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2000PR - USE OF GENERATIVE ARTIFICIAL INTELLIGENCE (GEN AI)

DOCUMENT NUMBER:	2000PR
EFFECTIVE DATE:	10/15/2024
VERSION	1.1

1. OVERVIEW

The purpose of this procedure is to provide best practices, including examples, related to the associated Policy P2000: Generative AI and the use of Generative AI solutions within Budget Units (BU).

2. ROLES AND RESPONSIBILITIES

2.1 State Chief Information Officer (CIO) or designee shall:

- 2.1.1 Perform a periodic review and update of this procedure to ensure accuracy and that it provides sufficient guidance on current and emerging use cases for Gen AI.

2.2 State Chief Data and Analytics Officer (CDAO) or designee shall:

- 2.2.1 Perform a periodic review of this procedure relative to the use of Gen AI tools to analyze State Data and provide input and guidance on recommended changes.


2.3 State Chief Information Security Officer (CISO) or designee shall:

- 2.3.1 Perform a periodic review of this procedure to ensure that its guidance complies with applicable Statewide Security Policies.

2.4 Budget Unit Chief Information Officer (CIO) or designee shall:

- 2.4.1 Perform a periodic review and assessment of use cases within the Budget Unit and provide additional agency specific guidance where necessary.
- 2.4.2 Inform the State CIO of any Budget Unit specific guidance and provide a written copy of such guidance to the State CIO.
- 2.4.3 Ensure that individual BU Users become familiar with and adhere to statewide and BU specific IT policies, standards and procedures (PSPs) regarding the use of Gen AI.

2.5 Individual BU Users shall:

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- 2.5.1 Become familiar with statewide and Budget Unit specific IT PSPs regarding the use of Gen AI prior to utilizing such tools.
- 2.5.2 Adhere to statewide and Budget Unit specific IT PSPs pertaining to the use of Gen AI in the execution of their job duties and/or while using State or BU IT resources.
- 2.5.3 Complete any required training related to the proper and secure use of Gen AI.
- 2.5.4 Where appropriate, work to share best practices and techniques with their peers and the State’s broader community of Gen AI users.

3. PROCEDURE


3.1 Drafting. Gen AI like ChatGPT can help draft memos, letters, and job descriptions. When creating prompts, specify any format preferences, keywords, technical terms, or phrases to include or avoid. Remember, you can tell the software how long you would like the response to be (e.g. the word count), the style (e.g., professional or informal), the language (e.g., please respond in English).

Example: In government we often have to write short documents that present an argument why a policy should be adopted, or a decision should be made. For instance, try the prompt in ChatGPT, Gemini, and other generative text tools:

Write a 250-word memo to a state agency director about the potential benefits of the use of Gen AI in state government. Please support the memo with evidence. The tone should be professional, and the text should be formatted as a memo.

Suggested:

- Try to be specific in the prompt. If you give more context, the answer becomes more relevant (however, be sure not to provide confidential information as context, if using a publicly accessible AI service or training model).
- Try different prompts to see how the responses improve.
- Try using multiple prompts in one chat (“conversing” with the model) to provide feedback over multiple iterations (e.g., “The tone of that memo is too informal. Please re-draft it to have a more formal and professional tone.”)
- Edit and review the content carefully.
- Fact check.

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- Refer to Section 6 of this document for helpful links to information about how to review and validate the accuracy of results.

Do Not:

- Do not rely on Gen AI to provide accurate answers.
- Do not use Gen AI to create communication regarding sensitive topics. For instance, a renowned institution was criticized for using Gen AI to write a press release regarding a shooting.
- Do not use content without carefully editing. Publicly available Gen AI and other AI tools use many different sources, including those that contain fictional content, therefore all answers must be carefully validated and edited and should never be copy and pasted into use.
- Do not include information which may be subject to copyright or other protections as intellectual property.
- Be especially careful when drafting scopes of work or requirements for a task order or solicitation, as information may draw from the websites of potential bidders.


3.2 Communicating with the Public. Gen AI can help you write clearly and in plain, accessible language. You can use the prompt to indicate the reading level of the audience.

Example: Use Anthropic’s Claude to upload the text of a website or policy and ask the AI to help you simplify the language to make it more accessible, concise and easy-to-understand.

