

NSF AI Compliance Plan

TITLE: National Science Foundation (NSF) Compliance Plan for OMB Memoranda M-24-10 – September 24, 2024

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1. STRENGTHENING AI GOVERNANCE

Planned/current efforts to update existing internal AI principles, guidelines, or policy

- NSF has published an AI Policy that applies to all AI systems used to support an NSF business process regardless of whether it is Government Off the Shelf (GOTS), Commercial of the Shelf (COTS), or developed internally. It applies to all internally developed AI systems regardless of if they are in the design, development, acquisition, or deployment stages. The policy is currently under review.
- A Generative AI Memo was prepared by an internal working group to assess and develop recommendations on the use of generative AI technologies within the NSF merit review process. The memo provided a foundation for NSF to understand, discuss, and navigate the future applications of the technology.
- The agency is implementing the Snowflake data warehousing platform and will leverage it as a governance tool to provide necessary controls and mechanisms that will help NSF to develop a clean data layer for maximizing development of AI solutions.
- Encouraging an environment of innovation and adoption requires engagement with the community around best practices both across government agencies and in industry. NSF has leveraged its Enterprise Data Governance and Education Group (EDGE) speaker series to introduce various topics related to the responsible use and development of AI.

AI Governance Bodies

NSF has established an AI Governance ecosystem which includes three governing bodies: the AI Governance Board, (AIGB) the AI Steering Committee (AISC) the AI and Data Governance Committee (AIDGC). Various offices are represented in NSF's governance bodies.

AIGB – The AIGB is composed of:

- NSF's Chief Science Officer,
- Chief Management Officer,
- Chief Information Officer,
- Chief AI Officer,
- Chief Financial Officer,
- Chief of Staff,
- General Council,

- Chief Human Capital Officer,
- Chief Diversity and Inclusion Officer,
- Office Head of the Office of Integrative Affairs,
- Office Head of the Office of Legislative and Public Affairs,
- Director of the Technology Innovation and Partnerships
- Office Head of the Office of Equity and Civil Rights,
- and Special Assistant for AI.

AISC - The AISC is composed of one member from each of the participating Directorates/Offices listed below. The AISC will be co-chaired by the Special Assistant to the Director for AI alongside representatives from CISE and EDU. Committee members serve as liaisons with the senior management of their respective Directorates/Offices to ensure full and transparent communication regarding development of Foundation-wide AI activities.

Participating Directorates and Offices: • Core: BIO, CIO, CISE, EDU, ENG, GEO, MPS, OAC, OIA, OISE, SBE, NCSES, TIP; Expanded Core: BFA, OCRSSP, OGC, OIRM, OLPA

AIDGC - The composition of the AI and Data Governance Committee includes agency senior officials as indicated in the Evidence Act (*) and additional key agency advisors or their designees, to include those who support the integration of AI technologies. Members are listed below:

- Chief Data Officer (CDO) as designated by the head of the Agency (Chair*)
- Chief Evaluation Officer (EO) as designated by the head of the Agency
- Chief Statistical Official (SO) as designated by the head of the Agency
- Performance Improvement Officer as designated by the head of the Agency
- Legal Representative(s) (i.e., Assistant General Counsel(s)) as designated by the Office of the General Counsel
- Data and Analytics Officer representative as designated by the DAO group.
- Knowledge Management representative as designated by the Senior Advisor for Knowledge Management
- CIO representatives as designated by the CIO.

Expected Outcomes of AI Governance Bodies

AIGB – The goals of the AIGB are to:

- Integrate NSF’s AI governance framework that provide NSF leadership oversight over the full breadth of NSF’s AI activities – both internal AI use and external research funding and communication.
- Review progress on implementation of the OMB Memorandum M-24-10, AI EO, AI-related legislative requirements, and gain awareness of milestones related to the agency’s flagship AI investments and external engagement on AI issues.

AISC - The goals of the AISC are to:

- Ensure timely and effective implementation of NSF’s tasks in the Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence.
- Proactively share information on existing and planned AI efforts across NSF.

- Maintain NSF-wide awareness of ongoing Executive Office of the President (EOP) and legislative interests related to AI.
- Foster cross-directorate collaboration to leverage existing funding programs and to formulate new programs and funding mechanisms to advance AI and its safe, secure, trustworthy application.
- Advise the Office of the Director and Assistant Directors/Office Heads (AD/OH) on potential areas of cooperation and investment across NSF, as well as interagency efforts where NSF may play a unique role.
- Act as the liaison group within NSF that will work with the Office of Legislative and Public Affairs and the Special Assistant to the Director for AI to respond to requests from EOP or Congress to inform AI policy and communications.

AIDGC - The AI and Data Governance Committee's responsibilities include:

- Coordinate and support implementation of data management and AI responsibilities with agency data management actors to strengthen strategic plans and learning agendas.
- Own and steward agency data and AI policy in a manner that complements but does not supplant the statutory authority of established positions.
- Implement/Uphold/Coordinate/Alignment with the Digital Accountability and Transparency Act of 2014 (DATA Act) and the Foundations for Evidence-Based Policymaking Act of 2018 by assessing data maturity, risks, and capabilities to recommend related data investment priorities.
- Implement the OMB Memo Advancing Governance, Innovation and Risk Management for Agency Use of Artificial Intelligence by serving as an agency AI Governance Board, removing barriers to the use of AI and advancing agency AI maturity.

Consultation with external experts

AISC - The AISC focuses on the research, education, and research infrastructure activities supported by NSF. The use of AI for NSF operations is not within the scope, although the AISC includes and coordinates with operational staff overseeing NSF's use of AI and compliance with government-wide reporting requirements.

AIDG - The AI and Data Governance Committee is responsible for policy and guidance covering a broad range of issues that touch on data management, data stewardship, data usage, AI usage and AI use case evaluation to help the Data and AI Governance Steering Committee achieve its goals and facilitate informed decision-making, working groups comprised of representatives from across NSF may convene as needed.

AI Use Case Inventories

- At NSF all uses of AI for business processes require approval through the process described in the agency's AI Policy Process and Guidelines. This applies to all tools that meet the criteria of an AI system as defined in the policy. This process includes

approval by the AI Team’s Deputy Assistant Director (or respective Office head), followed by a review by the Artificial Intelligence and Data Governance Committee (AIDG).

- Any new AI use or activities must have an AI use case inventory questionnaire completed. Upon submission of the questionnaire, the appropriate stakeholders will be contacted to review the questionnaire provided by the submission author
- Many AI applications are developed iteratively with improvements that leverage both internal and external efforts. To foster internal innovation and minimize the burden of use case submission, teams developing AI applications with a similar purpose to a previously approved application, can reference the use case and submit a truncated application for review. All approved AI applications will be shared in an internal inventory.

Reporting on AI Use Cases Not Subject to Inventory

- NSF’s CDO team solicited responses from across the agency curating a comprehensive list of use cases and excluded those that met the criteria for exclusion.
- Where relevant when we identify tools for agency wide use such as “Co-Pilot” we review the use case for blanket approval.
- NSF has established a standardized use case review process and we will monitor the development and revalidate all of our use cases annually.
- We use the same process of collection and review as our reportable AI use cases.

2. ADVANCING RESPONSIBLE AI INNOVATION

AI Strategy

NSF’s AI Strategy, which is under development, will address strategies related to removing barriers, building AI talent, sharing and collaboration, and harmonization.

3. MANAGING RISKS FROM THE USE OF ARTIFICIAL INTELLIGENCE

Not applicable. NSF does not have any safety-impacting or rights-impacting AI use cases.