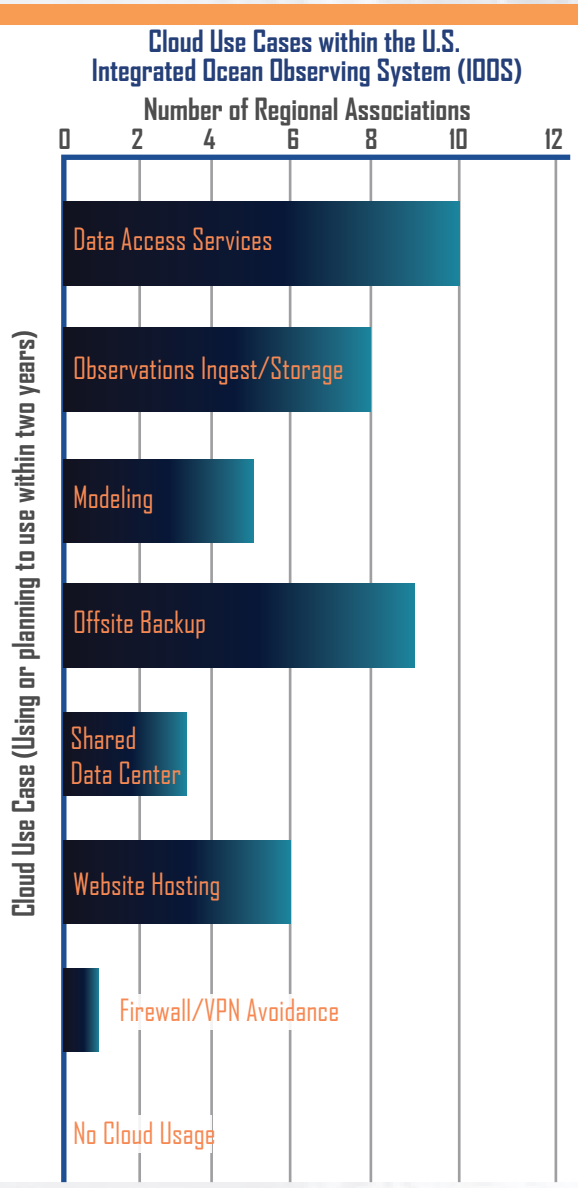
# NOAA Cloud Strategy

**NOAA will migrate suitable IT services to commercial cloud computing environments to reduce costs, improve efficiency, provide unlimited seamless scalability, and maintain high levels of security. Cloud represents a transformative technology that will not only improve general operational IT services, but also ensure many of NOAA's functions across the entire value chain—from observations, data management, and numerical weather prediction to end-user products and applications—will better serve the public and more effectively enable us to carry out our mission.**




*As data volumes increase exponentially, NOAA will increasingly leverage the commercial cloud for a variety of services, such as those leveraged by the NOAA IOOS Regional Associations.*

## Demonstrated Leadership in Cloud

NOAA's cutting-edge innovation and strategic academic and industry partnerships for developing cloud applications are already demonstrating improvements in performance and skill in areas such as satellite data products and services, numerical weather prediction, ocean models, and big data analysis, storage, and dissemination.

Cloud services will be further leveraged to expand benefits, such as:

- Accelerated timeline to acquire new computing resources;
- Increased security posture through security automation;
- More accessible and monetizable NOAA data to customers, such as academia and industry;
- Reduced transition time from research into operations;
- Scalable infrastructure that supports scientific and HPC requirements; and
- A more agile and innovative organizational culture.

## Earth Prediction Innovation Center (EPIC)

EPIC will enable NOAA to regain and maintain international leadership in numerical weather prediction through a novel community-driven approach to accelerate cutting-edge research into operations. An integral part of EPIC will be transitioning to cloud-based high-performance computing and storage to broaden community engagement and improve stakeholder access to NOAA's code and data.



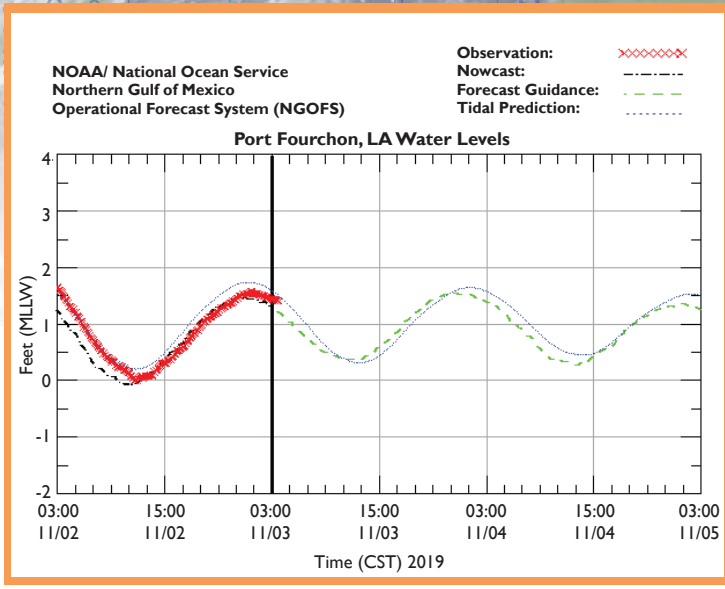
The Draft Cloud Strategy is available at https://nrc.noaa.gov/NOAA-Science-Technology-Focus-Areas.

## Cloud Strategy Goals

1. Enable innovation through rapid adoption of cloud-based services.
2. Drive smart migration to the cloud.
3. Ensure secure and broad access to cloud services.
4. Provide effective governance for cloud shared services.
5. Empower a cloud-ready workforce.

### NOAA's Cloud Strategy aligns with:

- The Executive Office of the President's August 30, 2019, Memorandum "Fiscal Year 2021 Administration Research and Development Budget Priorities."




*Under NOAA's Big Data Project, datasets, such as the output from Operational Forecast System (OFS) coastal ocean models, have already moved to the commercial cloud.*

## Bold New Era in Harnessing the Cloud

To ensure the NOAA Cloud Strategy realizes transformative techniques to enhance the quality and timeliness of NOAA products and services, NOAA is developing a Cloud Implementation Plan or "Roadmap" that defines detailed action items, deadlines, and responsibilities. In the meantime, the NOAA Cloud Strategy is already improving performance in our lifesaving and economically impactful missions and setting the course to strengthen our renowned environmental science and technology leadership. Through this, NOAA will achieve our top agency priorities to regain and maintain global leadership in numerical weather prediction and sustainably expand the American Blue Economy.

*Cloud computing provides more rapid access to data and superior scalability to enable a growing array of decision support services that will enhance NOAA's ability to keep Americans out of harm's way.*