



UCAR Members Meeting

October 10, 2006

Clifford Jacobs
Division of Atmospheric Sciences
National Science Foundation



Main Topics

- ✦ Management Review of NCAR
- ✦ Update on the Competition for Management of NCAR



Review of NCAR Management

On Site Review

March 20-22, 2006



Panel Membership

- **Dr Mary L. Good**, University of Arkansas, Chair
- **Charles Kennel**, Scripps Institution of Oceanography, UCSD
- **Charles Vernon Shank (Chuck)**, University of California, Berkeley
- **Diane L. Evans**, Jet Propulsion Laboratory
- **Chester S. Gardner (Chet)**, University of Illinois System
- **Norine E. Noonan**, College of Charleston
- **John E. Jones, Jr.**, National Weather Service
- **Michel Béland**, Meteorological Service of Canada

Charge to the Panel

- ✦ **The objective of the review is to assess the quality and effectiveness of NCAR's performance as managers of an NSF and Division of Atmospheric Science funded Federally Funded Research and Development Center.**

In considering this objective, the panel may examine the following questions:

- Has the management of NCAR encouraged and facilitated a National Center which is able to perform as a strategic partner of the NSF and to fulfill the NCAR mission defined in the 2003 Cooperative Agreement:
- Has NCAR demonstrated clear leadership in science and management, and an effective process for cultivating a long-term vision, mission and strategy?
- Has NCAR developed a robust process for planning and review that engages the community?
- Has NCAR been effective in promoting and sustaining cross-divisional and interdisciplinary programs?
- Has NCAR established productive national and international scientific links with Federal agencies, international institutions, NGOs, and the global research community
- Has NCAR encouraged and facilitated the participation of underrepresented groups (gender, ethnicity, disability, etc.)?

Comments on NCAR

From Management Review Report

“Clearly, NCAR has created and operates a viable, substantive geosciences research and support program of great value to NSF and the nation. It has used its resources wisely and represents an important U.S. scientific asset. NCAR’s research outcomes will have long – lasting scientific and societal impacts and its facilities, especially in high performance computing and research aircraft, are playing a crucial role in support of the university research community. NCAR’s long-term support should be a national priority.”

Comments on Leadership from NCAR management review

“NCAR is fortunate to be led by an exceptionally talented and capable leader in Dr. Timothy Killeen. In his nearly six years as Director, Dr. Killeen has virtually transformed NCAR and positioned the organization to address an ambitious and exciting agenda. He is equally comfortable and effective attending to the business and financial details of operating the Center, as well as to charting and advocating a visionary scientific future for the organization. Dr. Killeen has made considerable progress assembling a capable and committed leadership team. He has actively enlisted their expertise to help shape the strategic directions of NCAR, and has given them considerable freedom to lead their units guided by the Center’s strategic plan. NCAR is now well positioned to complete its transformation into a well-managed, high-performing organization with respected visionary leadership.”

Findings

1) Has NCAR management facilitated a strategic partnership with the NSF?

- NCAR has created a compelling strategic plan that both supports and amplifies NSF goals.
- Evidence of effective involvement of the university community.
- Unparalleled observational and computational infrastructure.
- A work in progress -- incorporating the social sciences to advance the impact of scientific discoveries that meet societal needs.
- To achieve goals, partnerships need to be treated as a strategic imperative.
- Evident that NCAR leadership puts the same energy into managing human capital as it does into managing its science future.

Recommendations

1) Has NCAR management facilitated a strategic partnership with the NSF?

- Metrics should be put into place to evaluate the science /technology outputs of NCAR's new management organization and whether NCAR is recognized as the leader in the Earth system science agenda.**
- To achieve success strategic asset, such as human resource systems & business systems, must be under NCAR's direct control**

Findings

2) Has NCAR demonstrated clear leadership in science and management, and an effective process for cultivating a long-term vision, mission and strategy?

- NCAR has demonstrated leadership and long term vision that has engaged and responded to a community of peers and reviewers.
- Vision and Leadership are manifest in:
 - An organizational structure better aligned with scientific vision and has shown some early evidence of producing scientific results not possible under old structure.
 - Currency and responsiveness of facilities in providing services to the community
 - Development of tools and techniques to facilitate the realization of strategic plan goals

Recommendations

2) Has NCAR demonstrated clear leadership in science and management, and an effective process for cultivating a long-term vision, mission and strategy?

- ✦ *Partnerships will be necessary to complement NCAR's internal capacity to deliver on its ambitious agenda. NCAR should play a leadership role in the development of: 1) national partnerships and 2) international partnerships.*
- ✦ *NCAR should maintain leading edge data and computing capacity and encourage NCAR in coordination with NSF to continue to pursue the petaflop geosciences initiative as a top priority.*

Findings

3) Has NCAR developed a robust process for planning and review that engages the community?

