



State Government and Artificial Intelligence Today: Governance, Policy and Use Case Considerations

Kentucky Artificial Intelligence Task Force

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@NASCIO

About NASCIO

- National association representing state chief information officers and information technology executives from the states, territories and D.C.
- NASCIO provides members with products and services designed to support the challenging role of the state CIO, stimulate the exchange of information, and promote the adoption of IT best practices and innovations.



STRATEGIC PLAN
2024 - 2026



VISION

Government in which the public is fully served through business innovation and the optimal use of technology

Advancing government excellence through trusted collaboration, partnerships and technology leadership

MISSION

GUIDING PRINCIPLES: The National Association of State Chief Information Officers will:

- be non-partisan
- promote the state CIO as the technology leader who drives business innovation and transformation
- focus on multi-jurisdictional issues
- foster policies that support the public trust
- promote strategic alignment of government technology investments and state business agendas
- be ethical in our actions and relationships



2024 STATE CIO TOP 10 PRIORITIES

Priority Strategies, Management Processes and Solutions

1 CYBERSECURITY AND RISK MANAGEMENT 


3 ARTIFICIAL INTELLIGENCE / MACHINE LEARNING / ROBOTIC PROCESS AUTOMATION 

5 WORKFORCE 

7 BROADBAND / WIRELESS CONNECTIVITY 

9 CLOUD SERVICES 

1 DIGITAL GOVERNMENT / DIGITAL SERVICES 

4 LEGACY MODERNIZATION 

6 DATA MANAGEMENT / DATA ANALYTICS 

8 IDENTITY AND ACCESS MANAGEMENT 

10 CIO AS BROKER / NEW OPERATING MODEL 



Definitions

Artificial Intelligence (AI): computer systems capable of performing complex tasks that historically only a human could do (reasoning, making decisions, solving problems). AI can automate, interact, predict and simulate.

Examples include: natural language processing, robotic process automation, chatbots, digital assistants (Siri, Alexa), social media algorithms, smart home devices, search engines



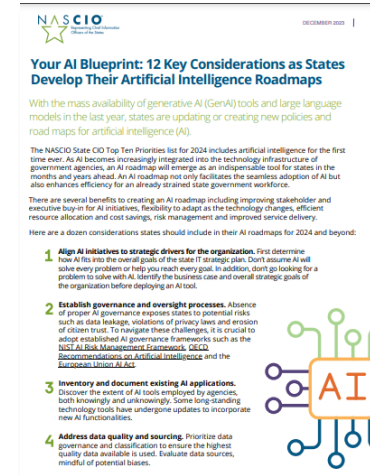
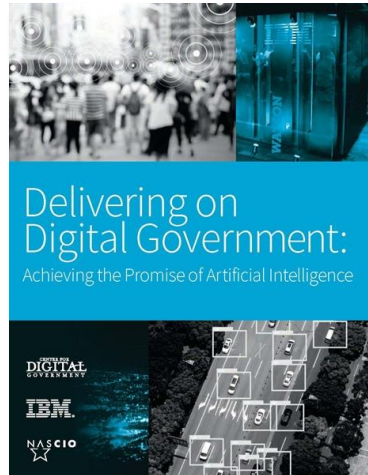
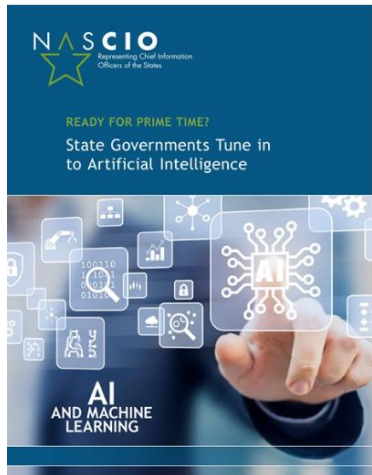
Definitions

Generative Artificial Intelligence (GenAI): A subset of AI that enables users to quickly create new content (text, images, audio, video, code) based on a variety of inputs

Examples include: OpenAI (ChatGPT and Dall-e), Co-Pilot, Midjourney, Claude, Gemini, Perplexity

New GenAI functionality in tools like: Zoom, Grammarly, Microsoft Office and Google Chrome

NASCIO AI Publications Since 2018



The Promise of Artificial Intelligence

79%

strongly agree or agree that they **do not have enough staff** to keep up.

77%

strongly agree or agree that **artificial intelligence and cognitive computing will free up their workforce** to focus in on higher value work.

79%

strongly agree or agree that **manual tasks and paperwork are limiting their productivity**.

49%

see AI as a **powerful tool to analyze the large volumes of new and existing information** collected across state departments and agencies.

