



Office of the Chief
Information Officer

1400 Independence
Avenue S.W.
Washington, DC
20250

TO: Office of Management and Budget (OMB)

FROM: Christopher Alvares
USDA Chief Data and Artificial Intelligence Officer
Office of the Chief Information Officer

SUBJECT: USDA Compliance Plan for OMB Memoranda M-24-10 – September 2024

This memo was developed to demonstrate USDA’s compliance to OMB Memoranda M-24-10 *Advancing Governance, Innovation, and Risk Management for Agency Use of Artificial Intelligence*. The USDA is expected to release its inaugural Artificial Intelligence strategy, covering Fiscal Years 2025 and 2026, sometime in Fall 2024.

I. STRENGTHENING AI GOVERNANCE

A. Describe any planned or current efforts within your agency to update any existing internal AI principles, guidelines, or policy to ensure consistency with M-24-10.

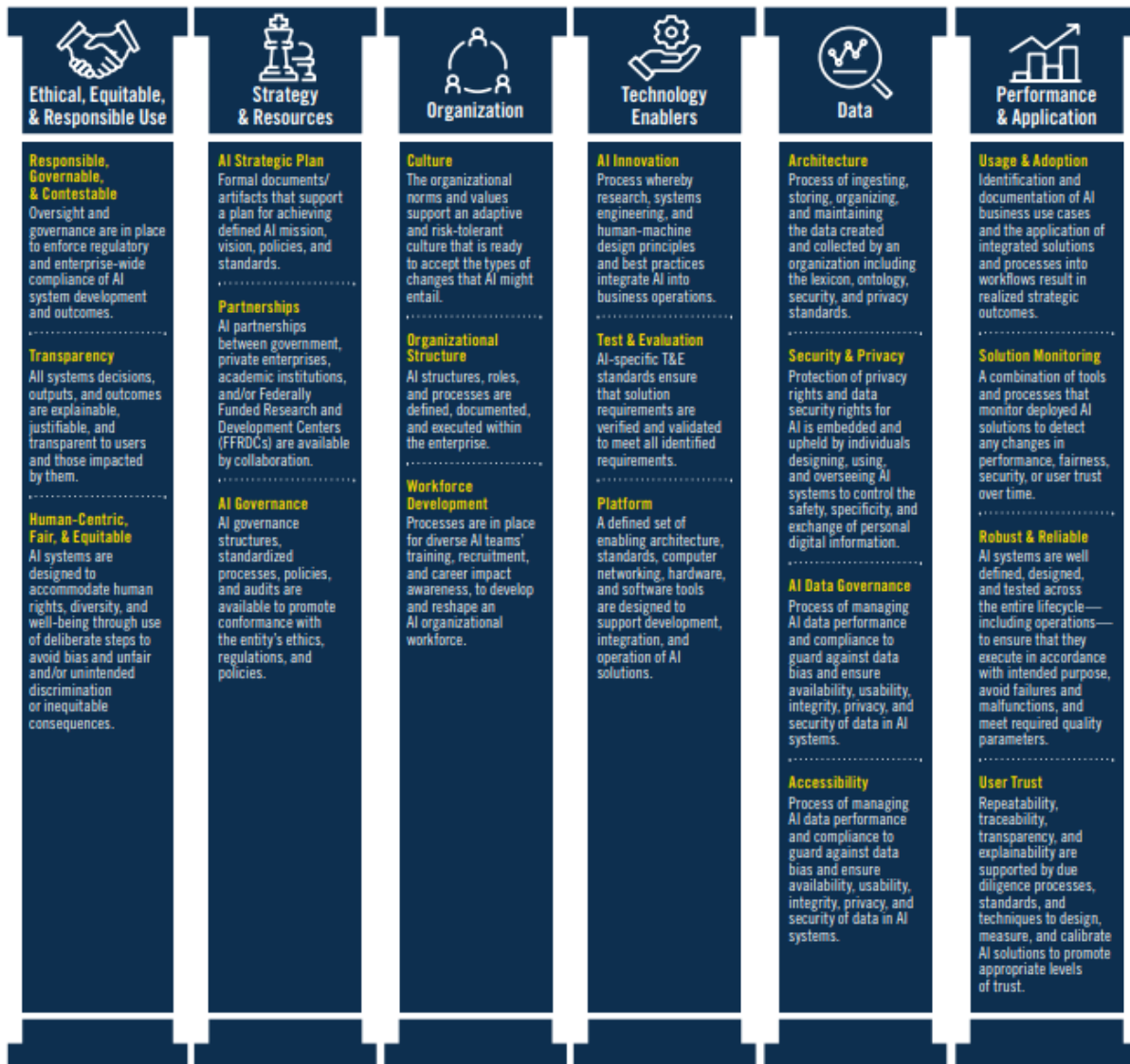
USDA has initially adopted the [MITRE AI Maturity Model](#), which focuses on six pillars:

