



4 March 2022

Stacy Murphy
US Office of Science and Technology Policy
1650 Pennsylvania Avenue NW
Washington, DC 20502

Dear Ms. Murphy,

BSA | The Software Alliance appreciates the opportunity to provide feedback to the Office of Science and Technology Policy (OSTP) as it considers updates to the National Artificial Intelligence Research and Development Strategic Plan. BSA is an association of the world's leading enterprise software companies that provide businesses in every sector of the economy with tools to operate more competitively and innovate more responsibly.¹ As leaders in the development of enterprise AI, BSA members have unique insights into the technology's tremendous potential to spur digital transformation and the policies that can best support a competitive and thriving national AI R&D ecosystem.

The National AI R&D Strategic Plan is an important signal of US priorities for the development of AI. We are pleased that OSTP continues to revisit the Strategic Plan to ensure that it accounts for shifts in the technological landscape and the needs of US R&D stakeholders. Overall, we regard the eight strategic priorities identified in the 2019 update to the Strategic Plan to be the right areas of continued focus and would not recommend any major course corrections. Instead, as OSTP considers updates to the AI R&D Strategic Plan, BSA offers below several recommendations for advancing the existing strategies and ensuring that federal investments in R&D are aligned with core US interests.

Expanding the National AI Research Institutes Program

As part of the effort to sustain long-term investments in fundamental AI research (Strategy 1), the 2022 R&D Strategic Plan should support the continued expansion of the National AI Research Institutes Program.² The National AI Research Institutes Program is helping to establish a nationwide network of AI research clusters- including regional hubs- that can support sustained, large-scale, and multidisciplinary research into pressing challenges. To date, the Program has established 18 Research Institutes that each operate as hubs for research into how AI can be used to address a broad range of societal and technological

¹ BSA's members include: Adobe, Alteryx, Atlassian, Autodesk, Bentley Systems, Box, Cisco, CNC/Mastercam, DocuSign, Dropbox, IBM, Informatica, Intel, MathWorks, Microsoft, Okta, Oracle, PTC, Salesforce, SAP, ServiceNow, Shopify Inc., Siemens Industry Software Inc., Splunk, Trend Micro, Trimble Solutions Corporation, Twilio, Unity Technologies, Inc., Workday, Zendesk, and Zoom Video Communications, Inc.

² National Artificial Intelligence Research Institutes, available at <https://beta.nsf.gov/funding/opportunities/national-artificial-intelligence-research-institutes>

challenges, including climate change,³ agricultural supply chain challenges,⁴ and cybersecurity.⁵ By bringing together researchers from multiple academic institutions, as well as experts from industry, government, and NGOs, each of the Program's Research Institutes is helping to break down siloes and foster coordination across the United States' dispersed AI R&D ecosystem. The 2022 R&D Strategic Plan should highlight the critical importance of the National AI Research Institutes Program and signal support for its continued expansion, including the promotion of regional hubs for AI R&D.

Investing in Tools and Resources to Manage AI Risks

BSA strongly supports the AI R&D Strategic Plan's focus on supporting research into the ethical, legal and societal implications of AI, including the potential risks of unintended bias (Strategy 3). The 2022 R&D Strategic Plan should build on this commitment by outlining how the federal government will support efforts to develop tools and resources that can help organizations manage the risks of AI. For instance, the 2022 R&D Strategic Plan should highlight the critical work being undertaken by the National Institute for Standards and Technology (NIST) to develop a cross-sectoral AI Risk Management Framework. BSA and its members are also deeply invested in the development of risk management tools, particularly as it relates to bias. In addition to supporting the development of the NIST AI Risk Management Framework, we recently published *Confronting Bias: BSA's Framework to Build Trust in AI*⁶ which outlines a comprehensive, lifecycle-based methodology for performing impact assessments to identify risks of AI bias and corresponding risk mitigation best practices. The AI R&D Strategic Plan should also invest in work to develop standardized frameworks for benchmark and operational testing of AI systems. This type of testing is important to ensure systems are performing appropriately for a given use case and is an important part of the risk identification and mitigation process. Further research into appropriate training programs for those using and overseeing AI systems, with a focus on developing programs for use of high-risk systems, should also be prioritized.

Enhancing Visibility into the Needs of the AI Workforce

There is growing demand across technology fields for skilled workers to fill critical roles, and the Strategic Plan correctly identifies the importance of meeting AI workforce needs to further US leadership in AI R&D (Strategy 7). The Strategic Plan can help address the current skilled worker shortage by prioritizing investments into initiatives that will grow the pipeline of future talent and make it easier to identify skills that are in demand. For instance, OSTP should consider how US labor data can be better leveraged to provide greater visibility into the needs of the AI workforce. Under current practice, labor force data often takes several months to be released. As a result, job seekers who may be interested in pursuing reskilling programs are unable to base their decisions on real-time data about what skills are in greatest demand. The lack of real-time labor data also impairs the effectiveness of government supported retraining initiatives by obscuring economic trends. To overcome these challenges, 2022 R&D Strategic Plan should prioritize research into how the public and private sectors can work together to enhance the collection and availability of real-time labor data. The government should work to better incentivize employers to improve their data collection methods, consolidate existing workforce

³ NSF AI Institute for Research on Trustworthy AI in Weather, Climate, and Coastal Oceanography (AI2ES), available at <https://www.ai2es.org/>

⁴ AgAID Institute, available at <https://agaid.org/>

⁵ NSF AI Institute for Future Edge Networks and Distributed Intelligence, available at <https://aiedge.osu.edu/>

⁶ *Confronting Bias: The BSA Framework to Build Trust in AI* (June 2021), available at <https://ai.bsa.org/wp-content/uploads/2021/06/2021bsaaibias.pdf>

datasets, and support the creation of a modernized labor database.⁷ Such improvements could help increase the number of workers in high-demand fields related to AI R&D outside of traditional graduate and post-graduate roles, such as data analysis, and those that involve the integration of advanced computing skills into other disciplines.

BSA appreciates the opportunity to provide input into the update of the strategic plan and looks forward to continued collaboration with OSTP on this and other AI-related projects.

Sincerely,

Heidi Obermeyer
Manager, Policy

⁷ Business leaders call for 100B in workforce investments, available at <https://nationalskillscoalition.org/wp-content/uploads/2021/08/Business-leaders-call-for-100B-in-workforce-investments.pdf>