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

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Comment on FR Doc # 2025-07332

Submitter Information

Organization: Deloitte Consulting LLP

General Comment

Deloitte's comments are attached to this submission.

Deloitte appreciates this opportunity to submit comments in response to the National Science Foundation (NSF) Networking and Information Technology Research and Development (NITRD) National Coordination Office's request for inputs in rewriting the National AI R&D Strategic Plan. Deloitte supports the federal government in securing U.S. leadership in AI by fostering innovation, enhancing economic and national security, and promoting human flourishing over the next three to five years. As a leading provider of digital transformation solutions to more than 99% of the Fortune 500 and 15 cabinet-level Federal agencies, we provide insights, implementation, and operational support that deliver on the promise AI innovation. Our comments reflect our deep experience with more than 2,800 customers who apply leading-edge AI processes across industry and government.
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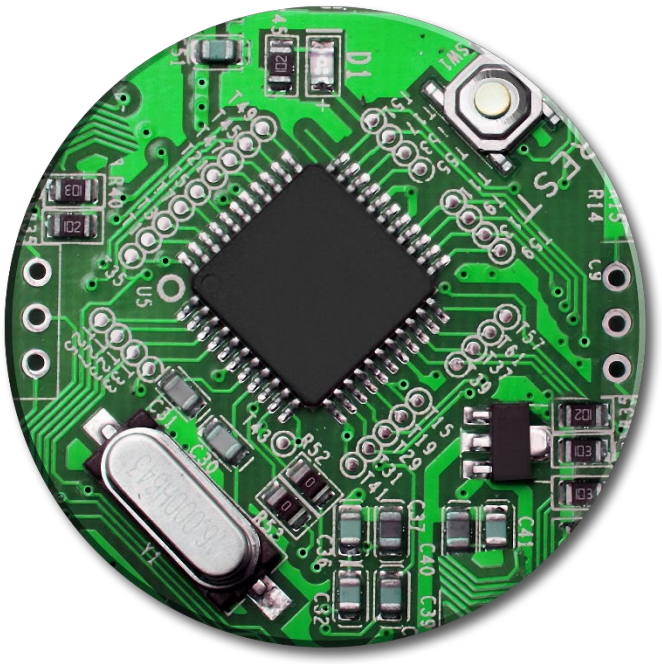
Attachments

OSTP AI RD Strategic Plan RFI

Deloitte.



National Science Foundation
Office of Science and Technology Policy
Networking and Information Technology
Research and Development National Coordination Office

Response to Request for Information on the Development of a 2025 National Artificial Intelligence (AI) Research and Development (R&D) Strategic Plan

Docket ID Number: NSF-2025-OGC-0001

May 29, 2025

Deloitte Consulting LLP
1919 North Lynn Street
Arlington, VA 22209
Tel: +1 (571) 882-5000
www.deloitte.com

May 29, 2025

Mr. Faisal D'Souza
Office of Science and Technology Policy
Executive Office of the President
2415 Eisenhower Avenue
Alexandria, VA 22314

RE: Deloitte Comments on the Development of a 2025 National AI R&D Strategic Plan

Dear Mr. D'Souza:

Deloitte Consulting LLP (Deloitte[1]) appreciates this opportunity to submit comments in response to the National Science Foundation (NSF) Networking and Information Technology Research and Development (NITRD) National Coordination Office's (NCO) request for inputs in rewriting the National AI R&D Strategic Plan. Deloitte aims to support the federal government in securing U.S. leadership in AI by fostering innovation, enhancing economic and national security, and promoting human flourishing over the next three to five years. As a leading provider of digital transformation solutions to more than 99% of the Fortune 500 and 15 cabinet-level Federal agencies, Deloitte provides insights, implementation, and operational support that deliver on the promise AI innovation.

Our comments reflect our deep experience with more than 2,800 customers who apply leading-edge AI processes across industry and government. We look forward to working with you to achieve optimum value to the National Coordination Office. If you have any questions or require additional information, please contact me or Roger Sion.

Sincerely,

Edward Van Buren
Principal
Deloitte Consulting LLP

Roger Sion
Managing Director
Deloitte Consulting LLP

[1] As used in this document, "Deloitte" means Deloitte Consulting LLP, a subsidiary of Deloitte LLP. Please see www.deloitte.com/us/about for a detailed description of the legal structure of Deloitte LLP and its subsidiaries. Certain services may not be available to attest clients under the rules and regulations of public accounting.