- The NCAR strategic plan is compelling
- The planning process was well conceived and addressed all the key issues considered essential for developing an effective strategic plan for any complex organization.
- The plan describes an ambitious yet appropriate set of goals that, if achieved, will serve NCAR, its university partners, and the international geosciences community extremely well.

Recommendations

3) Has NCAR developed a robust process for planning and review that engages the community?

- ✦ *NCAR should develop assessment protocols for on-going evaluation of NCAR's engagement of the external community*
- ✦ *These protocols should include*
 - *NCAR's planning and review processes*
 - *Development of university programs*
 - *Universities' contributions to NCAR programs and goals.*

Findings

4) Has NCAR been effective in promoting and sustaining cross-divisional and interdisciplinary programs?

- The reorganization has begun to address the challenges of promoting and sustaining cross-divisional and interdisciplinary programs.
- NCAR needs to be mindful of the enormity of accomplishing the vision articulated in a fiscally constrained environment, and the potential threat of over commitment given the broad interests represented by the staff.
- Metrics will be needed to establish priorities and to judge effectiveness

Recommendations

4) Has NCAR been effective in promoting and sustaining cross-divisional and interdisciplinary programs?

- ***NCAR should undertake a review to identify [and remove?] remaining programmatic overlap between Laboratories.***
- ***NCAR management needs to design metrics to assess the ongoing success of interdisciplinary programs and ensure the associated budgets are sufficient.***

Findings

5) Has NCAR established productive national and international scientific links with Federal agencies, international institutions, NGOs, and the global research community?

- NCAR demonstrates productive national and international links, but a proactive approach to building partnerships and strategic relationships will be needed
- NCAR needs to continue to pay attention to building bridges between groups and individuals within NCAR, as well as judiciously designing networks of relationships with other national and international research institutions and programs to generate the required intellectual breadth.
- NCAR is in an admirable position to undertake a leadership role in defining a framework for Earth system modeling that will capitalize on GEOSS and begin an effort to taking a strategic approach to relationship building.

Recommendations

5) Has NCAR established productive national and international scientific links with Federal agencies, international institutions, NGOs, and the global research community?

- NCAR should should strengthen relationships with the public and private sectors to establish stronger links to NCAR's research and how it can transition to operations conducted by the public and private sector. Foster more collaboration between RAL and ESSL to align their priorities.***
- NCAR could be a role model for more university community involvement in US GEOSS from an Earth system model viewpoint.***
- NCAR should create a plan to develop relationships and consortia necessary to accomplish its goals in Earth system modeling, research translation, workforce diversity and other areas.***

Findings

6) Has NCAR encouraged and facilitated the participation of underrepresented groups (gender, ethnicity, disability, etc.)?

- NCAR faces the same challenges that many other technologically-based organizations have in recruiting and retaining top talent to achieve its mission.
- NCAR has made a positive impact through activities in the human capital and organizational improvement.
- To achieve NCAR's strategic vision, significant creative energy and innovation will be required to achieve the science objectives and that same level of energetic innovation in management, particularly in human capital, will be required as well.

Recommendations

6) Has NCAR encouraged and facilitated the participation of underrepresented groups (gender, ethnicity, disability, etc.)?

- ✦ ***NCAR should develop an appropriate career "ladder" for professional engineers and social scientists that nurtures robust professional development and enables upward mobility.***
- ✦ ***NCAR leadership should focus more attention on the recruitment and retention of underrepresented minorities and should develop a plan (or plans) for increasing the representation of these groups within the NCAR science and engineering assemblies. NCAR should develop tailored strategies that will lead to successful outcomes for each group of underrepresented minorities.***

Summary of Recommendation

- Metrics to assess NCAR's: output, leadership, engaging the community, and interdisciplinary programs
- Partnerships
- Leadership in the provision of computer resources
- Focus on people
- Providing more control to NCAR management wrt strategic services



Competition for the Management of NCAR

See Dear Colleague Letter



Motivation

"... expiring awards are to be recompeted unless it is judged to be in the interest of US science and engineering not to do so."

NSB resolution 97-224

Governing Principles

- Full, open competition
 - Minimize disincentives for potential applicants
 - Demonstrate openness to new ideas
 - Explore alternative models for NCAR M&O
- Rigorous process
 - Fair
 - Exemplary within NSF
 - Robust against future legal challenges
- Broad consultation (DCCA, OGC, AST, OPP, ...)

