

PUBLIC SUBMISSION

Received: May 29, 2025 Tracking No. mb9-hehm-pu8r Comments Due: May 28, 2025 Submission Type: API
--

Docket: NSF-2025-OGC-0001
NITRD_FRDOC_0001

Comment On: NSF-2025-OGC-0001-0001
Request for Information: Development of a 2025 National Artificial Intelligence Research and Development Strategic Plan

Document: NSF-2025-OGC-0001-DRAFT-0184
Comment on FR Doc # 2025-07332

Submitter Information

Organization: Information Technology Industry Council

General Comment

Please find attached comments from the Information Technology Industry Council.

Attachments

FINAL ITI Comments Responding to AI RD RFI

May 29, 2025

Re: ITI Response to OSTP Request for Information on the Development of a 2025 AI Research & Development Strategic Plan

Dear Director Kratsios:

The Information Technology Industry Council (ITI) appreciates the opportunity to respond to the Office of Science and Technology Policy's Request for Information (RFI) on the Development of a 2025 Artificial Intelligence Research & Development Strategic Plan.¹

ITI represents the world's leading information and communications technology (ICT) companies. We promote innovation worldwide, serving as the ICT industry's premier advocate and thought leader in the United States and around the globe. ITI's membership comprises leading innovative companies from all corners of the technology sector, including hardware, software, digital services, semiconductor, network equipment, and other internet and technology-enabled companies that rely on ICT to evolve their businesses. Artificial Intelligence is a priority technology area for our member companies, who are both developing and using the technology to evolve their businesses. ITI and its member companies believe that effective government approaches to AI clear barriers to innovation, provide predictable and sustainable environments for business, protect public safety, and build public trust in the technology.

We recognize that AI is an active area of research that is constantly evolving and improving, and appreciate the Administration's goal of solidifying U.S. leadership, enhancing national security, and promoting human flourishing. It is vital to harness AI's potential benefits while addressing risks and vulnerabilities, and research and development (R&D) is a critical enabler of those possibilities. Indeed, our *Global AI Policy Recommendations*, released in 2021, include an entire section devoted to facilitating innovation and investment in AI that emphasizes the critical role R&D must play in that effort.² As such, we welcome the opportunity to provide input on how OSTP can best develop a Strategic Plan to guide federal investment.

As a starting point, we believe that many of the themes captured in the Trump Administration's 2019 Update of the National Artificial intelligence Research and Development Strategic Plan, and carried over into the 2023 Update of the Strategic Plan, remain relevant and encourage OSTP to consider that many of those strategic

¹ This document is approved for public dissemination. The document contains no business-proprietary or confidential information. Document contents may be reused by the government in developing the 2025 National AI R&D Strategic Plan and associated documents without attribution.

² See ITI's *Global AI Policy Recs* here: <https://www.itic.org/policy/artificial-intelligence/itis-global-ai-policy-recommendations>

lines of effort remain helpful. It might make sense for the Plan to continue to be structured around at least some of those lines of effort. As a general point, we encourage OSTP to recognize that NSF's research activities have a longstanding history of facilitating partnerships with AI industry leaders, academia, civil society and other government stakeholders. We believe robust funding for these key NSF partnerships and programs, such as the National AI Research Resource (NAIRR), can drive the strategic development and deployment of AI technologies by enabling NSF's research-focused institutes to promote the widespread adoption of AI technologies. A well-funded NSF, coupled with a focus on retaining qualified staff, ultimately supports the Trump Administration's AI agenda and advances our shared goal of enabling the United States to reap the benefits of AI technological innovation while maintaining its market advantage.

Below, we highlight several areas that we believe are important to prioritize in a federal R&D strategy that will support the Trump Administration's aims of enhancing national security and competitiveness, promoting human flourishing, and securing U.S. technological leadership. We encourage the Administration to also consider how to structure periodic updates to the Strategic Plan, given the rapidly evolving nature of the technology and the evergreen nature of research and development.

1. Emphasize the importance of long-term investments in AI research, as well as investment in R&D across the AI value chain, including in basic science.