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Company Profile

Company Name	Deloitte Consulting LLP	
Location	1919 N. Lynn Street, Arlington, VA, 22209	
Contact Name	Edward Van Buren	Roger Sion
Contact Title	Principal	Managing Director
Email Address		
Phone Number		

Introduction: Updating the AI R&D Strategic Plan to Enhance U.S. AI Leadership

Research and Development (R&D) in AI products and solutions is advancing rapidly. From 2018-2023, the number of papers published on AI topics increased by more than 114%. This growth in academic research has fueled business creation and the development of new AI products, with investments in AI startups growing by 123% from 2020-2021 alone and more than 74% of business executives plan to integrate AI into enterprise applications within the next three years.[2]

Our research and experience as a leading technology services provider across industry and government suggest that AI will continue to evolve in unpredictable ways over the next five years. In this environment, some emerging AI technologies will deliver on their promise; other well-developed solutions will fail to scale; and a few unexpected technologies will appear from unexpected sources and disrupt the AI market. Deloitte defines the need to place bets that deliver breakthrough success in a world characterized by deep unpredictability as the *strategy paradox*[3]. To navigate this paradox, we encourage OSTP to adopt the perspective of venture capital firms and update the AI R&D Strategic Plan to accelerate R&D innovation programs. For instance, the Pioneer Awards program at the National Institutes of Health and the Director's Research Initiative at the Defense Advanced Research and Projects Agency provide flexible funding mechanisms and encourage innovative approaches to explore untested theories. Such programs are especially appropriate for AI research, where fundamental research questions are yet to be answered.

Observations and Considerations

We noted in our previous response to the OSTP AI Action Plan RFI that AI leadership is characterized by a global race in three domains: the development of superior technologies, the creation of enduring business models that accelerate AI transformation, and the faster adoption of AI solutions by users. The AI R&D Strategic Plan can be updated to support American leadership in each of these three races:

Win the Technology Race

We recommend OSTP consider the following three actions to advance the basic research required to drive the development of superior AI technologies:

Streamline R&D reporting processes and regulations: The current regulatory framework for applying for, reviewing, and awarding R&D grants is complex and time-consuming, often hindering innovation and deployment speed. For instance, GAO has found that principal investigators spent 42 percent of their time meeting Office of Management and Budget (OMB) documentation requirements, such as pre- and post-award administration and the preparation of proposals and reports. This decreases the

[2] Ranjit Bawa: *Now Decides Next: Generating a New Future.* (Deloitte's State of Generative AI in the Enterprise Q4 Report, January 2025).
[3] Michael Raynor: *The Strategy Paradox* (Deloitte Review, 2007).

time spent on active research and adds unnecessary costs to R&D. This issue is exacerbated by overlapping regulations across funding agencies, which can discourage smaller entities from applying, thus slowing down the overall pace of AI research and limiting the effects of R&D grant spending.[4] To address these challenges, government agencies that award R&D grant spending should consider reviewing their approaches to grant funding, award, and reporting to streamline and automate funds administration. By leveraging existing AI-tools, OSTP can analyze existing regulatory texts and yield insights on potential sections for streamlining or elimination.

Reaffirm broad targets over selecting specific R&D topics: The 2023 Strategic Plan identified several R&D priorities, including using AI for cybersecurity and designing and building Agentic AI products. Many of these 2023 priorities have evolved from basic research to market-facing products and further advancement in this area is best left to the private sector. The rapid progress of research since 2023 demonstrates the value in setting broader R&D targets over selecting specific priorities. As such, we recommend that OSTP review the Strategic Plan and set longer-term R&D targets. This will enable more flexibility in directing resources towards the most promising questions and increases the chance of unexpected breakthroughs.

Widen R&D funding to support improved AI technical infrastructure: Our research indicates that funding for critical AI infrastructure is the most common category of AI policy employed by governments[5]. However, much of this support is focused on social infrastructure (such as workforce development funding and information sharing bodies). Relatively little investment has been made into technical infrastructure such as compute-sharing platforms, representative training data sets, and advanced cybersecurity frameworks to protect AI systems from unintended use. To address this issue, OSTP can revise its R&D Strategic Plan to place a greater focus on technical research initiatives that are required to host AI applications at scale.

