State of Connecticut

Policy AI-01 AI Responsible Use Framework

Meaningful Guardrails + Workforce Empowerment and Education + Purposeful Use = Responsible AI Innovation

Version 1.0

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Procedures

Responsible AI Framework for State of Connecticut

Connecticut's AI Framework outlines meaningful guardrails to empower our workforce to drive responsible AI innovation.

1.0 Artificial Intelligence (AI) Vision for State of Connecticut

The State of Connecticut has always embraced emerging technologies to advance its innovation agenda, spur economic growth, enhance quality of life for everyone, and empower its workforce to better serve business and residents. Fostering an AI-friendly mindset will position Connecticut as a national and global leader and play a key role in shaping Connecticut's ability and capacity to ***continue innovating with intent.***

We believe we can accomplish this vision internally through workforce empowerment and education and externally through inclusion, accountability, and transparency.

2.0 Purpose

This policy and the collection of procedures listed below seek to establish a framework that upholds the ethical use of AI in Connecticut state government, and prioritizes fairness, privacy, transparency, accountability, and security. This is an organic framework intended to evolve in tandem with technological advancements, future iterations of relevant legislation at the state and federal levels, societal needs, and government operational necessities.

3.0 Framework Elements

- Policy AI-01 – AI Responsible Use Policy

- Procedure AI-01 – AI Determination Characteristics
- Procedure AI-02 – AI Intake and Inventory
- Procedure AI-03 – AI Impact Assessment
- Procedure AI-04 – AI Procurement Due Diligence Checklist

4.0 Scope

This policy applies to AI software, hardware, services, and appliances. It also applies to developed, procured, and embedded AI and covers all State agencies as defined in §4d-1 of the Connecticut General Statutes, all consultants and contractors performing work for the State of Connecticut, and all vendors and third-party stakeholders who are extensions of services offered by State agencies.

The legislative and judicial branches of government, local government, quasi-public entities, constituent units of higher education, and local government are encouraged to adopt this policy.

5.0 Enabling Legislation

In accordance with C.G.S. §4d-8a, the Office of Policy and Management is responsible for developing and implementing policies pertaining to information technology for state agencies.

Specific to AI, Public Act No. 23-16, effective July 1, 2023, directs the Office of Policy and Management (OPM) and the Department of Administrative Services (DAS) to develop and establish policies and procedures concerning the development, procurement, implementation, utilization, and ongoing assessment of systems that employ AI and are in use by state agencies.

6.0 Terminology

6.1 Terminology Related to AI

- **Artificial Intelligence –** As per PA 23-16, AI means an AI system that:
  - performs tasks under varying and unpredictable circumstances without significant human oversight or can learn from experience and improve such performance when exposed to data sets,
  - is developed in any context, including, but not limited to, software or physical hardware, and solves tasks requiring human-like perception, cognition, planning, learning, communication, or physical action,
  - is designed to: think or act like a human, including, but not limited to, a cognitive architecture or neural network or act rationally, including, but not limited to, an intelligent software agent or embodied robot that achieves goals using perception, planning, reasoning, learning, communication, decision-making or action,
  - is made up of a set of techniques, including, but not limited to, machine learning, that is designed to approximate a cognitive task.
- **Explain-ability –** The property of an AI system to express essential factors influencing the AI system results in a way that humans can understand.
- **Large Language Model (LLM) –** A type of AI program that can recognize and generate text, among other tasks. LLMs are trained on huge sets of data — hence the name "large." LLMs are built on machine learning: specifically, a type of neural network called a transformer model.
- **Machine Learning –** The use and development of computer systems that are able to learn and adapt without following explicit instructions, by using algorithms and statistical models to analyze and draw inferences from patterns in data.

- **Training / Test Data –** A dataset from which a model learns / is tested.

6.2 Terminology Related to Bias and Fairness

- **Algorithmic discrimination –** Occurs when automated systems contribute to unjustified different treatment or impacts disfavoring people based on their race, gender, age, religion, disability, or sexual orientation.
- **Bias –** In the context of fairness, bias is a characteristic that places one group at a systematic advantage, disadvantage in comparison to other groups.
- **Bias mitigation process –** A process for reducing unwanted bias in training data, models, or decisions. This process should be developed and informed by a diverse group of stakeholders, including (when possible) residents with lived experience.
- **Fairness –** the process of correcting and eliminating algorithmic bias (of race and ethnicity, gender, sexual orientation, disability, and class) from machine learning models.
- **Human Rights –** The human rights to privacy and data protection, equality and non-discrimination are key to the governance of AI, as are human rights' protection of autonomy and of economic, social, and cultural rights in ensuring that AI will benefit everyone.
- **Individual Rights –** Under data protection law individuals have a number of rights relating to their personal data. Within AI, these rights apply wherever personal data is used at any of the various points in the development and deployment lifecycle of an AI system.
- **Protected Classes –** Groups of people who are legally protected from being harmed or harassed by laws, practices, and policies that discriminate against them due to a shared characteristic (e.g., race, gender, age, religion, disability, or sexual orientation).

