

The roles of NOAA Labs and Cooperative Institutes in NOAA Transitions

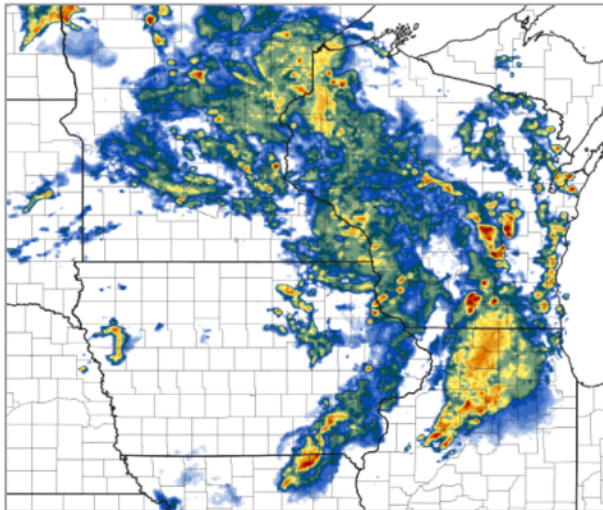
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Why R2O?

Industry

GSD research improves weather data, forecasts, and computing techniques used by industry, decision-makers, and stakeholders to make operations more safe and efficient.



The GSD-developed HRRR model is the only operational hourly-updated forecast in the world that predicts weather hazards over neighborhoods.



The HRRR weather model is the largest contributor to the FAA's NextGen Weather system that supports strategic traffic flow management.



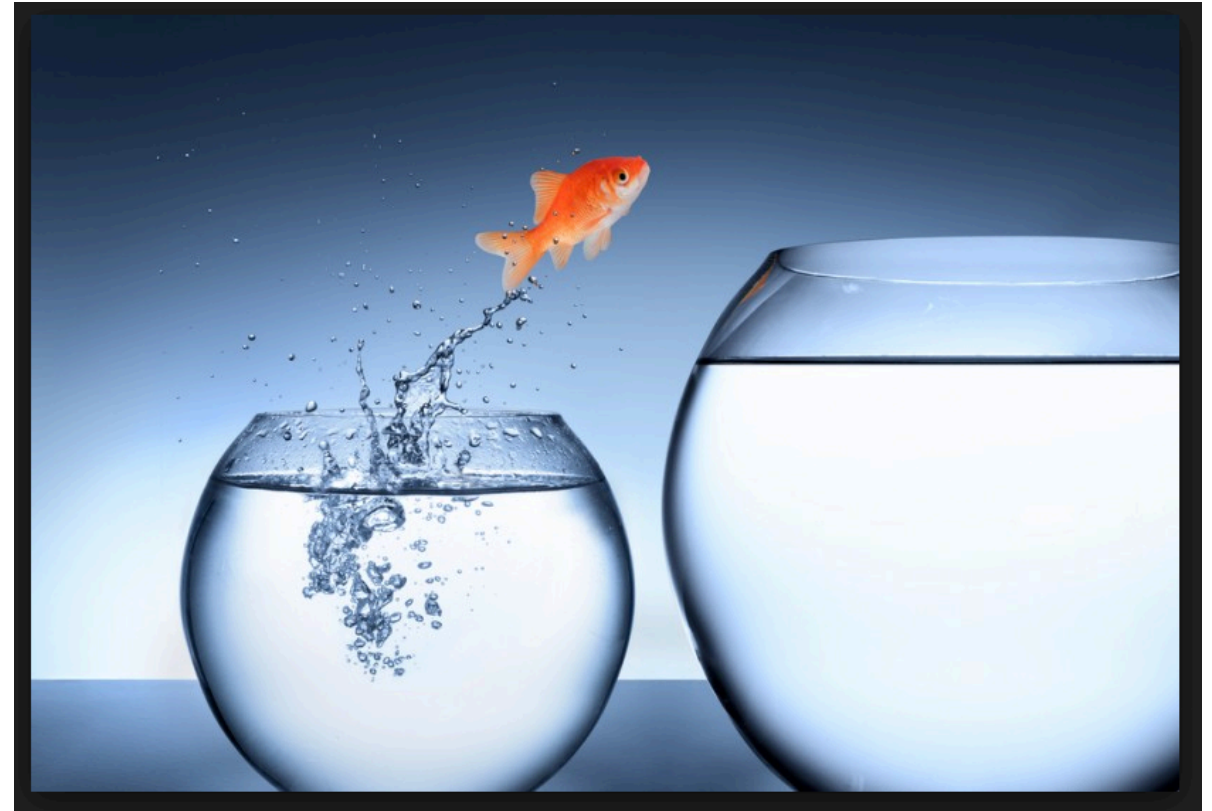
Increasingly accurate HRRR wind and precipitation forecasts are essential for agriculture production and managing wildfires.



