

NASA Education



Setting the Stage

NASA/NSF Research and Education Opportunities
Conference for Higher Education Principal Investigators,
Faculty, and Partners

February 22, 2007

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Education Programs*





NASA

Vision for Space Exploration

- **Goal**

To advance U.S. scientific, security, and economic interest through a robust space exploration program.

- **Objectives**

Implement a sustained and affordable human and robotic program to explore the Solar System and beyond.

Extend human presence across the solar system, starting with human return to the moon.

Develop innovative technologies, knowledge and infrastructures.

Promote International and Commercial partnerships in exploration.





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Inspire, Engage, Educate, Employ
the next generation of explorers

NASA's Mission

**To pioneer the future in
space exploration, scientific
discovery, and aeronautics
research.**



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Strategic Goal 1

Fly the Shuttle as safely as possible until its retirement

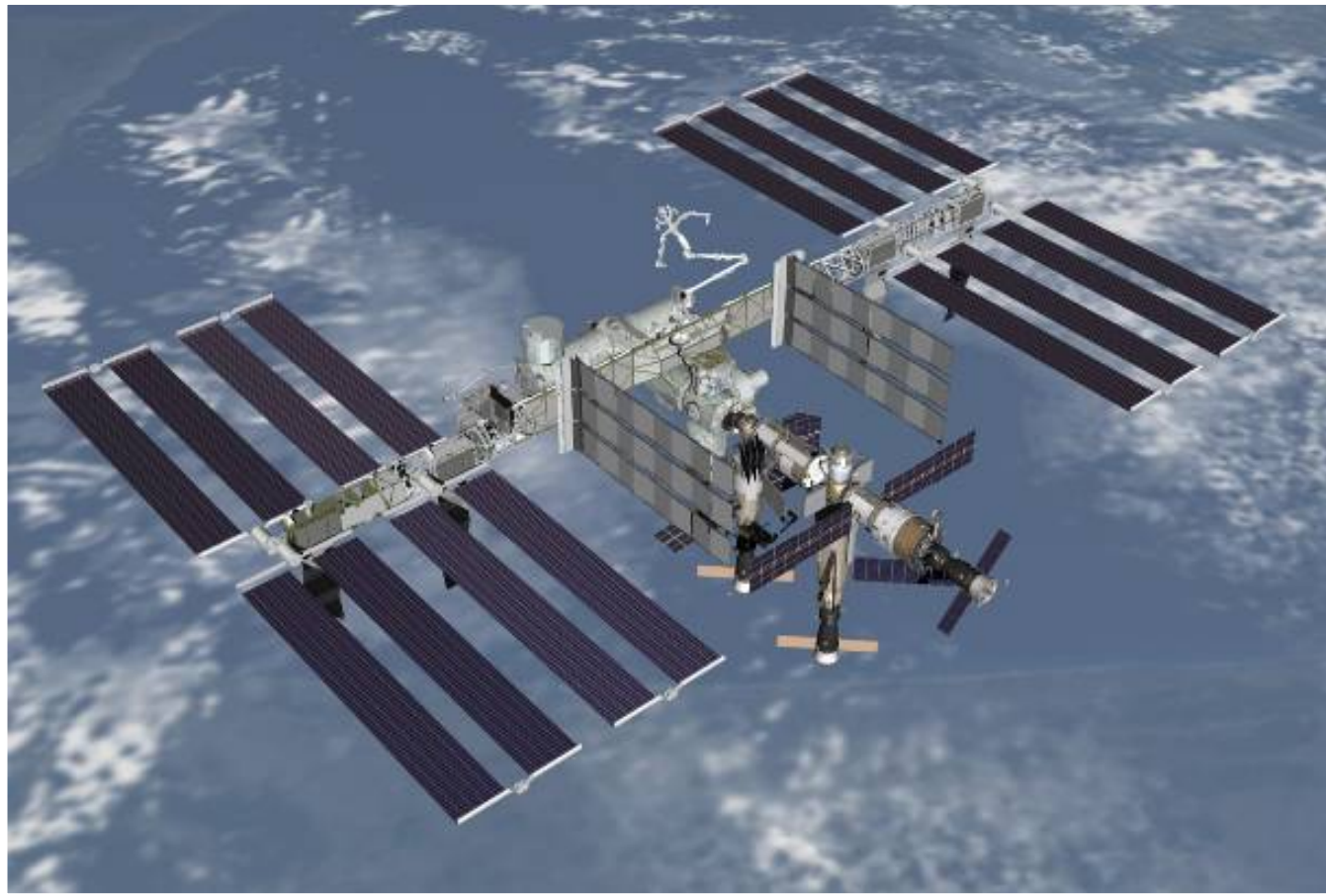




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Strategic Goal 2

Complete the International Space Station



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Strategic Goal 3

Develop a balanced overall program of science, exploration, and aeronautics to focus on exploration





