

*Community Response to the NRC Report
“Observing Weather and Climate
FROM THE GROUND UP
A Nationwide Network of Networks”*

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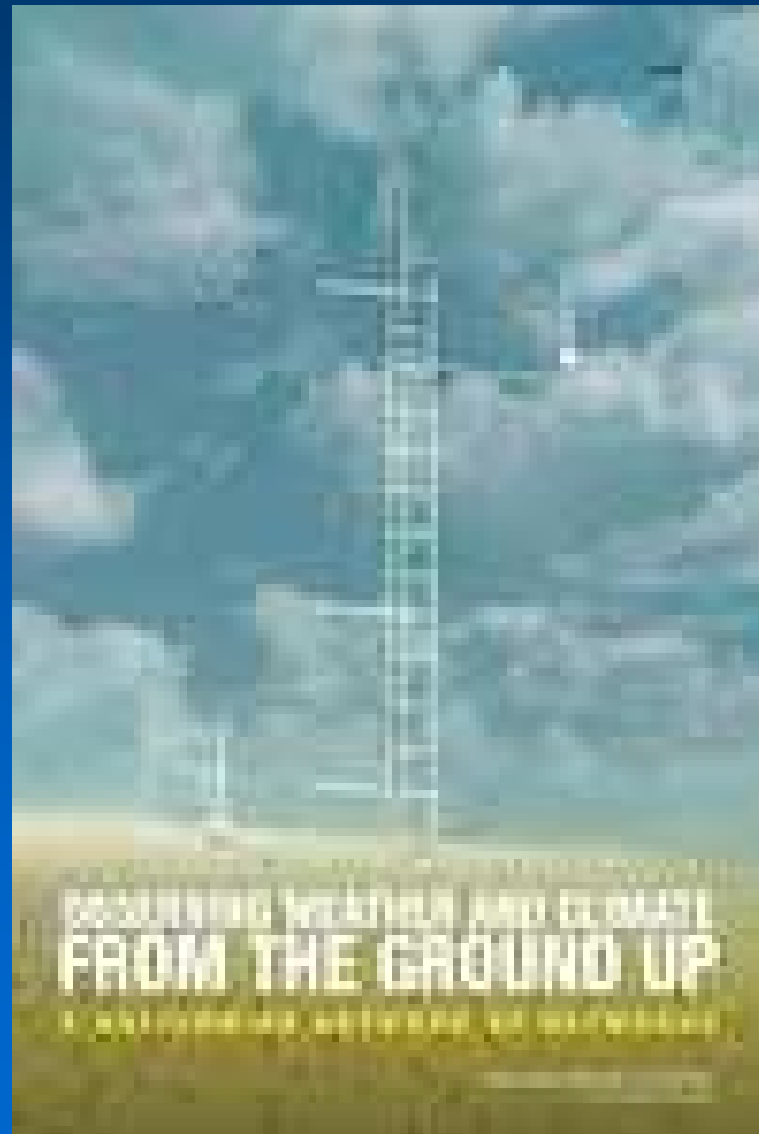
Chair

