BEFORE THE
NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT NATIONAL COORDINATION OFFICE AND WHITE HOUSE OFFICE OF SCIENCE AND TECHNOLOGY POLICY

In the Matter of **Request for Information on the Development of a 2025 National Artificial Intelligence (AI) Research and Development (R&D) Strategic Plan**	Docket ID No. NSF-2025-OGC-0001

COMMENTS OF THE CONSUMER TECHNOLOGY ASSOCIATION IN RESPONSE TO THE NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT NATIONAL COORDINATION OFFICE ON THE DEVELOPMENT OF A 2025 NATIONAL ARTIFICIAL INTELLIGENCE RESEARCH AND DEVELOPMENT STRATEGIC PLAN

The Consumer Technology Association® ("CTA") submits this response to the Networking and Information Technology Research and Development ("NITRD") National Coordination Office's ("NCO") Request for Information on behalf of the Office of Science and Technology Policy ("OSTP") regarding the development of a 2025 National Artificial Intelligence ("AI") Research and Development ("R&D") Strategic Plan.[1]

CTA's membership includes over 1200 companies from every facet of the consumer technology industry, including manufacturers, distributors, developers, retailers, and integrators, with startups or small and mid-sized companies comprising 80 percent of CTA's members. CTA also owns and produces CES®—the world's most powerful tech event.

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I. INTRODUCTION

CTA applauds the Trump Administration's (the "Administration") early actions regarding our nation's AI policy to enhance competitiveness and maintain American leadership in AI innovation. The Stanford Institute for Human-Centered Artificial Intelligence analyzed data on key indicators including research, private investment, and patents from 36 countries and ranked the U.S. first in AI development.[2] R&D investment is a critical component of innovation and maintaining America's long-term advantage in this strategically important sector. That is precisely why CTA evaluates R&D investment (among other factors) when evaluating states for its annual U.S. Innovation Scorecard.[3] CTA member companies continue to lead in the development and implementation of AI-enabled systems and solutions that are positively impacting human and societal development: promoting growth, improving the welfare and well-being of individuals, and enhancing global innovation and productivity.[4]

The Administration should ensure the AI R&D Plan identifies and seeks to eliminate regulatory barriers to private sector investment in R&D for AI, to enable the development of cutting-edge technologies that will benefit the greater community. More, early-stage research will ensure that AI is created and implemented in a secure and efficient manner. Such investments by the private sector are crucial for maintaining the

[2] *Stanford HAI Staff, Global AI Power Rankings: Stanford HAI Tool Ranks 36 Countries in AI*, November 21, 2024, available at: https://hai.stanford.edu/news/global-ai-power-rankings-stanford-hai-tool-ranks-36-countries-ai.

[3] *Consumer Technology Association, U.S. Innovation Scorecard*, available at: https://www.cta.tech/innovation-scorecard/us-innovation-scorecard/.

[4] For example, Google has worked with the ALS Therapy Development Institute to use AI technologies to improve the lives of people with ALS. *Google and ALS TDI: Working Together to Use Data to Improve the Lives of People with ALS*, March 3, 2022, available at https://www.als.net/news/google-and-als-tdi/. And Microsoft's AI for Good Lab is exploring AI solutions to pressing issues such as curbing malnutrition and empowering blind and low-vision individuals to easily navigate their world. *See* AI For Good Lab, available at: https://www.microsoft.com/en-us/research/group/ai-for-good-research-lab/.

United States' position at the forefront of technological innovation, ensuring economic growth, national security, and global competitiveness.

Alongside the Administration’s anticipated AI Action Plan, a cohesive and comprehensive AI R&D Plan will enable the Administration to harness the power of the federal government to bolster American leadership in AI innovation and lay the groundwork for long-term growth both in the U.S. and abroad. Further, a well-developed and thoughtful AI R&D Plan could have force multiplier effects on private investments and establish the U.S. tech industry as a hub of talent, knowledge, investment, equipment, and toolsets.

II. INCENTIVIZE AND INVEST IN AI INFRASTRUCTURE

The Administration should adopt policies that encourage and facilitate the infrastructure necessary to support the development and training of large models, such as promoting public-private partnerships and developing policies that encourage domestic chip development and data centers.

