



5
YEARS



Advisory Committees / Decadal Surveys Presentation to 2008 PI-Team Masters Forum

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SMD Principles (from NASA Science Plan)



- Investment choices first consider scientific merit. SMD will use open competition and **scientific peer review** as the primary means for establishing merit for selection of research and flight programs.
- Active participation by the research community outside NASA is critical to success. SMD will **engage the external science community** in establishing science priorities, preparation and review of plans to implement those priorities, analysis of requirements trade studies, conduct of research, and evaluation of program performance.
- The pace of scientific discovery is fueled by prompt, broad, and easy access to research data.
- Partnerships are essential to achieving NASA's science objectives.
- Partnerships are essential to realizing relevant societal benefits from NASA's research.
- The NASA mandate includes broad public communication.
- Sustained progress in advancing U.S. space and Earth science interests requires investments across a broad range of activities.
- The Nation looks to NASA for innovation in space.

Active involvement of outside scientists is critical in all phases of the program

- National Research Council (NRC) study committees
- Advisory committees (including roadmapping teams)
- Working groups that establish science requirements for individual missions
- Working groups that provide program management guidance
- Teams that develop proposals for space investigations
- Conducting the underlying basic research funded by NASA
- Developing critical technologies with NASA funding
- Service on flight mission teams
- Peer review panels for proposals
- Senior review panels for mission extensions

Forms of Science Advice



Formal Advice:

- NASA Advisory Council – chartered under the Federal Advisory Committee Act (FACA)
- National Research Council (NRC) – chartered by Congress, special FACA provisions

Informal Advice:

- Professional Societies – Provide unsolicited advice from outside the Government
- Town Halls, Requests for Information (RFIs), Open Door/Email Policy – provide advice from individuals
- Working Groups, Science Definition Teams, Independent Review Boards – provide technical findings to individual projects or programs, do not provide consensual advice
- Peer Reviews – provide strengths and weaknesses on individual proposals, do not provide consensual advice

Federal Advisory Committee Act (FACA)