Inspire, Engage, Educate, Employ
the next generation of explorers

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Strategic Goal 4

Develop a new Crew Exploration Vehicle





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Strategic Goal 5

Inspire, Engage, Educate, Employ
the next generation of explorers

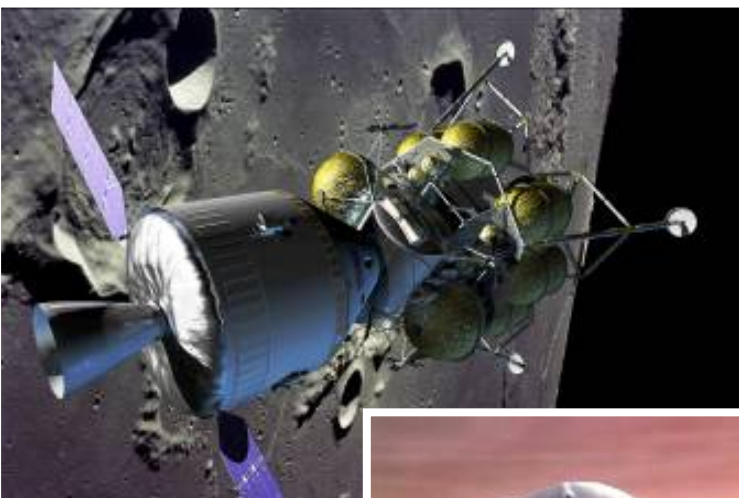
Encourage the pursuit of appropriate partnerships with the emerging commercial space sector



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Strategic Goal 6

Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations



NASA Education

Strategic Communications: Education Initiatives

- ***Continuing the Tradition***
- ***Maintaining Commitment to excellence in STEM Education***

In 2006 and beyond, NASA will continue to pursue three major education goals aligned with the Strategic Plan:

- ***Strengthen NASA and the Nation's future workforce.***
- ***Attract and retain students in STEM disciplines.***
- ***Engage Americans in NASA's mission.***



NASA Education

Direction from Administrator

National Aeronautics and
Space Administration
Office of the Administrator
Washington, DC 20546-0001



October 21, 2005

TO: Officials-in-Charge of Headquarters Offices
Directors, NASA Centers

FROM: Administrator

SUBJECT: NASA Education Activities

I met recently with Joe Davis, Chief of Strategic Communications, and other senior Agency leaders to review the Agency's Education activities. Our discussion followed the Program Analysis and Evaluation Office's assessment of NASA Education activities.

Based on that discussion, I have asked Joe and his team to bring a detailed implementation plan for NASA's Education investments to the Strategic Management Council. This plan will include:

- A clear education implementation plan mapped to the Agency Strategic Plan that supports the Vision for Space Exploration and our ongoing science and aeronautics activities.
- A clearly defined and coordinated portfolio approach to NASA Education (including all of the education and educational outreach activities and investments at NASA Centers and within the Mission Directorates).
- A clearly defined description of the relationships and responsibilities pertaining to education for the Office of Education, all Mission Directorates, and all NASA Centers to promote coordination and collaboration among these entities.
- A well defined evaluation component of the implementation plan to ensure that NASA's education activities are measured for effectiveness against the Agency's strategic goals.

This plan will serve as the framework for NASA's education activities in the coming years. I view NASA's Education activities to be an integral element in achieving the Agency's strategic goals, and I look to you and your staff to support Joe and his team in contributing to the development of this critical plan.



Map to the Agency Strategic Plan



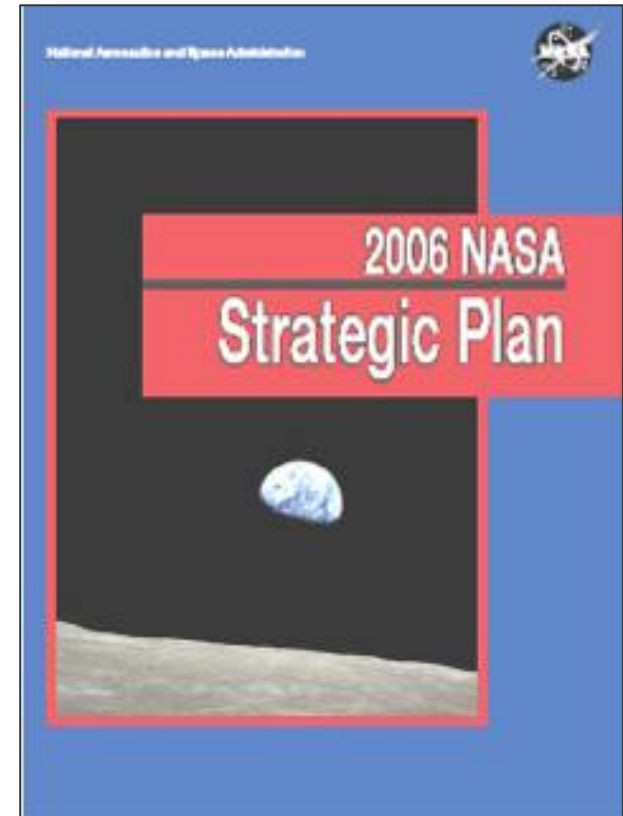
Clearly defined and coordinated portfolio approach