Source: Delivering on Digital Government: Achieving the Promise of Artificial Intelligence Survey 2019. CDG, JBM and NASCIO.

What's Needed to Unlock the Promise of AI?

Data Organization & Hygiene

42% do not feel that their state has **their data organized in a manner to be successful** with artificial intelligence today.

Data Assessments

51% have **not completed an assessment of their data** to ensure that it is usable, accessible and cleansed enough to effectively leverage artificial intelligence.

A Framework for Risk

57% do not have a **framework for evaluating risk** for emerging technologies like artificial intelligence.

Policy

72% do not have a **policy governing the responsible and ethical use of artificial intelligence**.

What are the most significant challenges or barriers to AI adoption?

45%
Legacy IT infrastructure

33%
Cultural concerns inside the organization

27%
Lack of necessary staff skills for AI

24%
Organizational data silos

2%
Lack of executive support

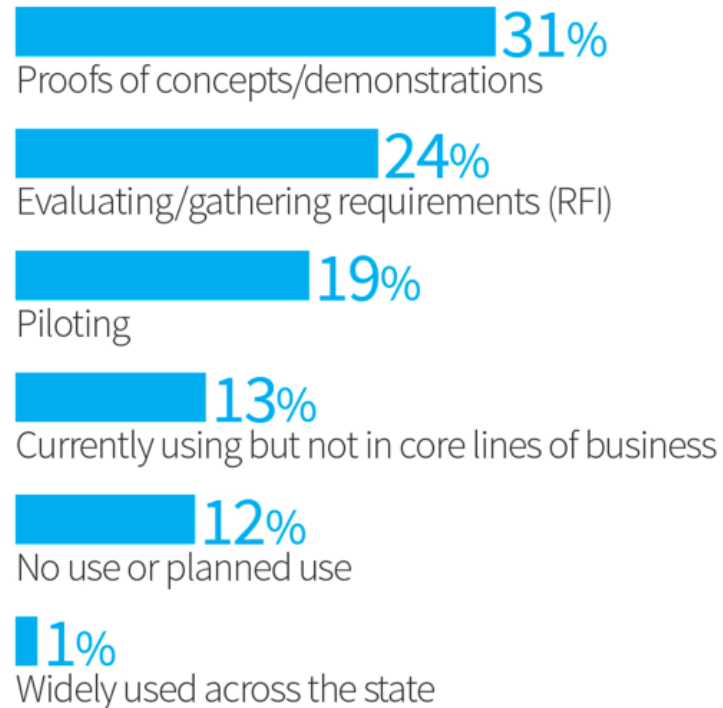
(Five greatest barriers shown)

Source: Delivering on Digital Government: Achieving the Promise of Artificial Intelligence Survey 2019. CDG, IBM and NASCIO.

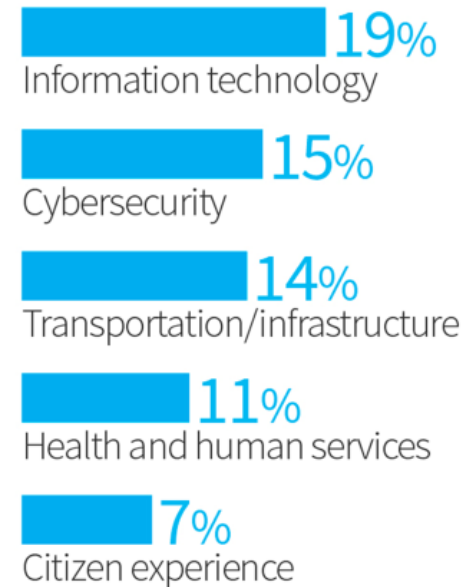


Where is Artificial Intelligence Today?

How would you describe your state's adoption of artificial intelligence?