What is R2O?

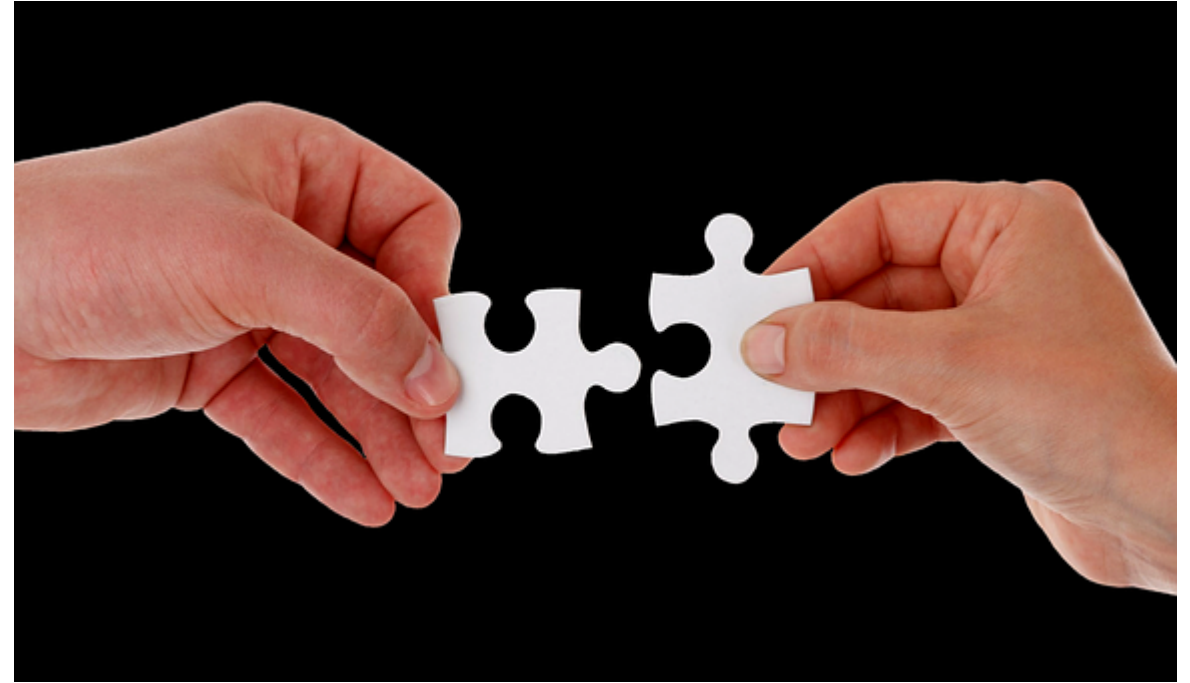
Various opportunities for transitions

- R2O
 - Big O
 - Little O
- R2X
 - Applications
 - Commercialization
(through CRADAs)
 - Other information
(e.g. publications)



Lab and Cooperative Institute (CI) Partnership

- Federal and CI staff partner to build and transition technologies
- CI staff work in the NOAA Lab to achieve NOAA mission
- NOAA staff serve as science advisors to CI staff



