



U.S. Environmental Protection Agency Artificial Intelligence Strategy for OMB Memorandum M-25-21

EPA AI Strategies for OMB Memorandum M-25-21 — October 2025

Environmental Protection Agency

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In response to Executive Order 14179: Removing Barriers to American Leadership in Artificial Intelligence the U.S. Environmental Protection Agency has “develop[ed] an AI Strategy for identifying and removing barriers to their responsible use of AI and for achieving enterprise-wide improvements in the maturity of their applications.”¹

AI Use Cases

Provide examples of significant agency AI use cases currently in use or planned to be in use

Publicly Reported Use Cases

As of August 2024, EPA has 18 publicly reported AI use cases, including:

- Use of random forest model to predict exposure pathways – Machine learning techniques used to estimate the amount of pollution people are exposed to.
- Records Categorization – A model that helps with records scheduling based on content of records, this aids in staff determining the applicable records control schedule for federal records stored in the Agency Records Management System.
- Enforcement Targeting – A proof-of-concept model created to aid in facility inspections.²

Generative AI Implementation

EPA created a secure chatbot within an approved cloud environment to allow staff to safely make Generative AI queries without risk of information exposure on a public site.

EPA is investigating:

- Expanding a pilot into a specialized coding-focused generative AI tool that will aid in software development.

¹ Office of Management and Budget. Accelerating Federal Use of AI through Innovation, Governance, and Public Trust. 3 Apr. 2025.

² <https://www.epa.gov/data/epa-artificial-intelligence-inventory> Retrieved 21 August 2024.

- Procuring more American Generative AI tools.
- Expanding Generative AI capabilities in its cloud vendors (Microsoft Azure and AWS). This will enable EPA staff to integrate Generative AI into projects after receiving clearance from the AI governance council and carefully evaluating risks.

AI Maturity Goals: AI-enabling Infrastructure

Describe your agency's plan to develop AI-enabling infrastructure across the AI lifecycle including development, testing, deployment, continuous monitoring

EPA provides its staff with a variety of AI infrastructure tools to meet their specific needs and budget:

- High end scientific equipment and virtual cloud computing environments.
- A cloud computing environment designed for managing high scale data computation.
- Enterprise Hosting Division's integrated cloud hosting service offering a range of services to set up, secure, and manage AI infrastructure.
- Low code tooling to aid in automation and data collection.
- Supporting middleware including continuous implementation/automated deployments, central authentication, central logging, error tracking, and custom data management systems.

These infrastructure tools and environments are meant to assist staff across the AI lifecycle including development, testing, and continuous monitoring phases.

AI Maturity Goals: Data

Describe your agency's plan to ensure access to quality data for AI and data traceability

EPA is following the guidance under Title II of the Foundations for Evidence-Based Policymaking Act of 2018,³ also known as the Open, Public, Electronic, and Necessary (OPEN) Government Data Act of 2018. This includes publishing on epa.gov and sharing metadata on data.gov in open formats unencumbered from restrictions. EPA shares AI assets through its GitHub site⁴, fulfilling its open-source initiatives. To take advantage of

³ Pub. L. No. 115-435 (2019).

⁴ <https://github.com/usepa>

and share standard agreements, EPA participates in the Chief Information Officer council, General Services Agency's AI Community of Practice, and the Chief Data Officer council.

EPA's AI Subcommittee, described in more detail in the Governance Structure section below, develops and helps implement AI best practices for model development including traceability, explainability, or interpretability through an interactive and ongoing process.

AI Maturity Goals: AI-Ready Workforce

Describe your agency's plan to recruit, hire, train, retain, and empower an AI-ready workforce and achieve AI literacy for non-practitioners involved in AI

The EPA staffing plan includes these components:

- Training and development of the existing workforce in the application of AI tools to enhance the quality, productivity, and efficiency of EPA work and work products.
- Leveraging AI specific competencies to augment recruitment actions across the wide range of disciplines and positions involved in the adoption, application, and integration of AI in our business systems and processes.
- Establishing extramural resource channels that can be easily accessed and broadly applied to specific use cases in the agency.