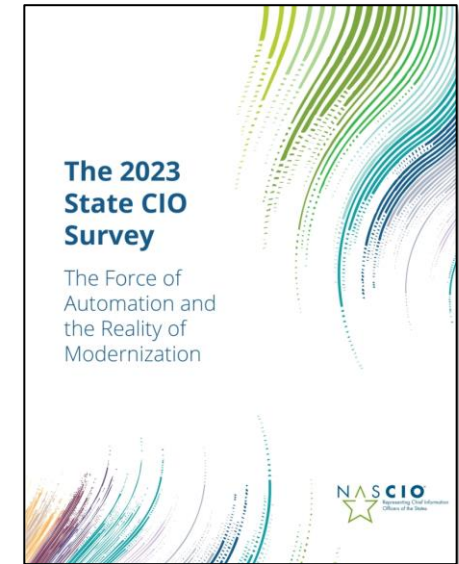
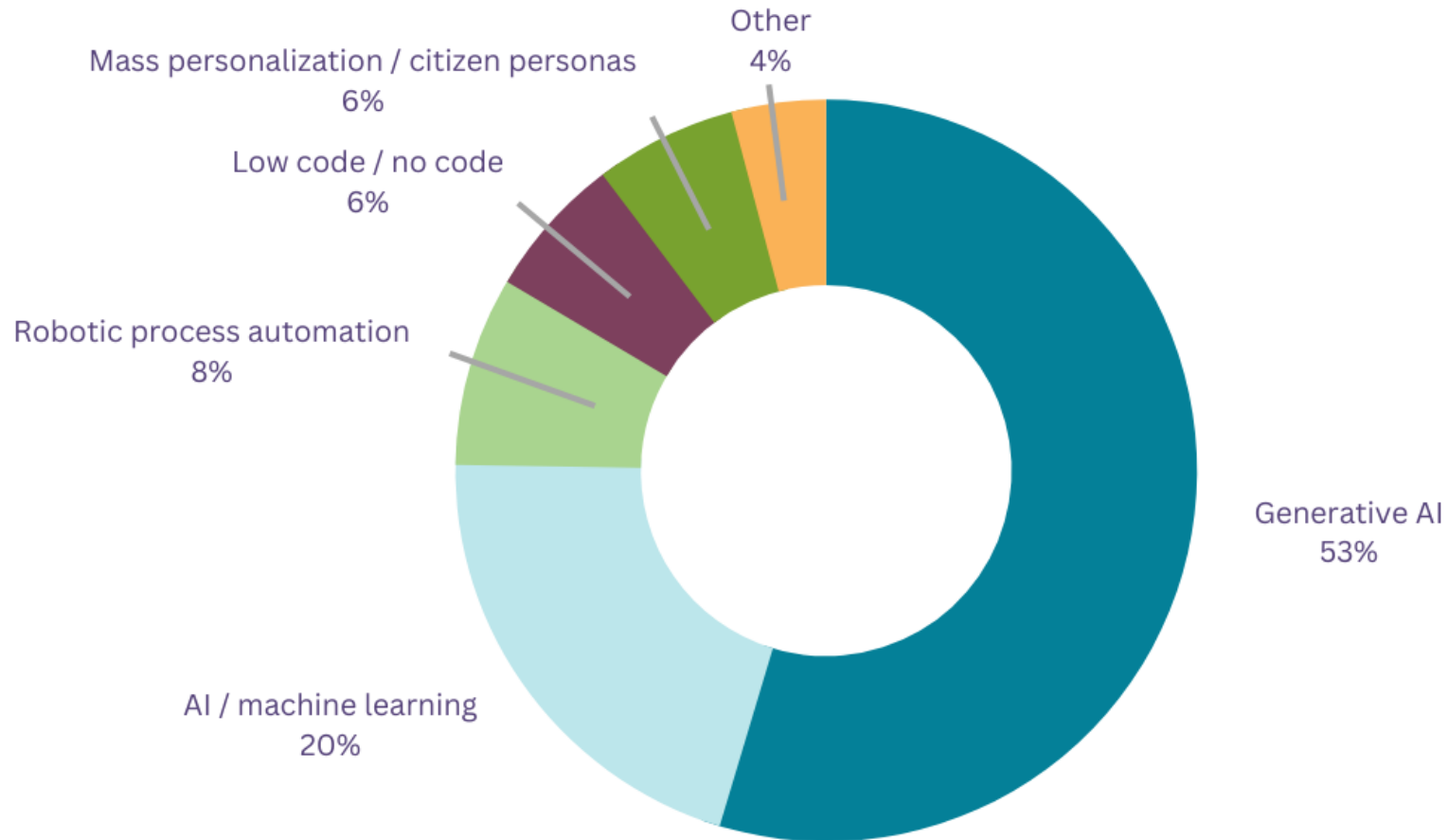
Where are you using AI?



Source: Delivering on Digital Government: Achieving the Promise of Artificial Intelligence Survey 2019. CDG,IBM and NASCIO.



What emerging IT area will be the most impactful in the next 3-5 years?