1. Ethical, equitable, and responsible use of AI
2. Strategy and resources
3. Organization
4. Technology Enablers
5. Data
6. Performance and Application

These six pillars, and the activities that support them, are highlighted in Figure 1.

In Fiscal Year 2025, USDA will work on a Departmental Regulation (DR) for enterprise artificial intelligence, building on Executive Ordering 14110 and OMB M-24-10, replacing USDA’s interim guidance on generative AI, and establishing clear decision-making processes for AI projects throughout their lifecycle.

Figure 1 – MITRE AI Maturity Model



B. AI Governance Bodies

Identify the offices that are represented on your agency's AI governance body.

The USDA AI Council includes the below offices and positions as voting members:

- The Deputy Secretary (Chief Operating Officer), Chair;
- The Chief Artificial Intelligence Officer, Vice-Chair;
- The Under Secretary for Farm Production and Conservation;
- The Under Secretary for Food, Nutrition, and Consumer Services;
- The Under Secretary for Food Safety;
- The Under Secretary for Marketing and Regulatory Programs;
- The Under Secretary for Natural Resources and Environment;

- Director, Office of Budget, and Program Analysis;
- Assistant Secretary for Civil Rights;
- The Chief Diversity and Inclusion Officer;
- Director, Office of Customer Experience;
- The Chief Information Officer;
- The Under Secretary for Research, Education, and Economics;
- The Under Secretary for Rural Development;
- The Under Secretary for Trade and Foreign Agricultural Affairs;
- The Chief Information Security Officer;
- The Chief Technology Officer;
- The Chief Financial Officer;
- The Assistant Secretary for Administration

Describe the expected outcomes for the AI governance body and your agency’s plan to achieve them.

The USDA AI Council provides the Secretary of Agriculture with recommendations on strategic approaches to AI needed to achieve the Department's mission and business requirements, including but not limited to the definition and implementation of the USDA’s AI strategy. The USDA’s AI strategy is in development and expected to be released Fall 2024.

Describe how, if at all, your agency’s AI governance body plans to consult with external experts as appropriate and consistent with applicable law. External experts are characterized as individuals outside your agency, which may include individuals from other agencies, federally funded research and development centers, academic institutions, think tanks, industry, civil society, or labor unions.

USDA has started preliminary work in Fiscal Year 2024 with external experts.

1. The Chief AI Officer sponsored Responsible Generative AI training for the USDA’s Generative AI Review Board (GAIRB) from [AIEthicist.org](https://www.aiethicist.org), an organization focused on providing responsible AI and AI ethics training and consulting. In Fiscal Year 2025, we will provide similar training to other groups and organizations as part of USDA’s AI Strategy.
2. USDA launched a third-party AI product testing and validation Request for Information (RFI), surfacing vendors, non-profit organizations, academic institutions, university affiliated research centers (UARCs), and federal funded research and development centers (FFRDCs) looking to assist with building this capacity.
3. USDA collaborated with several federal agencies, such as National Institute of Standards and Technology (NIST) and the Department of Energy, to share progress and best practices on multiple AI topics such as AI governance, minimum risk practices, AI use cases, and AI labs. We expect the list of agencies to grow with time and experience.