Clearly defined roles and responsibilities to promote coordination



Well-defined evaluation plan

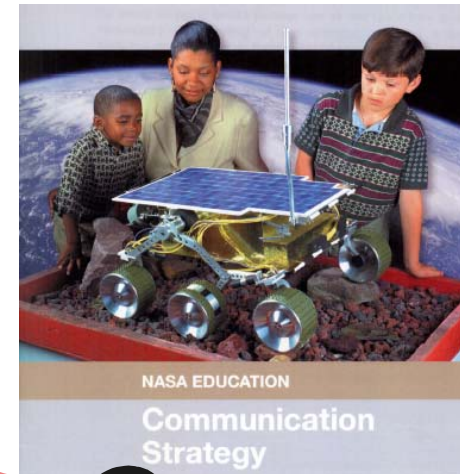
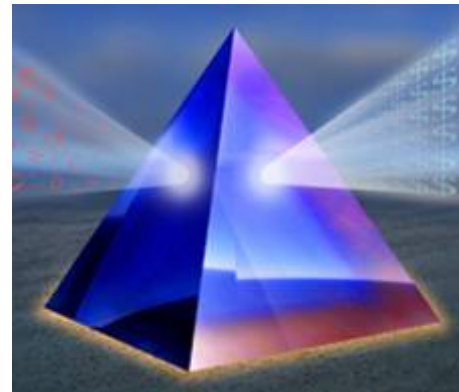


NASA Education

Overview

What is NASA doing to encourage students to pursue NASA-related STEM degrees and careers?

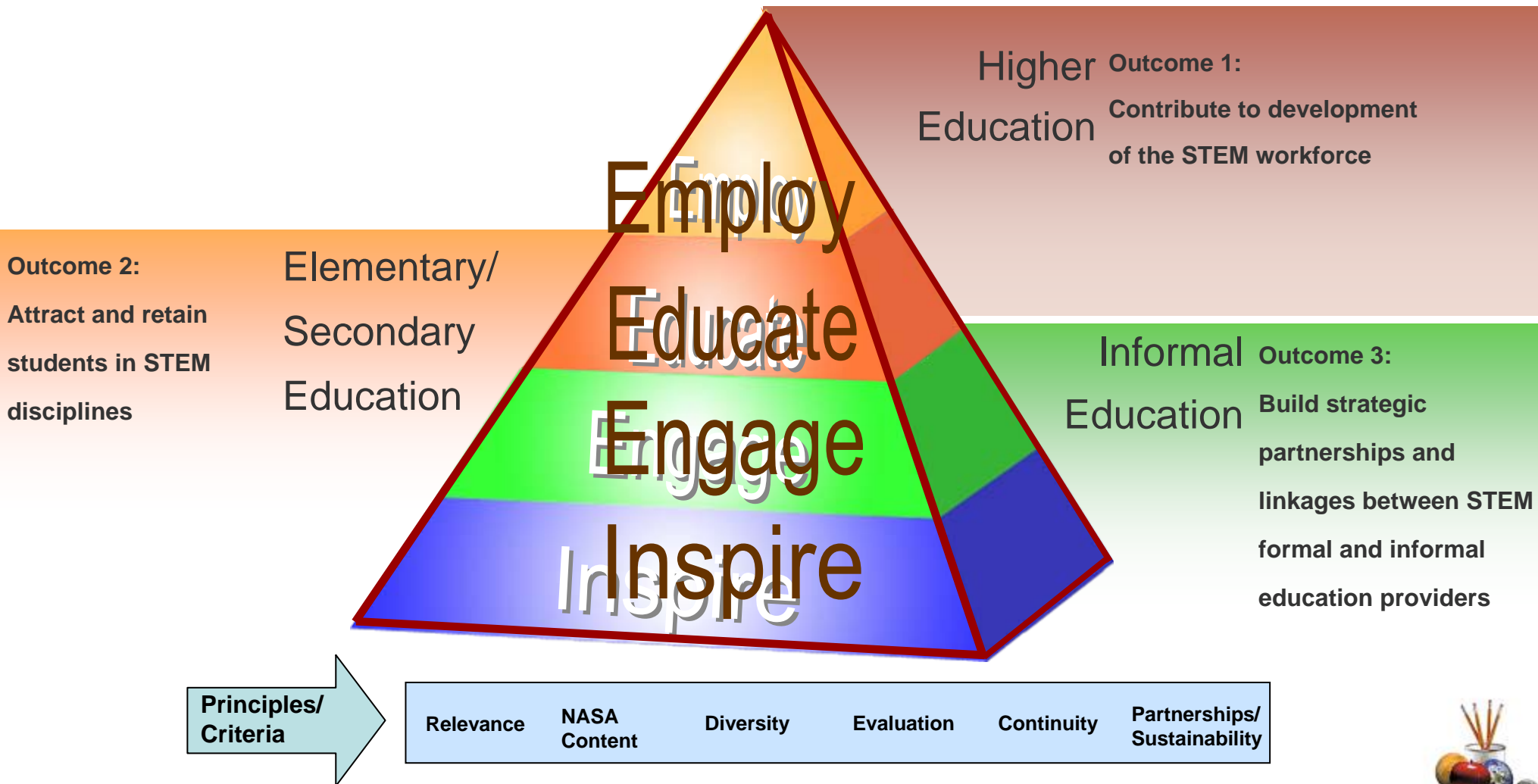
- **NASA Education Restructured**
- **Communication Plan** developed for more effective outreach
- **Partnerships and Collaborations** built to extend our reach to students