NASCIO Considerations for Developing AI Roadmaps

1. Align AI initiatives to strategic drivers for the organization
2. Establish governance and oversight processes
3. Inventory and document existing AI applications
4. Address data quality and sourcing
5. Collaborate with stakeholders and industry
6. Assess privacy and cybersecurity risks of AI adoption
7. Infrastructure and technology
8. Create acquisition and development guidelines
9. Identify potential use cases
10. Expand AI workforce expertise and training
11. Create guidelines for responsible use, ethics and transparency
12. Measure and communicate effectively

Source: NASCIO Your AI Blueprint: 12 Key Considerations as States Develop Their Artificial Intelligence Roadmaps, December 2023



State Actions on AI

Developing AI governance policies and frameworks

Creation of advisory committees and task forces

Inventory and documenting uses in agencies and applications

Collaborating with AI industry experts and researchers

Responsible use, flexible guardrails, security, ethics

Data governance: sources, data quality, bias, data privacy

Transparency and accountability

Procurement terms and contract provisions

Investing in AI training and education programs



Which of the following has your state implemented in terms of GenAI? (Select all that apply)

Action	Percent
Creation of advisory committees and task forces	76%
Inventory and documenting uses in agencies and applications	64%
Enterprise policies and procedures on development and use	74%
Responsible use, flexible guardrails, security, ethics	70%
Data governance: sources, data quality, bias, data privacy	26%
Transparency and accountability	38%
Requiring disclosure by software providers	24%
Procurement terms and contract provisions	29%
Impact on operations and workforce	24%



Is your state currently using GenAI in any of the following business processes? (Choose all that apply)

Applications in Use	Percent
Virtual meeting assistant/transcription	42%
Cybersecurity operations	33%
Document generation and management	31%
Software code generation	29%
Digital services for citizens	24%
Fraud prevention and detection	17%
Data analytics/predictive analytics	16%
Transportation management/traffic analytics	15%
Human services – intake, screening, case management	11%



State IT Use Cases for Generative AI

- Using OpenAI to support new chatbots to help citizens find services
- Language translation
- Analyzing survey data and making recommendations
- Cataloging databases and identifying their owners
- Downloading and reposting PDFs in more accessible formats
- Converting outdated computer code to current programming languages



State IT Use Cases for Generative AI (cont.)

- State transportation department using it to automate process for purchasing rights of way
- Scraping legislative data to help lawmakers and citizens find bills more easily
- Monitoring new legislation and creating a summary
- Human resources—writing effective job descriptions, interview questions
- Generating ideas, crafting emails and streamlining research
- Streamline procurement (repetitive forms, communication)

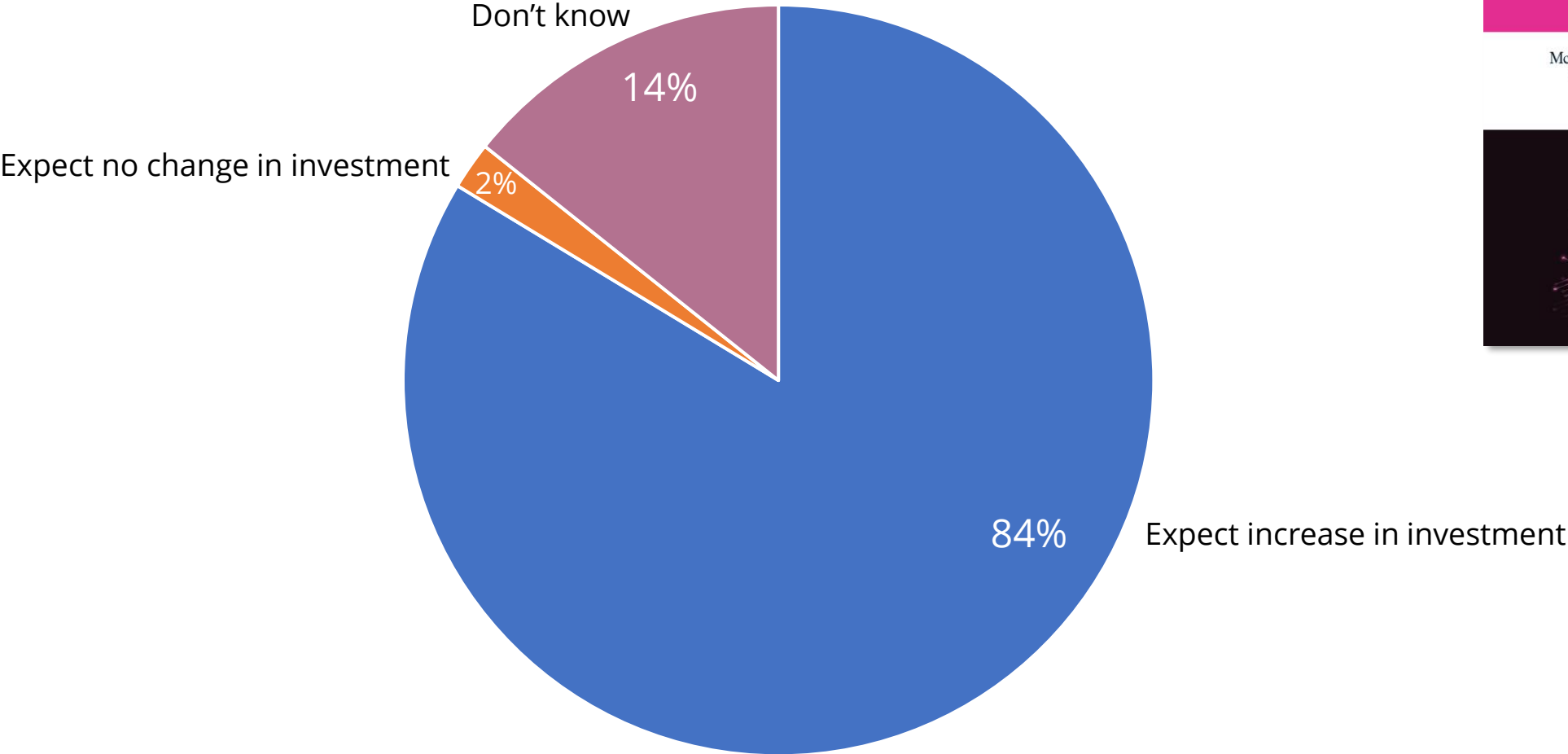
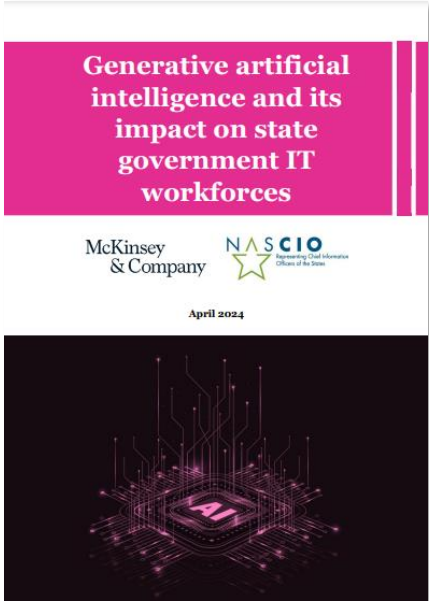