Help me to rewrite the text of this page in simple English accessible to a ten-year old. While you may streamline the language for clarity, please do not eliminate any directions.

Suggested:

- Specify in the prompt if you have a specific audience in mind.
- Try different prompts or verbiage of the same sentence to find what works best.
- You can pass the output of the text by using a readability application that can identify challenging sentences, as well as the reading level for the text.
- Review the text to ensure that the language is inclusive and respectful. The models might use language or patterns that appear regularly, but that might exclude some

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people. For instance, a model might suggest: “Dear Sir/Ma'am” does not include non-binary people and could be replaced with “Dear Colleague” or “Dear Neighbor”.

Do Not:

- Do not include confidential information in a prompt.

3.3 Translation. Gen AI can help you translate content into other languages. Meta claims that its free, open source [SeamlessM4T](#) tool can translate text or speech from 100 languages into 35 languages.

Example: Use SeamlessM4T, ChatGPT or Google Gemini to translate instructions for applying for a government benefit into the most popular non-English languages.


Suggested:

- Ask a native speaker to review. Try different languages to test the quality of the translation.
- If there is a large volume of content to be translated and verified, please refer to the statewide translation contracts available in the Arizona Procurement Portal (<https://app.az.gov>).

Do Not:

- Do not include confidential information in the prompt.
- Do not use content generated in a language you do not understand before consulting someone who is proficient in the language. You still need to assure the content is checked for accuracy, bias, etc.
- Note that text generated in other languages might be confusing to people who speak different regional dialects. Do not assume that some text will be easily understood by all speakers. Be specific in your prompt and ask for regional idioms.

3.4 Summarization. Gen AI can summarize longer text or speech into the desired length. You can use it to summarize lengthy documents for clarity or brevity when required. Many engagement platforms now make it possible to summarize and organize public comments.

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Please write a 100-word summary of this report, highlighting the most important recommendations. Use bullet points.


Suggested:

- Remember that summaries and transcripts are subject to public records law.
- If you plan on making a decision based on the summary, you should read the entire document(s) to make sure you did not miss or mischaracterize the original document.
- Be aware that the resulting summary might have biases as it will tend to present language that is more frequent in the data used to train the model for the Gen AI solution you are working with. Different solutions may yield different results.
- You can use changes to the prompt to enhance the results by suggesting that the result incorporates perspectives from marginalized groups. Even better, you can engage with some individuals in these communities to better understand their perspectives on the text generated.
- There are automated transcription tools like otter.ai, Chorus Notetaker, and others that will automatically generate a written transcription of a virtual meeting. You need to be aware that the transcription is public record and will be subject to Arizona public records law (see 6. Links for additional information). It is the responsibility of the Meeting Organizer and the user of the tool to be aware if such a tool is being utilized and to determine whether creating a transcription of a given meeting is appropriate or desired.

Do Not:

- Do not include confidential information in the prompt. Make sure you have deleted confidential information from your notes or other inputs.
- Do not use automated transcription in meetings where confidential or personally identifiable information is discussed, including but not limited to, when speaking to your legal counsel.

3.5 Data Analysis. Utilizing a code interpreter with Gen AI empowers individuals with limited coding experience to engage in data analysis tasks. This is particularly beneficial for those who are less technically inclined, including interns and student workers, enabling them to effectively contribute to technical projects. For instance, OpenAI’s Code Interpreter can be employed to interact with datasets through inquiries.

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Feel free to experiment with various programming languages and libraries. However, ensure that you grasp the code's logic and thoroughly go through the relevant component documentation before application. Gen AI serves as an initial aid, but it might be necessary to adjust the generated code for optimal results.

Example: "Hello Code Interpreter, I have collected a bunch of survey forms in PDF format. These forms contain valuable information, but it's a pain to go through them manually. I am looking to extract the participant comments and their locations from these PDFs and create a spreadsheet for easier review. Could you help me generate some Python code using libraries like 'PyPDF2' and 'Pandas' to extract this data and organize it into a neat CSV file? It would be a huge time-saver! Thanks!"


Suggested:

- Consider the use of Gen AI for a head start to explore new programming languages and libraries. Be sure to understand the functioning of the code before its practical application.