C. AI Use Case Inventories

Describe your agency’s process for soliciting and collecting AI use cases across all sub-agencies, components, or bureaus for the inventory. *In particular, address how your agency plans to ensure your inventory is comprehensive, complete, and encompasses updates to existing use cases.*

USDA maintains a centralized repository to track its AI Inventory, ensuring a comprehensive record of AI initiatives across the agency. This repository includes essential resources, such as the latest guidance for submission, definitions of AI according to relevant policies, and pertinent executive orders. The repository's structured fields align with OMB requirements, capturing necessary information for submission, as well as additional context and historical data to inform decisions on public disclosure.

Describe your agency’s process for soliciting and collecting AI use cases that meet the criteria for exclusion from being individually inventoried, as required by Section 3(a)(v) of M-24-10. In particular, explain the process by which your agency determines whether a use case should be excluded from being individually inventoried and the criteria involved for such a determination. Identify how your agency plans to periodically revisit and validate these use cases. In particular, describe the criteria that your agency intends to use to determine whether an AI use case that previously met the exclusion criteria for individual inventorying should subsequently be added to the agency’s public inventory.

While the list is available for updates year-round, the CAIO sends out a call for information semi-annually to ensure that information on the use cases is up to date for submissions to OMB and the public website. The data call goes out to the Mission Area Assistant Chief Data Officers (ACDOs), who then reach out to people within their Mission Area who are working on AI to catalog their efforts, and review the results for accuracy and consistency. One of the USDA AI Inventory questions asks whether the use case should be withheld from public disclosure and asks for a justification. Follow up is then done by the Mission Area ACDOs and the CAIO with the use case POCs to ensure that the information they provide is thorough and complete. Any use case that is deemed inappropriate to release publicly is followed up with as well to ensure that there is a proper reason for its exclusion.

Currently use cases are only excluded from the public inventory if it is a matter of security for national facilities, scientific research not intended for USDA operations, or if the use case never made it to development. While not currently included in the core AI inventory, USDA policies require inventorying research and development (R&D) use cases. If those R&D cases are subsequently adopted for operations, they will be added to the core AI inventory.

In Fiscal Year 2025, the CAIO will review and modify this process to fit the new OMB AI use case reporting requirements.

II. ADVANCING RESPONSIBLE AI INNOVATION

A. AI Strategy

As previously mentioned, USDA is expected to release its inaugural AI Strategy Fall 2024, focusing on themes such as workforce development, AI governance, equitable and responsible AI, technology enablement, and data readiness.

B. Removing Barriers to the Responsible Use of AI

Describe any barriers to the responsible use of AI that your agency has identified, as well as any steps your agency has taken (or plans to take) to mitigate or remove these identified barriers. In particular, elaborate on whether your agency is addressing access to the necessary software tools, open-source libraries, and deployment and monitoring capabilities to rapidly develop, test, and maintain AI applications.

The upcoming USDA AI Strategy is anticipated to have strategic goals and objectives that are focused on removing key barriers to responsible AI at USDA. While these barriers are not all-inclusive to the proper deployment of responsible AI, they represent challenges across multiple domains that require sufficient investment to overcome.

1. No shared environment for the safe testing and evaluation of emerging technologies such as Generative AI

USDA has not invested in a lab environment for AI until recently. The CAIO and the Chief Technology Officer (CTO) have partnered together to start building a USDA AI Lab, where USDA Mission Areas and Staff Offices can ideally work together in a shared environment to share code, lessons learned, and use common cloud infrastructure. When fully operational, this shared environment would assist USDA in the rapid deployment of capabilities and provide justified confidence to USDA executives and practitioners of the business value of AI products and capabilities.