Concerns With Using Generative AI

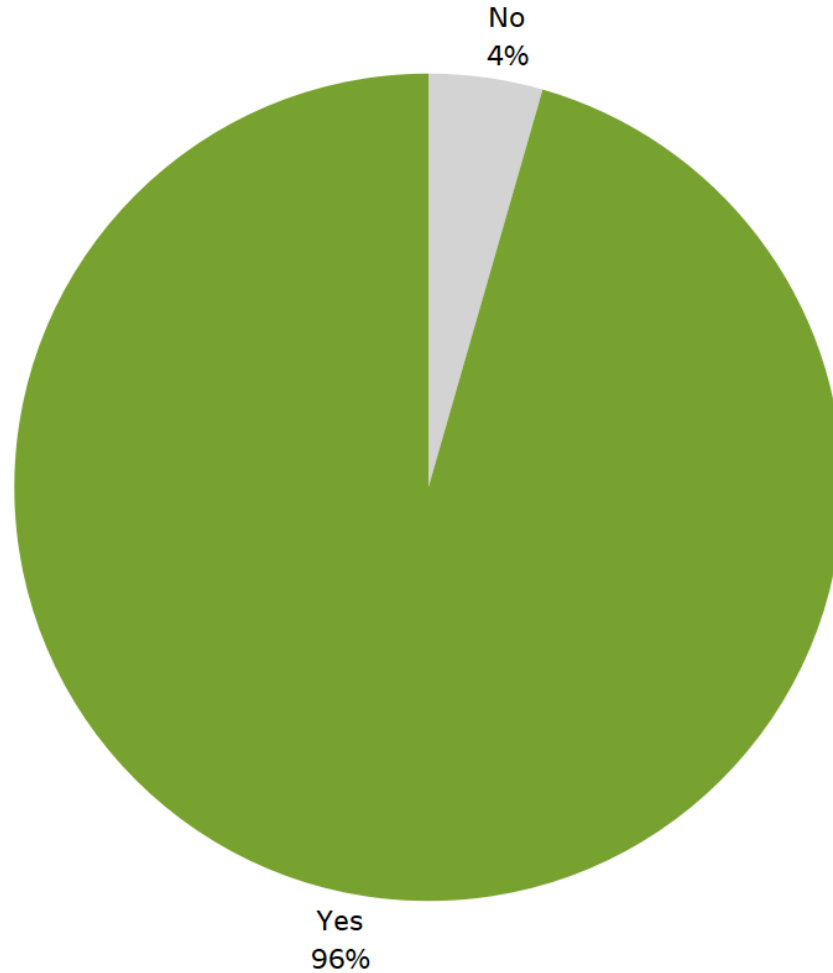
- Accidental disclosure of sensitive information
- Shadow use by employees
- Biased outputs
- Inadequate data privacy and security
- Lawsuits against AI companies
- Disinformation (fake text, images and videos) weakening trust in government



