



6 Great Use Cases for GenAI

How to put generative AI to work
in state and local government

Generative AI (GenAI) can help state and local government agencies simplify complex processes, elevate constituent experiences and secure sensitive data.

Large learning models (LLMs) and deep neural networks let users generate text, sounds and images quickly and easily. Although GenAI content is no substitute for human creativity, it can assist resource-strapped public agencies in a variety of ways. These six snapshots of GenAI possibilities can help you identify use cases for your organization.

1/ Onboarding

Establishing working relationships with employees, clients and vendors often requires newcomers to absorb information from internal knowledge bases, web pages and lengthy PDF files.

GenAI provides a chat interface that lets users query this information. It can answer their questions in plain language drawn from an agency's data.

"It helps tremendously in ramping up new talent," says Charles Elliott, practice lead for state and local government and education at Google Cloud. From their first day on the job, employees gain instant access to years of institutional knowledge. This approach can also improve support for new vendors and contractors and help constituents access health care and human services.

2/ Educating

GenAI is the natural evolution of search technology. It can help users easily answer questions and gather reliable information. With chat interfaces and natural language processing, GenAI applications can guide people through complex processes like applying for permits and complying with taxation requirements.

The reasoning function built into GenAI models also lets users do things like track the evolution of legislation. "Knowing the interpretation of a statute in 2021 versus 2022 or 2024 is incredibly important," says Sean MacKirdy, state, local and education leader with Elastic, a company that specializes in advanced search and security technologies.

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GenAI Quick Tips

- Don't ban GenAI use. Engage with employees to find safe ways to gain experience.
- Adopt policies for responsible and ethical use of GenAI.
- Create sandboxes where staff can experiment.
- Protect private data to prevent accidental release into public LLMs.
- Work with GenAI providers that have proven public sector experience.



3/ Planning

Developers and business owners often need to interact with multiple government departments to keep their projects on track. Opening a grocery store, for example, may require liquor licenses and other regulatory approvals.

Agencies can use GenAI to proactively help applicants navigate these processes. "Imagine having the LLM say, 'Hey, I see you are applying for a specific type of license. Here are the other six licenses you should investigate for the type of business you're running,'" MacKirdy says. "That's one of the most exciting possibilities."

4/ Securing

State and local government agencies rarely have enough staff to cope with cybersecurity threats like ransomware. GenAI-powered security services can help agencies plug talent gaps by scanning system environments, flagging vulnerabilities and explaining the ramifications of malware detected in networks. "We can train people to use generative AI to augment what they know about their processes and infrastructure," MacKirdy says.

In addition, cloud-based GenAI systems provide controls that make it difficult for users to accidentally add sensitive private data into a training model. Experienced vendors can also provide "grounding" that trains LLMs specifically on agency data and ensure that data has proper role-based access controls.

5/ Translating and Personalizing

GenAI can automatically translate web pages, PDFs and other information into users' preferred languages. Universities and colleges can use GenAI to help foreign students apply for financial aid. Similarly, health and human services agencies can boost participation of refugee and immigrant communities.

"Translation always comes up as an important use case," Elliott says, "because so many agencies serve diverse populations that speak multiple languages."

In addition, agencies can use analytics data from GenAI applications to give constituents personalized search experiences. "People like their search results to reflect who they are and what their interests might be," Elliott says.

6/ Connecting

Application programming interfaces (APIs) allow GenAI applications to tap an array of data sets and computing functions. This creates even more GenAI opportunities.

"One of the coolest things about generative AI is that any data source that can expose itself via an API can be leveraged as an input," MacKirdy says. For example, an API connected to a Department of Motor Vehicles database could quickly and accurately answer questions like, "How long is the wait time to get a new driver's license?"



4 Essential GenAI terms

□ Hallucinations: LLMs "hallucinate" when they generate erroneous replies to search queries. Hallucinations can arise from inaccuracies or biases in training data and other factors.

□ Grounding: This refers to connecting GenAI models to verifiable information sources, which helps avoid hallucinations. For example, agencies can ground LLMs on their own data, including applicable legislation or regulations.

□ Retrieval augmented generation: This is a method for improving the quality and timeliness of LLM-generated responses. It grounds the LLM on trusted external information sources in addition to the LLM's internal knowledge training. This gives LLMs access to up-to-date facts.

□ Multi-modal: This means generating useful output from text, audio, pictures and video.

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