7.0 AI Policy Guiding Principles

7.1 Purposeful – When using AI, State agencies shall ensure that it is used in service of their core missions to serve customers, residents, visitors, and industry and to support State employees. Data collected for the purpose of testing and training AI systems shall not be used for other purposes outside of the agency's responsibility. The use of AI shall be aligned with the mission and goals of the agency, properly documented, and well-vetted by agency leadership.

7.2 Accuracy – When using AI, State agencies shall confirm that the AI produces accurate and verifiable information. This framework includes procedures on how best to audit and verify AI outputs to ensure clear and accurate information. AI is considered "accurate" to the extent that the AI-provided result is correct and expected.

7.3 Privacy – The design, development, procurement, and deployment of AI by State agencies must not adversely affect the privacy rights of users. Agencies shall ensure that training related to the use of AI and the input of data into those tools complies with applicable laws, regulations, and policies concerning the privacy rights of users.

7.4 Equity and Fairness – State agencies shall use AI in a way that does not unlawfully discriminate against or disparately impact individuals or communities based on or due to race,

gender, age, religion, disability, or sexual orientation. State agencies shall use AI in a human-centered and equitable manner testing for and protecting against bias so that its use does not favor or disadvantage any demographic group over others. To the extent possible, State agencies should develop internal AI working groups that include a diverse set of stakeholders, including (when possible) residents with lived experiences related to the process or topic under discussion.

7.5 Transparency – State agencies shall ensure transparency and accountability in the design, development, procurement, deployment, and ongoing monitoring of AI in a manner that respects and strengthens public trust. When using AI tools to create content, agency external-facing services or dataset inputs or outputs shall disclose the use of AI; and what bias testing was done, if any.

7.6 Understandable – State agencies' use of AI shall be documented in ways that ensure the technology is understood by those that make decisions, monitor outcomes, or explain results.

7.7 Accountability – State agencies are responsible and accountable for AI-related decisions, with consultative support from the AI Board as defined in Section 10.

7.8 Adaptability – The fast-evolving nature of AI and its potential use cases require State agencies to establish and maintain an ability and willingness to recognize and adapt to shifting risks and opportunities. Staying current and relevant requires State agencies to make investments that promote continued research and diligence; engage with external stakeholders and subject matter experts; and learn from other government partners.

7.9 Aligned to Standards – Connecticut operates within a connected global economy. The ability to harness these technologies for sustained benefits means sharing the support of the broader community. Connecticut will monitor emerging AI standards and adhere to those that facilitate interoperability and adoption of AI technology and are in alignment with this policy.

7.10 Human Enhancing – Those organizations that benefit from using AI will be those that have personnel trained on using it safely and whose employees' skills are enriched through their use. State agencies shall create training opportunities for employees to grow their skills in utilizing, understanding, and managing AI tools or technology. The use of AI tools shall be to enhance and improve the value added by our State employees.

7.11 Safety and Security – The AI Board shall lead the development and implementation of standards, procedures, and policies to safeguard and secure the data provided to the State by customers, residents, visitors, and industry against unauthorized uses and intrusions, and to ensure that AI is implemented in a way that avoids bias, discrimination, and disparate impact.

8.0 AI Implementation Phases

The "procurement, implementation and ongoing assessment" of artificial intelligence systems, as required under Public Act 23-16, must be done in accordance with the Policy Guiding Principles outlined in Section 7 of this policy and the procedures defined as part of the overall AI Framework. The policy segments implementation into four distinct phases, and applies the principles to each:

- Intake and exploration
- Impact assessment
- Procurement

- Implementation

Each distinct phase is described below and includes reference to specific AI procedures to promote consistency in interpretation and application across agencies.

8.1 Intake and exploration

Prior to implementation, State agencies that are considering an AI system should submit documentation to the AI Advisory Board ("AI Board") addressing the purpose for the system and the relevant considerations for procurement, implementation, or assessment. Since AI technology is changing rapidly, coordination with the AI Board will enable the State to identify emerging use cases and opportunities for knowledge sharing. The documentation is not binding, and agencies are encouraged to document use cases that are still being explored.

The AI Board will maintain an intake form for new AI systems that will cover the Guiding Principles for AI. The AI Board will engage the agency to better understand and to provide recommendations on how to move forward. State agencies shall use **AI Procedure AI-01 – AI Determination Characteristics** and **AI Procedure AI-02 – AI Intake and Inventory** to initiate the intake process and engage the AI Board in a conversation leading to a recommendation.