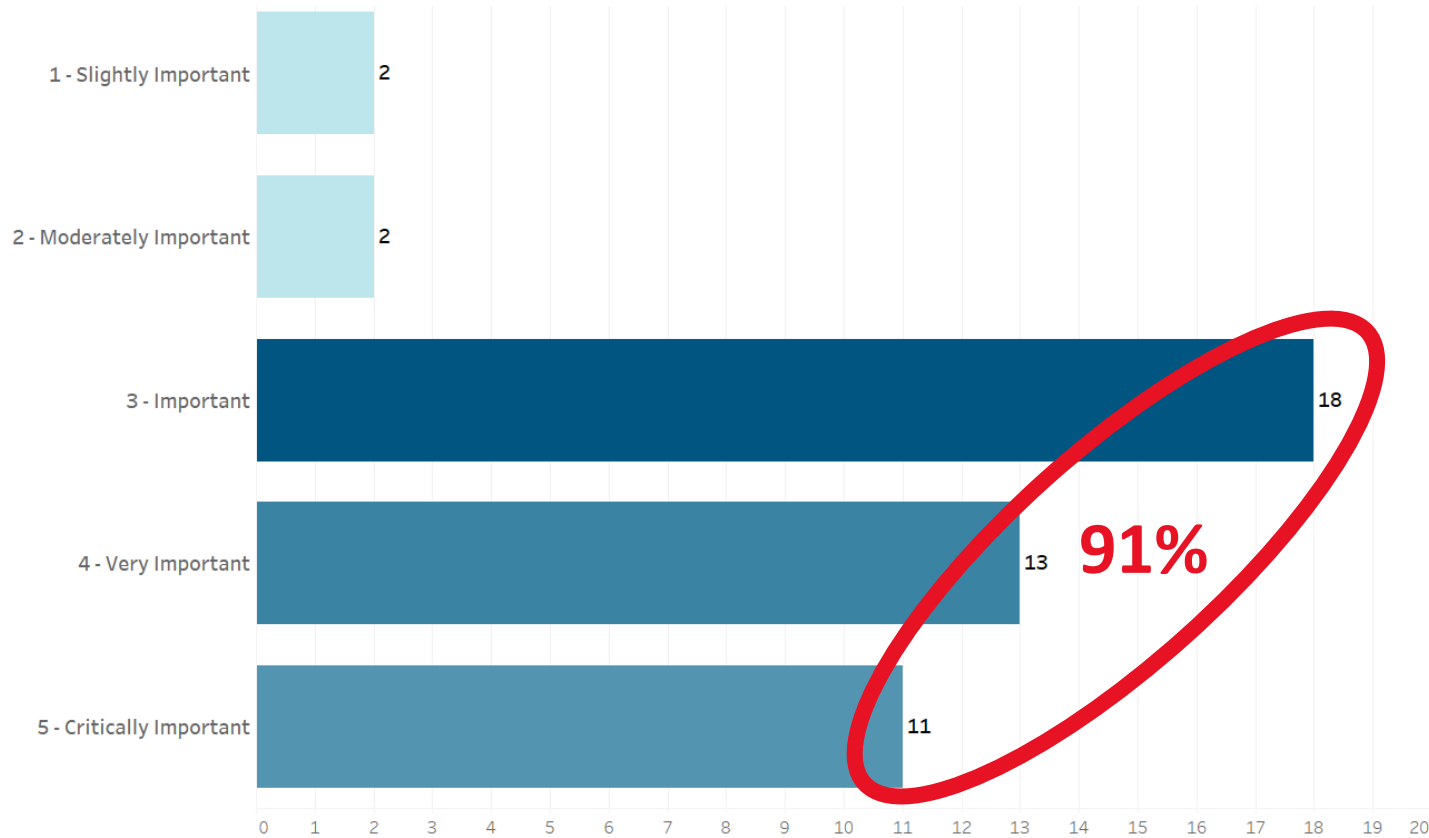
State Government Expected Change in Investment in GenAI Over the Next Three Years