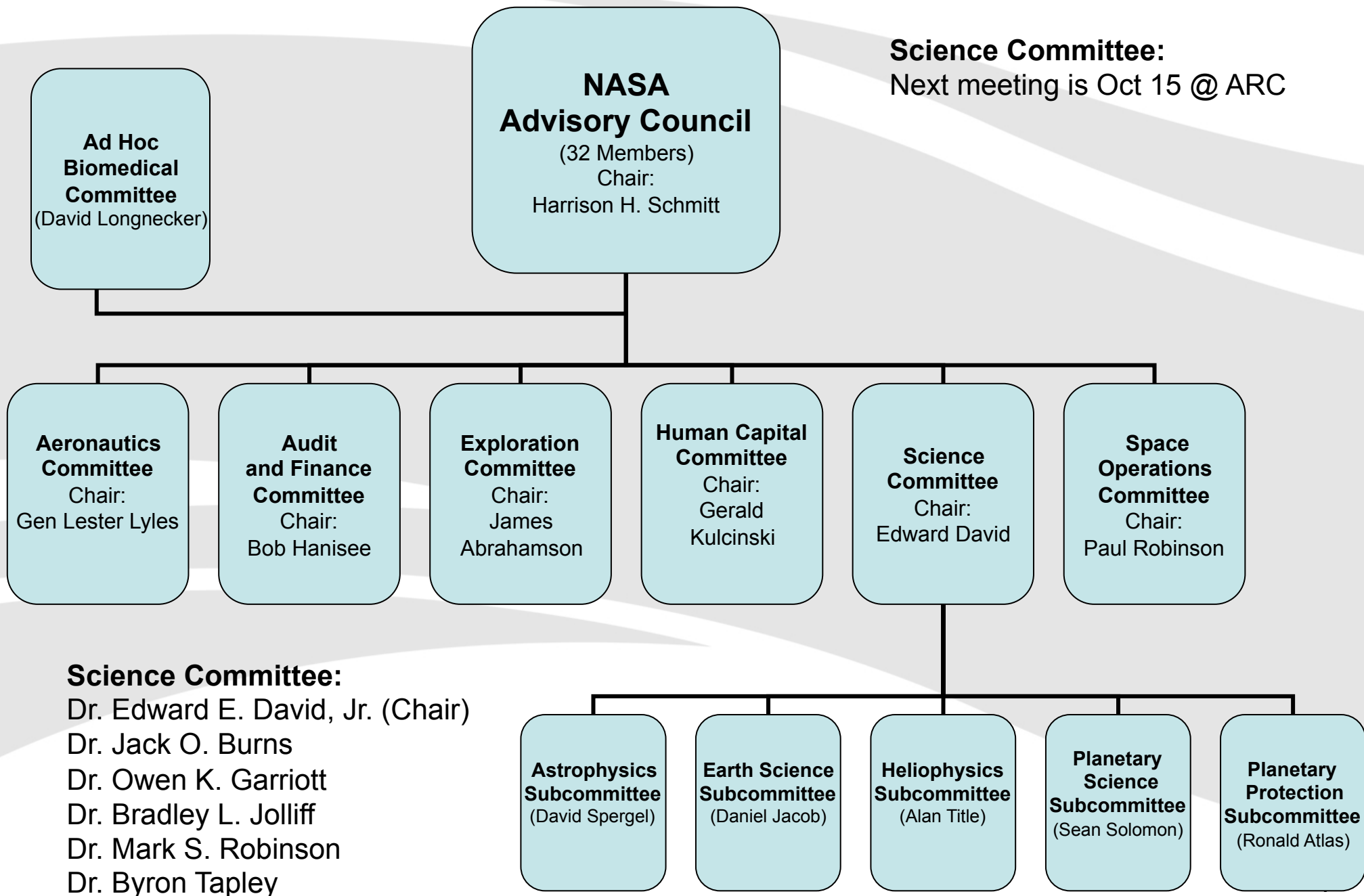


- FACA (5 USC Appendix 2) applies to Executive Branch advisory groups when all following conditions exist:
 - Group is a consensus forming body;
 - Group has at least one non-federal person on it; and
 - Group provides advice to the government.
- FACA sets requirements on advisory groups:
 - Be chartered (by statute, by President, by Agency);
 - Have membership balanced in terms of the points of view represented and the functions to be performed;
 - Provide advice that is relevant, objective, and public; and
 - Act promptly to complete their work.
- NASA has three FACA committees
 - NASA Advisory Council (NAC) (Agency authority)
 - Aerospace Safety Advisory Panel (by statute)
 - National Space-Based Positioning, Navigation, and Timing Advisory Board (by President)
 - Astronomy and Astrophysics Advisory Committee (shared, by statute)

NASA Advisory Council

- Advises the Administrator
 - Chaired by Harrison Schmitt
 - 32 Members appointed by Administrator with concurrence of NAC Chair
- Has six Committees; committees are made up of NAC members
 - Aeronautics, Audit and Finance, Exploration, Human Capital, Science, Space Operations
- Committees conduct fact-finding sessions
 - Agenda controlled by Committee
 - Science Committee agenda controlled by NAC Chair
- Council meets quarterly and presents findings and recommendations to the Administrator in public session
 - Agenda controlled by NAC Chair
- <http://www.hq.nasa.gov/office/oer/nac/>

NASA Advisory Council



NAC Science Subcommittees (SNACs)



- Meet prior to NAC meetings
- Members nominated by SMD but appointed by Administrator with concurrence of NAC Chair
- Agendas set by SMD Division Directors and Executive Secretaries)
- Planetary Science Subcommittee has Analysis Groups
 - Chair appointed by NAC Chair
 - Chair is member of parent subcommittee
- Next set of meetings are
 - Heliophysics: Sept. 24-26 @ HQ
 - Planetary Science: Oct. 2-3 @ HQ
 - Astrophysics: Oct. 6-7 @ Cocoa Beach, FL
 - Planetary Protection: Nov. 6-7 @ HQ
 - Earth Science: Jan @ HQ
- <http://nasascience.nasa.gov/about-us/NAC-subcommittees>

National Research Council (NRC)



- Operational arm of the National Academies
 - National Academy of Sciences chartered by President Lincoln in 1863
 - National Research Council established in 1916
- The mission of the NRC is to improve government decision making and public policy, increase public education and understanding, and promote the acquisition and dissemination of knowledge in matters involving science, engineering, technology, and health.
- The NRC is committed to providing elected leaders, policy makers, and the public with expert advice based on sound scientific evidence.
- The NRC does not receive direct federal appropriations for its work. Individual projects are funded by federal agencies, foundations, other governmental and private sources, and the institution's endowment. The work is made possible by 6,000 of the world's top scientists, engineers, and other professionals who volunteer their time without compensation to serve on committees and participate in activities.

National Research Council (NRC)



The core services involve collecting, analyzing, and sharing information and knowledge. The independence of the institution, combined with its unique ability to convene experts, allows it to be responsive to a host of requests. The portfolio of activities includes:

- **Consensus Studies:** These comprehensive reports focus on major policy issues and provide recommendations for solving complex problems.
- **Expert Meetings and Workshops:** By convening symposia, workshops, meetings, and roundtables, the NRC connects professionals as well as the interested public and stimulates dialogue on diverse matters.
- **Program and Research Management:** At the request of state and federal agencies, the NRC manages and evaluates research programs, conducts program assessments, and reviews proposals.
- **Fellowships:** The NRC administers several postdoctoral fellowship programs.
- **Free Scientific Information:** Publishing more than 200 reports and related publications each year, the institution is one of the largest providers of free scientific and technical information in the world.