The intake forms will serve to document the purpose for the AI system upfront, so that the intended purpose is clear and transparent. The intake forms will also cover considerations related to architecture, procurement, any requirements for vendors, security / privacy considerations, and potential for intellectual property or copyright concerns.

8.2 Impact Assessment

In addition, the AI Board will maintain tools to assist State agencies in assessing the impact of AI systems. State agencies have the ultimate responsibility to identify the potential impacts from an AI system, but the AI Board provides tools and review to support State agencies to avoid unlawful discrimination or disparate impact. State agencies are required to undertake an initial impact assessment before implementing an AI system and must be prepared to undertake assessments on an ongoing basis during utilization of the system. State agencies shall use **AI Procedure AI-03 – AI Impact Assessment** to perform the assessment and document results.

8.3 Procurement

Procurement will follow state policies and procedures, with a few important additions based on the unique requirements for AI systems.

- State agencies partnering with third parties or external vendors for AI systems should ensure that vendors explicitly agree to ongoing monitoring and assessment. Contract language shall be included to ensure that the product or service will not result in unlawful discrimination or create disparate impact.
- Contracts shall require notice and allow for amendment if a vendor introduces AI functionality into a system after implementation. Contracts shall ensure that agencies are not required to use or deploy embedded AI functionality, without the ability to opt in or opt out of such functionality after an impact assessment and review by AI Board.

Public Act 23-16 requires each agency to assess the likely impact of any such system before implementing such system. Consequently, agencies should anticipate additional time for impact assessment during the contracting phase and should plan accordingly with business leads, contracting staff and other stakeholders. For additional guidance, State agencies should refer to **AI Procedure AI-04 – AI Procurement Due Diligence Checklist.**

8.4 Implementation

As a State agency moves to implementation for a new AI system, whether embedded within a solution, procured from a vendor, or developed in-house, the State agency shall review technical parameters to ensure responsible use of the AI system within the state. While some assessment can be undertaken during the intake and procurement phases, there is potential for in-house or no-cost solutions or embedded AI functionality in legacy systems that may skip intake or procurement. State agencies are responsible for ensuring that implementation of AI systems remains aligned with the guiding principles described in Section 7 of this policy. Particular attention during implementation should be paid to:

- **Data stewardship –** Any AI system that uses state data or other data sources for training needs to consider the source and provenance of data and the quality, including the potential for bias in the dataset. Regular review of the data sources and impact on the model shall be part of the regular assessment process. Changes in policies or in other systems can impact data quality and data elements in a way that has unpredictable effects for an AI system. (For instance, changes in affirmative action policies may affect demographic data that state employees provide. This could then impact any system built to use or reference state employee or hiring data.)

- **Security / privacy considerations –** Information related to safety and security of state systems shall be collected, however it will not be published if such disclosure would compromise the security or integrity of an information technology system.

- **Documentation –** The utilization of AI systems must be thoroughly documented. This documentation shall include a comprehensive description of the system's general capabilities, the intended scope of its use, effective date, and any relevant contractual agreements. Particular attention should be given to the methods used for the AI system in order to understand the ways in which state data are used and the potential inputs and outputs for the system.

9.0 Guidelines Specific to Large Language Models (LLMs) and Generative AI

Currently available Large Language Models (LLMs), such as ChatGPT, Bard, Bing and Chat, offer potential opportunities to improve service delivery and enhance workforce productivity. LLM capabilities could assist with research, generating text and visual content, creating and editing documents, correspondence, and a host of other useful applications. State agencies are likely to explore those capabilities first because the market is more mature with readily available tools and products.

Use of LLMs and generative AI for official duties shall be conducted in accordance with the following usage guidelines:

- Employees must use LLMs in accordance with these guidelines.

