THE U.S. DEPARTMENT OF THE INTERIOR

ARTIFICIAL INTELLIGENCE STRATEGY

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Introduction

The U.S. Department of the Interior (the Department, Interior, or DOI) uses science and other forms of knowledge to carry out its mission. The Department's mission encompasses management and stewardship for lands, waters, natural resources, and ecosystems, along with its trust responsibilities to Tribes.

In the Department's FY 2022-2026 Strategic Plan, a series of guiding principles are laid out including "use science and evidence-based information to guide our decisions" and "balance our decisions to best meet the needs of today and tomorrow" (U.S. Department of the Interior 2022). In line with these principles, Interior embraces a forward-thinking approach aimed at leveraging artificial intelligence (AI) technologies to support the agency in delivering its mission, from enhancing decision-making to fostering greater equity and inclusivity.

The adoption of AI tools is an opportunity to increase the effectiveness and efficiencies of Interior's work while opening new possibilities in fulfilling the Department's mission. Interior foresees opportunities to leverage AI tools across its diverse mission areas, ranging from wildland fire, managing water, managing natural resources at a landscape level, to increasing efficiency in business operations and enhancing the ability to deliver products and services to communities and the American people.

Adoption of AI will, as appropriate and consistent with applicable laws, adhere to the guiding principles set forth in the *Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence* (EO 14110) as well as guidance issued by the Office of Management and Budget (OMB) to strengthen the effective and appropriate use of AI, advance AI innovation, and manage risks from AI.

With careful and deliberate implementation, Interior can use AI to increase benefits to people, climate, and nature. By fostering a culture of collaboration and learning, underpinned by responsible AI usage, DOI will enhance our mission delivery that is effective, efficient, and equitable.

Vision Statement

The Department of the Interior responsibly[1] and securely uses artificial intelligence to support and amplify its many missions, including delivery to protect and manage natural resources and cultural heritage, provide scientific and other information about those resources, and honor Trust responsibilities and special commitments to American Indians, Alaska Natives, Native Hawaiians, and affiliated Island Communities, now and into the future.

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[1] Responsible AI refers to the consideration of how AI affects the people who use it and are impacted by it, especially for the protection of privacy, civil rights, and civil liberties. (GAO AI Guide for Government, https://coe.gsa.gov/coe/ai-guide-for-government/introduction/index.html)

Goal 1: AI Is Used to Support and Amplify Mission Delivery

The Department of the Interior will responsibly use AI to achieve its many missions, including as steward public lands, increase environmental protections, pursue environmental justice, and honor our nation-to-nation relationship with Tribes. DOI will support and foster AI use throughout the agency.

1.1 Use Cases that Impact Mission Delivery are Identified, Inventoried, and Shared

Interior will harness the power of AI to better deliver on its mission –to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, Native Hawaiians, and affiliated Island Communities. DOI's use of AI will help steward resources and deliver services more effectively, efficiently, and equitably.

By tracking current and planned AI use cases – and sharing those with relevant internal and external audiences through Interior's Use Case Inventory – the Department will be able to identify and prioritize deployment of uses that are proven to enhance mission delivery, while also spurring the development of new use case ideas for development and testing. In addition to promoting the creation of new use cases, Interior will also work with partners within the Department, across the Federal government, and in the academic, nonprofit, and private sectors to collaborate on adapting use cases to fit Interior's mission.

AI applications such as machine learning help Interior better leverage data and other forms of knowledge to detect, monitor, and predict change in the lands, waters, and resources it manages to ensure the benefit for all Americans. This is of increasing importance as the climate crisis impacts every aspect of life on Earth – AI can help monitor, predict, and manage for both the current and future states.

Additionally, AI can increase the ability of Interior to deliver services to the American people faster and more effectively. Leveraging the use of AI can help ensure equity in the administration of programs and ensure environmental justice in the management of resources entrusted to DOI.

1.2 The Department Pioneers New Use Cases that Strengthens the Mission

Interior will be ready to continue to expand on the use of AI to deliver on its mission. As the Department's use of AI matures, the Department can develop, pilot, and implement larger, enterprise-wide initiatives.

Interior will continue to lead on developing opportunities to partner with American Indians, Alaska Natives, Native Hawaiians, and affiliated Island Communities in developing AI tools that

strengthen delivery of Interior's mission and benefit communities. As part of this effort, Interior's development of AI tools will comply with Department policy on the consideration of Indigenous Knowledge (301 DM 7). Interior will lead in developing policies that honor Tribal data sovereignty, aligning with a commitment to Free, Prior, and Informed Consent for use of Indigenous Knowledge and Tribally-owned data, to preserve and protect Tribal data.