This pillar was included in the 2023 Update of the AI R&D Strategic Plan and we believe it should continue to be a guiding principle in the rewrite. As the prior Strategic Plan referenced, government investment in high-risk, high-reward research areas has yielded revolutionary technological advances, so it remains critical that the Administration prioritize these long-term investments. In particular, we think that directing federal attention to continued research that supports standardized protocols for evaluating national security misuse risk of AI systems, potentially building upon initial AI Safety Institute guidance, would be a useful endeavor, as well as focusing on developing a more consistent set of practices for advanced threat modeling and red-teaming of advanced AI systems. While initial research exists in this space, furthering this research will be especially important to addressing national security risks moving forward. Additionally, investment in content provenance tools and technologies is critical as such tools can be used to help verify integrity of data and content more generally, and mitigate risks related to the proliferation of deepfakes and AI-generated Non-Consensual Intimate Images (NCII). We also support continued investment in public-private semiconductor R&D research programs, which are foundational to AI advances.

The USG should support investment in R&D across the AI value chain, including in basic science. Areas like math, physics, and semiconductors are all foundational to ensuring U.S. AI leadership. Appropriating funding for the science-based activities

from CHIPS and Science Act of 2022 will support this goal. We also encourage the Administration to consider how AI can be used to accelerate science, unlocking opportunities for the American people. We support the American Science Acceleration Project (ASAP), spearheaded by Senator Heinrich and Senator Rounds, aimed at investing in data, compute, and AI to “build a super highway for science.”³

Finally, we also encourage the USG to invest in R&D specific to agentic AI, the next evolution of AI technology. In particular, it will be imperative to support work with industry to develop standards and protocols for agent-to-agent communication (like AGNTCY), develop secure design patterns for agentic systems, and create additional multi-agent reference architectures to provide a mechanism to identify threats and contextualize agentic risks.

2. Support investment in research fields specific or highly relevant to AI cybersecurity.

In the 2023 Plan, Strategy 4 was focused on ensuring the safety and security of AI systems. This pillar remains relevant in 2025. As such, we continue to encourage the USG to invest in research fields specific or highly relevant to AI, including cyber-defense, agentic AI to address complex cybersecurity problems, data analytics, detection of fraudulent transactions or messages, adversarial machine learning/AI and how to secure ML/AI, and privacy preserving machine learning (PPML). As referenced above, this should also include research and development related to securing the AI lifecycle (supply chain, model provenance, model validation, automated red-teaming, pre- and post-deployment). For example, supporting R&D related to AI and cybersecurity, supporting AI-enabled cybersecurity solutions to protect against evolving threats, and using generative AI to enhance cybersecurity operations and workforce capabilities are important areas that the USG should consider focusing investment on. In addition, R&D should focus on establishing methods to secure the AI development and deployment lifecycle, including ongoing research into red-teaming as well as ongoing research into security threats and vulnerabilities related to AI systems. Finally, it will be increasingly critical for USG to invest in research to develop structured, repeatable processes for identifying and mitigating security risks in AI agents. While traditional methodologies like STRIDE or PASTA exist, they must be expanded or mapped to agentic AI vulnerabilities.

3. Measure and evaluate AI technologies through standards and benchmarks.

Consistent with the 2023 Update, we believe the rewrite of the R&D Strategic Plan should emphasize the key role of standards and benchmarks. Standards and benchmarks are foundational to advancing trusted and responsible AI models and systems. Standards are critical to understanding and evaluating the performance of models, as well as promoting consistency in the development of AI models and AI-enabled tooling. The emphasis on standards and benchmarks has continued to

³ <https://www.heinrich.senate.gov/asap>

increase over the last several years, particularly as countries around the world are introducing legislation to regulate AI technology. Notably, implementation of the European Union's AI Act has begun, while Brazil, Korea, and Mexico are all actively considering regulatory regimes to govern AI's development and application. In many instances, international standards play an important role in helping companies to comply with aspects of regulation. In the context of the AI Act, we continue to suggest that the European Union leverage international standards, particularly to underpin the risk management and the data governance requirements introduced in the AI Act, to help avoid fragmentation in the global regulatory environment.

Thus far, the U.S. National Institute of Standards and Technology (NIST) has undertaken significant work in developing voluntary frameworks, guidance, and best practices including the AI Risk Management Framework (AI RMF), and several AI RMF Profiles, including one for Generative AI Risk Management. This work has been leveraged by governments and organizations in the United States and around the world seeking to operationalize AI governance, in conjunction with international AI standards, such as those developed under ISO/IEC JTC1. Additional guidance documents like the Generative AI Profile have been especially helpful in building up the core functionalities of the AI RMF. We also appreciate NIST's latest work to pilot a zero-drafts project intended to help accelerate the development of international standards in U.S. priority areas and encourage continued federal support to research and activities that underpin this work.