- Employees must secure supervisory approval before using LLMs for each use case. Supervisors may consult with the AI Board or engage the AI Lab to help decide acceptable use.
- Employees shall not input non-public information into LLMs. All information entered into an LLM becomes public. The following is a non-exhaustive list of information that shall not be used in LLMs:
    - Confidential or privileged information or communications.
    - Personally identifying information (PII).
    - Protected health information (PHI).
    - Justice and public safety information.
    - Code containing passwords or other security-related information.
    - Information that is in conflict with Connecticut's Code of Ethics or has the potential to erode public trust.
- Employees may not pay for LLM software or sign up for services requiring payment. These purchases usually come with click-through terms and conditions that can potentially bind the state to unacceptable use.
- Any purchase of such products must go through the mandated state procurement processes and BITS intake process.
- LLMs may generate content that is incorrect or fictitious. This content may seem reasonable and not be readily distinguishable from factual information. Employees using an LLM must review all information obtained from the LLM for accuracy, veracity and completeness.
- Employees using LLMs are responsible for their work product, regardless of what portion of it is produced by the LLM.
- Employees using an LLM for official state business must log in and create an account using their state email address only. Official business may not be conducted using an account established with a personal email address.
- Do not use LLMs in a way that could cause reputational harm to the state.
- While it is acceptable to use LLMs to perform official job duties. These tools must be used to augment/assist and not replace common sense.
- If there is an opportunity to make Generative AI or LLMs a part of a standard work process, the AI Board will provide additional guidelines to procure, develop and implement.
- Employees must not use LLMs in any way that infringes copyrights or on the intellectual property rights of others.
- Employees must appropriately cite the use of AI where required by law. Standard citation formats are as follows:
    - **Standard Format –** "This content was [drafted, edited, translated] with the assistance of a generative artificial intelligence, [Bard, ChatGPT]. The content has been reviewed and verified to be accurate and complete, and represents the intent of [office, department, the State, or a person's name]."
    - **Emergency Format –** "This content was translated with the assistance of a generative artificial intelligence [Google Translate, Azure AI]. The content has NOT YET been reviewed and verified but will be as soon as possible. This notice will be updated once the review is complete. For any questions about this content or to report confusing or conflicting text, please contact [office-email@ct.gov]."

10.0 The AI Advisory Board ("AI Board")

To help navigate the implementation of AI policy and provide consultative services to State agencies, the State is establishing the AI Advisory Board ("AI Board"). The AI Board is internally focused and is made up of State agency representatives with expertise in policy formation, technology enablement, security, data governance, data privacy, and other expertise relevant to the successful implementation of AI. The AI Board shall have the responsibility to:

- Provide consultative services to State agencies.
- Make recommendations regarding Agency requests to utilize AI technology, based upon a review process that evaluates the technology's bias and security, and whether the State agency's requested use of AI adheres to the guiding principles set forward in Section 7 and **Procedure AI-01 – AI Determination Characteristics.**
- Encourage State agencies to utilize AI when it improves service delivery and service administration and lead the process to identify the most efficient use cases for the implementation of AI.
- Collaborate with DAS, OPM and other stakeholders to develop AI government procurement recommendations that outline additional guidelines, identify opportunities, balance the public benefits of using AI against potential risks, assess the accessibility, limitations, and potential historical bias of available sources to be used by AI, and ensure the procurement process maintains a level playing field for AI providers.
- Engage experts in AI from the private sector and leading education institutions to advise, as needed, on short and long-term research goals, industry trends, and ecosystem-wide best practices.
- Provide state labor and workforce organizations and other external stakeholders the opportunity to receive feedback or submit input to the AI Board regarding AI and its use.
- Recommend training and instruction to employees who utilize AI to ensure the employees are using AI tools responsibly and are prepared for the changing skills demanded of our workforce due to AI.
- Establish approaches and best practices for AI impact assessment.
- Establish subcommittees and workgroups to address specific data and/or services domains.
- Establish a procedure for exemption considerations.

The composition of the AI Board, meeting schedule, and additional relevant details shall be established and updated via separate correspondence.

10.1 AI Engagement and Enablement Lab ("AI Lab")

The best use cases for AI will come from customers and our frontline employees who are responsible for delivering services to those customers. State government requires a safe space to experiment with AI technologies, validate purposeful use, and connect various stakeholders in the process to drive meaningful AI innovation. Interest in the benefits of AI will continue to grow and additional state and federal regulations are likely to influence future direction. The AI Lab will provide a channel for those conversations to be curated, moderated, and facilitated. It will also provide a platform for workforce enablement and education. Content and outcomes from the AI Lab will inform future policy direction to enable continuous process improvement and policy tweaking.

Additional details for the AI Lab, including procedures for engaging the AI Lab and operational timeline will be documented and published via separate correspondence.