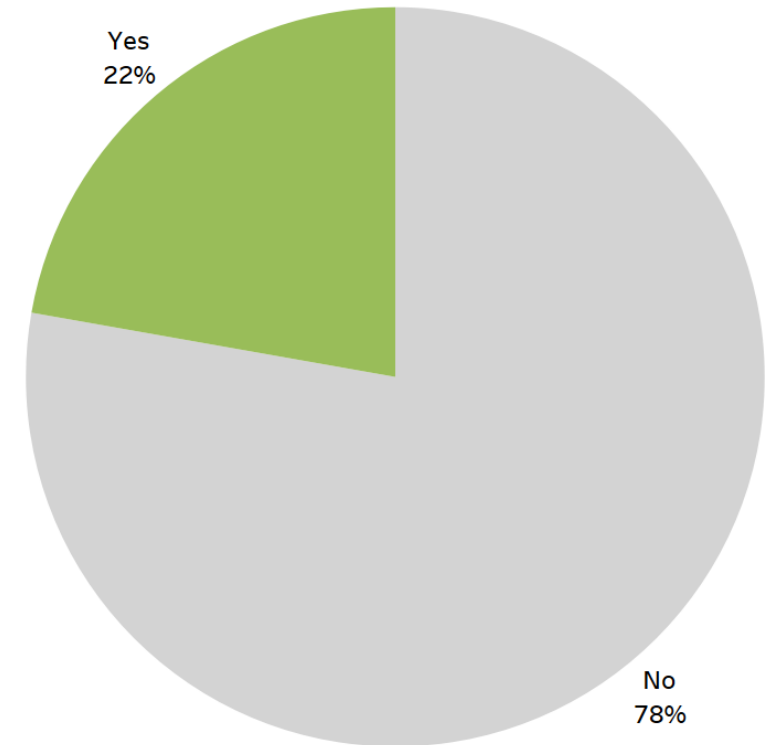
Do you anticipate increased adoption of AI and GenAI impacting data management importance?



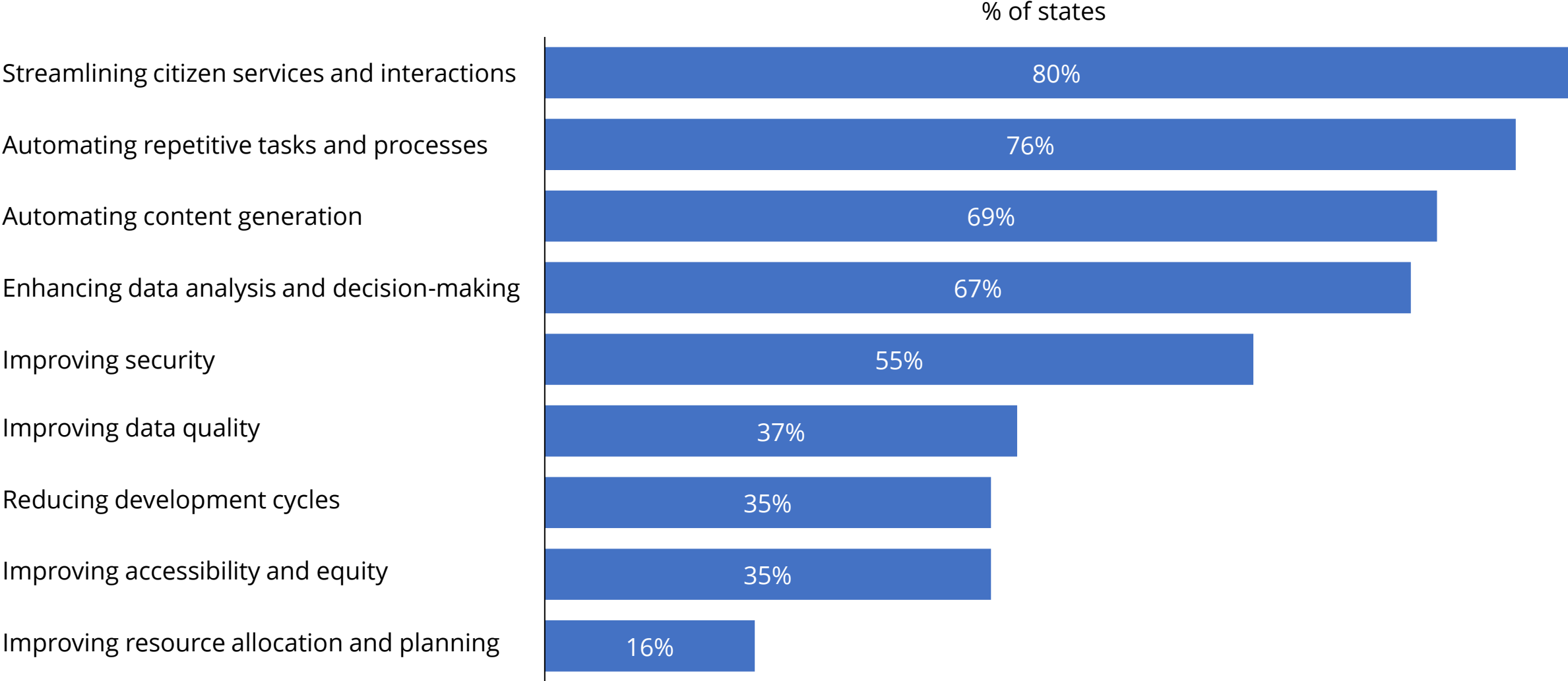
How would you rate the importance of data quality in your organization?