The Administration should begin by fostering partnerships between industry and academic institutions to accelerate AI research and development. By creating incentives for collaborative projects, the Administration can leverage the strengths of both sectors to drive innovation. This could include encouraging private sector research initiatives, establishing AI research “centers of excellence,” and supporting internship and fellowship programs that allow students to gain hands-on experience in AI development.

The Administration should also promote research into optimizing the distribution of AI workloads by developing frameworks for determining the optimal distribution of AI workloads between cloud and on-device platforms at the network edge (i.e., edge or on-

device AI) to maximize efficiency, privacy, and scalability. A well-conceived distributed processing architecture will be critical to ensuring that AI systems can scale and reach their full potential as generative AI adoption grows and computing demands increase. To date, relatively little R&D has focused on the unique opportunities and challenges of building robust, distributed AI ecosystems, but it is imperative that the Administration begin promoting research into foundational technology frameworks like distributed AI workloads that enable intelligent, scalable, and collaborative deployments beyond centralized cloud environments.

This is especially important from a global leadership perspective as other countries work to address such issues. For example, the South Korean Ministry of Trade, Industry, and Energy recently launched a project seeking to develop on-device AI semiconductors in major fields such as automotives, internet of things, robotics, and defense.[5] Supporting advancements in distributed AI workloads presents another means of positioning the U.S. as a global-leader in AI-driven productivity and innovation, unlocking potentially significant economic growth.

III. ESTABLISH AUTHORITATIVE BENCHMARKS FOR EVALUATING AND MEASURING AI SAFETY

Measuring the capabilities of AI models has been a persistent issue that impedes efforts to compare, benchmark, and evaluate models. Federal commitment to establishing uniform, widely accepted, voluntary benchmarks using input from industry stakeholders would facilitate innovation by creating a common vocabulary regarding the capabilities of AI models, and would in turn inform policy discussion about the future of

[5] *See Ministry of Trade, Industry and Energy, Press Release, Full-Scale Promotion of "K-on-device AI Semiconductor Development in Four Fields to Preempt the Physical AI Era*, May 20, 2025, available at https://www.motie.go.kr/kor/article/ATCL3f49a5a8c/170538/view.

AI. Widely accepted benchmarks lend credibility to technology advancements, which will in turn encourage public adoption and facilitate an expanded interoperable marketplace. Specific benchmarks should be developed for different domains, including system performance, safety, interoperability, security, privacy, and transparency. The Administration should take a leadership and coordination role in the development of benchmarks as part of a broader R&D strategic plan, working with industry stakeholders to establish credibility and wide adoption of any final voluntary metrics or standards.

IV. ENCOURAGE ADOPTION OF VOLUNTARY INDUSTRY STANDARDS

In addition to facilitating the development of technical benchmarks, the Administration should encourage the adoption of existing, voluntary frameworks to support responsible AI innovation. Many leading standards organizations have contributed to the growing body of standards that ensure the development of responsible AI, and the Administration should leverage such work rather than trying to duplicate those efforts. For example, CTA is an accredited ANSI developer and has developed two key AI standards to guide responsible AI development:

- ANSI/CTA-2096: Guidelines for Developing Trustworthy AI Systems – This standard provides a structured approach for companies to design AI systems emphasizing transparency, accountability, and fairness.
- ANSI/CTA-2125: Best Practices and Recommendations for Information Disclosure – This standard outlines recommendations for clear and effective disclosure practices to enhance trust and user understanding of AI systems.

Voluntary standards such as these avoid rigid mandates that hinder innovation while allowing companies to innovate responsibly and reinforce public trust in AI

technologies. The Administration should use and support such frameworks as models for effective AI governance.

In addition, the Administration should focus on promoting consistent standards towards the development of the next generation of AI-enabled models, systems, and applications. For example, the Administration could work with industry to develop standards and protocols for agent-to-agent communication[6] and secure design patterns for agentic systems. It could also focus on the promotion of consistent standards towards the development of AI models and AI-enabled tooling. These efforts could build on the work of NIST, whose risk management framework and playbook for AI and generative AI have become *de facto* standards for managing risks. Similar efforts should focus on the next generation of AI models, systems and applications, like those referenced above.

