



Mozilla's Response to the The National Science Foundation's Request for Information on the Development of a 2025 National AI R&D Strategic Plan

About moz://a

Mozilla's mission is to ensure the internet is a global public resource, open and accessible to all. An internet that truly puts people first, where individuals can shape their own experience and are empowered, safe, and independent.

Founded as a community open source project in 1998, Mozilla consists of several organizations. Most notable is the non-profit Mozilla Foundation and its wholly owned subsidiary, the Mozilla Corporation, which leads our market-based work, including the development of the open-source Firefox web browser and Gecko, one of only three major browser engines. They work in close concert with each other and a global community of tens of thousands of volunteers under the single banner: Mozilla.

For the past five years, Mozilla has been committed to advancing trustworthy AI. Mozilla published a paper in early 2024, [Accelerating Progress Toward Trustworthy AI](#), that outlines how Mozilla and its allies are advancing openness, competition, and accountability in AI. Mozilla is putting its resources behind these priorities as well: Mozilla is investing \$30M in research and development on trustworthy AI via Mozilla.ai, as well as \$35M in responsible tech startups — including investments in notable startups like Hugging Face — through [Mozilla Ventures](#) and the [Mozilla Builders accelerator](#) program. On the frontlines of modern AI practices, Mozilla freely provides an [open-source, large-language model \(LLM\) AI model deployment system for local use](#) and empowers more people to enhance the safety of models through the [oDin bug bounty program](#).

As an independent and mission-driven organization, Mozilla is committed to working with regulators to develop effective policies that ensure that innovation and growth in AI serve the public interest in line with the [Mozilla Manifesto](#). In the past, Mozilla has provided comments on critical topics like the [Department of Energy's RFI on the Frontiers in AI for Science, Security, and Technology \(FASST\)](#), [NTIA's consultation on openness in AI models](#), [NIST's Request for Comments related to Managing Misuse Risk for Dual-Use Foundation Models](#), and [OSTP's AI Action Plan](#).

Executive Summary

Sustained and strategic federal investment remains essential to a robust and innovative AI ecosystem. Mozilla urges policymakers to focus on areas where the private sector is currently underinvesting, such as privacy-preserving technologies, energy-efficient model development, and smaller or bespoke open source models in order to ensure long-term national competitiveness and economic resilience. Programs like the National AI Research Resource (NAIRR) can play a pivotal role by expanding access to compute for under-resourced institutions and mission-driven research centers, helping diffuse AI R&D more expeditiously while supporting national priorities through the use of open source.

In parallel, the U.S. must strengthen the foundations of open source AI, based on the values of openness, transparency, and security, in order to enable an AI future that benefits all Americans. This can be done through measurement and evaluation frameworks that include resource consumption metrics to drive energy efficiency innovations, updated procurement practices that enable broader reuse and open sourcing of government-funded tools and data as well as targeted support for global diffusion of value-aligned open source AI. Mozilla also calls for a more expansive approach to public-private partnerships, engaging a broader spectrum of actors including open source nonprofits and rural academic institutions. These steps will help ensure the AI ecosystem evolves in a direction that is competitive, innovative, and benefits those who use it.

Policy Recommendations

Government Investment Plays a Critical Role in the AI R&D Ecosystem: Given the ongoing reexamination over how and what research is funded by the federal government, Mozilla would like to emphasize that government investment in the AI R&D ecosystem is a net positive for government, for the American people, and for innovation. Government investment into areas which are underfunded by industry for myriad reasons such as having no direct short-term pathway to profitability or initially unclear commercial uses – such as Geoffrey Hinton’s NSF-funded work in the 1980s on neural nets, which now underpin the modern AI ecosystem – are critical to America’s economic security and innovation ecosystem. There are several areas of low-hanging fruit where government investment would help to propel the AI space forward in a way that generates high returns including:

- Providing compute resources for smaller research institutions, such as land-grant and rural universities, to conduct AI-driven research. Certain innovation ecosystems can further be targeted. For example by working to solve specific health problems with AI by working with specialty research centers focused on the issue. The provision of compute is likely to be most efficiently delivered through a structured program like the National AI Research Resource.
- As most of the leading U.S. AI labs are focused on large frontier models, an important market segment has been neglected and opened a window for China to expand the global market share of their AI ecosystem through the use of the smaller and lower cost models. Investment into the development of smaller and bespoke open source models which can compete more effectively with foreign open source models will be critical to ensuring a competitive global marketplace not dominated by one geopolitical player and help to more quickly diffuse AI across the economy, speeding innovation. In addition, investment into alternatives to large frontier models will likely have further benefits, increasing competition and optionality in the market, spurring further innovation and giving businesses and consumers more choices.
- Providing data and resources to facilitate the development of more energy efficient AI models, including open source models, is likely to have high returns for the U.S. While efforts are ongoing to expand America's energy resources, such a process is time consuming. In order to remain competitive, the U.S. must also invest in energy efficient AI, which will enable America to move faster, de-risk in case bringing new energy production online is slower than expected, and provide immediate benefits for grid security, energy prices, and the environment.
- One of the key concerns about AI today is the potential impact of the technology on privacy, a right which Mozilla believes is fundamental. By providing research funding into promising areas such as PETs for AI, which were discussed in the [House AI Task Force Report](#), and working to promote access to government data sets in privacy preserving ways, OSTP and NSF can help push the field forward. This would likely not only enable a better experience for end users of AI but create more trust in the technology, further spurring adoption.