**AMS Ad Hoc Committee on the
Nationwide Network of Networks**

**Draft Report
December 2010**



Community Response to NRC Report Recommendations

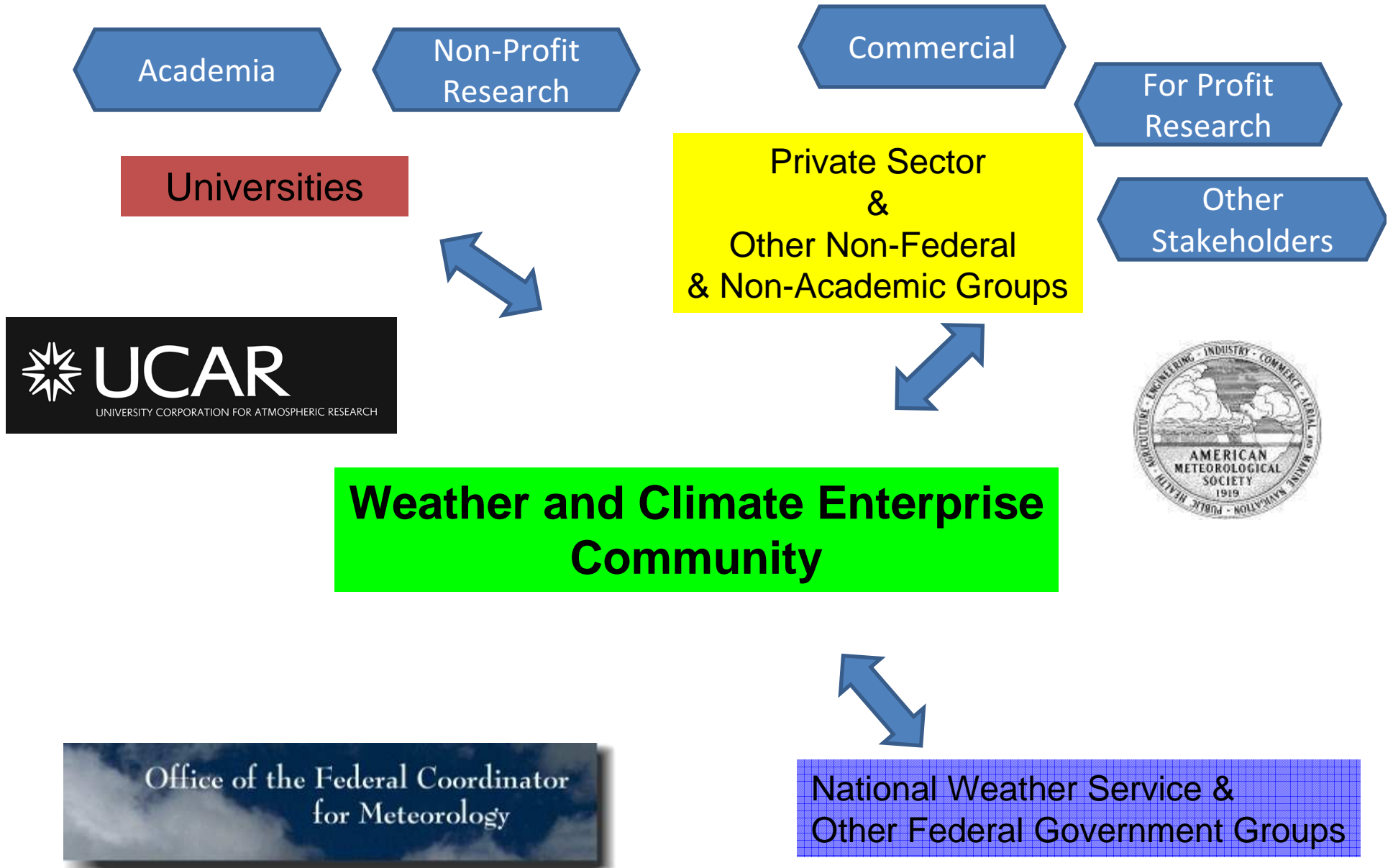


NRC Recommendation 2: To ensure progress, a centralized authority should be identified to provide or to enable essential core services for the network of networks.

- **The committee shares the vision of the NRC study that ultimately a “central authority” is required for the success of any nationwide network of networks.**
 - A pathway to achieve this goal is recommended in the report.
 - Traditional public-private-academic relationships will need to adjust to this new way of doing business—this will be a challenge for the entire community.

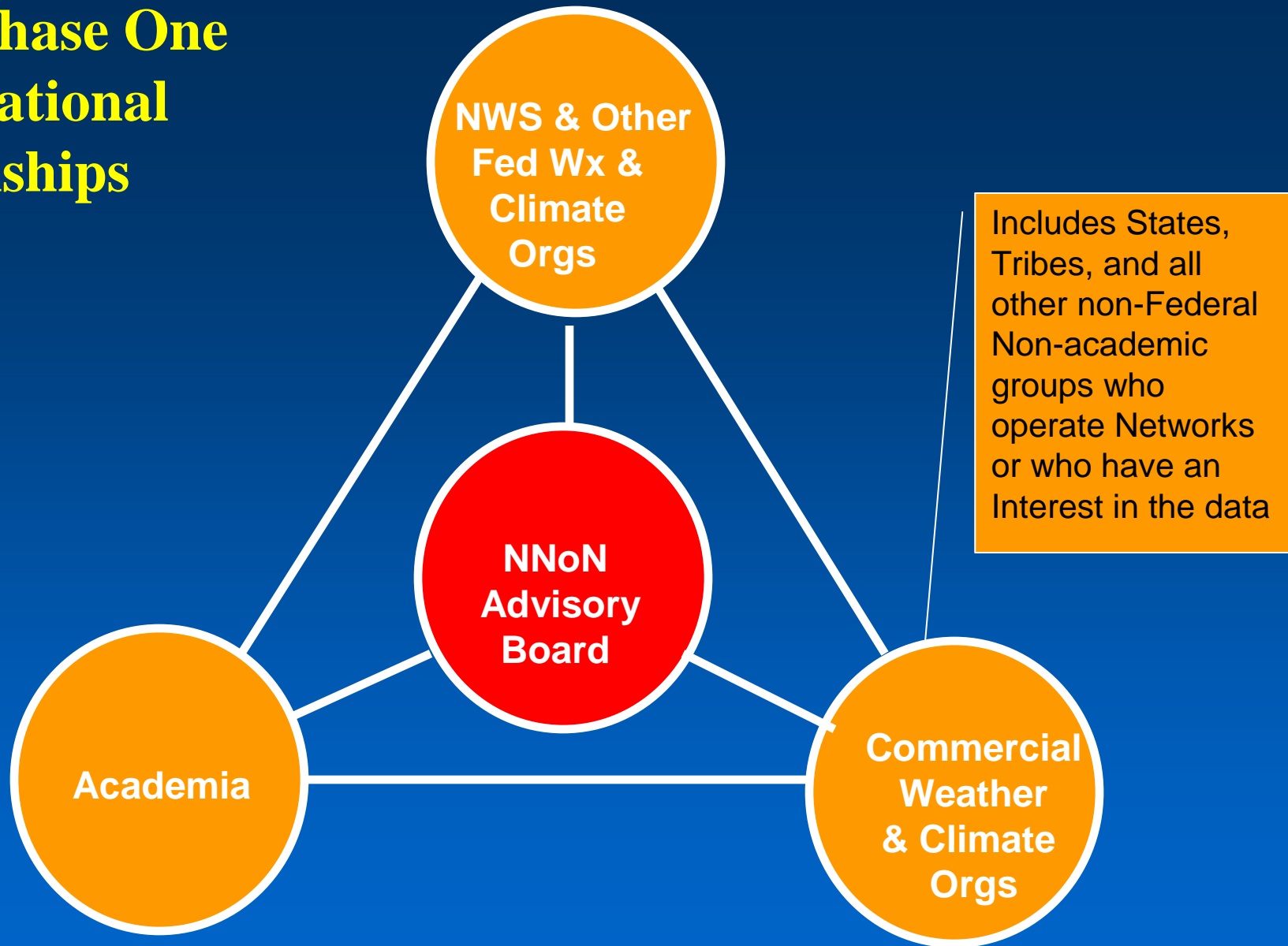
NRC Recommendation 7: The United States should establish a robust and economically viable organizational structure to effect the national implementation of a multi-purpose environmental observing network at the mesoscale. It may be preferable for this organization to take the form of a publicly chartered, private nonprofit corporation. A hybrid public-private organizational model would stimulate both public and private participation over a wide, dynamic range of investment and applications; maximize access to mesoscale data; and effect a synergism between the public good and proprietary interests.

