

# PUBLIC SUBMISSION

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## General Comment

Please see our attached TeraDact - Office of Science & Technology Policy's Request for Information on the Development of an Artificial Intelligence (AI) Action Plan

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## Attachments

TeraDact Office of Science Technology Polycys Request for Information on the Development of an Artificial Intelligence AI Action Plan



Office of Science & Technology Policy's Request for Information  
on the Development of an Artificial Intelligence (AI) Action Plan  
90 Fed. Reg. 9088 (Feb. 6, 2025)  
Docket No. NSF FRDOC 0001

March 14, 2025

Artificial Intelligence has shown itself to be a revolutionary advancement for the United States and the world to an even greater extent than the telegraph, telephone, and the internet to the daily life of our citizens. With near unlimited capability to revolutionize most, if not all aspects of American life for the better when harnessed appropriately for our common good. As a result, there is a keen desire to ensure that the United States remains a critical world and thought leader for the advancement of AI as we undergo this revolutionary transition period. There is a real potential for AI to fundamentally transform nearly every industry and aspect within the United States and to supercharge defense, medical, and scientific discoveries and improve global efficiencies for citizens of the United States and by extension all citizens of the world will also see improvements to their daily life. To support this, it will require the custom tailoring of our policy, procedures, protocols, legislation, and frameworks by Federal, State, and Local governments to ensure that the United States moves cohesively into this new age of wonder supported by the advancement of AI. TeraDact has already participated in the development and application of AI-based frameworks at a nation-state level for the United Kingdom<sup>1,2,3</sup> and has demonstrated American Dynamism in action by providing advanced AI to drive the optimization and efficiency for justice, policing, and national forces ensuring the most efficient use of resources by the United Kingdom in support of its citizens and to place resources where they can provide the most value while alleviating make-work requirements. Our experience with nation-state frameworks provides us with unique insight into the uncharted waters that the United States will be navigating via this Request For Information (RFI) and how to best promote the United States development of advanced AI while simultaneously improving the lives of our fellow citizens.

As it stands, the United States is a leader in AI, but we are not immune to foreign or malice-motivated actors seeking to disrupt our AI capabilities and future development. As most recently shown by foreign AI entities this year<sup>4</sup>, outside actors seek to leverage the advancements the United States has developed for AI Infrastructure, Hardware, Platforms, Solutions, and Tooling to quickly train, copycat, and bootleg off our industry-leading AI industry's hard-earned research and development. Unfortunately, there appears to be a coming balkanization of the world based on the underlying foundational technologies, and ultimately our partners and allies will be looking for leadership from the United States to provide foundational technology based upon our ideals of democratic and ethical AI. To support these ideals, the United States needs to act with alacrity to maintain its competitive advantage and to drive further innovation to unlock our full AI potential for our citizens, our partners and allies<sup>5</sup>, and for the betterment of the world.

TeraDact as an AI startup has demonstrated American Dynamism by being able to develop and harness advanced AI's benefits to support our American ideals for democratic and ethical AI use while supporting our national interests and the most efficient use of government resources to support our citizens. The United States currently leads the world in developing advanced AI Infrastructure, Hardware, Platforms, Solutions, and Tooling, and President Trump's request to sustain and enhance<sup>6</sup> America's global AI dominance is well-timed to ensure that the United States has the policy, procedures, protocols, legislation, and frameworks to drive this innovation and to "unleash our most brilliant innovators, and use AI to improve the well-being of our nations and their peoples." as Vice President Vance eloquently shared in his AI speech in Paris earlier this year<sup>7</sup>. TeraDact is committed to supporting the United States by supporting our Federal, State, and Local governments to bring the Artificial Intelligence Action Plan to life through our deep understanding of the technology and its impacts on our daily lives as Americans.