In addition to their collaborative work with NIST, many of our companies participate in international standards development processes, including ISO/IEC JTC 1 SC 42, where standards are being developed on many aspects of AI, including red-teaming. ITI's INCITS acts as the U.S. mirror committee to SC 42. While there have been significant strides in AI standardization over the last several years, the field of AI standards remains relatively nascent. We encourage continued U.S. government support for NIST and federal agency engagement in SC 42, where appropriate, as this will ensure that all NIST's work, including that being developed via the AI Safety Institute Consortium, is aligned with international standards that are in the process of being developed and vice versa. It will also ensure that international standards are developed with a U.S. perspective in mind, ensuring that other countries are not dictating the underlying standards that AI companies will have to adopt in order to comply with specific regulatory frameworks. We also encourage the Administration to consider how to facilitate additional industry engagement in these bodies. While we offer additional thoughts on international cooperation below, we emphasize that international standards bodies are one forum the USG should prioritize in seeking to increase international coordination on AI-related R&D.

4. Advance R&D to understand and address ethical and societal implications of AI to promote human flourishing.

We appreciated that the 2023 Update of the AI Strategic Plan highlighted the important ways in which R&D could support understanding of legal, ethical, and societal implications of AI. This remains important to fostering trust in AI systems and overall consumer and enterprise adoption of the technology. This priority is also aligned with the Trump Administration's goal that AI promote human flourishing, optimized in a way that supports people's social, emotional, and intellectual well-being.⁴ To be sure, societal level consequences of AI have the potential to impact people's ability to flourish over time, which makes continued research and development in this space important. Such R&D should include a focus on creating additional tools and practices to promote the security and robustness of AI systems. Additionally, advancing research around human-AI interaction is useful. In particular, encouraging research in rethinking how humans and computers interact in an edge AI world could be crucial, such as AI-centric user interfaces, persistent AI, novel techniques for learning, and improving interpretability.

5. Make more shared datasets publicly available for AI training and testing, ideally as a part of a broader U.S. data strategy.

As we recommended in our response to OSTP earlier this year on its development of an AI Action Plan, we encourage the Administration to consider how to make more federal and shared datasets available for AI training and testing.⁵ Data, particularly high quality data, is foundational to robust AI systems and access to datasets is a potential hurdle in democratizing access to AI R&D, especially as there is no comprehensive data-sharing strategy in the United States. As a part of its R&D Strategic Plan, we encourage the Administration to consider how a data strategy and/or data framework for responsible access to and use of data can help to promote U.S. competitiveness in AI. Making more datasets available will take a sustained investment by the federal government and also require a shift in incentives to curate and maintain such datasets for researchers.

To comply with privacy and other relevant laws, personal data or data containing PII should be anonymized, aggregated, or otherwise de-personalized to prevent re-identification, and all data including other types of sensitive or proprietary data should be appropriately protected and secured. Securing data and otherwise protecting data safeguards individual privacy while allowing for the responsible use of data in training AI systems. We recommend that the Administration identify and address any technical and administrative barriers that may hinder data accessibility. Doing so could include identifying obstacles to international transfer and use of datasets and/or data

⁴ See more information on MIT's research program on advancing humans with AI here: <https://aha.media.mit.edu/>

⁵ <https://www.itic.org/documents/artificial-intelligence/ITIResponsetoOSTPAIActionPlanFINALv2.pdf>

localization requirements and developing appropriate mitigation strategies to address such barriers. ITI included additional comments and suggestions for ways the USG can encourage data-sharing in our prior response on the NAIRR Implementation Plan, submitted in 2021.⁶

In this context, it is also useful to note that oftentimes when datasets are made open, provenance can be difficult to ascertain. The full context of data collection might be unclear, or it might be unclear how or whether consent to collect the data was obtained, or the conditions under which data labelling was conducted is not disclosed. There can be wide variation in how much testing for sampling bias is done, or there might be information missing that makes it difficult for those using that data to do their own bias testing. As it prioritizes investments, we urge the Administration to support R&D on provenance creation, including related to the development and adoption of data provenance standards, which can help to address issues related to provenance. It may be useful to consider the role of voluntary licensing agreements, as explored in the U.S. Copyright Office's recent report: *Copyright and Artificial Intelligence Part 3: Generative AI Training*.⁷

