, or other innovative programs.
- Center Directors leverage the value of required underutilized real property wherever possible, including seeking other beneficial uses of underutilized land and facilities such as public/private partnerships, outleasing, sale of unneeded real property, and similar innovative real property initiatives.
- Center Directors develop and maintain Center Master Plans that ensure the future physical development of each Center effectively and efficiently supports the NASA Mission.
- Center Directors ensure that facilities are planned, constructed, and operated for sustainability based on minimizing life-cycle costs; are of the right size and type; are safe, secure, and environmentally sound; and provide quality, affordable workspaces.
- Center Directors improve facility condition and operations to better attract and retain a high-performing workforce.

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National Aeronautics and
Space Administration

Wallops Island is a remote barrier island on the Atlantic coast. It is an ideal site for testing NASA aircraft models and launching small suborbital rockets. Goddard Space Flight Center relies on Wallops for launch, range, tracking, and data support.

*Wallops Flight Facility,
Virginia*

Program and Project Managers

- Program and Project Managers identify and address real property requirements as an integral part of program planning and execution.
- Program and Project Managers ensure facility program/project managers participate as members of the mission/program team from the inception of the program.
- Program and Project Managers continually review real property requirements throughout the program life cycle and address changing requirements.

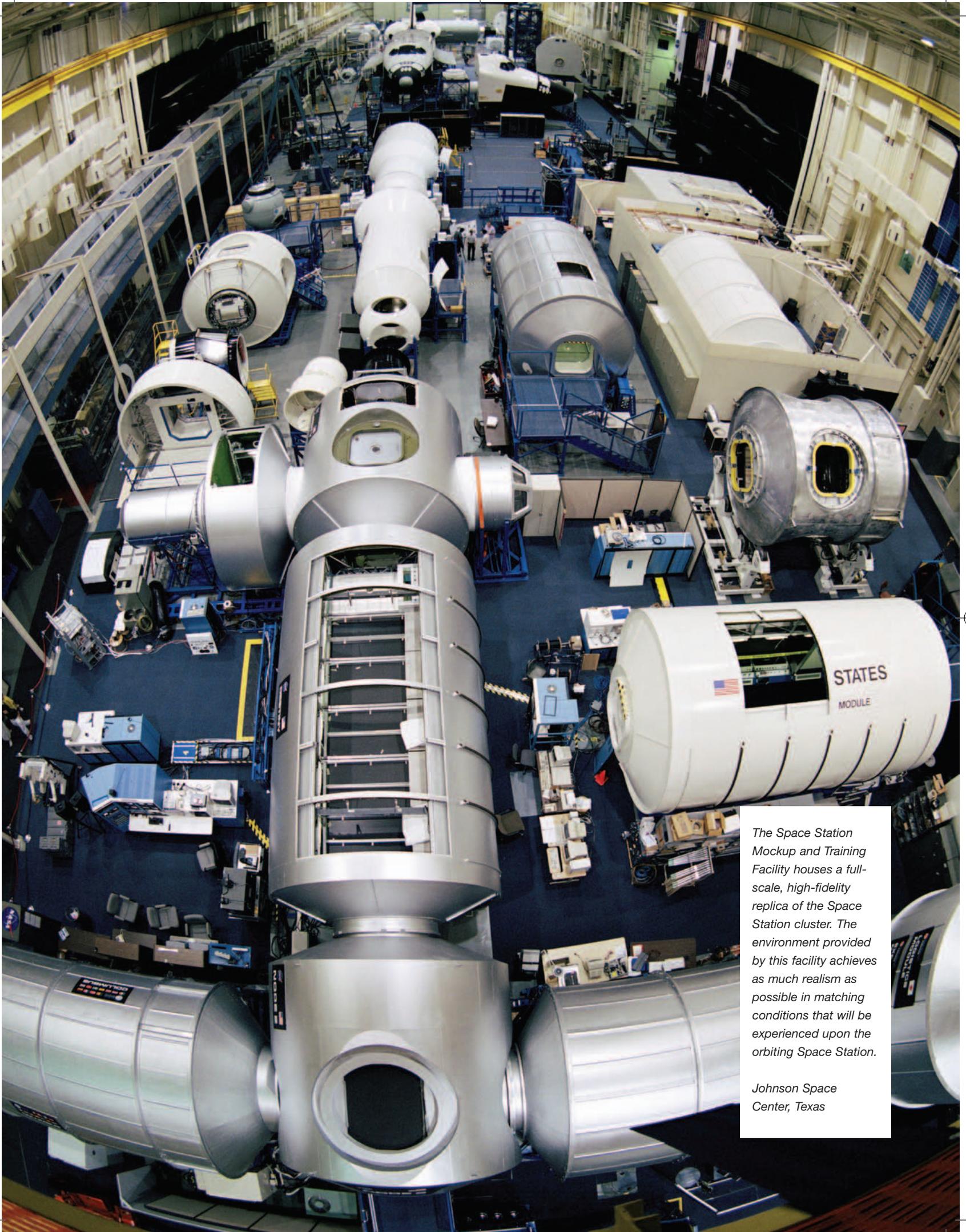
Management Challenge in the Area of Real Property

In summary, NASA managers have many challenges in the area of real property.