DOI employees are the greatest asset in exploring the potential use of AI tools, and the Department seeks to create opportunities for interested employees to safely and securely pioneer uses and test new tools for deployment. Interior will utilize a "sandbox" environment to allow new AI-enabled tools to be tested and improved to decrease potential risk upon deployment. The Department is establishing a system for employees across the enterprise to propose new use cases and facilitate connection with relevant data and information technology offices to further develop and test use cases before broad deployment.

Goal 2: Drive Innovation, Increase Effectiveness and Efficiencies in the Department by Increasing the Maturity of AI

AI will assist the Department in achieving greater accuracy and effectiveness, while gaining efficiencies to improve operations and delivery of services to employees and the public. Interior will facilitate the development and deployment of AI tools across Bureaus and Offices in a safe, secure, and effective manner. To do this, the Department must utilize high quality data with its AI toolsets, ensure equitable access to these tools and data, encourage collaborative sharing that enables innovative research and decision making, and encourage the development of partnerships that promote and advance the use of AI.

2.1 The Department Utilizes Data that is Findable, Accessible, Interoperable and Reusable (FAIR)

To efficiently use data to achieve mission outcomes today and in the future, data assets must be managed, well documented, and AI ready. Developing and maintaining FAIR data are essential to building and training reliable AI models. The availability of these data is essential to increasing Interior's responsible use of AI to support mission objectives. The development of AI tools and expansions of new use cases is a first step to AI adoption and innovation.

While the Department maintains large caches of data about the nation's natural resources, work to sustain, collect, develop, and manage FAIR data must continue. Implementing the Department's Data Strategy, expressed as Goal 5 in the Department's Information Management and Technology Strategic Plan, 2024-2029, will "create a data-centric ecosystem that allows the DOI workforce, people, community, organizations, and the public appropriate access to data on our land, water, cultural, and natural resources. Establish Findable, Accessible, Interoperable,

and Reusable (FAIR) and OPEN data as a strategic asset for DOI. Strengthen data protection and support evidence-based decisions through data analytics, artificial intelligence, and data science to increase transparency, improve government operations, and build public trust." Achieving this goal will provide a foundation of high-quality data, that can be used for development, training, and use of AI tools by staff and partners.

To facilitate use of data across the Department, Interior will promote data of documented quality that is AI ready, interoperable, and shared when appropriate. The sharing of data underlying AI models by using standardized data documentation, formats and other interoperability criteria will enhance AI transparency as well as the pool of data available to Interior programs when developing, training, and using AI tools for mission objectives.

While working to ensure greater open data access, Interior will also remain committed to privacy, safety, and cyber-security. Data that is considered private, proprietary, or sensitive will not be released in accordance with statutory guidelines and best practices.[2] Interior will work with Tribal nations to understand, develop, and execute policies for safeguarding the use of Tribal data, including sensitive data.

2.2 Equitable Access to Resources is Provided Across the Department

A critical challenge in Interior's adoption of AI tools is overcoming barriers to the adoption of technology, especially access high-performance computing, and reliable IT infrastructure that allow access to AI tools.

As Interior expands adoption of AI-enabled tools, the Department must remove barriers to ensure IT infrastructure, FAIR data, and training is available in order to streamline the access and usage of these tools. This will be accomplished by working collaboratively across Bureaus to identify efficiencies, share knowledge, leverage existing tools, support training, and provide access to AI resources which meet the dynamic needs and expectations of the Interior. The Department is focused on making AI resources available to everyone across the agency by offering open and equitable access to AI tools and training, which advance and promote opportunities to benefit from the use of AI.

2.3 Collaboration and Data Sharing

In addition, to capture the true value in the Department's data, mechanisms that allow collaboration through data sharing, interoperability, and open science, should be employed when appropriate. Allowing greater access to data across the Department and with partners and collaborators will not only enhance decision making and offer new insights through "data bycatch" (discovery data that is gleaned from information gathered for other purposes). We

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[2] Proprietary data includes information for which rights of ownership are restricted. Sensitive data is data that, if made public, would result in an adverse effect or that may have significant economic implications if disclosed.

will increase efficiency and decrease costs associated with data collection and monitoring by sharing and collaborating with our data in new, innovative, and more efficient ways.

2.4 Develop, Expand and Maximize Partnerships to Leverage AI Tools and Increase Capacity

A crucial strategy to enabling Interior to expand the development of AI use cases and increase mission capacity is to establish strategic partnerships both across the federal government and with our partners and collaborators. Interior is already working to build AI-focused partnerships within existing authorities, and can leverage partnership opportunities with academia, nonprofits, and the private sector to expand and amplify the use of AI tools and technologies that help us make better decisions.