To further the United States' AI Action Plan, we recommended the following holistic ideals:

- Investment in AI at all levels: The United States can take concrete and fast-moving actions to boost AI development:
  - Sustained funding for foundational AI research and availability of computing infrastructure with our national laboratories to ensure necessary underlying resources to continue to drive research in advanced AI capabilities and functionality
  - Federal Policies and Frameworks to drive access to publicly available, timely, secure, and unique datasets necessary for AI to efficiently learn and be trained to support advancements in research

- and provide operational efficiencies to the economy across industries. Further, we look to the federal government to provide data privacy, security, and AI laws to ensure uniformity and common understanding of the legal framework necessary for AI to flourish
- Import and Export Controls to allow for a balance of trade while protecting national security while enabling the release of lesser AI models and capabilities to the wider global community similar to how the United States handles defense and military capabilities with our partners and allies. Ultimately our goal should be to share ethical AI with the global community that will drive both democratic ideals along with economic opportunities within our borders and with our allies. These controls should also consider the ebb and flow of capital to allow our allies and partners to bolster our capabilities and their own through the partnership of capabilities and capital to drive positive outcomes for citizens of both countries.
  - Act as the First and Foremost customer of advanced AI innovation vendors and providers, whether they are at the Infrastructure, Hardware, Platform, Solution, or Tooling level to ensure that a robust and viable market is available for all consumers to choose the appropriate tools and solutions whether they are State, Local, Enterprise, Small and Medium Business and Individual-based on their needs for advanced AI. While considering the broader implications of the global economy we also need to allow for our partners and allies to be able to fulfill the role of Second Customer to our advanced AI Infrastructure, Hardware, Platforms, Solutions and Tooling and enable efficiencies to which they would not have the prerequisite and foundational capabilities to independently develop the critical underpinning support structure and taking advantage of our authorized export of the appropriate level of advanced AI technologies.
  - Federal government to drive adoption as a leader of AI procurement
    - The use government can follow the lead of other nations<sup>8,9</sup> and surpass those nations through the accelerated adoption of AI infrastructure, solutions and technologies from a collection of United States based vendors and providers to ensure that the best of breed AI Infrastructure, Hardware, Platforms, Solutions and, Tooling to develop in a robust marketplace primed and initiated by the federal government
    - Promote open and free markets domestically and abroad to ensure that the best-of-breed AI solutions are available to State, Local, Enterprise, Small and Medium Business and Individual interests and needs for advanced AI
  - Promote American Innovation
    - Promote American Dynamism in the global economic community and champion ethical AI to our allies and partners in the global community and how supporting these ideals drives dynamism within the broad global economy
    - Tailored solutions for our allies and partners that meet each country's needs for sovereignty, and national security while providing advanced capabilities to drive efficiencies in their own economies based on ethical and democratic ideals while removing restrictive trade barriers to allow for balanced trade, fair use, and mutual improvement of our countries and our economies through updated and amended trade agreements.
  - Support foundational and effective capitalism and market-building in the United States and abroad to support American ideals for democratic and ethical AI
    - Continue the federal government's goal of removing restrictive trade barriers across the globe that hold harm American Dynamism and AI advancements for the sake of protecting entrenched local interests at the cost of improved economies and market efficiencies. Further these entrenched interests often seek to utilize our advancements while protecting their separate but similar technologies in an attempt to copycat and bootleg from our hard-earned research and development and use that as a platform to jump ahead technologically while not providing back to the common good of the United States or the world as a whole. AI is a global phenomenon that will have significant impacts on citizens, economies, and marketplaces worldwide, and as such we will need to ensure that this revolution is in support of free and equal trade amongst nations.
    - Champion market driven solutions and widely adopt technical standards for security, privacy and ethical AI to be able to partner with private industry. The federal government has already championed the National Institute of Standards and Technology (NIST) and International Organization for Standard (ISO) to ensure minimums for policy, process, and operations are met, and the federal government can continue this role by ensuring that all vendors and providers within the functioning market are required to meet the ISO standards as part of the procurement process and the federal government fulfilling its role as First and Foremost customer to enable the creation of a thriving marketplace for State, Local, Enterprise, Small and Medium Business and Individual interests and needs for advanced AI

TeraDact as a startup has an insightful understanding of the where the rubber-meets-the-road as it relates to advancing AI ideals and what will provide a positive impact and result in the federal government and private industry meeting President Trump's request to sustain and enhance America's global AI dominance. Many of the recommendations below represent American common sense and ingenuity to continue to drive American Dynamism and demonstrate our leadership to the world around driving the next great revolution in technology. We humbly submit the following recommendations:

- Adopt balanced import and export control policies
  - Import and export controls can play an important role in supporting national stability, security, and innovation and must be tailored to support legitimate free market access for United States companies while protecting the sensitive aspects of our own economy. We feel that advanced AI technologies should be used in a similar manner as defense and military technologies as a means to provide access to better solutions to our partners and allies, while protecting the United States interests, and to provide capabilities and protection to our allies and partners where they are unable to effectively develop their own capabilities thereby supporting national security goals and improving the global economy and marketplace
  - Further the federal government will need to tailor export controls to avoid creating undue competitive disadvantages for U.S. companies. We suggest that the federal government should increase resources and drive a transformation of the State and the Commerce Departments to transform the export licensing processes and consideration of wider AI environment inclusive of AI Infrastructure, Hardware, Platforms, Solutions and Tooling. Effective enforcement requires robust international engagement to maximize global compliance. Beyond effectiveness of the systems to support export, this will provide the opportunity for monetize advanced AI to our allies and partners in a fashion of defense and military technologies which will further strengthen our relationship with the world and deepen the connection between our partners and allies. We recognize that there is a strong potential for a balkanization of the world at a foundational level and we will be separated by our foundation technologies of which advanced AI will be one strategic difference among many, and each country will choose which foundation they wish to align to and whether or not those foundations lead to authoritarianism, mistrust and uncertainty or act as a guiding light for democratic and ethical ideals to those foundational technologies
  - Moreover, the federal government should unilaterally opposed foreign government mandated disclosures which require the release of sensitive business and trade secrets which have been shown to be used by foreign governments to copycat and bootleg advancements of functionality and whole cloth copying of existing United States industries. Further to the point, some governments have used these forced disclosures to comprise national and individual security.
- Invest in the AI business environment within the United States
  - Fully fund and accelerate AI Research and Development, fast-moving and sustained investment in foundational technologies to support advanced AI research and development which provides a source of initial innovation and drives thought leadership throughout the industry and has led to developments such as AI Retrieval, Augmentation, Generation ("RAG") which was foundationally built upon Machine Learning research and development. The goal of the investment would be clearly aligned with the United States' desire to retain leadership and solve the most challenging and critical unsolved questions. By partnering with the national laboratories to leverage the existing national infrastructure to fund the further advancement of AI.
  - Ensure the United States research and development community remains focused on innovation rather than resource access and acquisition. By focusing on how AI-driven research approaches can help fuel scientific breakthroughs in areas beyond AI itself. Our national laboratories will be able to act as a hub and spokes to provide immediate funding, access to AI Infrastructure, Hardware, Platforms, Solutions and Tooling to support continued and sustained advanced research in science, cybersecurity, and chemical, biological, radiological, and nuclear (CBRN) risks. Beyond this, the federal government should also begin the research and collection of non-sensitive AI Infrastructure, Hardware, Platforms, Solutions and Tooling to be available to provide researchers and institutions with support to prioritize research and development of CBRN risk areas.
  - Lowering the barrier for entry to the United States along fast-lane citizenship pathways for foreign nationals who have unique capabilities and education to be able to support our continued development of advanced AI capabilities through research and development. Much like Operation Paperclip, the knowledge, know-how, skills, and capabilities to drive advancement in AI is not solely trapped within the United States, and to take a forward-looking view to bring in the best and

brightest who would be dedicated to restructuring their lives within the United States and who promote American ideals of democratic and ethical AI would supercharge our development capabilities.

