



NASA's Strategic Direction

Quarterly Federal Foresight Roundtable

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Overview of Strategy Efforts

NASA developed the following from guidance given in the National Aeronautics and Space Act of 1958, NASA Authorization Act of 2010, NASA Appropriations Acts of 2011 and 2012, and the National Space Policy of 2010:

Our Vision

We reach for new heights and reveal the unknown for the benefit all humankind.

Our Mission

Drive advances in science, technology, aeronautics and space exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of Earth.



Strategic Plan Goals (2011)

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



Strategic Plan Goals (2014)

- 1. Expand the frontiers of knowledge, capability, and opportunity in space.**
- 1. Advance understanding of Earth and develop technologies to improve the quality of life on our home planet.**
- 1. Serve the American public and accomplish our Mission by effectively managing our people, technical capabilities, and infrastructure.**



Overarching Approach (2014)

- **Invest** in next-generation technologies and approaches to spur innovation;
- **Inspire** students to be our future scientists, engineers, explorers, and educators through interactions with NASA's people, missions, research, and facilities;
- **Expand** partnerships with international, intergovernmental, academic, industrial, and entrepreneurial communities, recognizing them as important contributors of skill and creativity to our missions and for the propagation of our results;
- **Commit** to environmental stewardship through Earth observation and science, and the development and use of green technologies and capabilities in NASA missions and facilities; and
- **Safeguard** the public trust through transparency and accountability in our programmatic and financial management, procurement, and reporting practices.

NASA is working on new ways to do business, investing in new technology, and increasing the sustainability, accountability, and transparency in our operations.

- **Finding new ways to do business**
- **Investing in cutting-edge technologies**
- **Increasing sustainability, accountability, and transparency**



Top Trends Facing NASA...

- **Talent gap...with aging workforce and increased competitive pipeline for young talent...**
- **Aging infrastructure...**
- **New commercial space companies...**
- **Other nations emerging with strong space programs...**
- **The reality of budget pressures and competition within Federal government for tax dollars...**



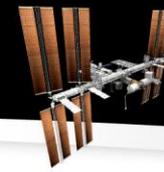
Goals of the NASA Administrator's Strategy Effort

- **Establish an Agency-wide commitment among Agency leaders to develop a common *strategy* for achieving NASA's Vision and Mission.**
- **Develop strategy process based on scenario-planning work and NASA's Strategy Implementation Planning process using a broad and inclusive communication forum (Strategic Management Council).**
- **Define strategic priorities and build consensus among Associate Administrators, Center Directors, and other Agency leaders.**
- **Align Agency-level strategy planning with Mission Directorates' and Center Directors' strategy efforts.**



Goals of the NASA Administrator's Strategy Effort – (Con't)

- **Build strategic framework using portfolio analysis and infrastructure evaluation to facilitate decision-making.**
- **Develop a resilient strategy within the framework of possible futures to resolve high-level portfolio and infrastructure issues.**
- **Utilize Strategy Implementation Planning Process to turn strategy into action by feeding results into NASA's Planning, Programming, Budgeting, and Execution process (PPBE).**
- **Foster innovation and creativity via application of non-standard solutions and lessons learned to NASA challenges and opportunities.**



The 4 Futures and the Strategic Framework

- The “4 Futures” define the trade space of NASA *why*'s and define the framework for strategic planning and dialogue.

- NASA leadership recognizes that the elements of all 4 Futures will always be present in the NASA environment:
 - Trend analysis and discussions with governing councils and NASA focus groups helped identify these four distinct rationales that drive NASA's future.



