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Generative AI and human capital: Redefining collaboration in the public sector

GenAI can augment the government workforce by automating tasks, guiding strategic innovation, and amplifying people's skills.

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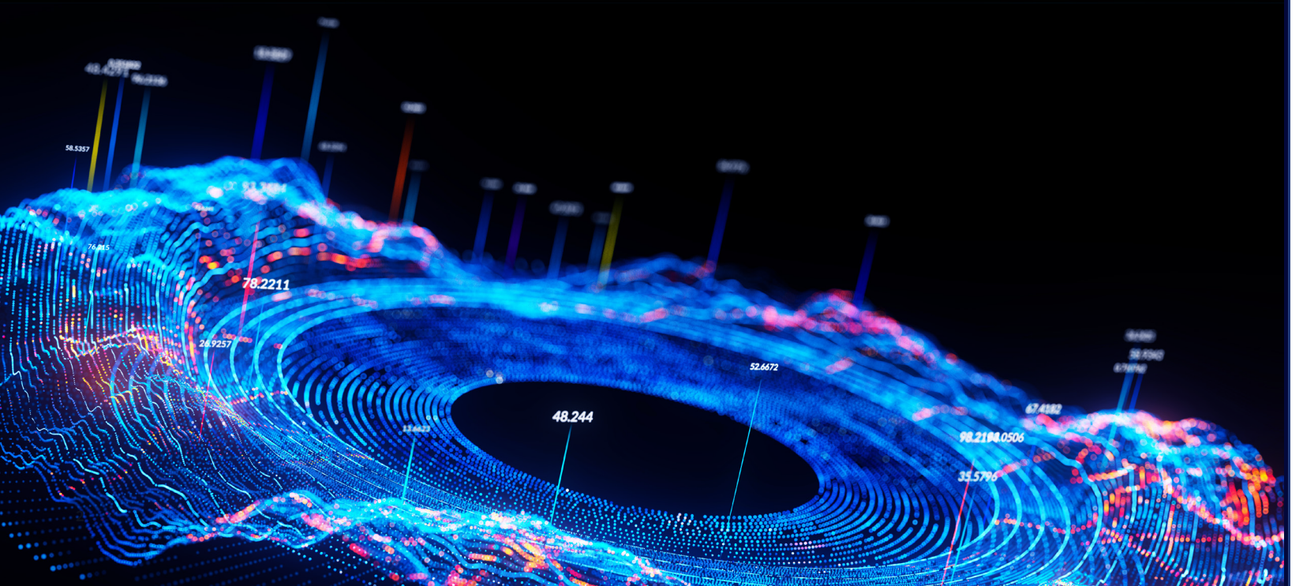
Generative AI represents a seismic shift in how work gets done for the workforce, ushering in a similar level of change as the dawn of the internet or smartphone.

The technology promises to be a powerful and intelligent collaborator. By handling tedious, time-consuming tasks, Generative AI-based tools can provide embassy personnel, defense and security analysts, child services case workers, and myriad other government employees more time for high-value, intuitive or creative work, including more time to interact with citizens, a key tenet of their mission to serve the public. Generative AI tools can also augment the workforce through its ability to use existing content to create new works, such as a new logo for an organization, potential designs for a workspace, or the initial draft of a report.



On October 30, 2023, President Biden issued an executive order (EO) on AI with the goal of promoting the "safe, secure, and trustworthy development of artificial intelligence."

The EO underscores the importance of investing in education and job training, along with emphasizing that it is to be accessible to all. Additionally, through the EO, the President directs the development of principles to mitigate the harms and maximize the benefits of AI for workers through addressing workforce related topics including job displacement, workplace equity, and labor standards. As a result, labor agencies will likely need to create robust plans for the use of AI both within their workforce and their processes.

In response to the EO and to maximize the technology's impact and minimize potential risks, government organizations should determine the updated or new skills their workforce needs, and the best way to provide those skills, including through reskilling and upskilling programs or by reimagining processes and career paths.

For departments and agencies to effectively adopt Generative AI, they should determine the best initial uses for the tools and adjust their workforce strategy to incorporate new skills into specific job roles and tasks. Leaders should provide policies and guidelines for how people should—and shouldn't—use the technology, and build trust by fostering a collaborative culture. They should take a measured approach to skills training with programs designed around learners, and smooth the transition by getting managers and frontline workers involved in designing or rolling out new tools.