- Support private industry through the partial restoration of 26 U.S. Code § 174 - Amortization of research and experimental expenditures. While this code section was updated under the prior Tax Cuts and Jobs Act (TCJA), this significantly change the legal, and operating environment for advanced AI companies. We fully agree that the tax implications of moving research and development roles overseas should not be supported through tax policy, the restoration of onshore and within the United States legitimate research and development activities as it stands defined within section 174 and to allow for the full tax credit within the same year of spend without amortization. We also believe that the current 15-year amortization for overseas and foreign research development activities should be increased to 20 years to further support the repatriation of high-skill and high-value research and development roles as they have been defined under section 174.
- Accelerate AI research and development, streamline access to AI Infrastructure, Hardware, Platforms, Solutions, and Tooling resources for researchers, and incentivize public-private partnerships with our national laboratories and public institutions. Long-term, sustained investments in foundational domestic research and development and AI-driven scientific discovery go hand-in-hand and have already provided the U.S. with immediate and crucial advantages in the race for global scientific leadership. Lawmakers and policymakers should accelerate these efforts with a focus on velocity funding allocations to early invention and ideas designed to drive the research and development community whether its individual, scientists, or institutions.
- Accelerate and Modernize Government AI Adoption To enable public sector organizations to fully benefit from AI. The federal government leverages opportunities to transform procurement of emerging AI technology and leverage the full capabilities of advanced AI while removing the limitations of entrenched legacy technology vendors and providers. With adoption of advanced AI capabilities by the federal government combined with accelerated research and development creates a positive feedback loop of the best capabilities being created and supported at a national level to ensure that the United States remains a global leader in advanced AI capabilities.
- Increase the velocity procurement of advanced AI technologies we suggest that the federal government focus on vendors and providers who support and have met the requirements of national and international standards bodies to ensure that a minimum functionality, capability, and security has been applied to the technologies in question. The creation of frameworks to allow for multi-vendor and providers to prove out in an ecosystem model the most capable and cost-efficient AI technologies to fulfill the need of the federal government. Furthermore, any interoperable which the federal government can require of AI vendors and providers will allow for the free data portability and migration to the most effective and efficient providers when new entrants enter the marketplace regardless of underlying AI Infrastructure, Hardware, Platforms, Solutions, and Tooling to prevent regulatory capture by entrenched interests<sup>10</sup>. Moreover, the federal government as part of its procurement policies and processes should require open data standards and API access for all federal government deployments to further the interoperability and portability of solutions acquired through a robust and functioning marketplace to increase the velocity, proliferation, and adoption of advanced AI.
- Lastly, we recommend the hybrid approach to technology implementations of the federal government AI deployments which aligns the appropriate system governance and controls to the use case needs which can occur at the edge in our localities, in multi-cloud environments where governance maintain national sovereignty and within centralized data centers fully secured to ensure protection of our most sensitive data and technologies.
- Tailor-made solutions for AI in the United States
  - Request that the federal government support federal level laws, and frameworks to remove the patchwork of more than 145 different state, county, and city-level laws to ensure that the United States is consistent across its states and territories in the development of advanced AI by creating federal legislation to preempt any state, county or city legislation which would be detrimental to the meeting of the President's request to sustain and enhance America's global AI dominance. As it currently stands, the patchwork of state, county, and city legislation has created uncertainty for

- private business and creates hurdles and challenges where the current legislation does not align which further slows innovation and dominance in this domain
- Risk/Reward focus on AI governance and deployment of advanced technology. The federal government while exploring policy, procedures, protocols, legislation and frameworks should consider the efficient gains compared to the risk of advanced AI deployment. For example, there would be a different risk profile between battlefield advanced AI planning compared to using RAG to genitively create war college policies and procedures for training new cadets in the military academies. While both use cases leverage new and novel advanced AI technologies they differ in their potential impact on our fellow citizens' daily lives. As such, we believe the federal government should defer to national and international standards bodies as experts within the field to provide governance and oversight based on the industry's combined knowledge and thought leadership.
  - Open access to trusted and known datasets for private industry to enable fair learning and training of advanced AI by the refining the following four areas of federal law as it relates to intellectual property:
    - Privacy – balance privacy laws to enable the broad analytics of anonymized datasets that do not infringe upon the individual's uniquely Personal Identifying Information (PII) and characteristics including Personal Health Information (PHI). Federal regulation should define anonymous data and how data treatment can protect the PII and PHI of an individual from malicious actors while still providing the ability to derive unique insights from public and privately held datasets augmented with AI-enabled data privacy solutions and tooling.
    - Patents – Restoration of the first-to-invent requirement over first-to-file of patentable inventions, ideas, or processes. The 2011, America Invents Act significantly changed the US Patent and Trade Office (USPTO) process for allowing for the first-to-file to receive the patent for novel ideas, inventions, and processes. This allowed for patents to be filed without a clear invention and often from foreign actors<sup>11,12</sup> to broadly patent obvious inventions, ideas, and processes within the United States that have hampered and hindered the development of advanced AI and other related technologies. Furthermore, the federal government must allow for a broader Inter Partes Review program to permit review of AI-specific patents granted in error and while most recently obviousness has been improved, based on the US Supreme Court's ruling in *KSR Int'l Co. v. Teleflex Inc.*, 550 US 398 (2007), the federal government could further support critical improvements to the USPTO regarding stronger guidance emphasizing the importance of adopting a flexible approach and providing a reasoned explanation when reaching a conclusion regarding the obviousness of a claimed invention.
    - Copyright – strength copyright rules, to ensure that American private industry can protect what it has created without worry that outside and foreign influences will attempt to circumvent copyright with copycat and bootleg solutions to the detriment of the United States and its citizens and then attempt to enter the United States market based upon those infringements. Further, the federal government through its national laboratories should explore the creation of trusted datasets with public access and availability to accelerate advanced AI learning and training on a common basis. While fair use has come into contest recently as it relates to AI learning and training, we recognize that copyright holders have created datasets and texts of value and as such should be protected by our federal systems while maintaining the United States' innovation and AI vendors and providers should only use appropriately licensed when not publicly available or authorized datasets and texts. We believe the federal government should ensure public access to government supported research, datasets or texts and ensure those items remains in the public domain and readily available. Any previously protected datasets and texts which have left their protected period should swiftly enter the public domain for future innovation and the United States should consider reducing copyright protections to a more reasonable timeframe before such works become public domain.
    - Trademarks – strengthen and strictly enforce trademark infringement to ensure that all consumers have a clear understanding of who is providing the advanced AI solutions and ensure that malicious actors who would seek to infringe upon the trademarks of private industry of the United States and our partners and allies are equally protected for ersatz copycats and bootlegs of the hard-earned innovation of AI vendors and providers. We believe the federal government should strengthen the Lanham act to further penalize and disincentivize maliced actors when it comes to trademark infringement based upon AI