NASA managers are particularly challenged to do the following:

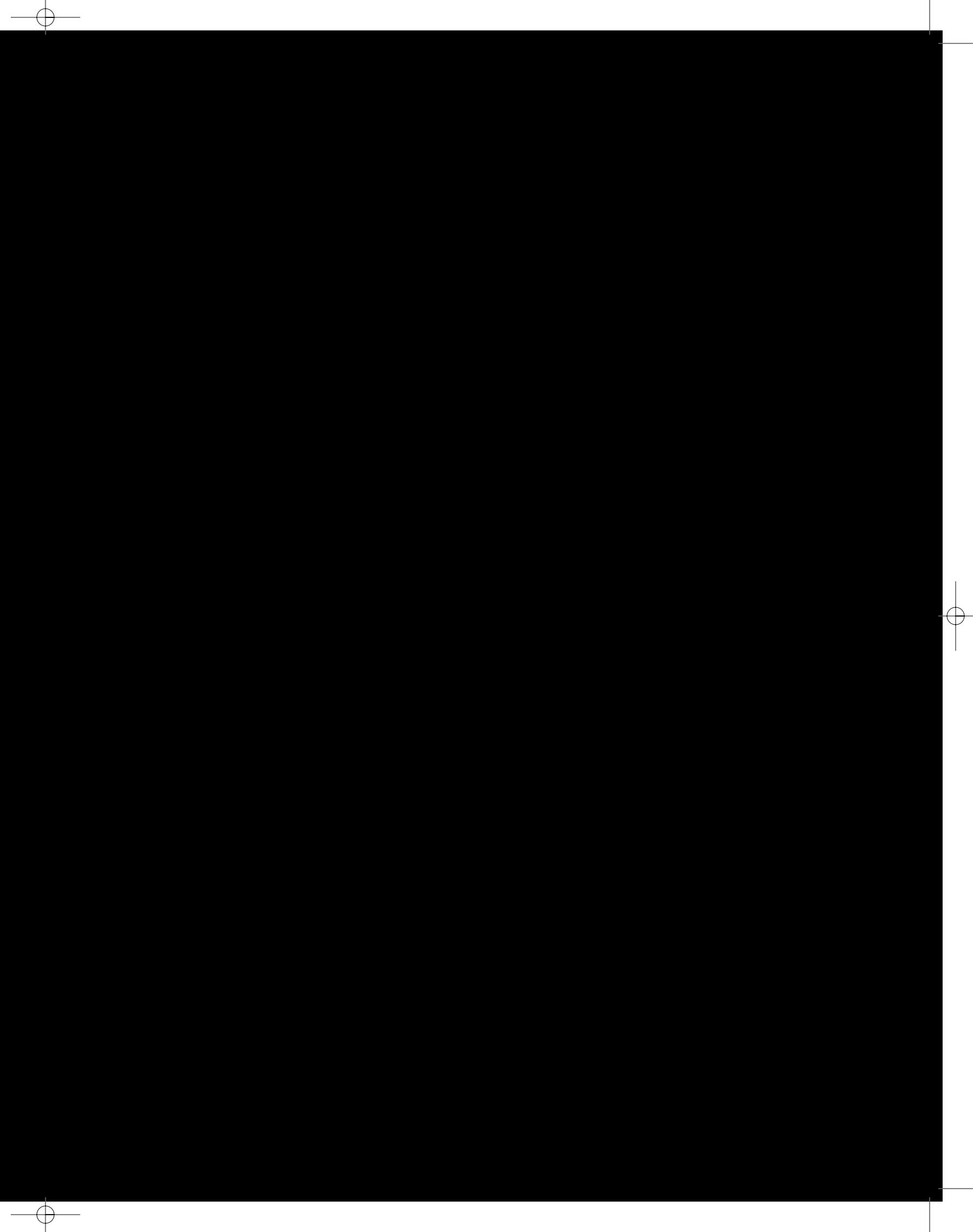
- Improve real property capital planning by integrating NASA Mission considerations into the NASA real property decisionmaking process, making businesslike decisions when evaluating and selecting real property assets, evaluating and selecting real property assets by using an investment approach, and evaluating results on an ongoing basis.
- Determine the core facilities required to support NASA's Mission.
- Identify, plan, and implement options to eliminate unnecessary real property through divestment, demolition, or other innovative programs.
- Ensure credible, long-term budget planning for facility sustainment, revitalization, and modernization.
- Minimize the negative effects associated with competing stakeholder interests in real property decisionmaking.
- Provide employees with appropriate tools and incentives that will facilitate businesslike decisions.
- Address Agency human capital issues related to real property by recognizing that real property conditions affect NASA's ability to attract and retain high-performing individuals and the productivity and morale of employees.

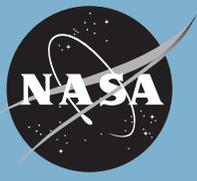
If actions resulting from the effective implementation of this plan address the Agency's real property challenge, NASA will be positioned to meet mission objectives and achieve the best value for the American taxpayers' investment.



The Space Station Mockup and Training Facility houses a full-scale, high-fidelity replica of the Space Station cluster. The environment provided by this facility achieves as much realism as possible in matching conditions that will be experienced upon the orbiting Space Station.

Johnson Space Center, Texas





National Aeronautics and
Space Administration

NP-2004-05-353-HQ