2. Challenges with reviewing commercial software

USDA has seen numerous challenges related to the review of commercial software that contains Generative AI. We lack the resources to review terms of service, assess the adequacy of guardrails, test the limitations of software, or even gather technical info such as the foundation model used. These challenges have been exacerbated by the speed that vendors have been adopting Generative AI into their products. USDA has also sought and expressed interest in collaborating with NIST and other Federal agencies to establish standards to guide vendors toward minimum standard feature sets to accelerate adoption of commercial software across all agencies and components. USDA also has representation on the Federal CAIO Council Procurement Working Group and the Generative AI Working Group. Based on the work from those working groups, the CAIO will adjust as new information, practices, and resources are identified.

The CAIO, in partnership with the CTO and the Chief Information Security Officer (CISO), will prioritize developing a process to review Generative AI in commercial software in Fiscal Year 2025.

3. Funding and resource limitations

A lack of dedicated funding and resources towards responsible AI makes it difficult to implement effectively in an austere budget environment, increasing our risk of improper deployments. The upcoming USDA AI Strategy is expected to assist by aligning capacity building and barrier-reducing activities to strategic goals and objectives. USDA has recognized this complex challenge and is working toward a strategy that balances speed of innovation through application of AI with ensuring a standard approach to responsible, secure, and compliant implementations.

4. Data readiness to support AI initiatives

While USDA has made strides to improve its data readiness and truly make data a strategic asset, opportunities remain to improve data readiness for AI. USDA is still working to implement the requirements of Title II of the Evidence Act. Further progress on enterprise data management would contribute significantly to USDA's readiness for AI. The [USDA Data Strategy for FY2024 – FY2026](#) identifies areas of improvement to increase our maturity for analytics and AI initiatives, and the AI Strategy will further identify additional objectives to close the data readiness gap for AI initiatives.

5. Need to develop AI Literacy and Talent across the workforce

Like most federal agencies, USDA does not have sufficient AI literacy and AI talent today. Without a significant investment to increase workforce literacy in AI and attract AI talent to USDA, our ability to execute the upcoming AI Strategy will be limited. Further details of our actions to close this gap are outlined in the AI Talent section below.

Identify whether your agency has developed (or is in the process of developing) internal guidance for the use of generative AI. In particular, elaborate on how your agency has established adequate safeguards and oversight mechanisms that allow generative AI to be used in the agency without posing undue risk.

The USDA published interim Generative AI guidance in October 2023. The guidance established a Generative AI Review Board (GAIRB) that reports to the CAIO and makes recommendations on whether to move forward with a Generative AI use case. The GAIRB is made up of Departmental and Mission Area representation, and includes representation from our Civil Rights office, the Chief Information Security Officer, the Chief Technology Officer, and our General Counsel's office. To date, the GAIRB has reviewed over 20 proposals, approving 12 to move forward into an exploration phase. At the request of the USDA AI Council and the CAIO, this guidance is currently being reviewed for an update, and will include feedback from multiple internal stakeholders.

C. AI Talent

Describe any planned or in-progress initiatives from your agency to increase AI talent. In particular, reference any hiring authorities that your agency is leveraging, describe any AI-focused teams that your agency is establishing or expanding, and identify the

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skillsets or skill-levels that your agency is looking to attract. If your agency has designated an AI Talent Lead, identify which office they are assigned to.

The CAIO has partnered with several groups, such as our Office of Human Resources Management (OHRM) and [USDA Digital Service](#), to increase our ability to attract AI talent to USDA. USDA's AI Talent Lead is housed in OHRM.

AI Direct Hire Authority

In partnership with USDA's Chief Human Capital Officer (CHCO) and the USDA Digital Service, USDA issued internal guidance to leverage the Office of Personnel Management (OPM) AI and AI-enabling Direct Hire Authority (DHA) across the Department, including reporting instructions and internal controls. Since this guidance, USDA has posted several positions that leverage the AI DHA, reducing time to hire for these positions and making USDA AI positions more competitive than before.

Shared Certificates

USDA's CHCO issued policy and procedural guidance on shared certificates within USDA, and between USDA and other Federal Agencies. The goal for this policy was to normalize a scaled approach to hiring, allowing multiple hiring managers across agencies with the same hiring needs to unlock economies of scale and create efficiencies. As a result, routine consideration of applicants already available through shared certificates has significantly simplified and expedited the hiring process across the Department.

