



# Artificial Intelligence for Public Service Delivery

## GUIDING QUESTIONS FOR NON-TECHNICAL GOVERNMENT LEADERS

As artificial intelligence becomes more common in our everyday interactions with private sector entities, it is also increasingly relevant for the delivery of public services by federal, state and local governments. The scale and speed of AI tools give them enormous potential to enhance the efficiency of government service delivery, but also mean these mechanisms must be employed carefully to avoid automating biased or inaccurate results. This is particularly important in the context of public service delivery, where governmental organizations have an obligation to provide trustworthy and equitable services to all possible customers.

Ensuring responsible AI use is not a one-time exercise, but a continual process that requires attention every step of the way—from the first contemplation of incorporating AI into a program to the routine use of a fully-implemented AI system.

This guide offers a series of questions to help leaders think through specific issues related to responsibly using artificial intelligence for public service delivery. The questions cover the whole AI lifecycle—leaders can start from the beginning and work through all stages of the process or reference the sections most relevant to their current work. This guide also can be useful for leaders who may not currently have a relevant situation of their own to consider, but who wish to practice working through the questions with a hypothetical example. While not covering every aspect of responsible use of AI for public service delivery, this guide offers a starting point to consider some of the most common issues.



**Artificial intelligence** is computers and software performing tasks typically associated with people, such as recognizing speech or images, predicting events based on past information, or making decisions. AI tools use data to learn a task, and they continue to improve at functions such as transferring information from paper to computers, recognizing images, answering questions by quickly finding relevant information in databases or documents, detecting patterns in data, making decisions about simple queries and predicting someone's behavior based on past conduct.

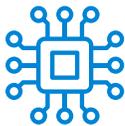
# Guiding Questions



## 1. First consideration of using AI

Before taking any action to use AI for public service delivery, explore whether it is the right fit for a particular program.

- a. **What is the problem that using AI is intended to solve?**
  - i. Are the capabilities of AI well-suited to address this problem?
  - ii. What are other potential solutions to this problem? Are they a better fit than employing AI?
  - iii. What criteria are you using to assess suitability to address the problem? Different solutions require different trade-offs: what factors are most important in this situation?
- b. **Have you solicited a range of opinions from technical, financial, legal, ethics, program management and service delivery experts and colleagues?**
  - i. How will using AI impact the work of frontline service delivery employees?
  - ii. Have you solicited input from members of the public who would be affected? Does this input reflect the full range of the service's customers?
- c. **Data: If you have decided that AI might be the right fit for this service, what data do you plan on using to train and operate this AI tool?**
  - i. Is this data available to you?
  - ii. How is this data collected? How is it processed and stored?
  - iii. Is the data representative?
  - iv. What biases are inherent in the data? What plans do you have for mitigating those biases?
- d. **Are there mechanisms and a culture in place to facilitate the collaboration between technical and non-technical experts that will be needed to responsibly implement and use AI?**
- e. **Are there mechanisms and a culture in place to facilitate the public engagement and oversight that will be needed to responsibly implement and use AI?**



## 2. Building or procuring an AI tool

If you have decided that employing AI is the right decision for delivering this service, the next phase is to decide whether to build or buy an AI tool.

- a. **What are the objectives of the AI system? What are the required capabilities?**
- b. **How will you evaluate specific AI systems and whether they fulfill your objectives?**
  - i. Have you created metrics that will be used to evaluate potential AI systems?
  - ii. Do these metrics include both technical specifications and responsible AI metrics?
  - iii. Does your agency have the capabilities necessary to capture and evaluate these metrics?
- c. **Are any other agencies pursuing similar AI solutions that could be applicable to your problem?**
  - i. Could there be a way for your agency to leverage those solutions?
- d. **Are there existing off the shelf AI systems that could be used for this service?**
  - i. If so, are there considerations unique to the public sector that would require changes to this AI system?
  - ii. If not, would a custom system built by the agency be a better fit?
  - iii. If building a system internally is not feasible, could the agency contract a company to create a custom system?
- e. **Does your agency have the needed expertise for your chosen option?**
  - i. If buying, are acquisition professionals equipped to evaluate potential AI tools, including their suitability for a public sector context and whether they meet the previously defined metrics?
  - ii. If building, does the agency have sufficient data science and machine learning expertise?
  - iii. If contracting for a custom AI tool, is the agency able to clearly articulate its needs and are contracting professionals equipped to evaluate potential contractors?