Cooperative Institute for
Research in the Atmosphere



Cooperative Institute for Research in
Environmental Sciences



Role of the Laboratory

- Supports the NOAA mission
- Large infrastructure gives access to:
 - Large amounts of data
 - High performance computing
 - Various weather research systems (e.g. AWIPS)
- Stability of long-term research problems
- Consistent and experienced workforce
- Cooperative Research and Development Agreements (CRADAs) to work with companies and other organizations

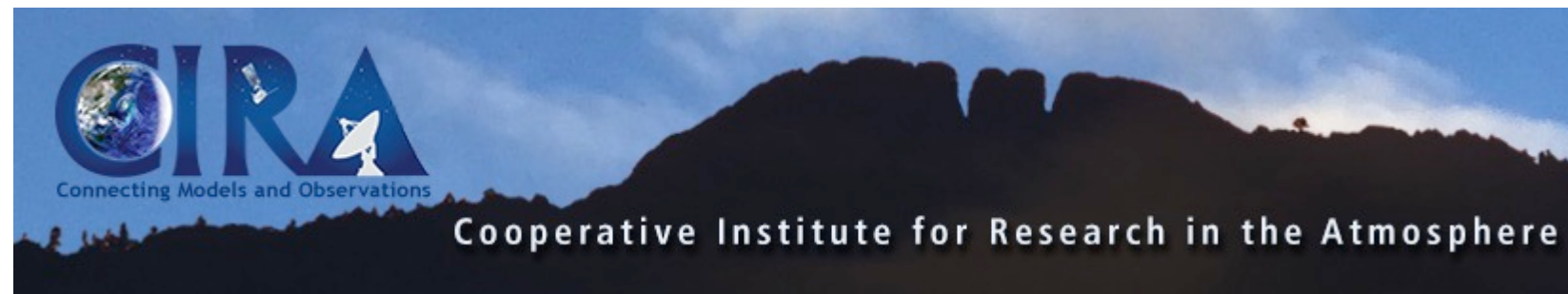


Role of the Cooperative Institute

- Partner in achieving NOAA's mission
- Part ownership in new technologies
- Copyright/patent of new technologies
 - Important for transition of technologies to private sector
- Flexible workforce
 - Cutting edge knowledge
 - New theories and techniques



C I R E S



The CRADA

Cooperative Research and Development Agreement

- Allows for collaboration between a Federal Laboratory and a Company
- Provides a mechanism for a Company to take advantage of research and technology developed by the Laboratory
- Provides opportunities for the Laboratory to extend its research into new areas
- Jointly developed research can be used freely by the Federal Government
- Company may patent and/or copyright the technology



Unique Function of the CI

- The Bayh-Dole Act
 - Applies to CI technology that can be patented
 - Extends IP rights to CIs/Universities with patented software
- University-developed technologies have automatic copyright authority
- Universities:
 - Establish copyright to license the jointly developed technology
 - Negotiate with Companies to provide software
 - Collects copyright fees and provides software
- Government:
 - Must understand and respect IP rights of Universities
 - Has the right to use the technology internally without limitations
 - Must work with University to transfer CI-developed technologies to commercial entities



Unique Function of the CI in Transitions

- Proceeds from license are re-invested in the project to continue research
- NOAA has a Technology Partnerships Office to help (Derek.Parks@noaa.gov)

<http://techpartnerships.noaa.gov/>



NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION OCEANIC AND ATMOSPHERIC RESEARCH

TECHNOLOGY PARTNERSHIPS OFFICE

Promoting Partnership & Commercialization of NOAA Technology and Innovations



A Successful Handoff

- Why R2O is important
- The Role of the Laboratory
- The Role of the Cooperative Institute

BUT a transition is not successful until it is fully installed and running in 'Operations'

Therefore, a **Successful Handoff** is critical!



Completing the Transition

Successful transitions require:

- Partnership with the operational site and the Laboratory
- Good software development practices
- Lots and lots of communication
- Joint Research to Operations Plan
 - Schedule
 - Operational platform
 - Clear expectations
- Testing, testing, testing, is a MUST!



Questions

Successful transitions are critical for reducing the impacts of severe weather on society