11.0 Change Log

- **Policy Number** AI-01
- **Policy Name** Responsible AI Framework
- **Policy Category** Emerging Technology
- **Policy Status** New
- **Policy Version** 1.0
- **Policy Publish Date** February 1, 2024
- **Policy Owner** OPM
- **Policy Sponsor** AI Advisory Board
- **Policy Publisher** OPM
- **Policy Review Cycle** Annually

12.0 Inquiries

Topics	Name/Title	Email Address
Policy, Inventory, Tech Enablement, Use Case Review, Impact Assessment, Procurement, Security, and AI Engagement Lab	AI Advisory Board	AI.Board@ct.gov

13. Resources

- **CGA Public Act 23-16**

  https://www.cga.ct.gov/2023/act/Pa/pdf/2023PA-00016-R00SB-01103-PA.PDF

- **NIST Trustworthy & Responsible AI Resource Center**

  https://airc.nist.gov/home

- **White House AI Bill of Rights**

  https://www.whitehouse.gov/ostp/ai-bill-of-rights/

- **White House AI Executive Order**

  https://www.whitehouse.gov/briefing-room/presidential-actions/2023/10/30/executive-order-on-the-safe-secure-and-trustworthy-development-and-use-of-artificial-intelligence/

- **NASCIO AI Blueprint**

  https://www.nascio.org/resource-center/resources/your-ai-blueprint-12-key-considerations-as-states-develop-their-artificial-intelligence-roadmaps/

- **European Union AI Act**

  https://www.europarl.europa.eu/news/en/headlines/society/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence

- **Framework for Fairness Assessment**

  https://www.tec.gov.in/pdf/Whatsnew/Letter%20TEC%20AI%20Fairness%20Asessment%20seeking%20inputs%202022_02_22.pdf

- **Canada Human Rights and AI**

  https://www.torontodeclaration.org/about/human-rights-and-ai/

- **EU AI Regulations Should Ban Social Scoring**

  https://www.hrw.org/news/2023/10/09/eu-artificial-intelligence-regulation-should-ban-social-scoring

- **Goldman Sachs on Artificial Intelligence**

  https://www.goldmansachs.com/intelligence/artificial-intelligence/index.html

- **McKinsey's Insight on Generative AI**

  https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai-in-2023-generative-AIs-breakout-year

- **Singapore's Approach to AI Governance**

  https://www.pdpc.gov.sg/Help-and-Resources/2020/01/Model-AI-Governance-Framework

- **State of California AI Executive Order**

  https://www.gov.ca.gov/wp-content/uploads/2023/09/AI-EO-No.12-_-GGN-Signed.pdf

- **ISO 42001:2023 AI Management**

  https://www.iso.org/standard/81230.html

- **Canadian Algorithmic Impact Assessment Tool**

  Algorithmic Impact Assessment Tool - Canada.ca

- **United States Chief Information Officers Council Algorithmic Impact Assessment**

  Algorithmic Impact Assessment (cio.gov)

- **Microsoft Responsible AI Impact Assessment Template**

  Microsoft-RAI-Impact-Assessment-Template.pdf

1.0 Procedure AI-01 – AI Determination Characteristics

1.1 Purpose

This document outlines the procedures and criteria for determining whether a system employs AI for decision-making. The procedure involves a multifaceted approach that assesses various aspects of the system's functioning, data processing, and decision-making processes.

1.2 Key Indicators of an AI Decision-Making System

Determining whether a system is an AI system without knowing its development process can be challenging, but there are some general indicators that can provide clues. Here are some factors to consider when reviewing a system:

1.2.1 Adaptive behavior: AI systems often exhibit adaptive behavior, meaning they can adjust their responses based on new information or experiences. For instance, an AI chatbot might learn to personalize interactions based on past conversations or an AI recommendation system might adapt its suggestions based on user preferences.

1.2.2 Pattern recognition: AI systems are often designed to identify patterns in data, whether it's text, images, or other forms of input. This ability to recognize patterns can be used for tasks like image classification, natural language processing, and anomaly detection.

1.2.3 Non-deterministic behavior: Unlike traditional software, AI systems can sometimes produce non-deterministic outputs, meaning they may generate different results for the same input under certain conditions. This is due to the probabilistic nature of AI algorithms and their ability to learn from data.

1.2.4 Predictive capabilities: AI systems can often make predictions based on historical data or current trends. This predictive ability can be used for tasks like forecasting revenue, predicting customer behavior, or identifying potential risks.

1.2.5 Explainability and transparency: While some AI systems may operate as black boxes, making it difficult to understand their decision-making process, others are designed to be more explainable and transparent. This means they can provide insights into how they arrived at a particular output, allowing for better understanding and evaluation.

1.2.6 Context and limitations: AI systems are typically designed for specific tasks and domains, and their performance may vary depending on the context and limitations of their application. Understanding the intended use case and the system's capabilities can help determine whether it is an AI system.

1.2.7 Human intervention: Some AI systems may require human intervention or oversight to function effectively, while others may operate more autonomously. The level of human involvement can provide an indication of the system's intelligence and decision-making capacity.

1.2.8 Continuous improvement: AI systems are often designed to learn and improve over time as they are exposed to more data and feedback. This continuous improvement is a goal of AI systems, as they adapt and refine their performance based on new information.