V. ENCOURAGE INVESTMENT IN CYBERSECURITY RESEARCH AND DEVELOPMENT TO ADDRESS RAPIDLY EMERGING THREATS

AI technologies have already begun to revolutionize both cybersecurity threats and defenses. Cyber threats continue to increase and diversify, which creates a cycle of threats/opportunities that demands the focus of both public and private experts. The Administration should focus on research and development that can identify and develop new security techniques that are suited to countering advanced cybersecurity threats. Indeed, emerging AI technologies such as generative AI may enhance those capabilities and expand workforce opportunities in the cybersecurity industry. For

[6] Protocols for agent-to-agent communications are already emerging. *See* Google's A2A Protocol (https://developers.googleblog.com/en/a2a-a-new-era-of-agent-interoperability/), and the open source initiative led by AGNTCY (https://agntcy.org/). The Administration could foster further development and consensus-building around standards to ensure the emerging opportunities around agentic AI are fully realized.

example, automated red-teaming is a promising area of research and could benefit from public-private partnership. New techniques are also required to ensure the security of model weights for advanced AI systems as well as methods for mitigating risks across the AI lifecycle from development to deployment.[7] Focused research and development efforts and investments in this area will pay dividends going forward in building safe, secure and trustworthy systems.

VI. PROMOTE OPEN DATA INITIATIVES

The Administration should promote open data initiatives that can lower or eliminate barriers to accessing large datasets that could be used to train and fine-tune large AI models. Building on the work done to make government data available at data.gov, the Administration should develop large datasets accessible to U.S. businesses that could be used to responsibly train AI models. Doing so would enhance competition within the U.S. by lowering the barrier for smaller firms to access sufficiently large datasets to train AI models.

VII. LEVERAGE AI R&D POLICY TO FOSTER THE FURTHER DEVELOPMENT OF ESSENTIAL US AI WORKFORCE SKILLS

The U.S. has a critical need for a highly skilled workforce capable of meeting current and future needs. CTA strongly supports efforts to address the growing “skills gap” in the U.S. and ensure that the workforce has the right training to fill the jobs that are currently open. In the future, critical functions across every sector of the economy

[7] The AI ecosystem is diverse and disaggregated. There are a variety of vendors offering systems and solutions including pre-trained models, open-source (or open weight) systems, and third-party datasets. Given the diversity of the AI ecosystem the Administration should focus efforts on enhancing transparency and accountability across the AI supply chain to ensure that this sector continues to grow and lead in the global market.

will likely be driven by AI technologies. Companies indicate that skills in data analytics, engineering, software development and cloud computing are in high demand.[8]

Some of these needs may be addressed through creative approaches to education and training—such as through apprenticeship programs.[9] The AI R&D Plan should explicitly address the need for workforce skills development as a component of its broader mission to expand and enhance the U.S.'s global leadership in AI.

To build a robust AI workforce, the Administration should also encourage expanded access to AI education and training programs. This includes promoting AI-focused degree programs at universities and providing resources for online AI courses and certifications. By making AI education more accessible, the Administration can equip the next generation with the skills needed to thrive in an AI-driven economy.

Also crucial to meeting the highly-skilled workforce needs of U.S. innovators is access to the best and brightest talent across the globe. Other countries are innovating, and talented individuals want to come to the U.S., but if they cannot—they will go somewhere else. For generations, immigration has been the heart of our country's strength. Many of our leading innovators—founders, engineers, and more—are immigrants or close descendants of immigrants. Amazon, Apple, Google, Intel, Meta, Microsoft, and NVIDIA are examples of this. The U.S. must cherish and protect its status as the country of choice for creators, thinkers, builders, and doers. This means we need to (i) increase our efforts on STEM education and workforce training and (ii)

[8] *See Consumer Technology Association, Future of Work: 2021 CTA Member Survey*, at 3,7 (Oct. 2021).
[9] *See Consumer Technology Association, Why Tech Companies Should Offer Apprenticeships: A Practical Guide to Understanding the Value of Apprenticeships, Their Structure and How They Fill Talent Pipelines*, at 8-9, available at https://cdn.cta.tech/cta/media/media/resources/research/pdfs/cta-apprenticeship-white-paper.pdf.

improve access to visas and pursue common sense immigration reform in a manner that aligns with broader AI R&D policies.

VIII. CONCLUSION

CTA appreciates the Administration's proactive efforts to ensure continued American leadership in AI innovation. By taking the actions outlined above, the Administration can lay a foundation for sustained, long-term growth and innovation in American AI research and development, ensuring that the U.S. continues to lead in the development of this critical technology.

Respectfully submitted,

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