NASA Education Strategy

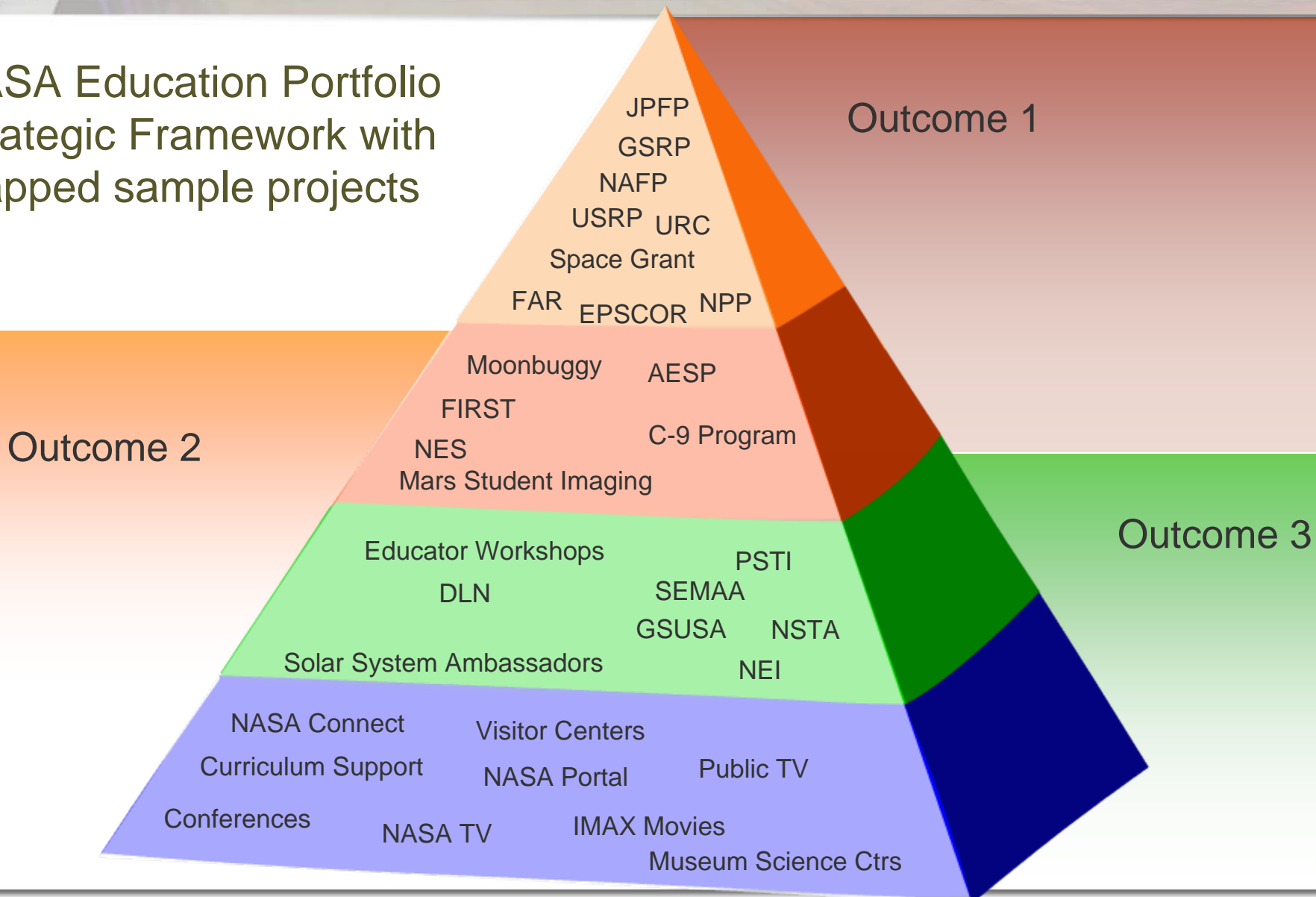
NASA Education Portfolio Strategic Framework