While these indicators can provide clues, it's important to note that there is no single definitive way to determine whether a system is an AI system without knowing its development process. The field of AI is constantly evolving, and new techniques and capabilities are emerging all the time.

State agencies interested in assessing whether a solution is AI enabled are encouraged to use the eight (8) characteristics above to arrive at a conclusion. Triggering one indicator does not mean it is AI; however, the more indicators triggered, the higher the likelihood that the solution is AI-enabled.

If in doubt, consult with the AI Board for further analysis and confirmation.

2.0 Procedure AI-02 AI Intake and Inventory

2.1 Purpose

Public Act 23-16 directs the Department of Administrative Services (DAS) to conduct an annual inventory of all systems that employ AI and are used by any State agency. This document outlines the procedure to be followed by State agencies to report information to the Bureau of Information Technology Solutions (BITS) regarding the use of AI systems.

2.2 Intake and Inventory Reporting Requirements

State agencies shall complete the intake form https://forms.office.com/g/MT343ZiYUQ to notify BITS of any AI development or procurement and begin the architecture review process, if necessary.

The AI inventory will be updated as new systems and capabilities are implemented and will be reviewed annually for accuracy and completeness. State agencies shall submit the following for each AI system:

- The name of the system and the name of the vendor who supplies the system (if applicable).
- The purpose and a description of the general capabilities and use of the system.
- Whether such a system is used to independently make, inform, or materially support a decision.
- Whether such a system has undergone an impact assessment prior to implementation.

This information is required prior to any AI development or procurement and State agencies shall engage BITS early in the planning process to solicit guidance and optimize outcomes. State agencies who engage in the development of AI solutions without securing the approval of the Board may risk having the AI application placed on hold until appropriate review can be made.

2.3 Inventory Transparency

BITS will publish the annual inventory on the State of Connecticut Open Data Portal, available at: https://data.ct.gov/. Information related to the safety and security of state systems shall be collected. However, it will not be published if such disclosure would compromise the security or integrity of an information technology system.

2.4 Inventory Scope

The inventory collected will not include commodity products embedded in other systems that pose little risk to the state or its citizens. Examples of commodity products include auto-complete functionality in email clients, smart virtual assistants embedded in smartphones, and email spam filters. While these technologies make use of AI and machine learning, their use is limited in nature and poses little risk.

2.5 Inventory Frequency

Information regarding AI systems shall be submitted prior to deployment and updated each year once deployed. Any updates to the AI system that result in a material change to the original purpose and intent of the AI system shall be submitted prior to redeployment.

3.0 Procedure A-3 AI Impact Assessment Procedure

3.1 Purpose

This document outlines the procedures and criteria for conducting an impact assessment for AI systems deployed by State agencies. The aim is to identify and mitigate potential biases and discriminatory impacts, ensuring fairness and equity in AI-driven decision-making processes. Refer to Section 6.2 for definition of terms related to Fairness in AI.

Under PA 23-16, State agencies have the following requirements for impact assessment for AI systems:

- Beginning on February 1, 2024, no state agency shall implement any system that employs artificial intelligence (1) unless the state agency has performed an impact assessment, in accordance with the policies and procedures established pursuant to subsection (b) of this section, to ensure that such system will not result in any unlawful discrimination or disparate impact described in subparagraph (B) of subdivision (1) of subsection (b) of this section, or (2) if the head of such state agency determines, in such agency head's discretion, that such system will result in any unlawful discrimination or disparate impact described in subparagraph (B) of subdivision (1) of subsection (b) of this section.

The impact assessments must cover two related concepts – unlawful discrimination and disparate impact, which are further defined in the Act as:

- [U]nlawful discrimination against any individual or group of individuals, or (ii) has any unlawful disparate impact on any individual or group of individuals on the basis of any actual or perceived differentiating characteristic, including, but not limited to, age, genetic information, color, ethnicity, race, creed, religion, national origin, ancestry, sex, gender identity or expression, sexual orientation, marital status, familial status, pregnancy, veteran status, disability or lawful source of income;

Over time, the AI Board will further refine standard policies, procedures for impact assessments, recommend best practices, and assist State agencies identify an appropriate impact assessment methodology based on the specific use case and recommend a process to follow and document results.

3.2 Approach to Assessment, Testing and Monitoring

New systems are required to undertake an impact assessment before implementation, such assessment should cover each of the AI Guiding Principles identified in Section 7 of the AI Policy. The impact assessments can be carried out by the agency, a vendor or a third party. The assessment process should actively involve policy, program, and legal expertise as it is not just a technical review. State agencies are advised to engage agency counsel in the impact assessment process to fully understand potential impacts.