Inter-Agency Partnerships

USDA is actively engaged in multiple inter-agency working groups related to building AI workforce capabilities across the government in compliance with the Executive Order 14110 on *the Safe, Secure, and Trustworthy Development and Use of AI*. Notable working groups where USDA has heavily contributed to efforts progressing AI talent acquisition strategies and skill-building efforts include Office of Management and Budget (OMB) AI Training and Talent working groups, Office of Personnel Management (OPM's) Tech-2-Gov working group, OPM's AI Playbook, MITRE-facilitated National Science Foundation (NSF) Scholarship for Service in AI program and others.

US Digital Corps Fellows

USDA is strategically focusing on early career and internship programs to recruit AI talent. In partnership with the General Services Administration (GSA), the USDA has expanded its footprint of [US Digital Corps fellows](#) for AI and AI-enabling work from two (2) fellows in Fiscal Year 2024 to a total of eight (8) in Fiscal Year 2025. These fellows will be supporting several offices: The Assistant Chief Data Officer (ACDO) for the U.S. Forest Service, the Chief AI Officer, and the CISO, all working on data and AI efforts.

Image 1 – US Digital Corps Fellows assigned to USDA at a Colorado State University hiring event



Student Intern Programs

In partnership with the USDA Digital Service, the CAIO has encouraged the use of Pathways intern programs and other programs such as the [Virtual Student Federal Service](#) and [Coding It Forward](#) to contribute to the AI mission, but also to build internal talent and create a “talent acquisition bench” when positions become available. Since starting this initiative in Fiscal Year 2024, the CAIO has brought in over 30 interns through various programs to contribute to our work.

In Fiscal Year 2025, the CAIO will continue to partner with the USDA Digital Service and other groups to increase USDA’s awareness and participation in early career programs for data and AI talent.

Hands-on Opportunities with USDA AI Lab – Rotational Details

In partnership with the USDA CAIO, CTO and Mission Areas, the USDA continuously provides opportunities for the existing workforce to leverage training and on-the-job training opportunities to increase familiarity of AI and AI infrastructure services available from commercial software and service providers. The rotational details focus on a span of AI-enabling capabilities aligned to current IT services architectures, responsible AI, security, and data readiness for common AI applications across the Department.

In Fiscal Year 2025, the CAIO and CTO will work to expand rotational details to provide more opportunities for hands-on AI and AI-enabling work.

Community of Practice

OHRM facilitated several AI Talent-driven efforts to support effective human resources policy promulgation and operations deliverables while leading a multi-agency team of classification, policy, data, and technology subject matter experts in the development of enterprise-wide AI and AI-enabling position management guidance.

Workforce Readiness for AI Taskforce

The CAIO, in partnership with OHRM, established a department-wide workforce readiness strategic planning effort to assess the awareness of AI across USDA, achieve a shared understanding of the workforce opportunities and risks associated with AI and ensure compliance with OMB Memorandum M-24-10 for *Advancing Governance, Innovation and Risk Management for Agency Use of Artificial Intelligence* to inform USDA's AI Strategic Plan.

University Engagements

USDA sponsored several external engagements at universities and elsewhere to increase USDA's brand awareness and attract bright talent to the mission. For example, in Fiscal Year 2024, the CAIO partnered with Colorado State University on a [data and AI hackathon](#) focused on a real problem statement facing one of our agencies. USDA is pursuing other university engagements including embedding problem statements in a classroom setting as a course capstone, giving university students an opportunity to see what it's like to be a USDA Data Scientist working on AI projects.

In Fiscal Year 2025, USDA will continue to sponsor university engagements to build brand awareness and increase our readiness to leverage related Direct Hire Authorities and build our talent bench.

Image 2 – USDA CAIO speaks at Colorado State University Hackathon Event



If applicable, describe your agency’s plans to provide any resources or training to develop AI talent internally and increase AI training opportunities for Federal employees. In particular, reference any role-based AI training tracks that your agency is interested in, or actively working to develop (e.g., focusing on leadership, acquisition workforce, hiring teams, software engineers, administrative personnel or others).

