



# *Office of the Chief Scientist Functional Leadership Plan*

*Approved by:*

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## *Office of the Chief Scientist Functional Leadership Plan*

*“The Chief Scientist, located in the Office of the Administrator, serves as the principal advisor to the NASA Administrator in science issues and as interface to the national and international science community, ensuring that NASA research programs are widely regarded as scientifically and technologically well founded and are appropriate for their intended applications.” NASA Organization Manual*

To advise the Administrator on budget, strategic objectives, and current content of NASA's science programs, the Chief Scientist works closely with appropriate representatives of the NASA Strategic Enterprises and the Field Centers, as well as advisory committees and the external community. NASA's Chief Scientist represents the Agency's scientific objectives and accomplishments to other federal agencies, industry, academia, other government organizations, the international community, and the general public. This Functional Leadership Plan delineates the goals, objectives, and metrics for the office.

### **Goal 1: Provide oversight to assure that NASA funds only the most exemplary and meritorious science to enable NASA to achieve its mission.**

Perform scientific, technical, programmatic, and/or policy reviews to assure that NASA science programs are universally regarded as of the highest scientific and technologic merit.

- Ensure that the review and selection processes for NASA intramural and extramural scientific research and projects are of the highest caliber; fully utilize the established system of Advisory Committees; be cognizant of the schedules and outcomes of NASA Research Announcements and Announcements of Opportunity that involve scientific research; use the Generate Knowledge Cross-cutting process and other mechanisms.
- Monitor the status of the NASA scientific programs by reviewing the evaluations performed by independent peer-review teams established by NASA, by the National Academy of Sciences and Engineering, the National Research Council, or other external

bodies. Assure that recommendations are appropriately considered for possible implementation.

- Work with the Science codes and the Office of Equal Opportunity and Office of Human Resources and Education to assure that reviewers are as representative as possible of the diversity of the scientific community; Evaluate the mail reviewer and peer reviewer selection to assure this representation.
- Support the Office of the Chief Engineer in science related matters.

Chair the NASA Science Council

- The Office of the Chief Scientist is responsible for the NASA Science Council per NPG 1000.2. The purpose of this Council is to:
  - Foster better communication between individual science codes and between the science codes and the functional offices.
  - Provide a forum for the consideration, review, and sponsorship of innovative scientific proposals that may be interdisciplinary or across enterprises.

Provide formal concurrence on planning, programs, and budgets for the NASA science programs as a member on the Capital Investment Council, Program Management Council, and as Chair of the NASA Science Council.

Oversee the policies for recruitment, promotion, retention, and support of scientists at NASA.

**Activity in progress:**

- Oversight of the NASA National Space Biomedical Research Institute (NSBRI) as specified in the cooperative agreement
  - Organize formal review of the NSBRI
  - Report outcome of the review and make recommendations to the Administrator for continuing support and funding.

**Metrics:**

- The NASA Science Council meets at least six times per year.
- The Enterprise science research programs are briefed annually at the NASA Science Council.
- Conduct an independent peer review of NSBRI that produces a balanced report.

## **Goal 2: Lead strategic planning for new and revolutionary research directions for NASA.**

Work with the national and international science communities, scientific advisory groups and professional societies to identify and prioritize the research developments required to best achieve NASA's mission.

Develop new cross-enterprise research programs that will leverage the science assets of individual enterprises to the maximum benefit of NASA.

Manage these development exercises efficiently and effectively.

- Work with the Enterprises to ensure that new science related activities are consistent with existing NASA and Enterprises strategic plans.
- Identify appropriate individuals to work between the Office of the Chief Scientist and the Enterprises to develop cross-enterprise roadmaps.
- Build formal collaborations with appropriate Federal Agencies and private entities.
- Work with the scientific communities and societies to elicit their input to validate NASA's planned programs.
- Work with the NASA Office of the Chief Financial Officer to ensure consistency with Agency budgets and to incorporate new research programs into future budgets.
- Advocate new activities to the Office of Management and Budget and the Office of Science and Technology Policy in collaboration with the Office of Policy and Planning, Office of the Chief Financial Officer and the Strategic Enterprises.

### **Cross-enterprise activities in progress:**

- Living with a Star
- NASA-NCI collaboration for bio-molecular systems
- Carbon Cycle Initiative

### **Metric:**

- New science programs are included in the appropriate Enterprise budget.

