

# PUBLIC SUBMISSION

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Request for Information: Development of a 2025 National Artificial Intelligence Research and Development Strategic Plan

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## Submitter Information

**Organization:** US Ignite Inc.

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## General Comment

US Ignite appreciates the opportunity to provide input on developing an updated National AI Strategic Plan. As a nonprofit launched by the White House Office of Science and Technology Policy, US Ignite collaborates with local communities, federal agencies, industry, and academia to accelerate smart city and defense innovations through advanced wireless and AI-driven technologies. The attached file recommends crucial areas of research and development for the advancement of AI technology relating to AI in the public sector and defense innovation, as well as community driven AI deployment. Please let us know if you have any questions. We appreciate the opportunity to respond.

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## Attachments

US Ignite Response to the AI Research and Development RFI

# **Response to the White House RFI on the Development of an Artificial Intelligence (AI) Action Plan**

**Submitted by: US Ignite, Inc.**

**Date: May 14, 2025**

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## **1. Introduction**

US Ignite appreciates the opportunity to provide input on developing an updated National AI Action Plan. As a nonprofit launched by the White House Office of Science and Technology Policy, US Ignite collaborates with local communities, federal agencies, industry, and academia to accelerate smart city and defense innovations through advanced wireless and AI-driven technologies. Our Smart Bases and Platforms for Advanced Wireless Research (PAWR) programs are real-world AI deployment testbeds emphasizing innovation, national security, and responsible technology development.<sup>1</sup> US Ignite has led over \$30M in AI-enabled smart base deployments, including projects with the U.S. Army Corps of Engineers at Fort Moore, GA.<sup>2</sup> These initiatives demonstrate clear present federal use cases for AI and provide exciting examples of the importance of future research and development of this emerging technology. The development of a new National AI Action Plan will lay the groundwork for the next generation of AI research, development, and use cases.

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## **2. Research and Development Opportunities for AI in Public Sector and Defense Innovation**

Within the Defense space, AI presents an opportunity to dramatically improve operational efficiency in federal installations. At Fort Moore, US Ignite deployed predictive maintenance systems that use AI to monitor building systems, identify faults in real time, and schedule repairs before breakdowns occur. Combined with mobile occupancy analytics and energy optimization algorithms, these tools have significantly reduced operational costs and enhanced facility readiness for military and emergency operations. Moving forward, the federal government should invest in research and development for national security and critical infrastructure. Enhanced readiness is critical in national security and defending the US against potential threats or security risks. Advances in AI

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<sup>1</sup> <https://www.us-ignite.org/program/platforms-for-advanced-wireless-research/>

<sup>2</sup> <https://www.us-ignite.org/program/smart-bases-and-installations/>.

algorithms related to utilizing AI technology in monitoring deficiencies within systems are necessary to further enable more efficient use of AI on military bases.

The federal government should expand the number of AI testbeds, building on successful models like US Ignite's Smart Base and PAWR initiatives. New investments on research and development in smart military installations and connected communities will accelerate real-world innovation, integrate AI with next-generation wireless and edge computing infrastructure, and generate insights that can inform scalable deployments across settings nationwide. Investment in further research on AI utilization in advanced wireless applications will progress AI innovation on military bases and further efficiency on military bases, ultimately aiding US national security.

Cross-sector collaboration is essential for the development of trustworthy AI. The 2023 National AI Action Plan included prioritization of public private partnerships in AI research and development, and this should continue into the new action plan. The new AI Action Plan should create matching grant programs that unite government agencies, private companies, academic researchers, and nonprofits. These partnerships will drive innovation, ensure ethical oversight, and facilitate rapid translation of AI research into mission-driven applications. Open standards and interoperable platforms will enable knowledge sharing and technology reuse across regions and sectors. This collaboration should emphasize the inclusion of rural communities that struggle with accessibility to AI technologies and development.

AI is also instrumental in advancing risk mitigation and improving health safety outcomes. For example, US Ignite developed and deployed an AI-powered heat risk management tool at Fort Moore to address training-related heat injuries among service members. This tool synthesizes weather forecasts, on-site environmental sensors, and individual health data to provide predictive alerts and guide activity planning, ensuring safety without compromising training effectiveness. In addition, AI contributes to improved surveillance and public safety capabilities. US Ignite has implemented remote sensing systems through our smart base programs that utilize AI-based anomaly detection to monitor perimeters, identify unusual patterns, and facilitate rapid responses to security threats. These capabilities could be increased by further research on AI algorithms and AI utilization in identifying and monitoring deficiencies within systems.

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### **3. Community-Driven AI Deployment**

In addition to defense work, US Ignite supports more than 50 communities across the U.S. in applying AI to address local challenges:

Our digital twin pilots have introduced AI into city operations, enabling municipalities to optimize traffic flows, monitor infrastructure health, and plan for urban growth. These digital replicas of physical environments use real-time data and AI simulations to model scenarios and inform data-driven decision-making. They enable cities to reduce congestion, lower maintenance costs, and increase resilience in public services. Further federal support for research and development is needed to ensure that more communities are able to utilize and scale AI to improve city services and drive economic development.

To this end, US Ignite recommends the government prioritize the development of open data frameworks and community data trusts, which ensure that residents have a voice in how data is collected, accessed, and utilized. By promoting transparency and community ownership, we foster greater trust in AI applications and mitigate the risks of data misuse and algorithmic bias.

While not directly related to research priorities, we also want to emphasize the need to invest in AI workforce development opportunities through partnerships with institutions of higher education, community colleges, and technical training programs with a focus on rural populations. These collaborations should focus on building AI skills pipelines that prepare individuals for high-demand jobs in data science, analytics, and system operations and emphasize both technical proficiency and the ethical application of AI. Without an AI-literate workforce, it will be impossible to take advantage of any research advancements driven by federal investment to scale. The federal government should continue to prioritize workforce development related to AI and support research and development on internal workforce training and literacy efforts within its agencies to ensure broad AI readiness, especially within rural communities that typically do not have access to AI benefits. Drawing from US Ignite's community engagement model, agencies can adopt participatory training strategies that empower public servants to use, evaluate, and manage AI tools effectively. A cross-agency AI council would coordinate deployment practices, foster accountability, and align AI initiatives with national priorities.

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## **5. Conclusion**

US Ignite is uniquely positioned to inform national AI strategy through our hands-on work with federal installations, municipal governments, and innovation partners nationwide. Given our expertise, we believe the strategic plan should adopt a place-based and mission-driven approach to AI investment. The plan should focus on AI algorithms and monitoring systems; emphasis on public private partnerships; and ensuring that workforce development maintains the pace advancing AI technology. Research focuses areas should have a priority of reaching rural communities as well and ensure that they benefit and partake in the development of AI technology. The U.S. can lead in responsible and

transformative AI deployment by scaling what works, primarily through smart bases and community pilots.

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