Bringing disruptive technologies to a new level

Previous disruptive technologies automated tasks or jobs performed by people and created new, adjacent, and expanded jobs and new ways of working.

Between 2003 and 2016, automation helped federal workers to spend 1.3% less time on below-average importance tasks, increasing the time they could spend on labor tasks of above-average importance by 4.6%.

Generative AI has the potential for even more expansive workforce changes. Generative AI-based tools can tackle the sophisticated, creative work that earlier generations of AI weren't capable of addressing. The technology digests vast amounts of data to build a complex understanding of the rules for creating cogent content. In that way, it mimics the human creative process and generates novel information in a variety of formats in keeping with the data and algorithms it was trained on. By synthesizing data from existing information to create original content, it simulates human-like judgments in tasks such as data analysis and pattern recognition.

Organizations throughout the public sector have started piloting or implementing Generative AI for a range of uses to better serve the public. Some of the earliest include report generation, case management, knowledge management, and back-office functions. For example:

- Government employees often must **create reports to update stakeholders,** including Congress and the public, on the progress of initiatives. Generative AI could consume internal status updates, emails, and other project documentation, using them to create a first draft of the report. This would allow employees to spend time addressing the high-level message of the report and verifying its accuracy — and, ultimately, spend more time driving initiatives forward and less on reporting.
- Government organizations could potentially use Generative AI to **evaluate grant applications** it receives for approval, a task that is often time intensive, requiring input from many parties. By having Generative AI models take a first pass at determining whether applications meet the specified criteria for selection could speed up the decision-making process enough to open the door for more individuals to apply. This would allow employees to spend less time reviewing applications which don't meet basic criteria and more time on those which do, allowing them to make better use of their human capacity for reasoning and nuanced understanding.

Promising use cases

Generative AI holds substantial promise, but it can be expensive and resource-intensive to adopt. In some instances, the calculations that AI tools perform might be more than what's required—like using a sledgehammer to pound a nail. **Within the five general use case families that show early promise for government entities—report generation, case management, knowledge management, back-office functions, and customer engagement—here's how Generative AI can augment work:**

Assume mundane tasks

Generative AI can handle tedious tasks, freeing up people to concentrate on more valuable work. Child welfare workers are a good example. A previous study of one state human services department found that case workers spend 37.5% of their time on paperwork. If Generative AI tools took over filling out paperwork and other documentation-related tasks, case workers could devote more time to interacting with clients. That could improve client services, which adds value to society. It could also improve case workers' job satisfaction, which could lead to lower turnover and make the positions more attractive to potential employees.

Segment non-core from high-value work

Some jobs can be broken into discrete steps, and Generative AI tools could be trained to take over non-core steps, enabling employees to focus on more high-value tasks and supervise the other work, reviewing the AI-generated outputs for quality and accuracy. Some government organizations are adopting multiple, discrete AI tools for specific tasks. A state Medicaid department could adopt Generative AI tools to process benefits claims. An optical character recognition tool could "read" handwritten information from a form, and a separate rules engine running on top of that system could determine if the information meets the criteria for a claim to be approved or if a department staffer needs to review it first. Based on that determination, an automation tool could generate a text message informing the applicant that their claim has been approved or is being held for additional review.

Create new works from existing materials

Generative AI can create new content based on existing data. For example, Generative AI could create handover briefings for government workers who are transferring to a new post and need to get up to speed on their new position. These briefings may cover background information and context for the new role and can be time consuming to compile, taking staff who write them away from other, higher priority tasks. Agencies that create these briefings could train a Generative AI model on internally produced reports as well as on external sources such as news reports and other public information and then prompt it to produce concise summaries that could serve as briefings.

Amplify people's skills

AI tools can help people do or see things that they might not have been able to on their own. For example, Generative AI-based virtual assistants could one day be used by an office worker to search for trends in data that would be difficult or impossible to find any other way. The office worker could then query the AI assistant to design a report or presentation based on the results.