- Evolutionary approach recommended
 - Phase 1—Central Authority is a FACA
 - Phase 2—FACA morphs into an NGO
- Sector input/interaction with Central Authority
 - Academia—UCAR
 - Federal Government—OFCM
 - Private Sector/Non-Fed Govt—AMS “Chapter”

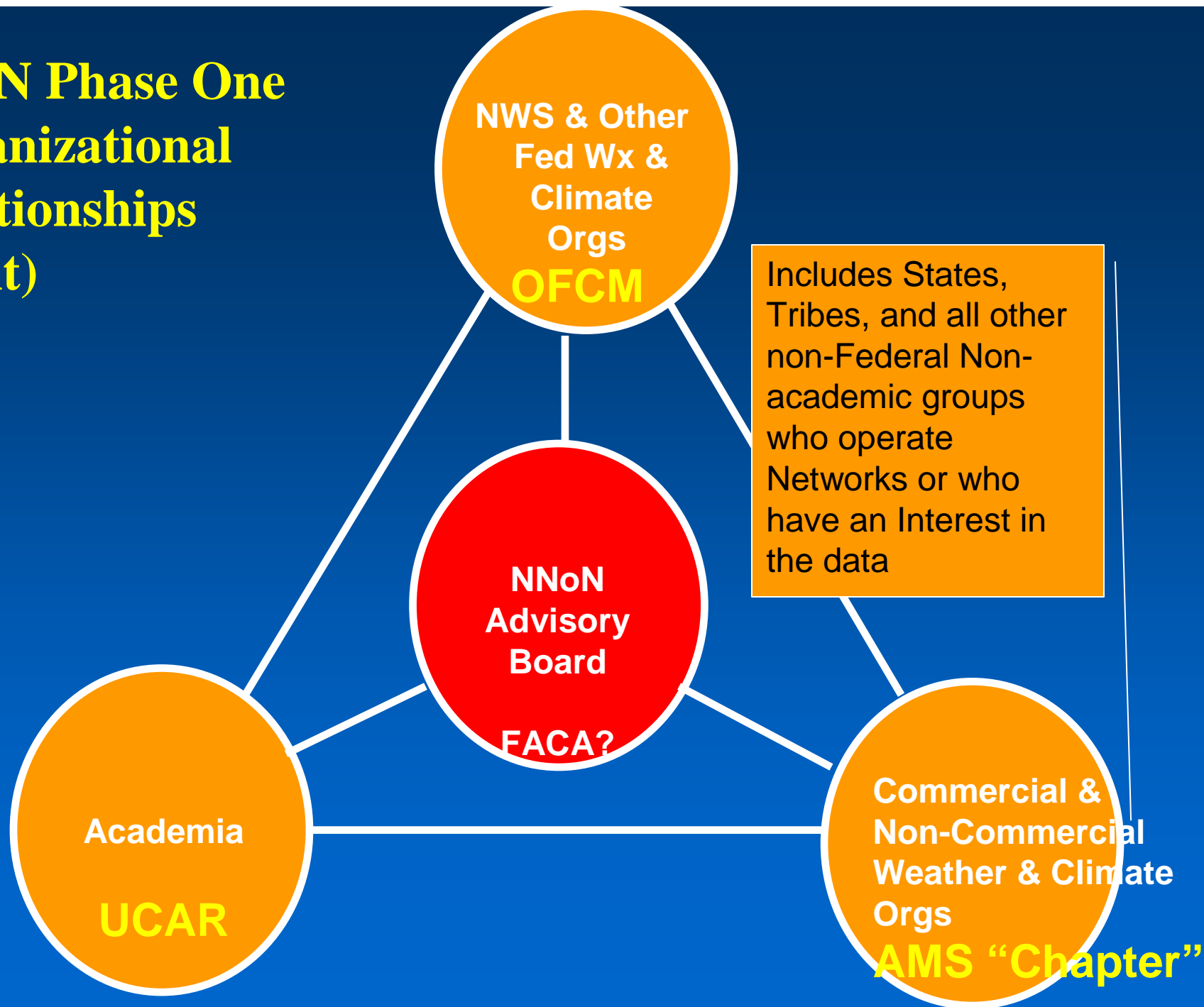


Current State

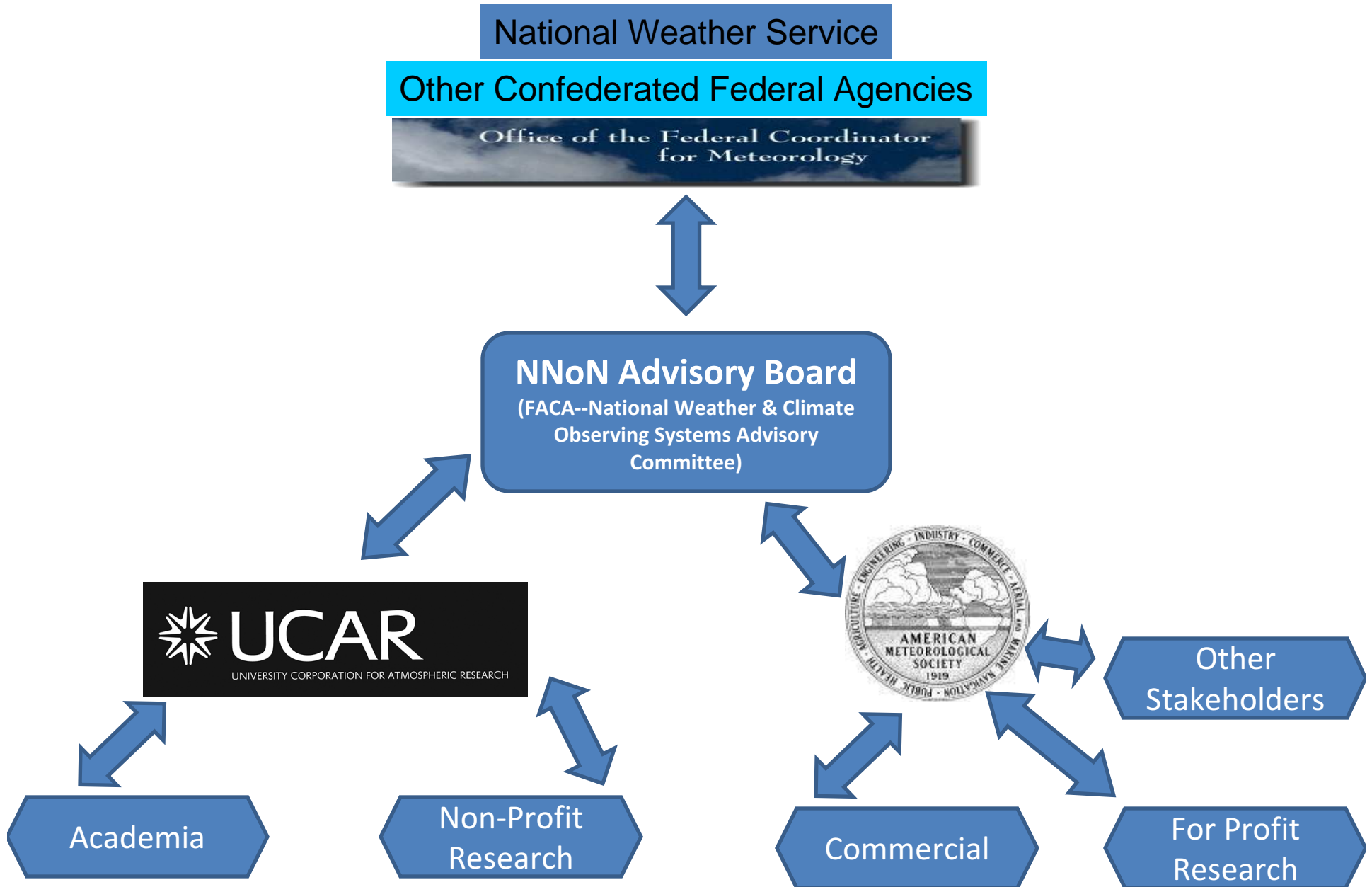
NNoN Phase One Organizational Relationships



NNoN Phase One Organizational Relationships (Cont)



Phase 1-Interim State



Phase 1-Interim State

National Weather Service

Other Confederated Federal Agencies

Office of the Federal Coordinator
for Meteorology

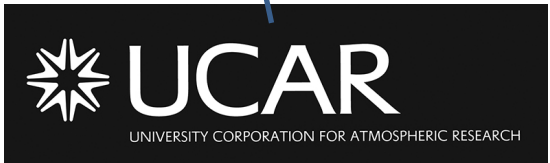
- Appointment of Advisory Committee
- NNoN related Federal agency coordination through CIOS
- Administration of Advisory Committee under FACA

- Standards approval and repository control
- Advisory Committee Per FACA to help maximize value of public sector investment
- Liaison among three bodies
- Fulfillment of NRC report objectives

NNoN Advisory Board
(FACA--National Weather & Climate
Observing Systems Advisory
Committee)