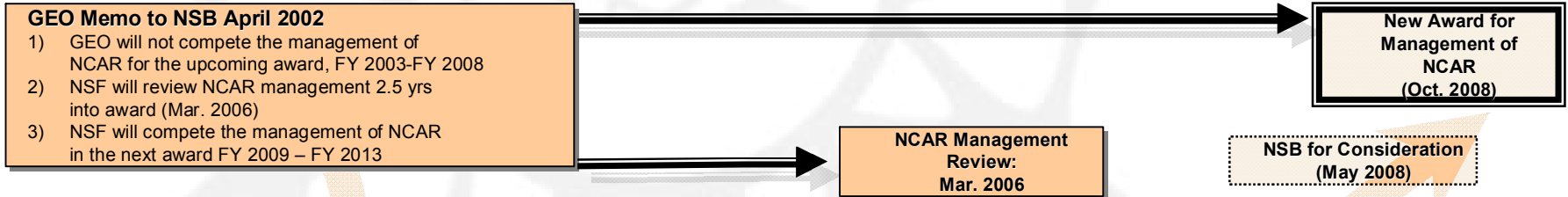


Continuity of Research and Service at NCAR

NSF and NCAR will focus on serving the community while management of the laboratory is evaluated

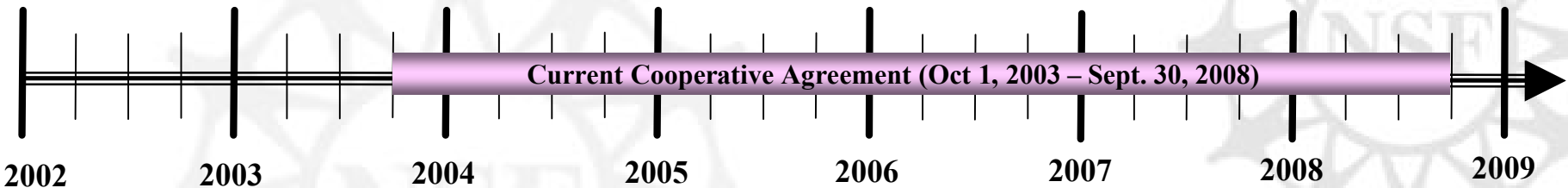


Policy



GEO Memo to NSB April 2002

- 1) GEO will not compete the management of NCAR for the upcoming award FY 2003-FY 2008
- 2) NSF will review NCAR management 2.5 yrs into award (Mar. 2006)
- 3) NSF will compete the management of NCAR in the next award FY 2009 – FY 2013



Oversight

Discussion with Tim Killeen (Early 2005)

- 1) NCAR's Strategic Plan needs to be updated based on experience, current planning environment, reorganization, and budget outlook.

Discussion with Tim Killeen (Early 2005)

- 1) NCAR's Strategic Plan needs to be updated based on experience, current planning environment, reorganization, and budget outlook.
- 2) The new strategic plan should be a principal component NCAR management review.
- 3) This new plan will serve as the scientific core of all proposals for the management of NCAR

plan should

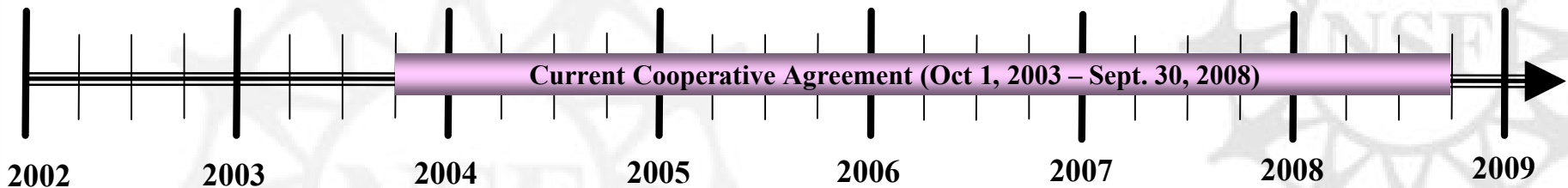
NCAR Revises
Strategic Plan
(Jan. 2006)

v.

serve as the scientific core of all proposals for the

management of NCAR

Current Cooperative Agreement (Oct 1, 2003 – Sept. 30, 2008)



Community Input

Review of Current Award Proposal

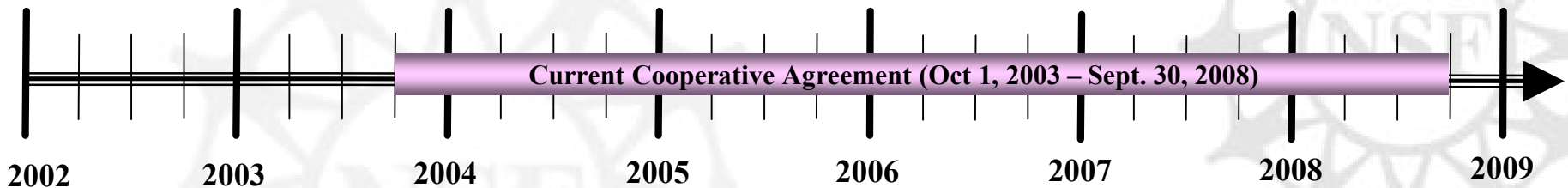
Review of Current Award Proposal

A number of recommendation made, e.g.
Are you best organized to carry out your strategic agenda.