People are still better than AI at making decisions, understanding context, and creating fundamentally new material. Generative AI could not create or articulate a new government policy, but a public sector organization could use AI-based tools to research potential outcomes before deciding which version of a policy to recommend or put in place. For example, government economists can already query AI-based models to determine the effect of changing the minimum wage on a specific demographic group or region, and the model could provide forecasts based on existing data, which the economists could use as the basis for recommending a wage policy change. Generative AI could amplify the economists' abilities by generating multiple scenarios to help economists understand a range of outcomes, by providing an interactive question and answer system so economists can query models using natural language, or through creating readable summary reports of complex data.

Preparing the workforce

Generative AI will unlock new avenues of creativity and scientific inquiry. In the short term, it will change the skills that people need to do their jobs, which will require some measure of reskilling and upskilling. In the long term, it will change the composition of the workforce. **Both will require government leaders to act, to:**

Add critical skills

Generative AI tools will likely require departments or agencies to help their workforces expand new, critical skills and establish new roles, including:

- **AI architects.** It's unlikely that many government agencies will build their own large language models that Generative AI runs on. But they will need technically proficient people—call them AI architects—who understand how LLMs work and can design a secure Generative AI infrastructure or ecosystem that integrates the appropriate open-source or customized AI tools with other technology applications.
- **Procurement**. Procurement of Generative AI presents unique challenges that extend beyond traditional tech projects the government has extensive experience procuring. These systems can involve specialized hardware, complex data requirements, and ethical considerations such as bias. They also often require integration with existing IT infrastructure and may have specific licensing and intellectual property constraints. Given the complexity and rapid evolution of AI technology, procurement personnel could need a high level of technology literacy to make informed decisions.
- **Prompt engineering.** Organizations will need to train people how to craft queries that yield the intended results, commonly referred to as prompt engineering.
- **Data lineage.** Organizations have to be able to trace where data for AI models comes from and how it is used, what's referred to as data lineage. Traceability builds trust and confidence in AI-based processes, and provides the information required for the routine audits many organizations are subject to. Organizations will need people who can explain model data's origins, how it is propagated through the pipeline, and how it appears in end results.
- **Monitoring and reviewing.** If Generative AI tools are assuming some tasks previously done by people, organizations will need staff capable of supervising or monitoring those tasks and validating or correcting the results. Generative AI tools continue to have challenges with accuracy because of limited or faulty training data or models, poorly constructed queries, or "hallucinations." Government staff could be trained to audit AI tools' output to guard against hallucinations or other faulty results.

Reskilling and upskilling

Being comfortable working with Generative AI tools requires essential human skills, such as adaptability, resiliency, and agility—universal human capabilities that transcend specific skill sets. These capabilities can improve workers' ability to upskill.

The learning curves for Generative AI-related skills that organizations need will vary. Some skills, such as prompt engineering and monitoring AI results, could be accomplished through on-the-job or other training. In some cases, learning could be embedded in the tools themselves—think walkthroughs or tutorials. Other skills, such as programming or procurement, will take more effort for an organization to set up the appropriate learning structure to provide.

Organizations could follow the lead of governments that offered reskilling programs in conjunction with rolling out earlier iterations of AI tools. For example, the City of Denver previously established a data academy to train city workers in basic AI skills.

Reimagining processes and career paths

Introducing and scaling Generative AI tools could require government entities to change workflows and create new jobs. Previous Deloitte research found that government agencies that add new AI roles are 60% more likely to achieve desired outcomes.[1] Agencies are generally more successful if they provide career development and support for workers interested in pursuing new roles. When Australia's public service and digital transformation agencies defined more than 150 new digital jobs in government, they created a career pathfinder tool for people working in similar roles in the private sector to explore digital career options in government.[2]

Embracing Generative AI to create a resilient public sector

For public sector leaders, embracing Generative AI is a two-part process, preparing themselves and the workforce.

To prepare themselves, leaders can:

Determine the best use cases for Generative AI technology

Pick initial uses to pilot that could yield immediate benefits or add the most value. Assemble a cross-functional team and provide them with resources and training to produce and test a minimal viable product in a controlled environment before adding features or rolling it out on a broader scale.