NRC Studies

- SMD sponsors the Space Studies Board
and contributes to the sponsorship of several other Boards
- Space Studies Board has standing committees
 - Committee on Astronomy and Astrophysics
 - Committee on Planetary and Lunar Exploration
 - Committee on Solar and Space Physics
 - Committee on Earth Studies
 - Committee on the Origins and Evolution of Life
- Space Studies Board has ad hoc committees for studies; currently:
 - *Review of Planetary Protection Requirements for Mars Sample-Return Missions*
 - *Space Radioactive Power Systems*
 - *Role and Scope of Mission-Enabling Activities (R&A)*
 - *Heliophysics Performance Assessment*
 - *Science Opportunities Enabled by NASA's Constellation System*
 - *The Societal and Economic Impacts of Severe Space Weather Events: A Workshop*

NRC Decadal Surveys

- Ad hoc survey committees develop a consensus report on the priorities for the next decade
- Establish science priorities, also comment on project priorities
- Decadal survey reports are requested by Federal Agencies



Astronomy and Astrophysics in the New Millennium (2001)



The Sun to the Earth -- and Beyond: A Decadal Research Strategy in Solar and Space Physics (2003)



New Frontiers in the Solar System: An Integrated Exploration Strategy (2003)



Earth Science and Applications from Space: National Imperatives for the Next Decade and Beyond (2007)

NRC Decadal Surveys Process



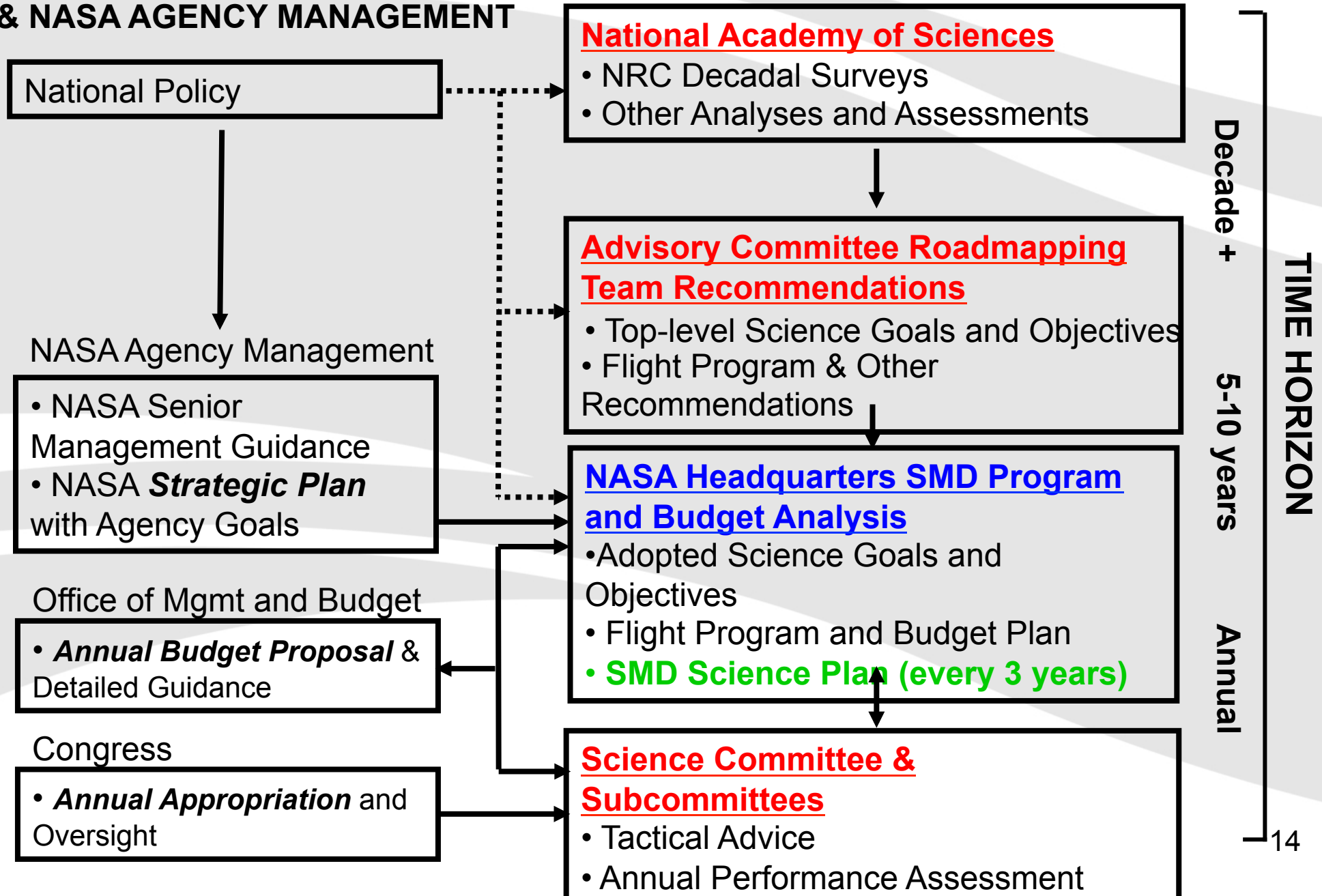
- NASA requests a survey, negotiates scope and organization
- NRC submits proposal to the sponsoring Agency(s)
- NRC appoints a Chair and members of Survey Committee (NRC may form a committee to make recommendations)
- Survey Committee establishes Panels and recommends Panel chairs and members; Panels are linked to Survey Committee
- Panels solicit input from the science community through town halls, open meetings, white papers, and closed meetings
- Panels meet and recommend priorities and projects
- Survey Committee meets and establishes priorities and projects
- Survey Committee writes decadal survey report
- Report is reviewed by independent reviewers
- Decadal Survey Report is published
- Panel reports are published