All AI systems must be deployed with a plan to conduct regular monitoring through a yearly impact assessment. The results of impact assessments should be reported to the AI Board. Ongoing monitoring should include human review of system input, output, decision-making logic, errors, accuracy, and

appropriateness. The AI Board reserves the right to request new or updated assessments based on changes in the system or other changes in policies at any time.

State agencies should review and utilize strategies for mitigating adverse impact, such as:

- Be aware of common biases that may be present in AI systems, such as data bias, algorithmic bias, and confirmation bias.
- Regularly review and evaluate AI-generated outputs for potential biases and inaccuracies, seeking input from diverse perspectives and stakeholder groups.
- Use AI tools with transparent methodologies and documentation to better understand their decision-making processes.
- Collaborate with AI vendors and developers to improve AI systems and address identified biases, reporting any issues, and working together to develop solutions.
- Document and communicate any identified biases and mitigation efforts to relevant stakeholders.
- Maintain assessment records for the duration of implementation of the AI system, in addition to any record retention requirements.

3.3 AI Impact Assessment Risk Tiers

The impact assessment process will produce measures of both risk and potential impact. However, due to the requirement to avoid adverse impacts and the potential for risk with emerging technology, AI systems will be categorized into risk tiers based on potential risks, with the presumption that agencies have evaluated potential positive impacts before pursuing implementation of an AI system:

Tier	Description	Self-Assessment	AI Board	Peer Review	Human Involvement
1 Low	Minimal individualized risk or adverse impact	✓			Primarily automated with human oversight procedures, checklists and decision trees.
2 Medium	Moderate risk or adverse impact affecting subsets of people		✓		Use case review by team. Human reviews of high-risk decisions.
3 High	Significant risks or widespread adverse impact		✓	✓	Human maintains authority over all consequential decisions.
4 Severe	Severe or irreversible consequences		✓	✓	Presumption against deployment without full human control, peer review, and AI Board's approval.

The impact assessment process should influence agency-level implementation of AI systems, especially for the appropriate level of human involvement in AI system functioning, oversight, and decision-making. The AI Board may recommend the level of human involvement in implementation, but it will ultimately be an agency decision how to proceed.

3.4 Resources for Assessing AI Impact

While this procedure does not prescribe a specific assessment tool to be used by State agencies, it is recommended State agencies utilize the following prompts to guide their decision making in developing, procuring, or considering the use of AI systems. The following list of prompts is meant to provide a starting point for agencies to review their use cases with the guiding principles of the state's AI policy in mind. Each prompt represents a characteristic of an AI system, which is aligned with one or more of the guiding principles for responsible AI.

Artificial Intelligence Impact Assessment Review Prompts	Guiding Principle(s)
The AI System is built or implemented to enhance a key function or interest of the agency.	Purposeful
The AI system will be used to help make decisions that impact the lives of constituents or state employees.	Purposeful, Transparency, Human Enhancing
The AI system will be used to help make decisions that impact the lives of constituents from historically marginalized populations.	Transparency, Equity & Fairness, Human Enhancing
The AI system does not appear to disproportionately harm, burden, or disadvantage any population served by the agency.	Transparency, Equity & Fairness, Accountability
The AI system has a plan in place for regular monitoring for accuracy and fairness, including human review of system input, output, decision-making logic, errors, bias, and appropriateness.	Equity & Fairness, Accountability, Accuracy
The AI system does not have the ability to share learning data with other systems or third parties.	Privacy, Safety & Security
The AI system's data storage is secure for learning data at rest and in motion.	Safety & Security
The AI system has a plan in place for destruction of data after a given period of time. (Data retention policy)	Privacy, Safety & Security
The AI system has the ability to be disabled and have data removed at any given point in time after its implementation.	Adaptability, Privacy, Safety & Security
The AI system is adaptable and responsive to evolving business requirements.	Adaptability
The AI system's learning methodology, training, and testing models are thoroughly documented and explainable.	Understandable, Transparency, Accountability
The AI system has been developed and reviewed by a diverse and multi-disciplinary, internal review board.	Equity & Fairness, Accountability
The AI system will learn from sensitive financial data, personal health information, or personal	Privacy, Safety & Security, Equity & Fairness

identifiable information of constituents or state employees.	
The AI system will learn from demographic data of constituents or state employees.	Privacy, Safety & Security, Equity & Fairness
The AI system can be prompted to provide context information about its output or recommendations in uses for decision-making.	Accuracy, Transparency
The AI system will ingest, connect to, or share data with from other State Agency data sources.	Privacy, Safety & Security
The AI system will ingest, connect to, or share data from sources outside of the State.	Privacy, Safety & Security
The AI system has been reviewed for compliance with other existing state, federal, international, or industry standards.	Aligned to Standards

While this procedure does not recommend or endorse any specific tool at this time, State agencies may reference the following external resources to aid in their review of AI systems as well as algorithmic models.