Craft Generative AI workforce development strategies

Any workforce development strategy for **Generative AI should serve two purposes, helping employees embrace the tools, and aligning use of the new technology with the organization's broader mission and goals.** Toward that end, organizations should determine which initiatives, directives or strategic plans could benefit from Generative AI. Then map out how the tools would be integrated into those initiatives or directives along with related departments, functions, job roles, tasks and desired outcomes. Another starting place is choosing the uses, processes, or systems that would create the most value to update, for example, offloading documentation or other non-core tasks from case workers to Generative AI tools. Whatever use cases they adopt, organizations should follow a pre-determined change management plan to implement them.

Create supportive policies and guardrails

Leaders should develop guidelines aligned to directives from the EOs and Office of Management and Budget (OMB) and frameworks like the NIST AI Risk Management Framework and Deloitte's Trustworthy AI Framework to **maximize privacy and security and minimize legal, ethical, bias, and other risks.** Then leaders should put policies and procedures in place so that people abide by those guidelines—beginning with informing the workforce of the implications of using new tech tools. If comprehensive guidelines are still in the works, create interim policies spelling out what the workforce can and cannot use Generative AI to do. Policies should ensure that data used to train models remains private and that models don't introduce bias into operations. If the situation warrants it, specify the type of data that models can be trained on. For example, agencies may train AI models on limited datasets to avoid inadvertently sharing personally identifiable data, proprietary information, or data that could perpetuate biases. Policies should be transparent and accountable for AI-supported decisions. Leaders should also determine how to monitor AI systems to detect and correct anomalies or deviations from intended behaviors.

Foster a culture of collaboration between people and AI tools

People don't embrace what they don't understand. The real impact of AI applications may depend on how much public sector workers understand, learn how to work with, and trust their AI "colleagues." AI models that can provide explicit justifications for a decision or recommendation—something known as explainability—build trust in the people who use them and are a significant factor in the successful use of AI at scale. To build trust that can improve human-AI collaborations, organizations can also make sure that workers know what inputs AI models are based on, how data is being collected and used, and what the standard is for accuracy, so they can hold AI models accountable for meeting it.

Tying AI to an organization's overall mission is another way to build trust. Previous Deloitte research has shown that training government employees in the right skills for their tasks and showing them how their tasks help the organization accomplish its larger mission ultimately improves public trust.

How leaders can prepare the workforce.

