



CIT Discusses the Benefits of Cloud Computing at the AWS Public Sector Summit

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Thousands of public sector professionals and technology enthusiasts gathered at the [Amazon Web Services \(AWS\) Public Sector Summit in Washington, D.C.](#), from June 10 to 12 to learn how AWS cloud services are changing the way we work and live.

On June 11, CIT Director and NIH Chief Information Officer Andrea Norris participated in a [keynote session led by Teresa Carlson, vice president of worldwide public sector at AWS](#) that highlighted innovators across the public sector using cloud services to optimize intelligence data, cybersecurity, and biomedical research. The other featured keynote speakers were the Hon. Susan (Sue) M. Gordon, principal deputy director of national intelligence (PDDNI); Morgan Reed, chief information officer for the State of Arizona; Kenny Bowen, chief information officer for special access programs at the Department of Defense; Ángel Cabrera, president of George Mason University; and 10-year-old Karthick Arun, the world's youngest person to pass AWS' certification test to become a cloud practitioner.

Norris's portion of the talk echoed the keynote session's theme of how cloud service providers are enhancing work in the public sector. She highlighted the [STRIDES Initiative](#) as a mechanism for NIH biomedical researchers to access the most advanced computational infrastructure, tools, and services to accelerate research outcomes, making discoveries more accessible and affordable than ever before. AWS joined the STRIDES Initiative in October 2018.

Norris noted that NIH is eager to transform the way NIH conducts research, shares results, and makes discoveries in patient care in order to accelerate discovery. In addition to the STRIDES Initiative, she discussed the work being done in NIH big data research programs, such as the [Cancer Moonshot program](#), the [BRAIN Initiative](#), and the [All of Us Research program](#).

"These technological advances have led to the rise of new data domains at unprecedented size and scale," said Norris. "Through these partnerships and investment in big data, we believe we can vastly accelerate cures and treatments for everyone."

Nick Weber also spoke about the STRIDES Initiative during his breakout session, elaborating on how advances in technology are changing the way NIH conducts biomedical research. He spoke about how the use of the cloud for NIH research continues to steadily increase, and many NIH programs are shifting to the cloud due to the increase in size and complexity of datasets, and the ability to access robust computing and analytical tools. The goal is to set a standard across the research ecosystem, with a cloud-based model, to make data FAIR (findable, accessible, interoperable, and reusable).

However, using the cloud doesn't address all research challenges. As Weber noted, one challenge that remains is that each NIH program stores and manages data in its own way. Two issues that contribute to this

challenge include a lack of attention paid to data organization, structure, access, utility, findability, and reusability; and that data is viewed as just a byproduct, with scientific findings and journal articles as the primary goals. As a result, there is a reduced ability to use/reuse data, both across NIH and within programs.

To help address this challenge, the NIH Cloud Guidebook was created as a living resource to capture best practices in using the cloud in support of biomedical research. The ultimate goal for NIH is an even greater ability for NIH programs and institutes to leverage data to support biomedical discoveries.

These new technologies and the ability to capture big data, as Norris sees it, are “changing the way we do science.”