- Open Source Development Host for data exchange software
- Advisory Committee nominations
- Research and education resource
- Research lead

- Sponsor of NNoN Chapter
- Advisory Committee nominations
- Commercial and educational promotion
- Encourage use of Open Software for data exchange



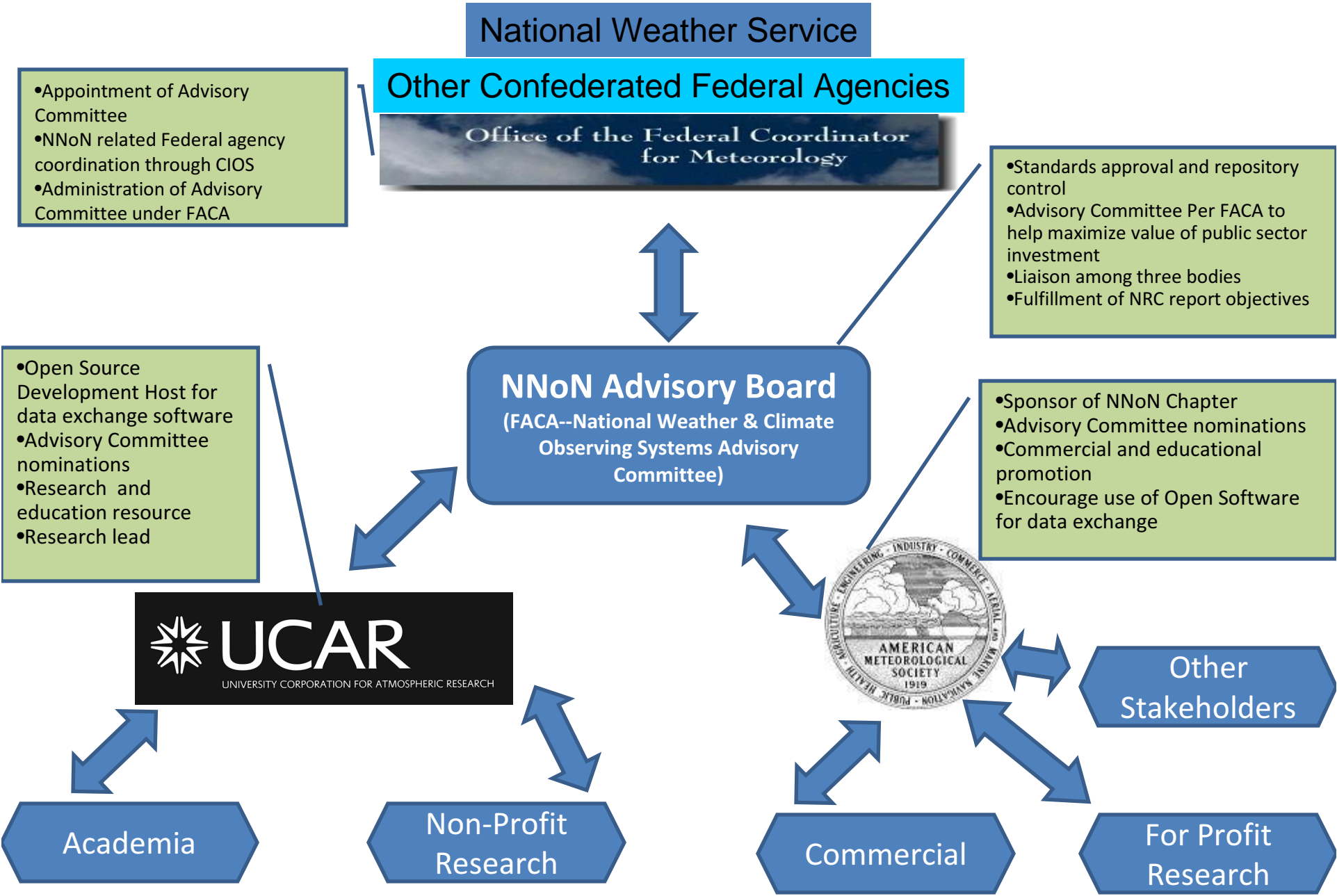
Academia

Non-Profit Research

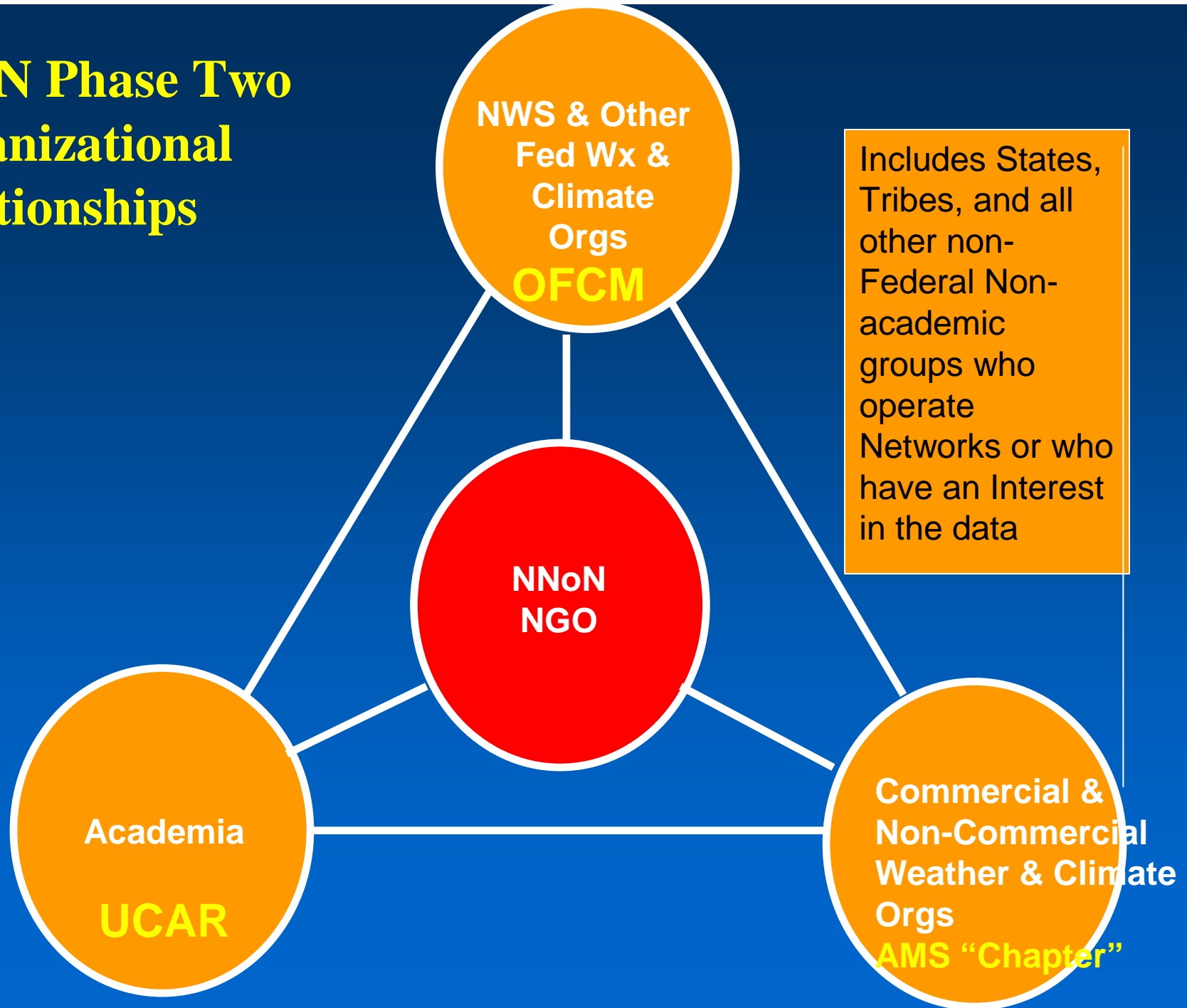