NASA Education

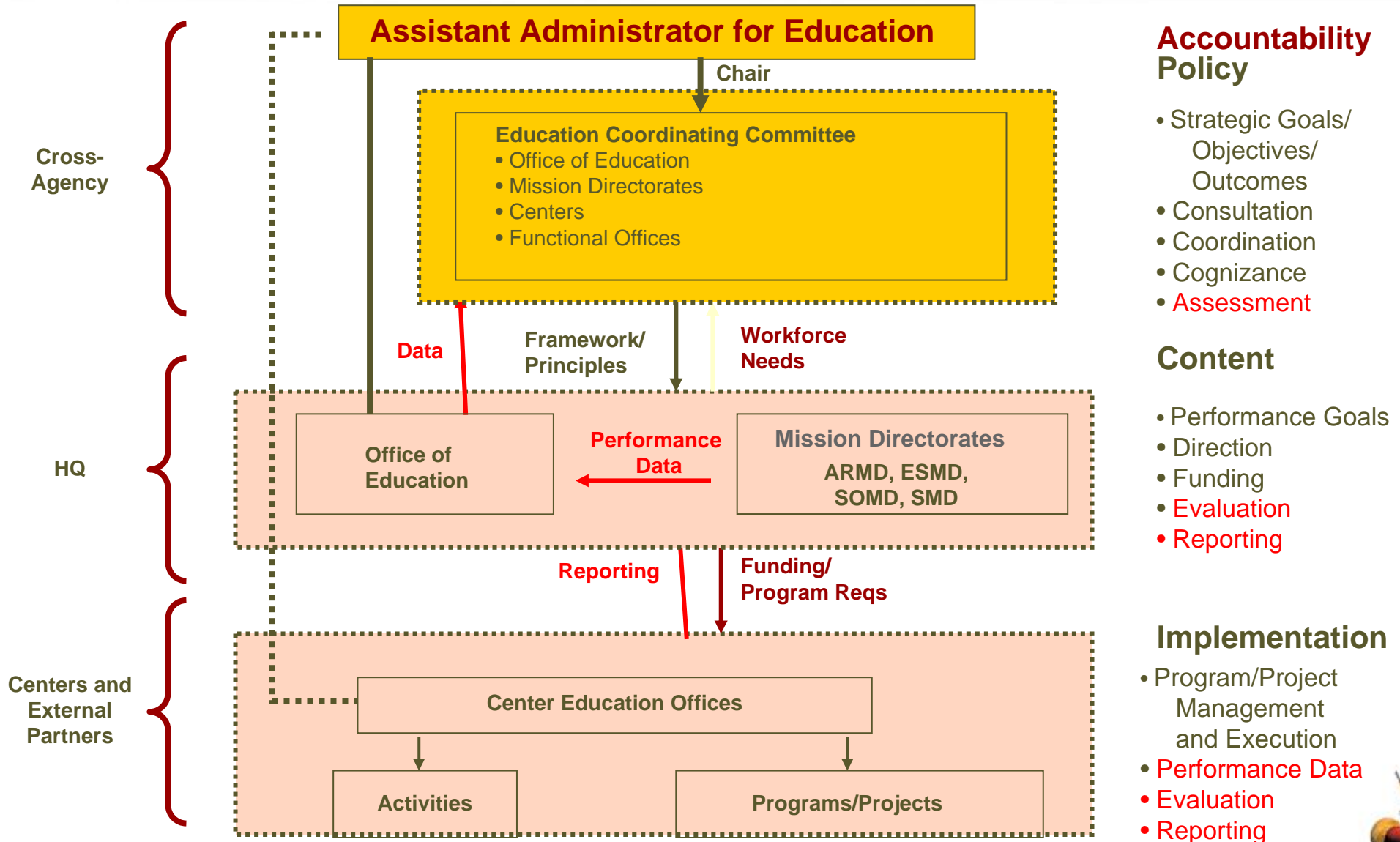
Strategy

NASA Education Portfolio
Strategic Framework with
mapped sample projects



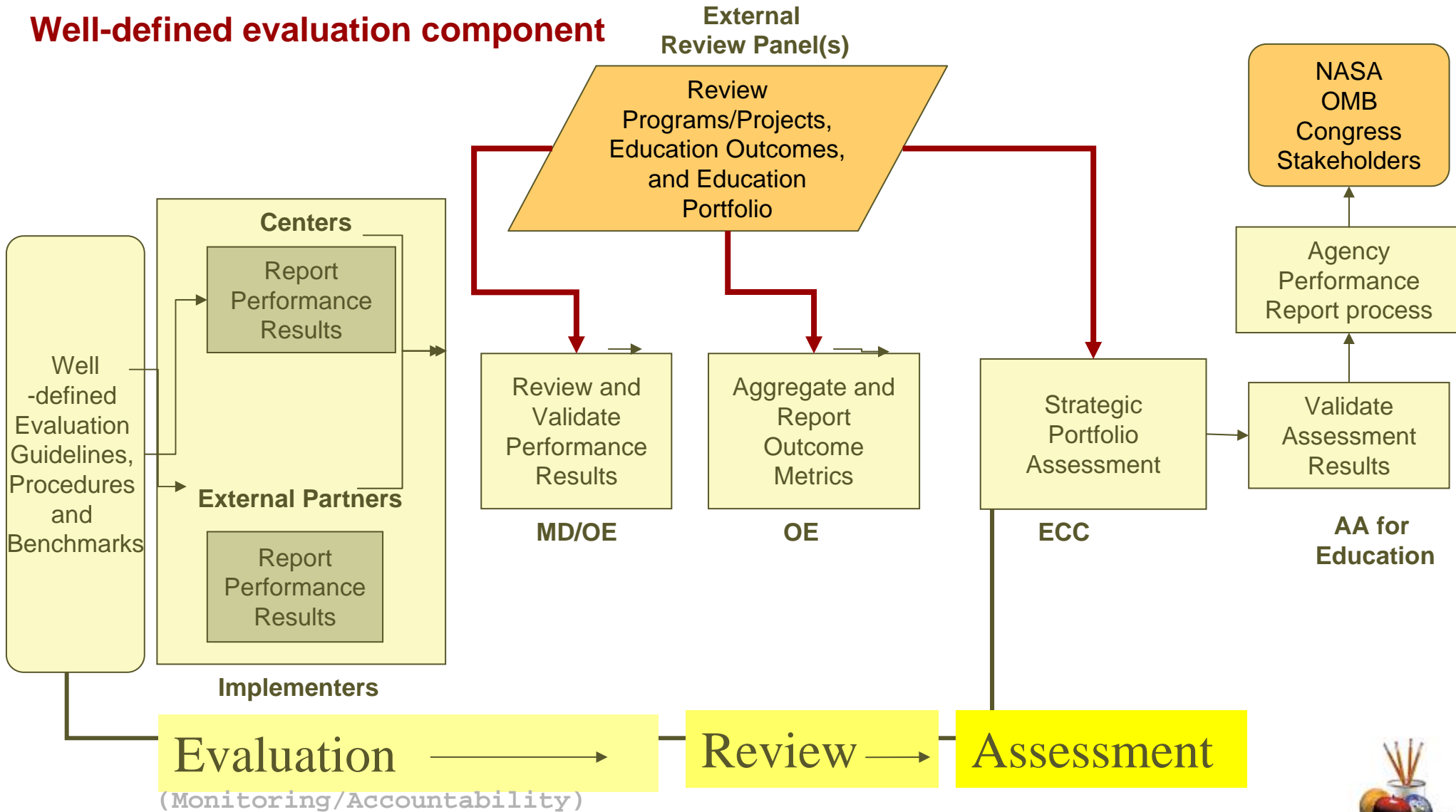
NASA Education

Education Portfolio Coordination Framework



NASA Education Strategy

Well-defined evaluation component



NASA Education

Overview

NASA Education Big Picture

- Agency-wide participation in Strategic management of NASA education portfolio
- Office of Education provides integration and evaluation support to the Education Coordinating Committee.

- **Five Program Areas:**

- » Higher Education
- » Minority University
Research and Education
- » Elementary & Secondary
- » Informal Education
- » Technology & Products



NASA Education

Programs Overview

Educate and Employ: **Higher Education**

Meeting Future Workforce Needs.

NASA's Higher Education Program focuses on

- supporting institutions of higher education in strengthening research capabilities
- attract and prepare students for NASA-related careers.



Projects and Activities:

- **Experimental Program to Stimulate Competitive Research (EPSCoR)**
- **Graduate Student Researchers Project (GSRP)**
- **National Space Grant College and Fellowship Program**
- **Undergraduate Student Researchers Project (USRP)**



NASA Education

Programs Overview

Educate and Employ: **Minority University Research and Education Program (MUREP)**

Diversity in Higher Education: NASA engages under-represented populations through engaging minority institutions, faculty and students in research pertinent to NASA missions, and encouraging completion of degrees and entry into the workforce.

Projects and Activities:

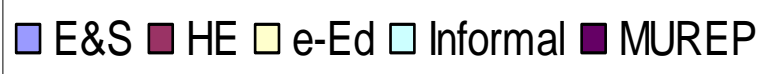
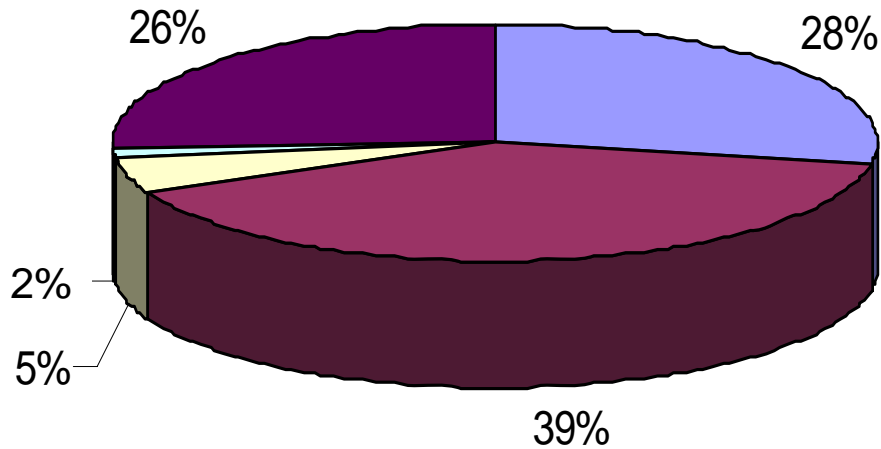
- **Curriculum Improvement Partnership Award (CIPA)**
- **Faculty Awards for Research (FAR)**
- **MUREP Small Projects**
- **NASA Administrator's Fellowship Project (NAFP)**
- **University Research Centers**
- **Jenkins Predoctoral Fellowship Project (JPFP)**
- **Motivating Undergraduates in Science and Technology (MUST)**
- **NASA Science and Technology Institute for Minority Institutions (NSTI-MI)**