Be transparent

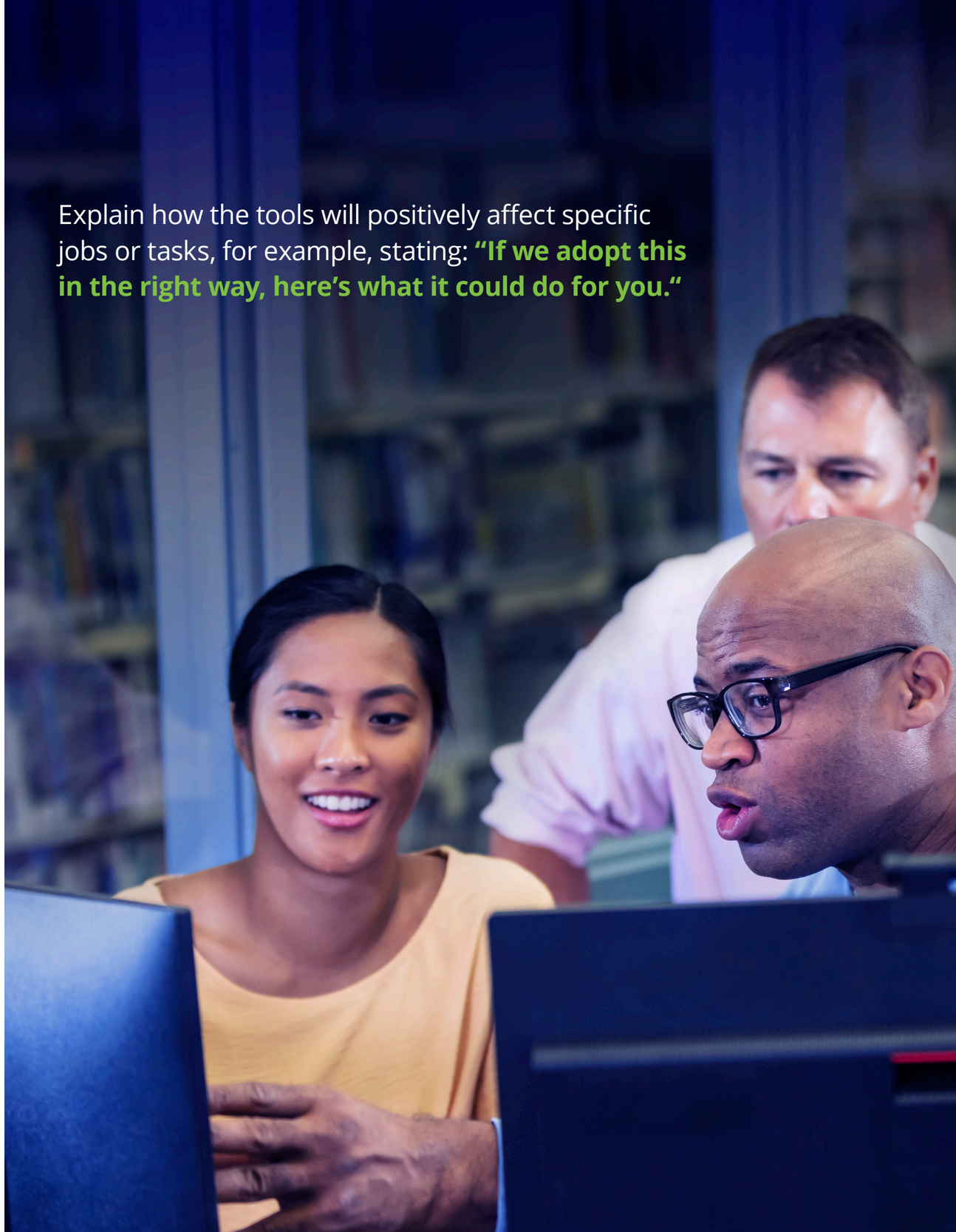
Leaders should communicate their organization's AI strategy, the expected outcomes from AI, and how those outcomes align to the mission. That can provide the backdrop for mitigating concerns about Generative AI by explaining how it works, how it will be implemented, and how it could affect specific jobs or tasks. Use past technological upgrades as examples of how the organization innovated before. Discuss the strengths and weaknesses of the specific Generative AI tools being introduced. Explain how the tools will positively affect specific jobs or tasks, for example, stating: "If we adopt this in the right way, here's what it could do for you." Underscore how the new tools and the new skills that people need to use them benefit the organization's overall mission.

Take a considered approach to reskilling and upskilling

Previous Deloitte research found that **to get the most out of reskilling, upskilling, and other learning, programs should be designed around the learner.** Successful training programs are outcome-based, let people learn at their own pace in their preferred format, and focus on needed skills. Government entities often look askance at failure, but organizations should build in leeway for trial and error when integrating new technologies into routine tasks.

Involve the workforce

Getting the workforce involved in implementing Generative AI tools is another way to smooth the transition to new ways of working. Have program managers participate in the planning stages of rolling out a tool. As work progresses, invite frontline workers to participate in sandbox-type tests. Allowing workers to participate in the early stages not only makes them more comfortable with the technology, it makes the job more attractive, which could create more job satisfaction, and improve the organization's appeal as an employer.



Conclusion

In the not-so-distant future, the public sector could be run by a Generative AI-augmented workforce. **AI tools can provide government workers with more time for the high-value, intuitive, contextual work that only the human brain can handle.** A human-machine collaboration will let public sector workers such as caseworkers spend more time with clients, the type of activity that builds government engagement and trust. For that to happen and in accordance with the EO, government departments or agencies have to determine how they'll use Generative AI tools so they can map out the new roles needed in their human workforce. Additionally, government leaders should offer regular coaching and other guidance to drive home the positive effects that human-machine collaborations can have on people's work, mission, and society, and to enable them to effectively partner with their AI "colleagues."

Reach out for a conversation.

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Endnotes

1. Edward Van Buren, William D. Eggers, Tasha Austin, Joe Mariani, and Pankaj Kishnani, "Scaling AI in government," Deloitte Insights, December 13, 2021.
2. "New APS career pathfinder tool," Australian Government Digital Transformation Agency, October 19, 2020.

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