Commercial

Other Stakeholders

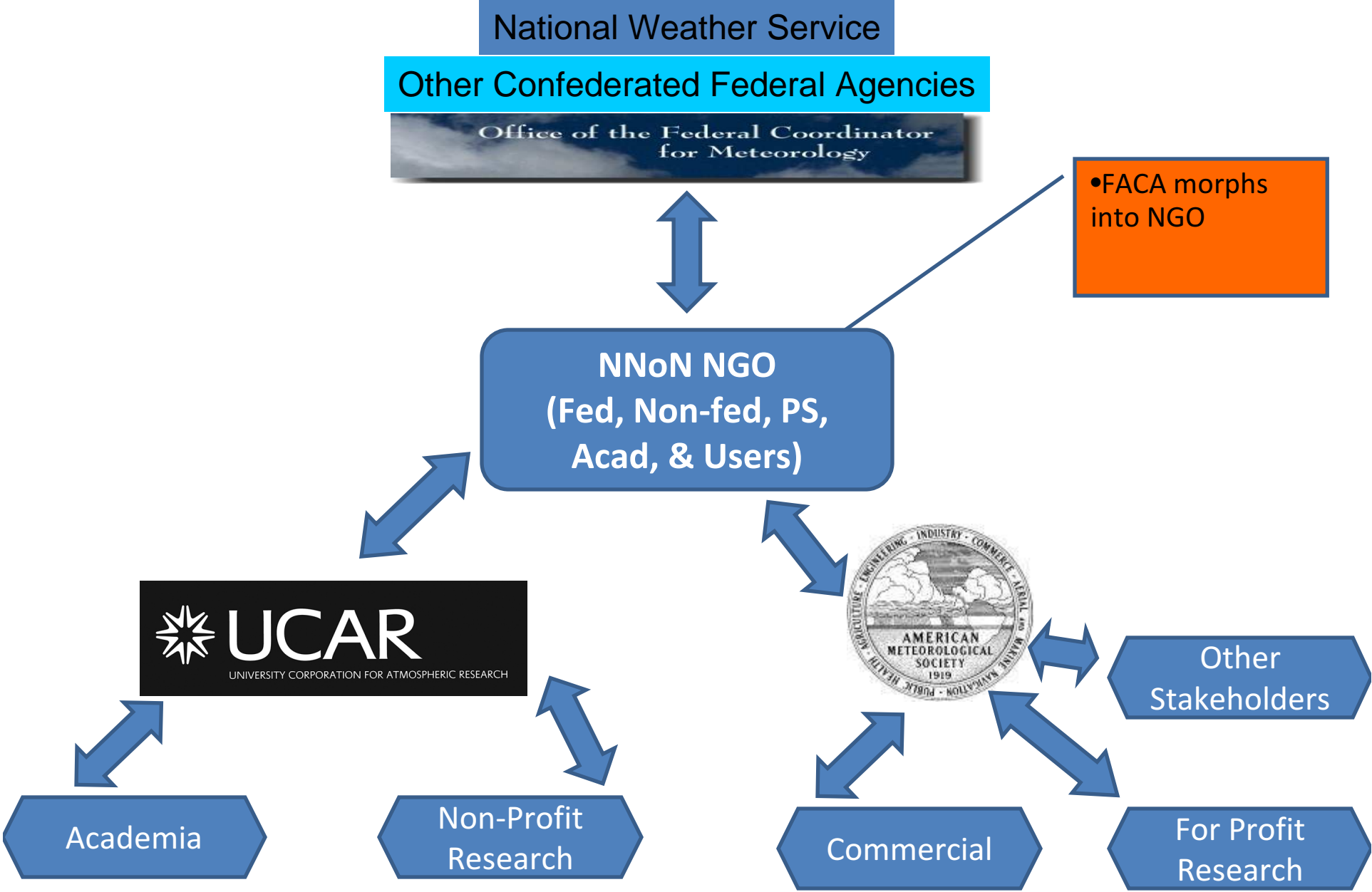
For Profit Research



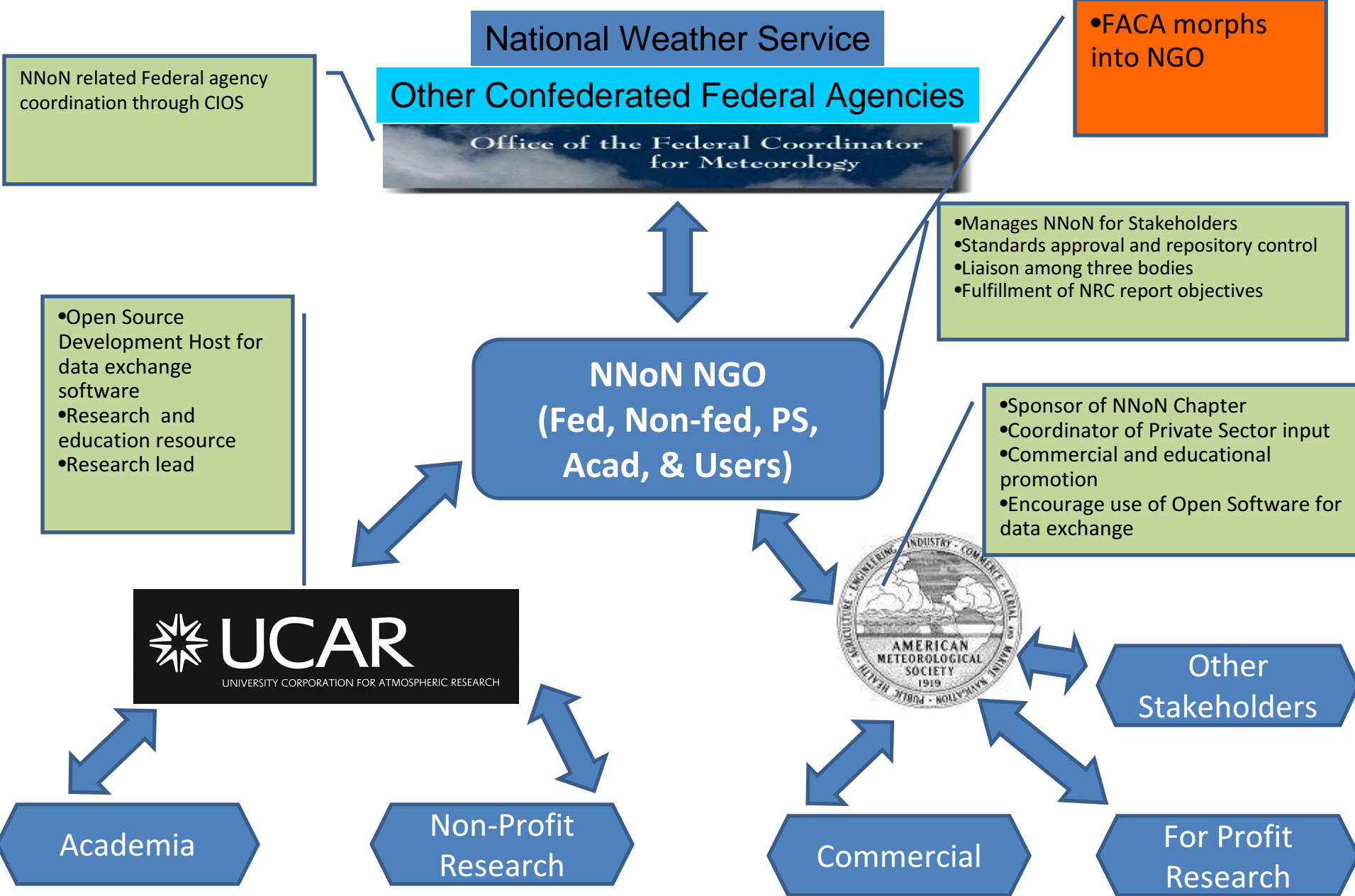
NNoN Phase Two Organizational Relationships