The 4 Futures and the Strategic Framework – (Con't)

- **The “4 Futures” are not meant to be mutually exclusive, they create the framework for:**
 - **Defining the desired future state of NASA that will allow the Agency to be more flexible and responsive to changes.**
 - **Raising strategic questions for the Agency to address.**
 - **Defining areas of emphasis and focus for NASA portfolio.**
 - **Shape the strategy with Agency’s stakeholders.**
 - **Communicate NASA’s focus and impact to its broader community.**
 - **Strategic planning - by ensuring we make informed decisions.**



4 Futures: The Realm of Driving Rationales – (Con't)

US Global Leadership



- Contributes to global prestige through use of space as a strategic asset for the Nation
- Signals strength of the Nation's political and economic systems to the world through technological prowess

Direct Measureable Payback



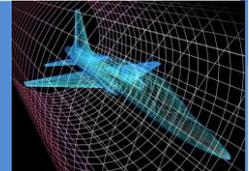
- Links goals of programs to clear and direct quantifiable benefit
 - Benefits are not indirect or follow-on and should be intuitive to the taxpayer
 - SMART: Specific, measurable, actionable by industry, responsive to taxpayer needs and timely

Human Drive to Explore and Extend Human Presence in Space



- Enhances the indomitable human spirit to expand our footprint in the Universe
- Allows humankind to create permanent long-term space presence in the solar system
- Bolsters sustainability of life as exploration expands beyond the Earth

Seeding Technical Innovation and Expanding Scientific Knowledge



- Advances research and technology agendas to the community at large to enable future discoveries and innovation
- Fulfills role of government to create a scientific public good benefitting all (e.g., asteroid threat detection)
- Answers key scientific questions (e.g., black-hole imaging)



Strategy to Decisions



Framework:

- Probable futures
- Portfolio analysis
- Infrastructure analysis

Strategic studies and analyses
MDs strategic planning

Ext. policy requirements

Portfolio constraints and opportunities analysis:

- Strategic programming tools
- Infrastructure strategies
- Make/buy/partner analysis
- Workforce strategies

Ext. policy constraints

Strategic Implementation Planning Review

- Resource allocations
- Policy influence
- Strategic Planning
- Partnerships

US Global Space Leadership

Contribute to global strategic through clear of space as a strategic asset for the Nation. Develop strength of the Nation's national and economic systems to the world through technological progress.

Direct Missionary Payback

Linkage goals of programs to clear and direct quantitative benefits.

- Benefits are not indirect or follow-on and should be visible to the taxpayer
- Should: Specific measurable, achievable by industry, responsive to taxpayer needs and timely

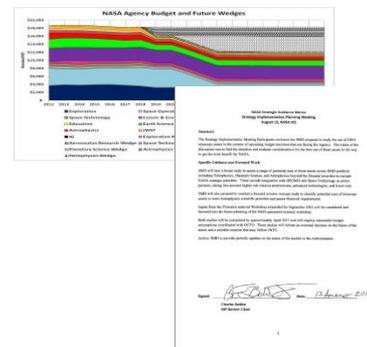
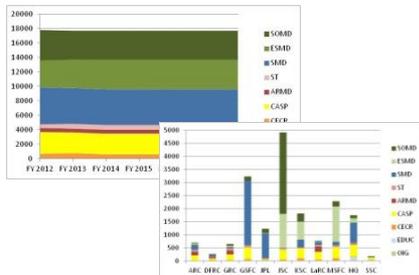
Human Drive to Explore and Extend Human Presence in Space

Enhance the individual human spirit to expand our footprint in the Universe. Allow humanity to transcend present long-term technical limitations in the solar system. Develop sustainability of life as an exploration capability beyond the Earth.