Do Not:

- Never insert sensitive information in prompts. Following development best practices, abstain from including confidential data like passwords, private keys, or proprietary details either in your code or the prompts.
- Do not utilize code in a production setting without a comprehensive understanding of its operations and written approval from your BU IT and Cybersecurity leadership.
- Ensure you are well-acquainted with novel libraries and dependencies. Familiarize yourself with potential vulnerabilities and security aspects related to the chosen language or library.

3.6 Generating Images, Audio and Video. Gen AI enables the creation of images, audio, and videos based on prompts, offering support in crafting captivating and insightful communication resources. Tools like Mid-Journey and DALL-E generate images. CANVA is a popular tool for automating the creation of slides. The Music plugin available from ChatGPT, Amadeus Code and Media.io are examples of music generators.

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Write me a jingle or song to remind residents to enroll in Health-e-Arizona Plus.

Generate a training video illustrating how to submit a public records request, leveraging a provided script.

Suggested:

- Recognize the potency of visual, audio, and video communication in conveying messages. Use Gen AI to harness these tools, extending your artistic abilities.
- Employ Gen AI to draft mock-ups that facilitate effective communication with graphic designers, videographers, and other creative professionals.
- Collaborate with your department's public information officer when using or publishing images, audio, or videos. Their expertise ensures adherence to accessibility and branding best practices.
- Engage with Agency leadership and legal counsel; Respectfully seeking their insights to help identify potentially hurtful, discriminatory, or misconstrued content.

Do Not:

- Do not include confidential information in prompts; rather, ensure any sensitive data is removed from notes or inputs. This includes faces, voices, identifications, and license plates of individuals who haven't granted consent.
- Do not assume that the outputs of Gen AI are respectful and non-offensive, especially to vulnerable populations like diverse ethnic, racial, and gender groups or people with disabilities. Test and validate.


4. DEFINITIONS AND ABBREVIATIONS

Any terms not defined in this Policy are defined in statute or rule. Refer to the [PSP Glossary of Terms](#) located on the ADOA-ASET website.

Gen AI or Generative AI: An AI system that learns the patterns and structures of input training data to generate new content.

5. REFERENCES

- 5.1 A.R.S. § 18-104
- 5.2 POLICY P2000: GENERATIVE ARTIFICIAL INTELLIGENCE (GEN AI)
- 5.3 Policy 1250: Website and Application Design

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6. LINKS

Amadeus Code, Inc.: Artificial intelligence powered songwriting assistant.

<https://amadeuscode.com/app/en>

Anthropic's Claude: Claude is capable of a wide variety of conversational and text processing tasks.

<https://www.anthropic.com/index/introducing-claude>

Arizona State Library Archives and Public Records - Public Records Management:

<https://azsos.libguides.com/c.php?g=1241074&p=9082300>

Arizona State University - Artificial Intelligence - Digital Trust Guidelines:

<https://ai.asu.edu/digital-trust-guidelines>

Canva: A free-to-use online graphic design tool typically used to create social media posts, presentations, posters, videos, logos and more. <https://www.canva.com>

Google's Gemini: A conversational generative artificial intelligence chatbot developed by Google.

<https://gemini.google.com/>

Meta's SeamlessM4T: A multilingual and multitask model that translates and transcribes across speech and text. <https://ai.meta.com/blog/seamless-m4t/>

Medio.io: An AI music generator. <https://www.media.io/ai-music-generator.html>

Midjourney: An independent research lab. A small self-funded team focused on design, human infrastructure, and AI. <https://www.midjourney.com/>

Northern Arizona University - Artificial Intelligence: <https://in.nau.edu/its/ai/>

OpenAI's Dall-e: DALL-E 2 is an AI system that can create realistic images and art from a description in natural language. <https://openai.com/dall-e-2>

OpenAI's ChatGPT: a free-to-use generative AI system for engaging conversations, research insights, automate tasks, generate and rewrite text, and other tasks. <https://chat.openai.com>

University of Arizona - Artificial Intelligence - Resources:

<https://artificialintelligence.arizona.edu/resources>

7. VERSION HISTORY

Date	Change	Revision	Signature
3/15/2024	Initial Version	1.0	J.R. Sloan
DRAFT	Updates and clarifications	1.1	