Phase 2-Final State



Phase 2-Final State



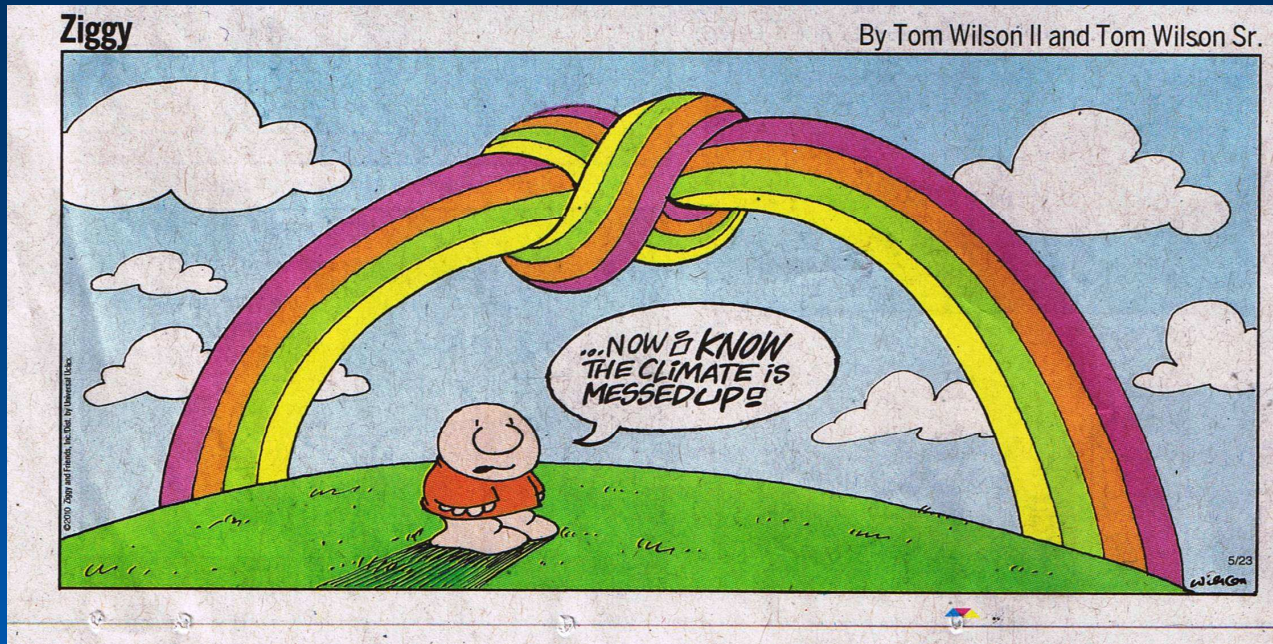
Other Key Recommendations

- A **stakeholders summit** should be convened at an early date to foment the NNoN initiative and continue the momentum achieved to date. Implementation plans should be a follow-on result of this summit.
- Overhaul of any measurement systems should include consideration of **multi-sensor platforms** to fill gaps in observing needs.
- R&D and the use of **Testbeds** will be essential to success in validating the member networks of the NNoN and developing new and innovative methods for observing the earth's boundary layer.
- The architecture for a NNoN should have a **“tiered” approach** to accommodate the maximum number of useable data networks available.
- **Metadata will be mandatory** for applying data from the NNoN and an ISO and SensorML standard is recommended as candidate formats for collecting and disseminating these data.
- The Human Dimension cannot be overlooked when developing the NNoN. **User assessments** will be a key part of this effort. **Economic benefit** will be very useful in prioritizing network needs

Road to Success

- Take the first step toward formal NNoN organization with a form of the **Confederation of Federal Agencies** alternative identified in the NRC report, with **NOAA** as the lead agency.
- Add to this alternative a **NNoN Advisory Board** or committee able to provide input and direction from the stakeholder communities of regional, state, and local mesonets, private weather and climate reporters, forecasters, and consultants, and the related academic and research community.
- Encourage the formation of a **Thematic Chapter of the AMS** to develop the market for mesoscale weather observations by supporting metadata standards adoption and a coordinated means of data discovery.
- **Engage academia**, including universities that operate mesoscale observation networks for state and local purposes, for research and education as well as exchange of available mesoscale observations.
- Maintain a policy of **free and open availability of observations from all publicly owned assets**.
 - **Distinguish between vital public needs** such as air traffic control, public safety, and emergency management, **and non-vital public needs** such as industry independent forecast model improvement, general weather and climate forecasts, and geographic in-fill for improved spatial resolution, consistent with related discussions among NOAA (including the NNoN advisory board) and private weather and climate service providers.
 - Let the **Federal Government further encourage the development of an open and competitive market** for mesoscale observations by purchasing those data that fulfill non-vital Federal needs as may be available on **reasonable and competitive terms**.
 - **Let Federal, State, and Municipal government bodies equitably bear costs of shared networks that address mutual vital needs.**

Discussion



Feel free to contact the Committee Chair at any time at:

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