This approach enables the broadest, fastest, and most agile engagement of the rapidly evolving AI landscape. In this context, EPA hiring will focus on just a few key positions to establish an enterprise-wide AI Digital Services Consulting Team. This team will lead extramural resources in the development and acquisition of applied AI workforce training alongside our Chief Learning Officer. The group will also provide technical consulting services for AI integration for EPA use cases.⁵

AI Maturity Goals: Research and Development

Describe your agency's efforts to provide AI tools and capacity to support the agency's AI research and development (R&D) efforts

While EPA investigates uses of AI, Machine Learning, Generative AI, and advanced statistical techniques at EPA, it does not perform pure research into "AI" in terms of advancing "AI". EPA is exploring complementary methods to innovate with AI using the details described in the section below.

⁵ Collard, Erin, et al. Human Capital Review Exercise. 9 Apr. 2024. EPA Internal Report: Unpublished.

AI Maturity Goals: Governance and Risk Management

Describe your agency's plan to develop enterprise capacity for AI innovation

Describe your agency's plan to develop the necessary operations, governance, and infrastructure to manage risks from the use of AI, including risks related to information security and privacy

AI Innovation

Through ongoing learning activities and continuous improvement initiatives, EPA staff are encouraged to submit ideas to the internal AI use case inventory described below. EPA has groups of architects and IT specialists who review the ideas for ways to assist each group in implementing their ideas for AI innovation, keeping risk management and cost/benefit in mind.

EPA has Generative AI training as a priority “learning agenda” item.

Governance Structure

The agency's governance structure is made up of three groups:

- The Executive AI Governance Board chaired by the EPA Deputy Administrator and vice-chaired by the Chief Artificial Intelligence Officer. This group contains political leadership which set strategic vision, with career SES aligning resources and plans accordingly these groups decide on agency priorities and approve governance policy.
- The second group is a subcommittee of EPA's Data Governance Advisory Committee which is tasked with assisting the Executive AI Governance Board. This group is made up of delegates from the many diverse offices across EPA, which develops and implements policy approved by the Executive AI Governance Board and career SES staff. In addition, this group is charged with collecting and maintaining a robust AI use case inventory.
- EPA's AI Interested Users Group, referred to as the AI Community of Practice within the EPA Data Science Community of Practice, is a non-governing group with open membership. This group is made up of data science practitioners and program staff whose feedback is used in the development of policy and guidance and are kept up to date on the latest AI developments. This groups also share best practices and contribute towards organizational learning.

Risk Mitigation

EPA's approach to managing risks of AI consists of these components:

- Incorporating the NIST Risk Management Framework.
- Including pilots, monitoring, and feedback cycles into AI projects.
- Development and maintenance of a Generative AI Rules of Behavior document which establishes clear expectations for appropriate use of Generative AI.
- Providing ongoing training and webinars to help everyone understand limitations and risks of the technology.
- Implementation of controls over AI high-impact use cases (As defined by OMB M-25-21) or otherwise use cases that have potential to negatively impact society through its use. This process is overseen by the Data Governance Advisory Committee AI subcommittee.
- Consultation and close collaboration with EPA's cybersecurity group and Office of General Counsel ensuring security controls are implemented with security, privacy, legal, and AI risks in mind.

AI Maturity Goals: Resource Tracking and Planning

Describe your agency's plan to identify, track, and facilitate future AI investment or procurement

AI Inventory

The agency's AI inventory process consists of collecting AI use cases from practitioners. A communication campaign is completed annually to inform practitioners of the existence of an AI use case reporting form and associated guidance as to what use cases apply. In addition, connections to EPA's procurement, application development, and research planning processes are integrated which capture practitioners who are using, developing, and procuring AI systems.

The AI Subcommittee also reviews EPA's registries and performs interviews as appropriate to discover and refine the AI use case list. EPA has a detailed list of use cases and publishes from the list the applicable use cases to its public website in accordance with associated OMB guidance.

The AI Subcommittee will integrate with EPA's budget processes including its yearly Information Technology Portfolio Review process to help identify, track, and facilitate investments in AI to ensure they are providing value.