**Goal 3: Maintain and foster communication links with the scientific and technical communities at large, including other Federal science agencies, academic, industrial, international partners, and the general public.**

Represent the Administrator and NASA in presenting the visions, plans and progress of NASA's science programs to:

- The Office of Science and Technology Policy and the President's Science Advisor in coordination with the Office of Policy and Plans.
- Mutidisciplinary external scientific and technical communities and advisory bodies, such as the National Academy of Sciences
- Local, national, and international scientific and technical meetings and conferences.

Provide coordination among the sciences at many levels: program offices, advisory groups, other agencies, and the scientific communities.

- Organize internal and external workshops to identify and promote emerging and exciting areas in NASA scientific research fields where support could play a major role in advancing knowledge or have the potential for technology transfer in the area.
- Develop, through workshops, direct communication with NASA's scientific constituencies, and encourage increased participation in NASA science programs.
- Identify essential research resources needed to advance interdisciplinary research through discussions at advisory panel meetings, professional society meetings, and workshops.
- Encourage the appointment of industry scientists to NASA advisory panels and NASA sponsored workshops when appropriate and utilize their expertise by engaging them in panel discussions of future trends and opportunities.
- Advocate and facilitate the appointment of NASA scientists to panels and workshops outside of NASA, to share Agency expertise with the external communities.
- Identify emerging scientific areas of interest to NASA requiring international collaboration and facilitate participation of U.S. scientists in critical international research in these areas.

Foster and coordinate the integration of NASA science activities with NASA programs in engineering, technology, and education.

- Promote the integration of scientific research and education programs throughout the Agency.
- Work with the Office of the Chief Engineer and participate in the Program Management Council to ensure that science requirements are understood and addressed.
- Ensure the coordination between NASA's technology and science communities by working with both programs.

**Metric:**

- Measure attendance and participation as described above.

**Goal 4: Act to encourage cooperation and synergy among the science programs and between science programs and other NASA programs.**

The NASA Chief Scientist is responsible for the overarching issues related to the Agency's scientific programs and will foster communication between the scientific Enterprises, the Field Centers, and the Functional Offices with the goal of achieving win-win situations whenever possible. The Chief Scientist will ensure fairness and science quality in the discussion by consulting with the advisory groups and others experts external to the Agency.

- Establish an ad hoc team possibly consisting of the Chairs of the NASA Advisory Committees for the science codes to aid the Chief Scientist in establishing research priorities and counsel when conflicts arise.
- Establish links between key science managers at the Centers and Enterprises, for the purpose of better communication and as a source of advice (on an as-needed basis).
- We seek for NASA to act as one (e pluribus unum).

**Goal 5: Lead and manage the Generate Knowledge cross-cutting process.**

The Office of the Chief Scientist is responsible for the Generate Knowledge cross cutting process inputs to the NASA Strategic Plan, Performance Plan, Performance Reports, and Accountability Reports. The Office will work in conjunction with the NASA science codes and the field centers to compile the data and prepare them for reporting. However, the Office is not responsible for the validity of the data provided, it is the responsibility of the science codes and Field Centers to provide valid, traceable data to the Office of the Chief Scientist.

- Establish a Generate Knowledge Working Group, per NPG 1080, to facilitate reporting to the Office of the Chief Scientist.
- Fully utilize information technology to better enable the transfer of data.

**Metric:**

- Defined in the NASA Performance annually

**Goal 6: Lead and manage the Communicate Knowledge cross-cutting process.**

The Office of the Chief Scientist is responsible for the Communicate Knowledge cross cutting process inputs to the NASA Strategic Plan, Performance Plan, Performance Reports, and Accountability reports. The Office will work in conjunction with the NASA Functional Offices, Strategic Enterprises, and the Field Centers to compile the data and prepare them for reporting. However, the Office is not responsible for the validity of the data provided, it is the responsibility of the Functional Offices, Strategic Enterprises, and field centers to provide valid, traceable data to the Office of the Chief Scientist.

- Establish a Communicate Knowledge Working Group, per NPG 1090, to facilitate reporting to the Office of the Chief Scientist.
- Fully utilize information technology to better enable the transfer of data.

**Metric:**

- Defined in the NASA Performance Plans annually.