



Partnerships that Leverage Innovation in the Weather and Space Enterprises

Through creative partnerships with the flourishing weather and space enterprises, NOAA will deliver the world's best weather forecasts to save lives, protect property, boost the U.S. economy, and strengthen national security.

An estimated

\$700 billion

of annual U.S. economic activity is sensitive to weather variability.*



Earth Prediction Innovation Center

Regaining and maintaining international leadership in numerical weather prediction through a novel community-driven approach to accelerate cutting-edge research into operations.



Collaboration in the Cloud

Transitioning to cloud-based high-performance computing and storage to broaden community engagement and improve stakeholder access to NOAA data.



Commercial Data Purchases

Leveraging emerging commercial capabilities in the \$400 billion global space industry by piloting private-sector data purchases to help advance the NOAA mission.



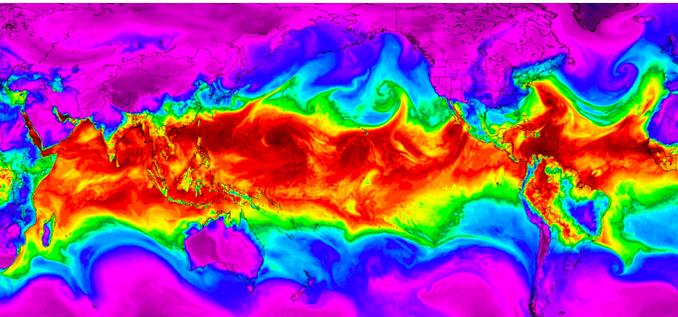
Space Innovation Initiative

Embracing rapid advancements in space-based technologies through public-private partnerships to deliver the most effective and diverse set of future Earth observations.

*Lazo, J. K., M. Lawson, P. H. Larsen, and D. M. Waldman, 2011: U.S. economic sensitivity to weather variability. *Bull. Amer. Meteor. Soc.*, 92, 709–720. 3.4% calculated using 2018 GDP.

NOAA's innovative solutions to advance U.S. leadership in weather forecasting by implementing the Weather Research and Forecasting Innovation Act of 2017 are based on:

- Accelerating the transition of cutting-edge science and technology research into critical operational life-saving weather prediction;
- Harnessing transformative technologies, such as unmanned systems, artificial intelligence, and cloud;
- Building innovative mutually beneficial public, private, and academic partnerships with the rapidly evolving space and weather enterprises; and
- Strengthening decision support for emergency responders and local communities to provide the real-time impact-based guidance needed to respond to and recover from extreme weather and water events.

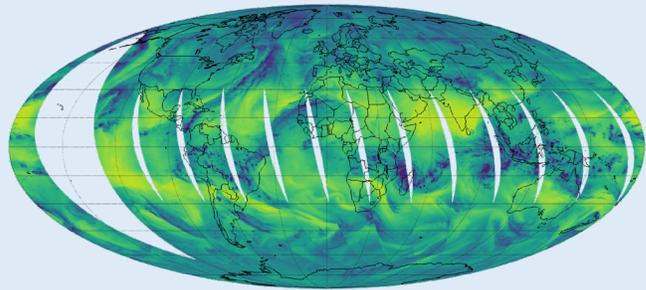


Earth Prediction Innovation Center (EPIC)

Establishing EPIC to accelerate Earth system modeling improvements by linking world-class scientists and software engineers in academia, industry, and partner agencies with research, development, and operational activities within NOAA through a virtual community modeling framework.

Collaboration in the Cloud

Leveraging private-sector innovation in cloud-based high-performance computing and storage to accelerate EPIC's community-based model development, enable parallel testing environments, and more effectively manage and disseminate vast amounts of environmental data.



Commercial Data Purchases

Investing in new approaches to better meet mission requirements by purchasing both *in-situ* (location-based) and remotely sensed weather data from industry partners to improve weather prediction, as well as enhance NOAA's ability to better serve the public.

Space Innovation Initiative

Embracing rapid advancements in space-based technologies by implementing the NOAA Satellite Observing System Architecture (NSOSA) study, which maps the future innovation of NOAA's space-based Earth observing network through public-private partnerships that deliver integrated, adaptable, agile, and affordable solutions.



For more information on these important initiatives, read the FY20 NOAA budget request testimony at <http://bit.ly/2WCmf5p> from Dr. Neil Jacobs, Assistant Secretary of Commerce for Environmental Observation and Prediction, performing the duties of Under Secretary of Commerce for Oceans and Atmosphere. Also, visit the EPIC webpage at <https://owaq.noaa.gov/Programs/EPIC>.