Leading Scientific Knowledge & Technical Innovation

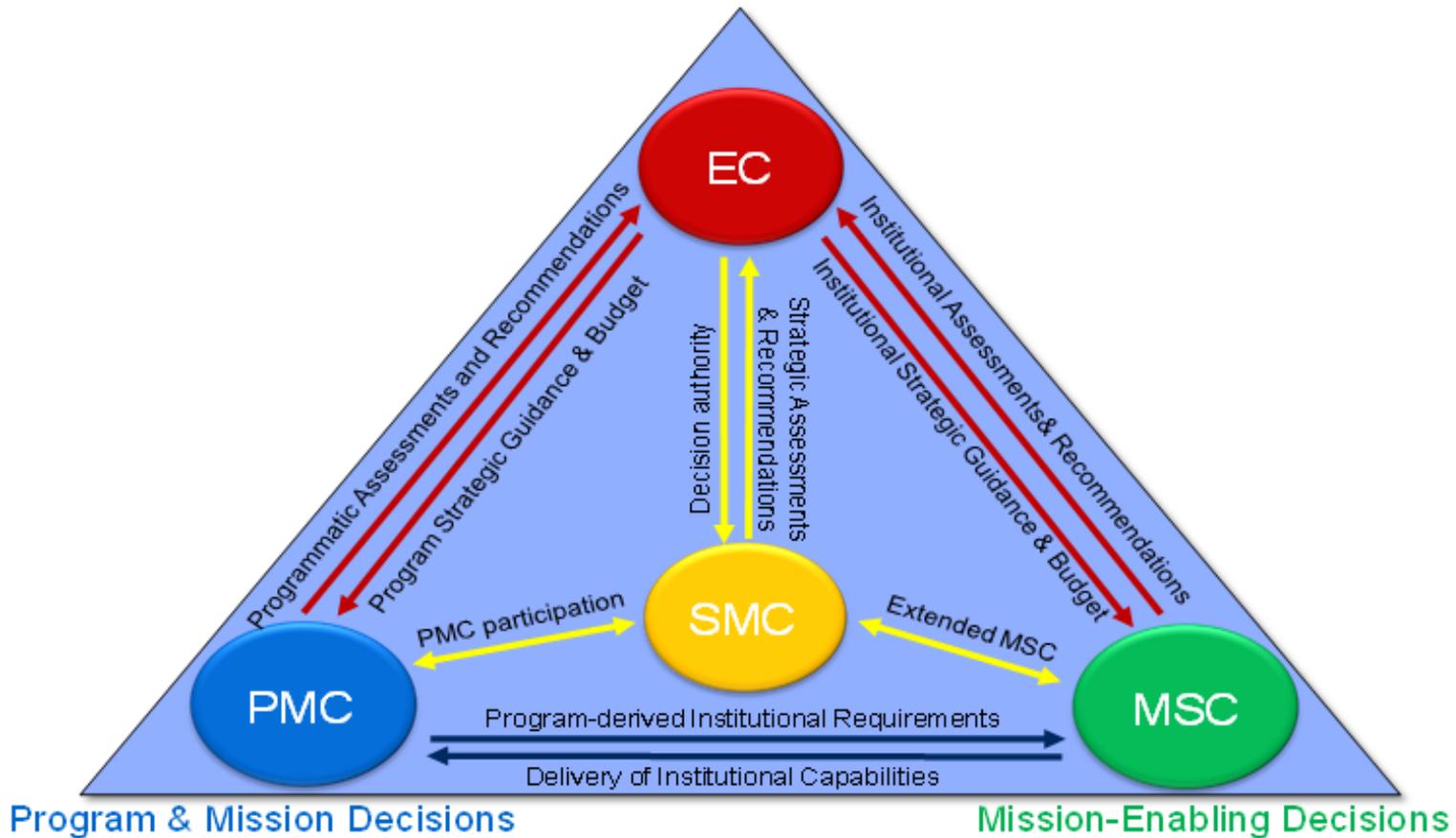
Advance research and technology agencies to the forefront of large scientific fields.

- Benefits are not indirect or follow-on and should be visible to the taxpayer
- Should: Specific measurable, achievable by industry, responsive to taxpayer needs and timely





Role of SMC in NASA Strategic Governance



Partnership Council (PC) to be added and will advise the Executive Council on partnerships.



Evolving Strategic Governance – (Con't)

- **Strategic Implementation Planning (SIP) Process**
 - An integrated Agency-level activity to convert high level Agency strategy into guidance for implementing NASA's portfolio and budget planning. To accomplish this, SIP reviews are conducted where specific aspects of the NASA program requiring upcoming decisions are discussed in the context of 20-year strategic outlook.
 - SIP Chair/NASA Administrator provides guidance on either additional planning efforts needed or the approach to be taken in the budget cycle.
 - SIP reviews are not decisional meetings, but consultations with the NASA Administrator on proposed plans forward.
 - SIP review participants consist of the core team from HQ and others that are invited depending on the topic:
 - Recent action was to involve applicable Center Directors in the SIP reviews.
- **Completed SIP reviews resulted in better alignment and preparedness for budget discussions.**
- **2014 SIP planning focuses on long-term portfolio review**



Questions or comments?