NASA Education Budget

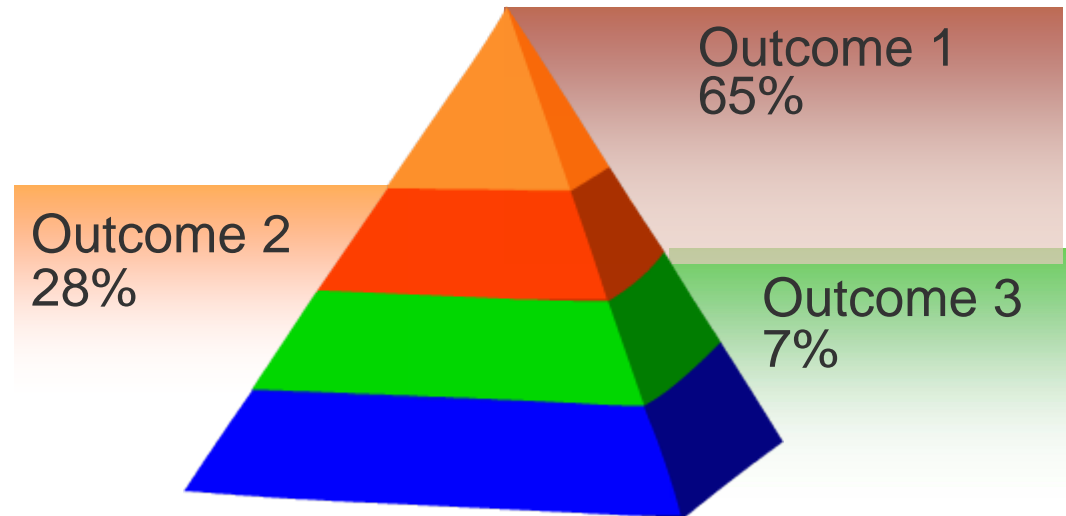
Funding Priorities

FY 2008 Requested Funding by Program



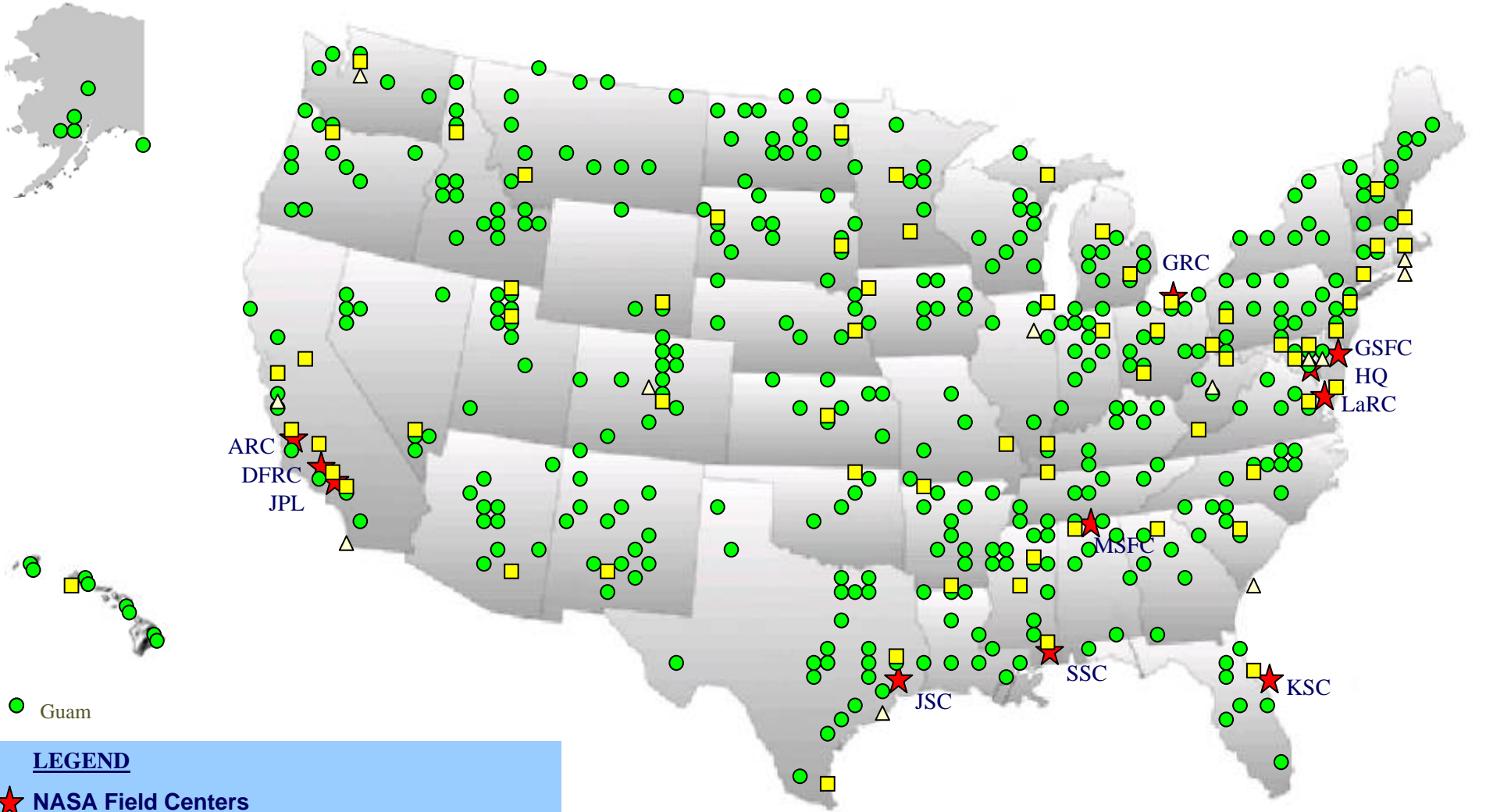
Total requested FY 08 budget authority is \$153.7 million.