In partnership with the USDA Digital Service, the CAIO worked with the Assistant Chief Data Officers (ACDOs) across USDA to determine data and AI training needs, plus barriers to implementation that may need Departmental assistance.

USDA Data Science Training Program

USDA is working to improve and mature the [USDA’s Data Science Training Program](#) to handle additional AI topics such as machine learning, natural language processing, and generative AI. The Data Science Training Program is a 9-month program providing USDA staff an environment to learn data science skills. The program offers curated learning tracks in an e-learning platform, monthly USDA exercises and review sessions, guest lectures and workshops, facilitator support through office hours, one-on-one help, and mentorship, and a capstone project.

In Fiscal Year 2025, USDA will continue to improve the Data Science Training Program by partnering with other organizations that have similar programs in the Federal government to share best practices.

AI Training Needs Assessment

In partnership with USDA’s CHCO and the USDA Digital Service, the CAIO facilitated a USDA AI training needs assessment. The results of this needs assessment helped identify areas where the Department can alignment investments (like expanding the USDA Data Science Training Program) and also identified barriers where more support is needed.

AI Training

The USDA has a robust learning management system (LMS) called AgLearn where we have launched a “USDA Generative Artificial Intelligence Learning Journey” in partnership with Skillsoft. This learning journey consists of 5 tracks with 15 courses. Completion of each track earns a badge and completion of the journey earns employees a certificate.

The Agricultural Research Service’s (ARS’s) [scientific computing program, SCINet](#), along with the AI Center of Excellence (AI CoE), develop and provide a variety of AI-related training opportunities to ARS researchers. These opportunities include live, hands-on, workshop-style short courses and online tutorials and reference material. Topics covered range from data science and scientific computing fundamentals to advanced applications of deep learning and other machine learning methods in scientific research. SCINet also provides all SCINet account holders with the option to access AI and machine learning courses on Coursera, including the opportunity to earn relevant certificates.

In Fiscal Year 2025, USDA will be piloting free trainings through [InnovateUS](#), a non-profit organization focused on providing no-cost workforce education to government employees on topics such as data, AI, and innovation. One course is focused on providing fundamental Generative AI skills for the entire workforce, and another course is focused on leadership looking to scale AI in their organization.

Hands-on Experience

USDA will continue to leverage hackathons and rapid prototyping events to give the USDA workforce real opportunities to work with the latest tools and focus on real-world problems. The CAIO has sponsored internal hackathons at events like the [USDA Innovation Symposium](#) to attract and develop internal talent towards the mission. The AI CoE also ran several cross-agency pilots as a learning experience, and the [National Agriculture Statistics Service \(NASS\)](#) has held several Machine Learning hackathons.

In Fiscal Year 2025, the CAIO will also sponsor more rotational details and assignments to give current USDA employees an opportunity to hone their skills and return to their prior USDA agency with new relationships and skillsets.

Image 3 – USDA Innovation Symposium



D. AI Sharing and Collaboration

Describe your agency’s process for ensuring that custom-developed AI code—including models and model weights—for AI applications in active use is shared consistent with Section 4(d) of M-24-10.

The CAIO has partnered with the Chief Technology Officer to leverage existing work to encourage code sharing within USDA, and ultimately with the public. This partnership is expected to provide a consistent experience when sharing code of any type with the public.

Elaborate on your agency’s efforts to encourage or incentivize the sharing of code, models, and data with the public. Include a description of the relevant offices that are responsible for coordinating this work.

Code and Data Sharing

USDA will continue to leverage platforms like data.gov to share data with the public. In partnership with the CTO and the Assistant Chief Data Officers, the CAIO will work to develop an improved code sharing culture, both within USDA and with the public. The CAIO will also coordinate with the USDA Public Access and Open Science forum that coordinates implementation of research results sharing.

Enterprise Data Platform

USDA has made great progress to stand up and build an enterprise data platform for common use.

