December 4, 2023

Director Shalanda D. Young Office of Management and Budget 725 17th St., NW Washington, D.C. 20503

RE: OMB–2023–0020, Proposed Memorandum for the Heads of Executive Departments and Agencies

Dear Director Young and OMB Colleagues:

We are writing in response to the request for comment on the proposed draft memorandum titled "<u>Advancing Governance, Innovation, and Risk Management for Agency Use of Artificial Intelligence</u>" by the Office of Management and Budget (the OMB Memo).

We write as individuals with decades of experience in technology and government services and want to express our support for the requirements in the OMB Memo stating that:

Agencies should also ensure adequate access for AI developers to the software tools, *open-source libraries*, and deployment and monitoring capabilities necessary to rapidly develop, test, and maintain AI applications.

We believe that open approaches to innovation for government technology are critical for responsible, accountable, and transparent use of AI for the federal government.

We write to amplify the need for this open innovation approach and offer context for why it is so necessary for the government to be able to seize this moment to lead with responsible innovation.

First, the OMB Memo should expressly draw the connection to established federal policy around open source.<sup>1</sup> OMB Memorandum M-16-21, "<u>Federal Source Code Policy: Achieving Efficiency.</u> <u>Transparency, and Innovation through Reusable and Open Source Software</u>" established a

<sup>&</sup>lt;sup>1</sup> We focus in this letter on policies around open source, which is a type of software whose source code is publicly available for individuals to view, use, modify, and distribute. See also <u>https://opensource.org/osd/</u>. Open source can be conceived of as an example of open innovation in software, and we do not draw sharp definitional distinctions here. See <u>http://oss-watch.ac.uk/resources/openinnov</u>. While the term open source is often used to characterize foundation models loosely, there are important distinctions to be drawn there, as the "openness" of a foundation model depends not just on source code availability, but also on the availability of model weights, artifacts, documentation, data, and compute. For a lucid exposition of the gradient of open release, see Solaiman, Irene. "The gradient of generative AI release: Methods and considerations." In Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency, pp. 111-122.

federal policy in support of open innovation to benefit Americans. Agencies should <u>default to</u> <u>open source</u> when developing or acquiring code, and agencies piloted programs to require at least 20 percent of new software to be commissioned as open source. Many agencies, from the <u>Department of Commerce</u> to the <u>General Services Administration</u> to the <u>Department of Defense</u>, have built on this policy and examples abound. One <u>report</u> found that open source software "plays a more critical role in the [Department of Defense] than has generally been recognized." The <u>US Digital Service</u> has used an open source approach to build tools to help address the climate crisis.

Second, there are long-recognized benefits to open source approaches, including the reusability and robustness of code, the enhancement of <u>digital services</u> and federal programs, and the ability for government to develop collaborative approaches with the private sector. The emergence of AI itself illustrates the central role that open source approaches have played to catalyze innovation in the field.<sup>2</sup> While some questions have emerged around large foundation models,<sup>3</sup> the vast majority of AI applications within federal government are not such use cases.<sup>4</sup> More importantly, open research environments are exactly the ones that have enabled a wide range of researchers to uncover vulnerabilities, biases, and limitations with such models.<sup>5</sup>

Third, Executive Order 14110 takes important steps to understand the benefits and risks of Generative AI. The risks for a very limited set of models – particularly relative to machine learning as presently used within government – should not detract from the overall commitment toward an open approach to AI innovation. The development of privacy-enhancing technologies and cybersecurity standards, as also required under the Executive Order, will benefit tremendously from the reliance on open source. As has long been established in the cybersecurity field, security through obscurity is not a solution:<sup>6</sup> "With enough eyeballs, all bugs are shallow."<sup>7</sup> This open-first orientation has been widely acknowledged to have surfaced and

<sup>&</sup>lt;sup>2</sup> Sonnenburg, Soren, Mikio L. Braun, Cheng Soon Ong, Samy Bengio, Leon Bottou, Geoffrey Holmes, Yann LeCunn et al. "The need for open source software in machine learning." (2007): 2443-2466.

<sup>&</sup>lt;sup>3</sup> Bommasani, Rishi, Drew A. Hudson, Ehsan Adeli, Russ Altman, Simran Arora, Sydney von Arx, Michael S. Bernstein et al. "On the opportunities and risks of foundation models." *arXiv preprint arXiv:2108.07258* (2021). See also Stanford Center for Research on Foundation Models (CRFM), Stanford Institute for Human-Centered Artificial Intelligence (HAI), and PrincetonUniversity's Center for Information Technology Policy (CITP) Letter on the National Telecommunications and Information Administration request for information on AI accountability policy,

https://hai.stanford.edu/sites/default/files/2023-06/Response-to-Request.pdf.

<sup>&</sup>lt;sup>4</sup> Cuéllar, Mariano-Florentino, David Freeman Engstrom, Daniel E. Ho, and Catherine Sharkey. 2019. "Administering by Algorithm: Artificial Intelligence in the Regulatory State." Administrative Conference of the United States.

<sup>&</sup>lt;sup>5</sup> See, e.g., Zou, Andy, Zifan Wang, J. Zico Kolter, and Matt Fredrikson. "Universal and transferable adversarial attacks on aligned language models." *arXiv preprint arXiv:2307.15043* (2023).

<sup>&</sup>lt;sup>6</sup> Guha, Neel, Christie M. Lawrence, Lindsey A. Gailmard, Kit T. Rodolfa, Faiz Surani, Rishi Bommasani, Inioluwa Deborah Raji, Mariano-Florentino Cuéllar, Colleen Honigsberg, and Daniel E. Ho. 2024. "Al Regulation Has Its Own Alignment Problem: The Technical and Institutional Feasibility of Disclosure, Registration, Licensing, and Auditing." George Washington Law Review.

<sup>&</sup>lt;sup>7</sup> Raymond, Eric. "The cathedral and the bazaar." *Knowledge, Technology & Policy* 12, no. 3 (1999): 23-49.

resolved a vast number of vulnerabilities that may have been left unaddressed in a closed system,<sup>8</sup> and open design is surfaced as a core principle of <u>NIST's server security guidance</u>.

We strongly support OMB's furtherance on the reliance on open source, but encourage explicit linking to long-established federal policy favoring open innovation approaches.

Best,

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<sup>&</sup>lt;sup>8</sup> Brandon Keller, Andrew Meneely & Benjamin Meyers, What Happens When We Fuzz? Investigating OSS-Fuzz Bug History 4, ARXIV (May 19, 2023), https://arxiv.org/abs/2305.11433; Frank Nagle, et al., Report on the 2020 FOSS Contributor Survey (2020),

https://8112310.fs1.hubspotusercontent-na1.net/hubfs/8112310/2020FOSSContributorSurveyReport\_121 020.pdf

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