Win the Business Model Race

Maintaining American leadership in AI requires R&D in how AI solutions can drive value. To this end, we recommend that OSTP consider the following three actions:

Coordinate foundational research to understand LLM behaviors: Large Language Models (LLMs) power a wide range of Generative AI solutions. However, today's researchers still do not fully understand how LLMs interpret data, provide user responses, or make known mistakes. This lack of understanding limits the value of AI solutions, as business leaders will not adopt AI solutions at scale if those solutions cannot be trusted to produce results at a level of quality on par with humans. To address these issues, we recommend that OSTP advise that R&D funding agencies

[4] Government Accountability Office: *Federal Research Grants: Opportunities Remain for Agencies to Streamline Administrative Requirements* (GAO-16-573).
[5] Deloitte Center for Government Insights: *The AI Regulations that Aren't Being Talked About* (Deloitte Insights Magazine, 2023).

allocate resources for research aimed at demystifying LLM decision-making and understanding deceptive behaviors. This research should focus on understanding AI interpretability and establishing standards to reduce or eliminate unexpected emergent behaviors. Such research would not only open new business models currently restricted from using AI (such as high-complexity financial transactions where auditability is required) but also improve the demand for American AI solutions compared with our global competitors. Furthermore, we recommend that OSTP deepen its coordination on LLM behavior research across industry and government, including by creating repositories where researchers can share knowledge, hosting symposia, and supporting the development of shared technical infrastructure.

Advance safety and reliability research, ensuring that the United States market can keep pace with rapidly evolving and increasingly advanced threats, including the ability to detect fraudulent activity and protect models from foreign adversaries and other malicious actors. Additionally, research into outcomes-based, risk-informed regulations can spur greater AI adoption both by removing onerous barriers to AI builders, but also by protecting the equities that the public cares about. Part of this investment can be put towards developing an AI model selection framework, providing standards and guidelines for assessing models based on safety and reliability criteria such as potential harm and robustness against failure, allowing organizations to proactively select models best suited for the risk profile of their specific use cases.

Win the Adoption Race

For AI to deliver on its promise, government must improve AI fluency across the workforce. As such, we recommend OSTP consider the following two actions:

Accelerate AI Workforce Development Through Grants: The AI R&D Strategic Plan identifies the need to build American skills in AI at all levels and across industry, academia, and government. To accomplish this goal, the Plan recommends a range of interventions to upskill the workforce, including collecting more data on the AI workforce, creating instructional materials at all levels, and programs to retrain the workforce. Given the speed of AI advancements and the differences in worker needs, we recommend that NSTC act as a clearinghouse of leading practices for workforce development and offer grants to State Workforce Development agencies, academic organizations, and the private sector to develop their workers. This approach would better target specific workforce development needs at various industries and preserve the role that State and Local governments provide in education.

Improving Industry and Academic Partnerships: Expanding public-private partnerships is essential to advance AI innovation. This requires a skilled workforce, which can be achieved through early education initiatives and programs like AI scholarships to prepare a future-ready talent pool. Promoting data interoperability

frameworks – structured guidelines and standards that enable data to be shared and used across systems – can enable industry, academia, and government to build on each other's knowledge[6]. OSTP can explicitly include mechanisms for information sharing as part of its strategy to drive faster AI innovation. Public-private collaboration, such as through federal AI challenges and joint ventures, can scale government leadership in AI. Finally, supporting incubators and accelerators that connect promising ideas with capital and resources is critical to transforming innovative concepts into scalable solutions, further strengthening the AI ecosystem.

Conclusion

Updating the AI R&D Strategic Plan is a pivotal step in ensuring the United States remains at the forefront of AI innovation. By prioritizing streamlined R&D processes, broad research targets, and infrastructure investments, OSTP can accelerate AI adoption and maintain U.S. leadership in this transformative field. Deloitte is committed to supporting these efforts by leveraging our extensive experience in AI implementation across government and industry, and we are eager to collaborate on strategies that drive economic growth and technological advancement.

[6] Adita Karkera, Dr. Kellie Nuttall, Mahesh Kelkar, and Joe Mariani: *Bridging the Data-Sharing Chasm* (Deloitte Center for Government Insights, 2023).