FY 2008 Requested Budget in Context of Framework



NASA Education

Physical Assets



● Guam

LEGEND

- ★ NASA Field Centers
- NASA Educator Resource Center Network
- △ Space Science Broker Network
- Space Grant Consortium Network

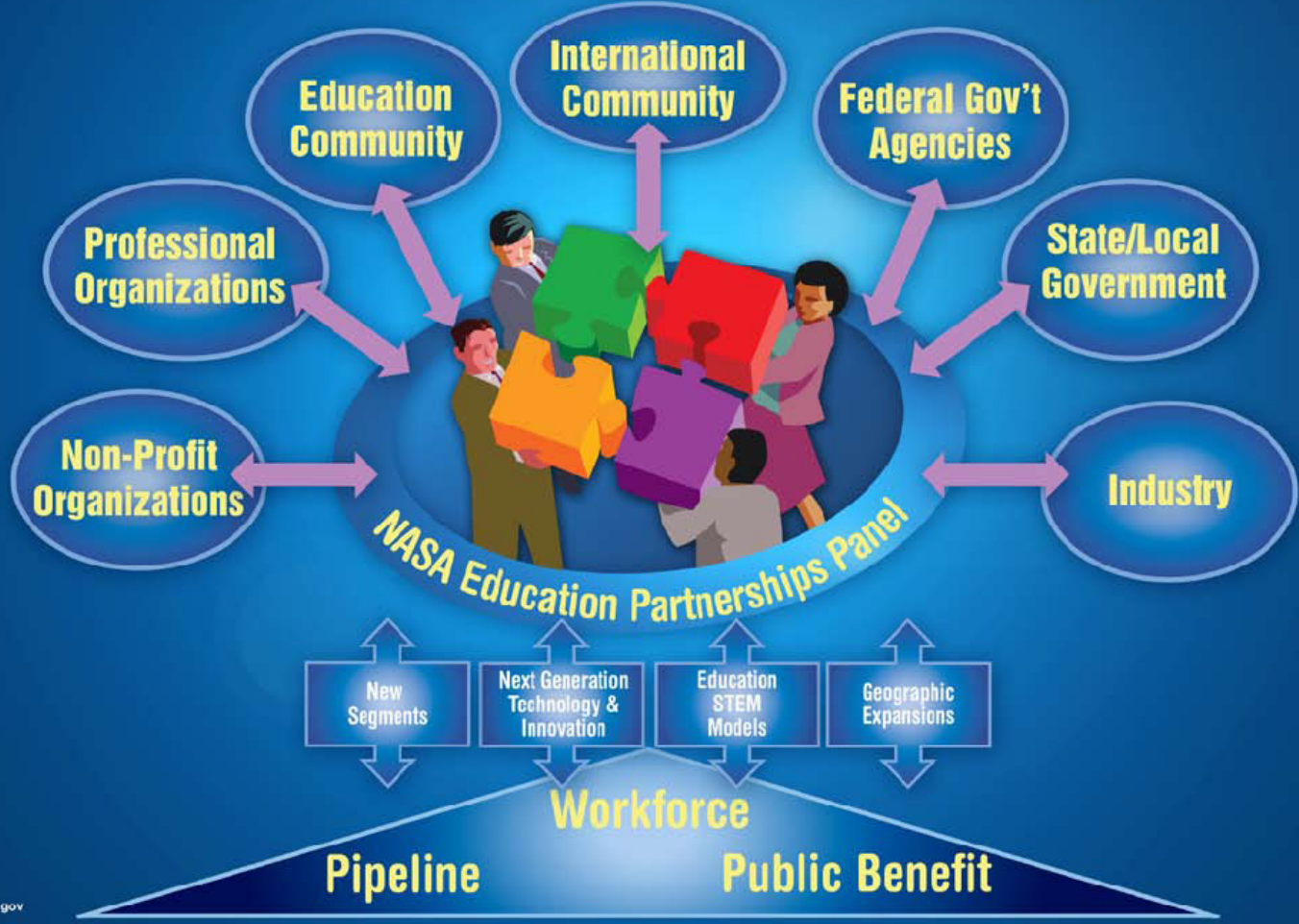
NASA Education Partnerships



National Aeronautics and Space Administration



NASA Education Future: Partnerships



www.nasa.gov



NASA Education

Benefits of NASA Education

Why NASA Education?

- NASA inspires learners of all ages as no other agency can.
- NASA can make unique contribution to the national crisis in STEM education.
- NASA can contribute to Nation's need for S&E workforce.
- Knowledge dissemination mandated by Space Act.



Education provides NASA:

- Sustainability for the Vision
- Creating the workforce
- Maintaining long-term public support for programs
- Nationwide communication networks