In Fiscal Year 2025, the CAIO, dual hatted as the CDO, will work to strengthen the USDA’s enterprise data platform by migrating from 3rd party hosting to in-house hosting. This effort is expected to lower costs in the long term, add some AI tools to the enterprise data platform to assist with data and model sharing, but most importantly, make it easier for USDA to leverage curated datasets for AI use cases by putting the data closer to the models and compute.

E. Harmonization of Artificial Intelligence Requirements

Explain any steps your agency has taken to document and share best practices regarding AI governance, innovation, or risk management. Identify how these resources are shared and maintained across the agency.

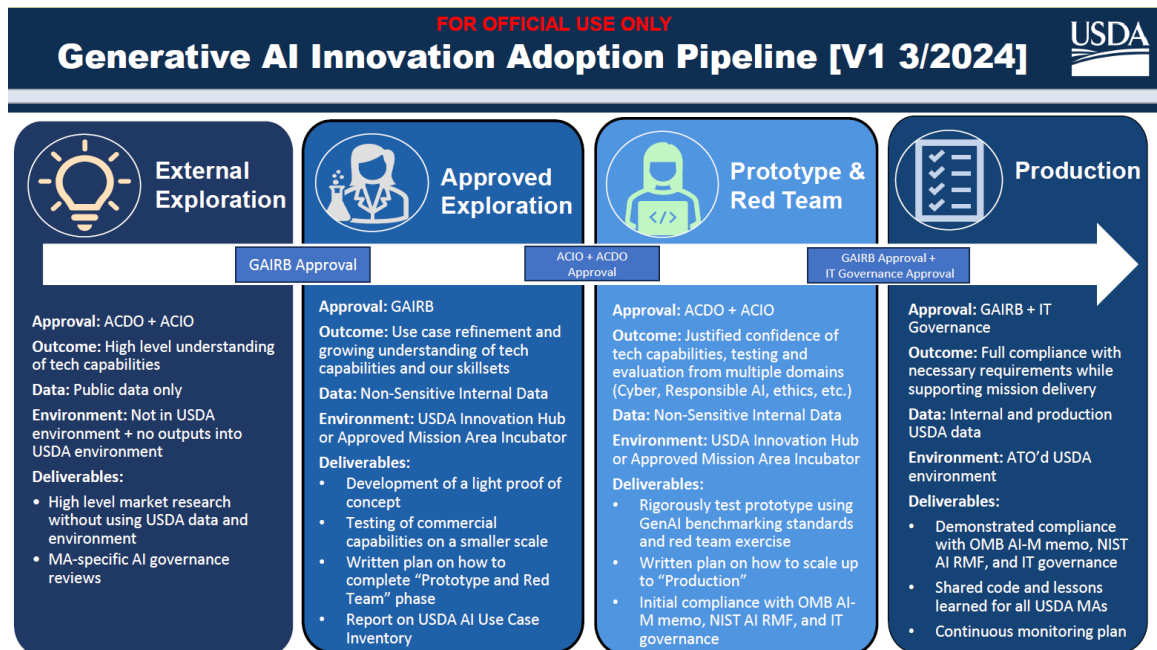
AI Lab

The USDA is working to develop a USDA AI Lab, a common environment to collaborate, share code, lessons learned, and shared infrastructure in a safe and secure manner. The USDA AI Lab is a partnership between the CAIO and the CTO, and currently being serviced by the [Digital Infrastructure Services Center \(DISC\)](#). When fully matured, the AI Lab is expected to give USDA the ability to test and evaluate innovation technologies, but also enhance our ability to review our risk tolerance and risk management practices.

Generative AI Innovation Adoption Framework

The CAIO, in collaboration with the CTO and approved by the Generative AI Review Board (GAIRB), developed an innovation adoption pipeline to incubate use cases through the lifecycle. This framework illustrates how Generative AI technologies can be leveraged, where approvals are needed, and what restrictions are in place, providing a path forward to using Generative AI at USDA.