- Total time elapsed: Up to 3 years

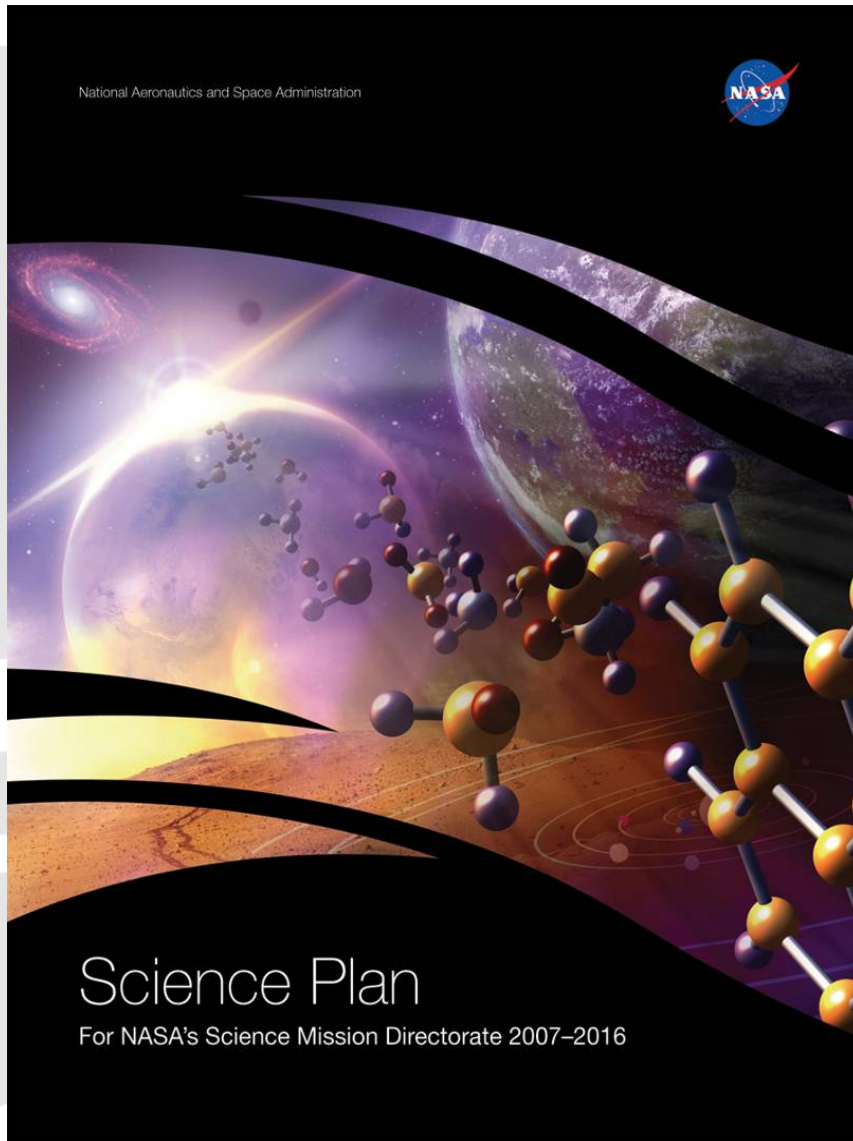
Planning Cycle (How It Comes Together)

EXTERNAL U.S. GOVERNMENT & NASA AGENCY MANAGEMENT

NASA SMD & SCIENTIFIC COMMUNITY



NASA Science Plan



- The NASA Science Plan is accessible on-line (5 MB) and in print form (170 pages).
- A summary version (28 pages) is also available on-line and in print form.
- <http://science.hq.nasa.gov/strategy>