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Government AI Hub With Bipartisan Backers Braces for Trump

By Kaustuv Basu

Deep Dive

- NIST has key role in Biden's AI executive order
- Agency studied AI precursors decades ago

For more than a century, the National Institute of Standards and Technology has been best known for its work in the physical sciences. But last year President Joe Biden asked it to do something quite different: monitor the rapid growth of AI and test its safety and usability.

NIST has since launched an AI Safety Institute, worked with Anthropic and OpenAI Inc. on AI safety, and formed a consortium with top universities like Stanford and companies like Meta Platforms Inc.

It's also gained backers across the political divide who want the nonregulatory agency under the Commerce Department to continue its work.

WATCH: Can laws keep up with AI's fast pace?

"The nice things about it is that it provides services for all entities of government," said Sen. Mike Rounds (R-S.D.), co-lead of the Senate AI Caucus. "It might very well be one of the more efficient ways to actually deliver those technical services."

But NIST faces looming uncertainty about how its AI work might change in the new administration. President-elect Donald Trump has pledged to repeal Biden's executive order on artificial intelligence, where much of NIST's new direction stems from, and push for fewer restrictions.

Critical Opportunity?

NIST scientists quietly conducted studies for decades on technologies that became the root of modern AI, such as machine learning or natural language processing. But the launch of ChatGPT in late 2022 elevated that work to a national priority.

Groups that represents Meta, Anthropic, Microsoft Corp., OpenAI, and dozens of others, now are pushing lawmakers to fund and make permanent the US AI Safety Institute, which is housed within NIST.

But those close to the incoming administration are not all on board.

Sen. Ted Cruz, a Republican from Texas who will have a say in AI policy as the incoming chairman of the powerful commerce, science and transportation panel, is a vocal critic of Biden's executive order. And vice president-elect J.D. Vance told a Senate hearing that over-regulating would help only established technology companies, not startups.

Dean Ball, a research fellow at George Mason University's Mercatus Center who focuses on AI and emerging technologies, predicted the Trump administration will run the gamut on AI, from those who argue for little or no regulation to those who want AI closely monitored.

Ball noted that Elon Musk supported the California bill to regulate AI that was vetoed by Gov. Gavin Newsom in September. Newsom, a Democrat, said the bill was too expansive and would burden AI companies.

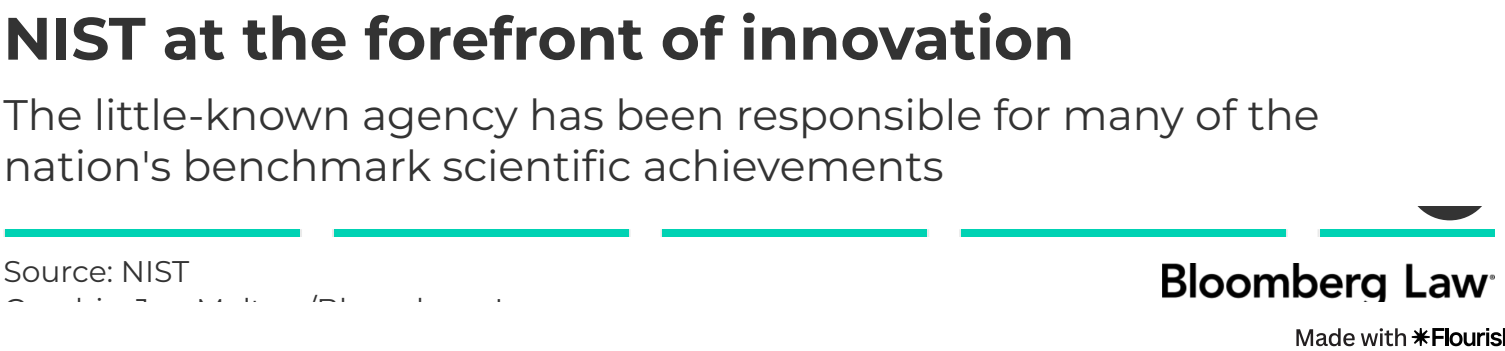
In a November blog post, Ball said many Republicans have been "turned off from 'the AI safety movement' because they see it as a progressive cultural cause, or another effort at 'big tech censorship." But he also said the "political dynamics under a Republican administration permit focused work on major AI risks in a way that they simply do not under a Democratic administration."

"There's a lot of Republicans who are fans of NIST," Ball concluded in an interview. "There's a lot of Democrats who are fans of NIST."

Laureates and More

NIST began as the National Bureau of Standards in 1901, as a physical science lab of the federal government. It was renamed the National Institute of Standards and Technology in 1988, and is housed in a sprawling 578-acre campus in Gaithersburg, Md., outside of the nation's capital.

Another campus is located in Boulder, Colo. And NIST is part of research entities with other organizations such as JILA in Boulder, formerly known as the Joint Institute for Laboratory Astrophysics, and the Joint Quantum Institute in Maryland.



Interactive graphic: NIST has been responsible for many of the nation's benchmark scientific achievements.

NIST has 3,400 employees and about about 3,500 guest researchers, students, and post-doctorates. Over a century, the institute has set national standards for weights and measures, improved radio reception in the 1920s, helped develop weather forecasting, created a DNA profiling standard, introduced an early version of the digital computer, and even shared in an Emmy award for developing closed captioning systems.

Five scientists have been awarded Nobel prizes for work they did at the institute. One of them is Bill Phillips, a NIST fellow, who jointly received the Nobel Prize in physics in 1997 for developing a way to cool and trap atoms with laser lights.

Phillips still works out of the Gaithersburg campus, where a giant twisted metal beam from one of the World Trade Center buildings destroyed by the 2001 terrorist attack is on display. NIST scientists studied the technical failures that led to the destruction of the buildings, examining structural steel from the site.

A once-straight steel support column recovered from World Trade Center Tower 2, studied by NIST scientists, on display at NIST headquarters in Gaithersburg, Md.
Photographer: Kaustuv Basu/Bloomberg Government

“We have a style of research here that is somewhere between what you see in academia and what you see in industry,” Phillips said. “Our leadership is really happy for us to explore things that may not pay off for a long time. You know, in industry, you better have some payoff coming pretty soon.”

Phillips called NIST the intellectual successor to Bell Labs, once the storied subsidiary to AT&T Inc. known for scientific innovation and research including invention of the transistor and developing the world’s first satellite communications system.

‘The World We Live in Now’

NIST has long invested in artificial intelligence or its precursors: It published a paper on information retrieval in 1993, its work on speech and speaker recognition can be traced to the 1990s, and it has worked on bias in facial recognition technology for decades, before its use by law enforcement and in smartphones. The NIST AI innovation lab was established in 2018.

Laurie Locascio, NIST’s director who is departing to work for a nonprofit, said that the government’s goal is to get involved in the new technologies early.

“We’ve been doing this work for decades. We’ve been working with companies for decades,” she said. “We have a pretty seamless relationship with them at NIST to try to understand and figure out how we can do best by the technology and help it to thrive while while making sure that it’s trusted.”

Still, the challenges for a government-run agency as it tries to monitor AI development are enormous.

Sen. Martin Heinrich of New Mexico, the Democratic leader of the Senate AI caucus, said that he could spend weeks pontificating on what Trump might or might not do. But there is relative consensus in the Senate that NIST’s role is important and industry recognizes that as well, he said.

“This is going to be the world we live in now,” Heinrich said. “We need to maximize the benefits and minimize the risks.”

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