Figure 2 – Generative AI Innovation Adoption Pipeline



USDA AI Center of Excellence (CoE)

The AI CoE is a volunteer-run group of AI practitioners across USDA, co-led by the Assistant Chief Data Officer for the [Research, Education, and Economics \(REE\) Mission Area](#), with the CAIO as the executive sponsor. The AI CoE has various working groups on topics such as leadership, best practices, skills and awareness, and more.

III. MANAGING RISKS FROM THE USE OF ARTIFICIAL INTELLIGENCE

A. Determining Which Artificial Intelligence Is Presumed to Be Safety-Impacting or Rights-Impacting

Explain the process by which your agency determines which AI use cases are rights-impacting or safety-impacting. In particular, describe how your agency is reviewing or planning to review each current and planned use of AI to assess whether it matches the definition of safety-impacting AI or rights-impacting AI, as defined in Section 6 of M-24-10. Identify whether your agency has created additional criteria for when an AI use is safety-impacting or rights-impacting and describe such supplementary criteria.

The CAIO reviewed all use cases in its AI inventory for identification as either rights-impacting, safety-impacting, or both. No additional criteria have been added to the existing OMB guidelines at this time.

If your agency has developed its own distinct criteria to guide a decision to waive one or more of the minimum risk management practices for a particular use case, describe the criteria.

N/A

Describe your agency's process for issuing, denying, revoking, tracking, and certifying waivers for one or more of the minimum risk management practices.

Currently, the CAIO reviews all requests for AI use cases that require the application of minimum risk management practices. USDA will be implementing a form submission to issue, accept/reject, and track waivers per AI use case. This work is still ongoing and is expected to be completed in Fiscal Year 2025.

B. Implementation of Risk Management Practices and Termination of Non-Compliant AI

Elaborate on the controls your agency has put in place to prevent non-compliant safety-impacting or rights-impacting AI from being deployed to the public.

As a large federal organization, USDA operates a federated governance model in domains such as IT and data. USDA is expected to delegate some CAIO oversight duties to the Mission Area Assistant Chief Data Officers (ACDOs). The ACDOs, acting as the program ambassadors for their Mission Areas, will be expected to act as the first line of defense for AI governance. The USDA CAIO will retain ultimate authority but will rely on

Describe your agency’s intended process to terminate, and effectuate that termination of, any non-compliant AI.

USDA has awarded a multi-vendor blanket ordering agreement called [STRATUS](#) for department-wide access to cloud service providers, cloud integration and development providers, and Software-as-a-Service (SaaS) providers and resellers. STRATUS will give USDA enhanced abilities to properly monitor cloud usage and spend, and implement “policy-as-code”, where policies are defined, updated, shared, and enforced across the organization. The CAIO has implemented several “policy-as-code” actions for Generative AI-specific capabilities to ensure compliance with the USDA’s interim generative AI procedures. These policies can be scaled beyond Generative AI and beyond the STRATUS ordering agreement to provide a more holistic and “eagle eye” view of AI usage across USDA. Furthermore, the CAIO and the CISO will continue to work together if termination of non-compliant AI is required, including coordination with the CIO and USDA Deputy Secretary as needed.

In Fiscal Year 2025, the CAIO will work with other IT leaders and the Office of Contracting and Procurement (OCP) to ensure that all cloud system procurements meet USDA AI standards.

C. Minimum Risk Management Practices

Identify how your agency plans to document and validate implementation of the minimum risk management practices. *In addition, discuss how your agency assigns responsibility for the implementation and oversight of these requirements.*

In Fiscal Year 2025, USDA is exploring awarding a 3rd party AI product testing and validation contract to assist with compliance to minimum risk management practices. In the interim, the CAIO is relying on evidence and testimonials from AI product leads to determine if minimum risk management practices are being met. USDA also has representation on the Federal CAIO Council Minimum Risk Working Group. Based on the work from that working group, the CAIO will adjust as new information, practices, and resources are identified. As mentioned above, the Mission Area ACDOs will share responsibility with the CAIO on whether AI use cases meet minimum risk management practices, but the CAIO will retain ultimate responsibility and accountability.