



# FY02 Highlights

- Overview
- Architecture Concepts
- Exploration Hurdles
  - Space Transportation
  - Power
  - Crew Health and Safety
  - Human and Robotic Operations
  - Space Systems
- Technology Planning
- Leveraging and Partnering
- ➔ • *Future Direction*



## Future Direction – NEXT Steps

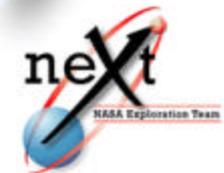
NEXT has been successful from many different perspectives. It was instrumental in the request for four initiatives that have brought over \$1.5B of new funds into NASA (In-Space Propulsion Technologies program , Nuclear Systems Initiative, and the Radiation Research). The multi-disciplinary team illustrated the strength of involving expertise from across NASA to develop new and creative options for space exploration.

The new management team of the Agency, under Mr. O’Keefe and Mr. Gregory, has recognized the power of the NEXT approach and are now institutionalizing the approach to be the way NASA does business from a corporate standpoint. The NEXT organization will evolve under the leadership of the new Space Architect and will transform into the strategic analysis and strategic planning mechanism for space exploration.



## Future Direction NEXT Steps

- The NASA Exploration Team successfully accomplished its task to:
  - Develop a strategic framework for science-driven, technology-enabled human and robotic exploration
  - Develop architectures and concepts
  - Identify strategic investments using systems analysis, with support to three successful new initiatives
- The NEXT has set NASA on a new course
  - Provided depth to NASA's new vision and mission
  - Catalyst for the space planning focus within the Deputy Administrator's Office - the Space Architect
  - Existence proof to illustrate the power of a one NASA approach
- The Space Architect team will continue and expand upon where NEXT left off



## Future Direction – Space Architect's Responsibilities

The Space Architect will report findings and recommendations to the Joint Strategic Assessment Committee (JSAC). The JSAC is comprised of the Enterprise Associate Administrators, the Comptroller, and is chaired by the ADA for technical. The JSAC will approve the studies and receive the results and recommendations of the Space Architect. Many of the duties outlined above for the Space Architect reflect the continuance of activities that the NEXT has successfully developed over the years.



# Space Architect's Responsibilities

**The Space Architect is responsible for developing and recommending the Agency's integrated space strategy to the Joint Strategic Assessment Committee (JSAC).**

- Working with the Enterprises, leads the development and manages the Agency's integrated space strategy and its supporting rationale
- Identifies the integrated long-term investment strategy required to implement the space strategy across Enterprises and Functional Offices. Assesses the Agency's progress in achieving the integrated investments required to implement the Agency's space policy and reports the findings to JSAC
- Collects and integrates supporting rationale for the strategy such as, science and research goals, commercial space development opportunities, educational benefits, etc.
- Leads systems analysis activities to identify technology gaps and the investments required to implement the Nation's exploration strategy
- Develops strategic road maps to show the relationship between programs and investments toward NASA's long term goals in space
- Ensures the Agency's Strategic Plan reflects the integrated space plan
- Represents NASA's integrated space strategy with external organizations (Congress, OMB, OSTP, DoD, external advisory groups, industry, international organizations, etc) in consultation and coordination with relevant HQ functional offices

## Future Direction – Space Architecture Team Structure

The proposed Space Architect Team has representatives from the Enterprises, the functional offices, and the Centers. This is where the integrated approach will be developed and debated. The systems analysis task will be conducted using a working group structure. Each working group will draw expertise from across the Enterprises and Centers as needed.



# Space Architecture Team Structure

## Space Architect

### Enterprise Support (S, U, M, N, R, Y)

- Participate in the development and implementation of NASA's integrated space strategy
- Recommend analysis activities, technology and tool development efforts
- Develop and coordinate programmatic and technology roadmaps
- Develop supporting rationale

### Functional Support (AB, AE, AM, AS, AF, B, G, I, L, P, Q)

- Participate in the development and implementation of NASA's integrated space strategy
- Develop strategies and plans to accomplish the goals of the integrated space strategy (with respect to each functional area)

### Center Leads

- Participate in the development and implementation of NASA's integrated space strategy
- Provide Center expertise and ensure support for the cross-Enterprise, cross-Center working groups
- Provide integration between the Center and the integrated space strategy

### Cross-Enterprise, Cross-Center Working Groups

- Participate in the development and implementation of NASA's integrated space strategy
- Conduct trade studies, systems analysis, develop tools and technology
- Develop options and recommendations to guide space strategy development and implementation

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“As for the future, your task is not to foresee it, but to enable it”

Antoine de Saint-Exupery