6. Investing in infrastructure to support AI R&D.

As we highlighted in our comments to the AI Action Plan, investing in infrastructure to support AI R&D is critical. Directing federal investments toward federal agencies that play a key role in advancing R&D, such as the Department of Energy and Department of Defense is imperative to help transform the mission of these agencies. These agencies already have world-class facilities, scientific workforce, and data; however, they often lack the advanced computing resources needed to support the development of frontier AI models critical to ensuring the United States remains a global superpower in AI. An approach that emphasizes investment in such resources thus maximizes efficiency, safeguards taxpayer dollars, and accelerates AI innovation. Further support for the creation of the National AI Research Resource (NAIRR) -- a shared national research infrastructure that provides AI researchers, small business owners, and students with greater access to the compute resources, data, and tools needed to develop safe and trustworthy AI is essential. The NAIRR serves as an instrumental resource that will benefit critical sectors of the U.S. economy by enabling companies to integrate AI solutions into their business applications. The Trump Administration should call on Congress to advance legislation that would codify the NAIRR. ITI supports the bipartisan, bicameral CREATE AI Act, which would establish the NAIRR under the direction of the National Science Foundation.⁸ If authorized, the NAIRR

⁶ ITI comments responding to the RFI on an Implementation Plan for a National Artificial Intelligence Research Resource (NAIRR) available here: [https://www.itic.org/documents/artificial-intelligence/2021-9-30-ITICommentsNAIRRRFIFINAL\(1\).pdf](https://www.itic.org/documents/artificial-intelligence/2021-9-30-ITICommentsNAIRRRFIFINAL(1).pdf)

⁷ <https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf>

⁸ <https://www.congress.gov/bill/118th-congress/house-bill/5077>

could provide AI testbeds, open-source models, and high-powered computational tools that adhere to existing open standards to academics, researchers, and small- and medium-sized enterprises, which can in turn accelerate the pace of AI research and development that supports American innovation.

7. Highlight the importance of collaborating with international partners to advance AI R&D.

We believe that an AI R&D Strategic Plan should highlight the important role of international cooperation in undertaking joint R&D work. International cooperation offers opportunities to advance the Trump Administration's stated interests of achieving U.S. AI leadership, protecting national security, and promoting human flourishing. To be sure, groups like the International Network of AI Safety Institutes (INAISI) and the Hiroshima AI Process Friends Group Partners' Community,⁹ can serve as a force multiplier and create efficiencies that enable individual countries to contribute their strengths. For example, by working with trusted partners, the United States can leverage complementary strengths and create efficiencies, thus accelerating innovation, reducing duplication of research efforts, and allowing the United States to address technical challenges more easily. Joint research and development projects also enable the United States to shape global efforts in a way that reflects American values and ensures early access to cutting-edge research developments. In a rapidly evolving landscape where researchers are making strides in AI daily, collaborative R&D is essential to maintaining U.S. leadership in AI.

8. Invest in multi-disciplinary education and research programs for AI.

In considering how to prioritize federal investment, we stress the need for ongoing support for multi-disciplinary education and research programs for AI. As the President's recent EO on Advancing AI Education for Youth highlighted, equipping youth with the appropriate skills to embrace an AI future and investing in workforce development and training/retraining more generally, will be critical to embrace the technology. It is imperative that the USG works to develop top talent with expertise in AI methods and tools as well as expertise across the different domains in which AI might be deployed.

9. Invest in the development and application of AI in energy management

As AI becomes a cornerstone of economic and technological progress, it is simultaneously emerging as a major driver of electricity demand—particularly through energy-intensive applications like large-scale model training and data center expansion. However, AI also holds unparalleled potential to optimize and reduce energy consumption across the economy. From intelligently orchestrating distributed energy resources and managing flexible loads, to automating building systems and

⁹ <https://www.soumu.go.jp/hiroshimaaiprocess/en/supporters.html>

streamlining industrial operations, AI can unlock significant efficiency gains and grid flexibility. As an example, an AI-driven microgrid optimizes the buying, selling, and storage of energy, enabling them to align their utilization of resources with the most cost-effective decisions while providing reliability benefits that bolster the grid during times of peak demand or instability. Federal investment is essential to accelerate the development and responsible deployment of these applications ensuring that AI contributes to, rather than undermines, national goals for affordability, reliability, and national security.

We appreciate the opportunity to provide feedback to OSTP via NITRD's NCO. Investment in key areas of research and development will be key to supporting U.S. AI leadership, supporting industry efforts, and competing on the global stage. Please consider ITI a resource as you develop the AI R&D Strategic Plan and reach out to Courtney Lang, Vice President of Policy, with any questions.

Sincerely,

Courtney Lang
Vice President of Policy
Trust, Data, and Technology