- iv. If your agency does not have the needed expertise, how can it develop capacity among technical and non-technical staff to understand the risks, benefits and implications of using AI?
- v. Does your agency need to hire additional staff to support this work? What skills are needed?



### 3. Implementation

Once a specific AI tool has been chosen, implementation brings several additional technical and responsible AI considerations.

- a. **Have you developed mechanisms for communicating to the public about the role of AI in delivering a service?**
  - i. What is the appropriate level of transparency given the specific function of the AI? How can you balance transparency about a complex system with plain language guidelines?
  - ii. What are the communication preferences of the service's customers? Have you conducted or used existing customer research as part of developing communication mechanisms?
- b. **What due process mechanisms are available for customers to contest decisions made by or reliant on AI?**
  - i. Are these mechanisms consistent with those available prior to the use of AI in delivering the service or with other services that do not use AI?
- c. **Data: Is the planned training data for the AI system adequate, given the data you plan to use to operate it?**
  - i. Has the data been checked for built-in biases that could be replicated by the model? Have you found alternative data sources or mitigation strategies to prevent that replication?
  - ii. Are the data flows that will be used to operate the system set up and ready to feed into the model?
- d. **Have you established a framework to evaluate the AI's performance, or determined how to employ an existing framework to do so?**
  - i. Is this framework based on evaluating AI's contribution to solving the original service delivery problem identified above?
  - ii. Does this framework include both technical specifications and responsible AI metrics?
  - iii. Has a broad range of technical, financial, legal, ethics, program management, service delivery and evaluation experts/colleagues contributed to the determination of these metrics?
  - iv. Do these metrics include measures at both the component level and system level?
    - 1. Component level: Is each technical element working as intended?
    - 2. System level: Are all elements working well together as a whole?



### 4. Routinely using AI

Ensuring responsible AI use is an ongoing commitment that continues once the AI tool is operational.

- a. **What is your plan for regularly auditing data inputs and AI model outputs?**
  - i. Is the performance of the AI varying over time?
  - ii. If so, what adjustments need to be made to ensure consistency?
  - iii. Have you, to the extent practicable, provided opportunities for academics and other outside experts to independently audit the data and outputs?
- b. **Are you regularly evaluating the AI tool against the established performance metrics?**
  - i. Are these evaluations tracked and publicly documented?
  - ii. Are evaluation experts actively involved in this work?
- c. **Do you regularly evaluate whether the AI is serving its intended purpose and continuing to solve the original service delivery problem?**
  - i. If the AI is not serving its intended purpose, are there updates that can be made to ensure it does?
  - ii. If there are not, what is your plan for retiring or replacing the AI tool?

## Below are two scenarios of government leaders looking to use artificial intelligence.

These scenarios can be used to hypothetically work through the guiding questions listed above. Although it may not be feasible to fully answer all of the questions using these scenarios, it can be a useful exercise to understand the types of discussions required to ensure that any use of AI for public service delivery is responsible.



### Prompt 1 **Budgetary Planning for Education**

You are a leader at a state education agency charged with ensuring the agency is prepared to serve the needs of schools and the community during the next 10 years. To do so, you are thinking about how budgetary resources will need to be allocated now and in the future to ensure the agency is achieving its mission. You are considering using artificial intelligence to analyze data—such as demographic trends, school attendance levels, graduation rates and past budgets—to help understand what the next 10 years might look like. You plan to use this analysis as part of your planning along with other inputs such as community town halls and discussions with experts.



### Prompt 2 **Application Processing for a Government Agency**

You are a leader at an agency working on a program that provides assistance to low-income families. You are looking to speed up the application processing time for this program and are considering adopting artificial intelligence to initially review paper applications for completeness rather than having staff members do so. More than half of all applications for this program are submitted on paper and the initial completeness review of the 5-page application takes up staff time that could otherwise be spent making decisions on the applications.

To read more about incorporating responsible AI principles into the use of artificial intelligence for public service delivery, see the Partnership for Public Service and Microsoft's [In the Public AI research brief](#).