- **Canadian Algorithmic Impact Assessment Tool** – The Algorithmic Impact Assessment (AIA) is a mandatory risk assessment tool intended to support the Treasury Board's *Directive on Automated Decision-Making*. The tool is a questionnaire that determines the impact level of an automated decision-system. It is composed of 51 risk and 34 mitigation questions. Assessment scores are based on many factors, including the system's design, algorithm, decision type, impact, and data. The AIA was developed based on best practices in consultation with both internal and external stakeholders. It was developed in the open and is available to the public for sharing and reuse under an open license.

- **United States Chief Information Officers Council Algorithmic Impact Assessment** – The AIA is a questionnaire designed to help you assess and mitigate the impacts associated with deploying an automated decision system. The questions are focused on your business processes, your data, and your system design decisions. The questionnaire includes 62-78 questions related to business process, data, and system designed decisions.

- **Microsoft Responsible AI Impact Assessment Template** – The Responsible AI Impact Assessment Template is the product of a multi-year effort at Microsoft to define a process for assessing the impact an AI system may have on people, organizations, and society. Microsoft has published their Impact Assessment Template externally to share what they have learned, invite feedback from others, and contribute to the discussion about building better norms and practices around AI.

4.0 Procedure AI-04 Procurement of AI Solutions and Tools

4.1 Purpose

This document outlines the due diligence process State agencies shall follow to procure AI solutions and tools. This procedure is a crucial step to ensure that the chosen solution meets the requirements of the AI policy, aligns with ethical considerations, and is sanctioned by the State of Connecticut. This procedure applies to all AI software, hardware, appliances, and services.

4.2 Access to AI Models

Within the context of the State's AI policy and this procedure, there are three (3) types of access to AI models:

1. **Open-Box Model –** Access to the internal logic, parameters, and training data is available.
2. **Closed-Box Model –** Access to the internal logic, parameters, and training data is not available, and only the input and output behavior of the model is known.
3. **Grey-Box Model –** The training data is known but the model internals are unknown.

4.3 Types of AI Software/Hardware

Within the context of the State's AI policy and this procedure, there are four (4) types of AI software:

1. **Developed AI –** Custom built AI systems where the State is involved in the development and implementation of the system to solve a discrete use case. Developed AI is generally Open-Box because the State can access internal logic, parameters, and training data is available.
2. **Embedded AI –** Solution or tools that are embedded in a software system that the State owns or subscribes to but one where the State did not have a role in developing. Embedded AI is generally Closed Box because the State does not have access to internal logic, parameters, and training data is not available. Only input and output behavior of the model is known.
3. **Open-Source AI –** Open-source AI is the application of open-source practices to the development of AI systems and tools. Many open-source AI products are variations of other existing tools and technologies which have been shared as open-source software by private companies or a development community or consortium.
4. **Procured AI –** A standalone AI solution or tool that is purchased or licensed by the State for the purpose of developing AI systems.

4.4 Procurement Due Diligence Checklist

Item Description	Check when completed
All AI solutions, regardless of type, must be reviewed and approved by BITS to verify purposeful use and ensure compliance with AI policy. It is highly recommended that State agencies engage BITS during the discovery process to assess technical capabilities, data and integration capabilities, scalability, user interface, and security considerations. BITS may engage the AI Board as necessary to ensure proper interpretation of AI policy, assess ethical considerations, and solicit feedback and guidance for specific use cases. State agencies can only proceed once approval from BITS has been secured.	✓

State agencies shall not procure an AI solution unless an evaluation has been conducted to assess impact using **AI Procedure AI-03**. State agencies shall assess the training data, algorithms, and models for any unintended biases that may impact decision-making and ensure that the solution promotes fairness and inclusivity.	✓
State agencies shall not procure an AI solution without verifying that the vendor has conducted an annual certification of their AI solution according to PA 23-16.	✓
State agencies shall verify the transparency of the AI solution's decision-making process. Ensure that the solution provides a clear explanation for its outputs, especially in applications such as health, safety, employment, economic opportunity, benefits determination, and other critical public-facing applications.	✓
State agencies shall assess the training programs offered by the AI supplier to ensure that staff can effectively use the AI solution. Evaluate the support mechanisms, including response times for issue resolution and ongoing maintenance.	✓

Procuring an AI-based solution requires a systematic and thorough approach to ensure that the chosen solution is in compliance with the AI policy, aligns with purpose and need, and meets ethical standards. This procedure will be reviewed frequently by the AI Board to adjust for market maturation, State agencies' feedback, and industry best practices.