Supporting Open Source AI Diffusion Globally: Supporting the export of AI technology that enriches the lives of human beings is critical to ensuring the success of value-aligned AI companies and the global adoption of such technologies. Open source is primed to play a key role in the global AI ecosystem given it is generally more easily accessible thanks to its lower cost and modifiability. In addition to providing resources to the open source

community through research grants and compute, the U.S. should work with global standards setting bodies to shape the regulatory landscape in a positive way for open source developers. Finally, we recommend exploring the use of finance support mechanisms through EXIM, the DFC, and other grant, loan, or funding programs to help facilitate global adoption of U.S. developed open-source AI, including when part of a larger product or export (ex. A U.S. robotics export that leverages open source AI to maximize operational efficiency).

Developing shared public datasets and environments for AI training and testing: As emphasized in Strategy 5 of the National AI R&D Strategic Plan 2023 Update, developing and making accessible shared public datasets and resources meant to advance scientific progress that will benefit humanity. In order to most effectively maximize the benefits of public datasets and other resources, such as newly developed environments and tooling, Mozilla recommends that the government not just seek to open source such datasets and tools but actively promote their use in the open source ecosystem by partnering with nonprofit organizations and open source companies and communities to disseminate information and resources. In addition, Mozilla recommends that federal agencies broadly examine future contractual agreements that relate to the development of AI models, tools, or which may result in the creation of any datasets which could be useful for the AI innovation ecosystem. By working to update contractual terms in future procurement agreements to ensure that the government can use procured models, tools, and data in any way it chooses, including by open sourcing such products, the government can spur innovation while potentially driving down government costs by making acquired tools available for other agencies thus reducing duplicative product development and contracts.

Measure and Evaluate Open Source AI Systems & Develop Standards: Ongoing work in NIST to measure and evaluate AI systems and develop relevant standards across a range of metrics is useful for the development of a shared understanding of the state of the American AI ecosystem. With the rapid adoption of domestic open source AI models like Llama and pledges from top AI labs to introduce more open source AI models, it would be beneficial to expand measurement, evaluation, and standards setting work to open source AI more broadly. In addition, given the launch of a range of highly competitive foreign open source AI models, it would be useful to expand measurement and evaluation to include top foreign open source models. This would help to create more understanding of the broader competitive ecosystem both in AI and policy communities and help to inform the global development of benchmarks and standards for open source AI. When

considering how to most effectively measure, evaluate, and develop standards, Mozilla recommends working closely with leading open source developers and communities. Finally, as the government determines what to include in evals and standards, we recommend the inclusion of resource consumption information (ex. Electricity use and water consumption).

Expanding Public-Private Partnerships to Accelerate Advances in AI: The 2023 National AI R&D Strategic Plan 2023 Update reinforced the importance of public-private partnerships when it came to accelerating AI innovation. The relationship between the public and private sector is critical and aligning incentives, finding the right partners, and having shared strategic objectives is necessary to ensure a robust and useful long-term relationship between the two worlds. We hope that the administration continues to prioritize public-private partnerships and works to include more out of the box partners who can provide significant value, such as rural schools like Dakota State University which has existing partnerships with federal agencies like Army Cyber, or open source focused nonprofits and public benefit corporations which can help coordinate the broader open source community and accelerate open source AI innovation.

Conclusion

Mozilla appreciates the Office of Science and Technology Policy (OSTP) and the Networking and Information Technology Research and Development (NITRD) National Coordination Office (NCO)'s call for comments on R&D to accelerate AI-driven innovation. Continued collaboration and targeted investment across high-impact areas such as open source infrastructure, privacy-preserving technologies, and access to compute will be critical to ensuring the U.S. remains globally competitive. Not only can the U.S. help to more rapidly diffuse a technology which has the potential to be one of the most consequential of our lifetimes across American industry and the workforce, but through investment in and support of open source AI can help to spur global innovation built on a foundation of competition, accountability, and openness which will benefit the American people and humanity writ large. We look forward to working together to advance a more sustainable and innovation-driven AI future.