Goal 3: The Department Has an AI-Ready Workforce

A diverse AI-ready workforce – through both training of current employees and the hiring of an AI-enabling workforce – is essential for the long-term implementation of AI across Interior. The ability for the Department to effectively meet the needs of the American people and effectively carry out our mission is dependent on attracting and retaining the best talent who are fully engaged and committed. The Department's workforce currently spans a broad array of awareness and literacy regarding AI, from the hesitant to those who are already using AI tools in their roles. Interior seeks to establish a learning-first environment to allow employees to safely and securely pioneer uses of AI that support their mission functions.

3.1 The Department Supports a Culture of Learning, Including for AI

In the early stages of AI adoption, the Department must support employees in developing and expanding data and AI literacy and fostering an environment that promotes learning and development about the use of AI tools. The Department will continue to support employee-driven knowledge sharing, through communities of practices, providing venues for sharing and discussion, and providing access to information on the Department's use of AI. Departmental support for AI-related learning will support individual employees to develop AI literacy that matches their position and interest.

3.2 The Department Offers Essential AI Training to Staff

Interior will offer trainings, workshops, detail assignments, and other avenues to support employees in learning about and implementing AI tools. The Department will implement comprehensive skill development and other training programs aimed at equipping employees with the expertise and knowledge needed to leverage AI ethically and effectively. Training will support employees in developing an AI competency that includes knowledge of available tools, understanding the role of quality data, responsible and ethical use of AI, and mitigation for anticipated risks associated with AI tools, including bias and inaccurate information.

3.3 The Department's Hiring Strategy Integrates AI Skill Acquisition and Building

Adoption of AI throughout Interior's mission areas will also require new areas of expertise to support the development and adoption of AI tools. Interior will leverage existing mechanisms – including internships, fellowships, and skills-based hiring – to recruit a diverse and skilled workforce to drive innovation and enhance organizational capacity. Interior's unique mission and inclusive culture is a focal point for attracting new talent with ambition to address the pressing challenges of today and tomorrow.

Goal 4: Responsible, Trustworthy, and Accessible AI is the Department's Standard

While the adoption of AI tools presents an opportunity to expand and deliver on Interior's mission, it is critical that adoption be governed in a way that facilitates innovation and experimentation while protecting rights and providing safeguards against risks.

4.1 Effective Governance of the Use of AI

The Department's Chief AI Officer (CAIO) and Management Initiatives Team (MIT) will provide senior leadership in developing policies to guide the implementation of AI across the Department. The MIT Executive Council, which is chaired by the Deputy Secretary, will serve as the AI Governance Board. Working with existing risk management bodies focused on cybersecurity and technology; privacy; scientific integrity; human capital; data; diversity, equity, and civil rights; and others, the MIT will, as appropriate, facilitate development of complementary policies guiding development of AI use to include increased oversight of high risk, rights-impacting use cases. The MIT has chartered a sub-group representing Interior's Bureaus, as well as the relevant operations portfolios, including science, information management and technology, human capital, budget, public safety and emergency management, the Office of Diversity, Inclusion and Civil Rights, and the Solicitor. The sub-group will lead the development of policies and best practices and serve as a venue to exchange information to enable coordination of research, development, and deployment of use cases.

4.2 Use Case Monitoring

A key function of the MIT and AI sub-group is to establish protocols around the approval and monitoring of AI use cases within the Department. The MIT will determine processes for reviewing use cases with different levels of risk, to ensure rights- and safety-impacting, or other high-risk level opportunities, receive sufficient review to minimize and mitigate impacts. The MIT, based on recommendations from the AI sub-group, will establish protocols for determining and reviewing use cases that require greater levels of review for safety, equity, civil rights and civil liberties. The MIT will also establish procedures for implementing risk management practices when warranted.

4.3 AI Advances Equity, Civil Rights, and Accessibility

Adoption of AI at DOI will maintain adherence to existing policies and practices to ensure civil rights and equity, including protecting the public's privacy as well as part of the sovereign-to-sovereign relationship with federally recognized Tribes. Interior will continue to collaborate as appropriate with partners across the agency, the federal government, indigenous peoples, and externally in developing AI including through listening sessions, consultations, and workshops, and will provide transparency on data, code, and models, unless doing so would be rights- or safety-impacting. In addition, the Department will seek ensure that AI tools are accessible to all employees and will collaborate to identify the role of AI in making Interior's programs and services accessible to all users.

As part of Interior's role in effectuating the United States' trust responsibilities, applicable AI policies and uses will align with current policies and practices of consultation and collaboration with Tribes. This includes establishing policies and best practices, in coordination with Tribes, on the appropriate use of data throughout the data life cycle (including collection of data and development and implementation of models), or the decision to not collect data until mechanisms are in place for appropriate protection.

The Department will continue its engagement of diverse stakeholders, including marginalized communities, in discussions about AI and its impacts. This inclusive approach ensures that privacy concerns from various perspectives are considered, leading to more robust privacy protections. The Department will also review and enhance as necessary it's privacy program to mitigate any additional potential privacy risks associated with AI adoption.