NCAR Reorganized (Oct 2004)

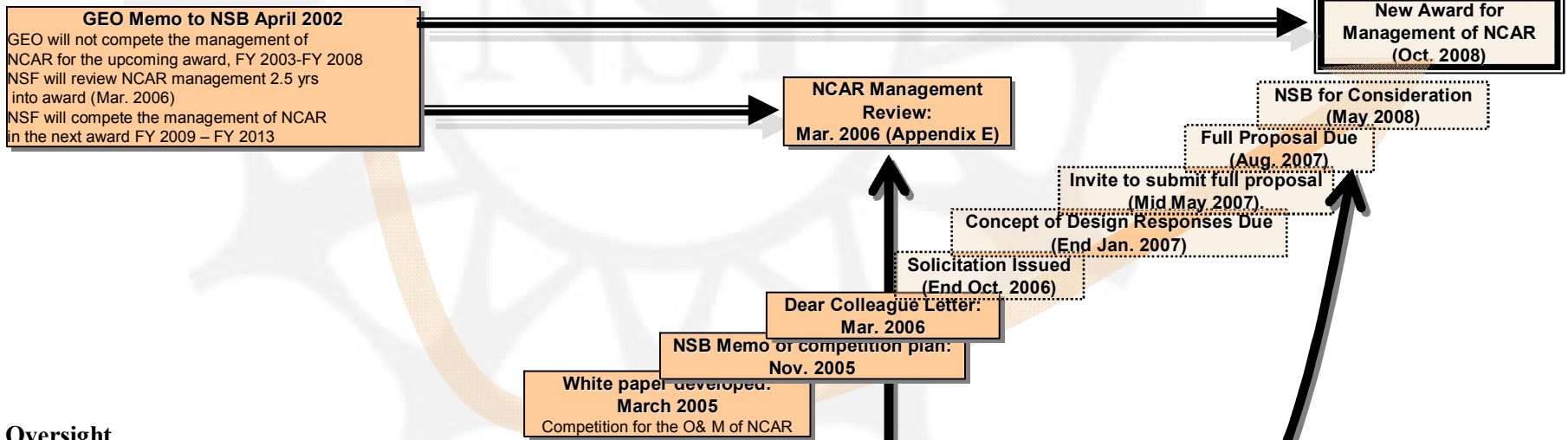
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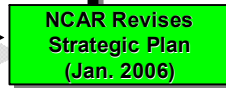
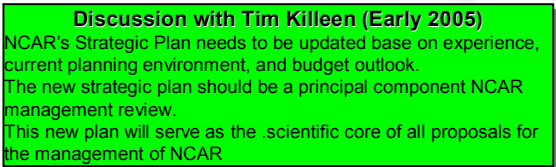


Implementation of Policy, Oversight, and Community Input in the Stewardship of NCAR/UCAR

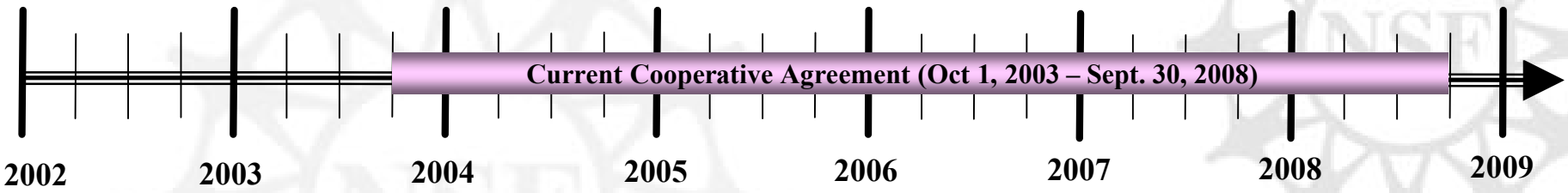
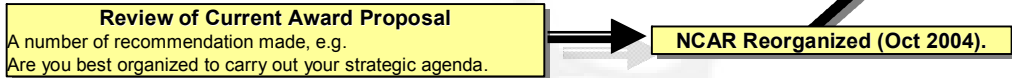
Policy



Oversight



Community Input





Questions and Discussion