advancements. Trademarks should to the consumer remain as a pure reflection of the vendor or provider of the service and should have faith that when they see such a trademark that is representative of that true vendor or provider and as stated by Vice President Vance “ensure that American AI technology continues to be the gold standard worldwide”<sup>7</sup>

- The federal government has already championed the National Institute of Standards and Technology (NIST) and International Organization for Standard (ISO) and must further champion technical consensus as it leads to the development of standards and protocols related to advanced AI. The federal government should recognize the effectiveness of national and international standards bodies and their ability to support the development of standards and recommended practices and often are better suited than the law or policy because their members are made of the very practitioners of the technologies in question. The federal government acting as the First and Foremost customer of American advanced AI can leverage its procurement processes to favor those private industries which participate and follow the national and international standard making bodies through price relief, and velocity of procurement where the vendors and providers have appropriately met the requirements of the national and international standards bodies.
- Workforce development, much like our workforce transitioned from an analog based world to a digital world which gave rise to the digital native generation of Gen Y, and Gen Z, we will be undergoing a similar revolution where we will have AI native generations of Gen Alpha and Gen Beta<sup>13</sup> who will treat AI much like we did the creation of the digital watch, as another tool to support and improve the lives of our friends, family, society, and ultimately our country. To support this transformation and to provide our citizens with the tools necessary to navigate the cultural and technological changes occurring the United States will need to make the necessary investments into education and post-secondary education to drive the furtherance of AI advancement and at the same time provide off-ramps of usable skills and capabilities for those who do not wish to vanguard the development of the next generation of technologies but still provide meaningful skills and capabilities to positively impact our towns, states, and country through meaningful and purposeful work.

As stated previously, TeraDact is a startup provider of advanced AI capabilities who has worked with other nation states on deployment of advanced AI frameworks and is committed to supporting our American ideals for democratic and ethical AI to support our citizens, partners and allies as we enter the AI revolution. We believe this coming age of AI will lead to overall positive impacts based upon more efficient use of resources to improve the lives of our fellow citizens and by extension all citizens of the world will also see improvements to their daily life through the application of AI advancements.

The Leadership Team  
TeraDact

TeraDact has provided this Request For Information and is freely available to Networking and Information Technology Research and Development (NITRD) National Coordination Office (NCO), National Science Foundation and has been submitted as part of the public comment and contains no propriety or confidential information and may be reused as seen fit to support the development of the AI Action Plan.

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1. [https://assets.publishing.service.gov.uk/media/652421682548ca000dddefd8/ACE\\_Annual\\_Review\\_2023\\_update\\_27.09.23.pdf](https://assets.publishing.service.gov.uk/media/652421682548ca000dddefd8/ACE_Annual_Review_2023_update_27.09.23.pdf)
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  5. <https://www.presidency.ucsb.edu/documents/white-house-press-release-united-states-and-united-arab-emirates-cooperation-artificial>
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  7. <https://www.presidency.ucsb.edu/documents/remarks-the-vice-president-the-artificial-intelligence-action-summit-paris-france>
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  9. <https://www.gov.uk/government/groups/accelerated-capability-environment-ace>
  10. <https://www.whitehouse.gov/wp-content/uploads/2024/10/M-24-18-AI-Acquisition-Memorandum.pdf>
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