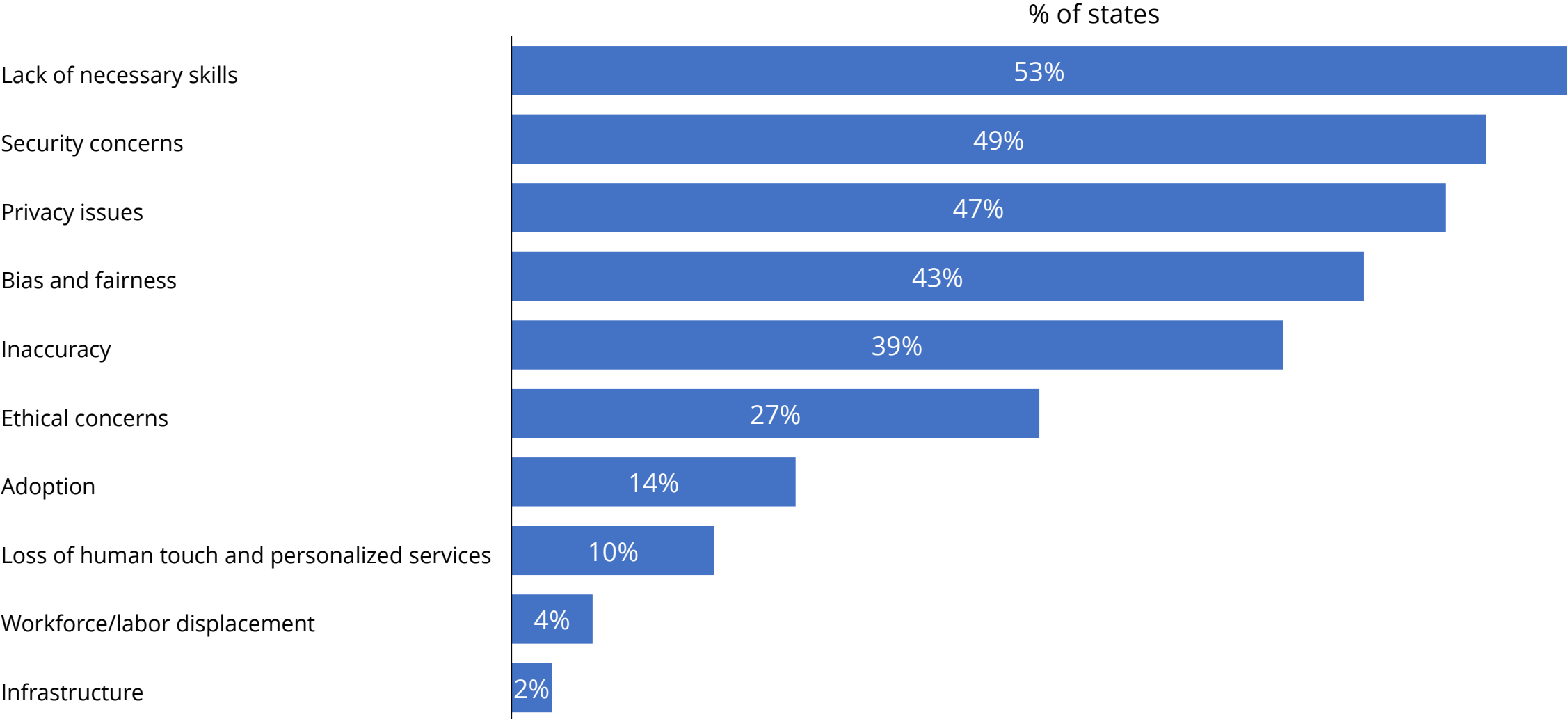
Do you have a data quality program?



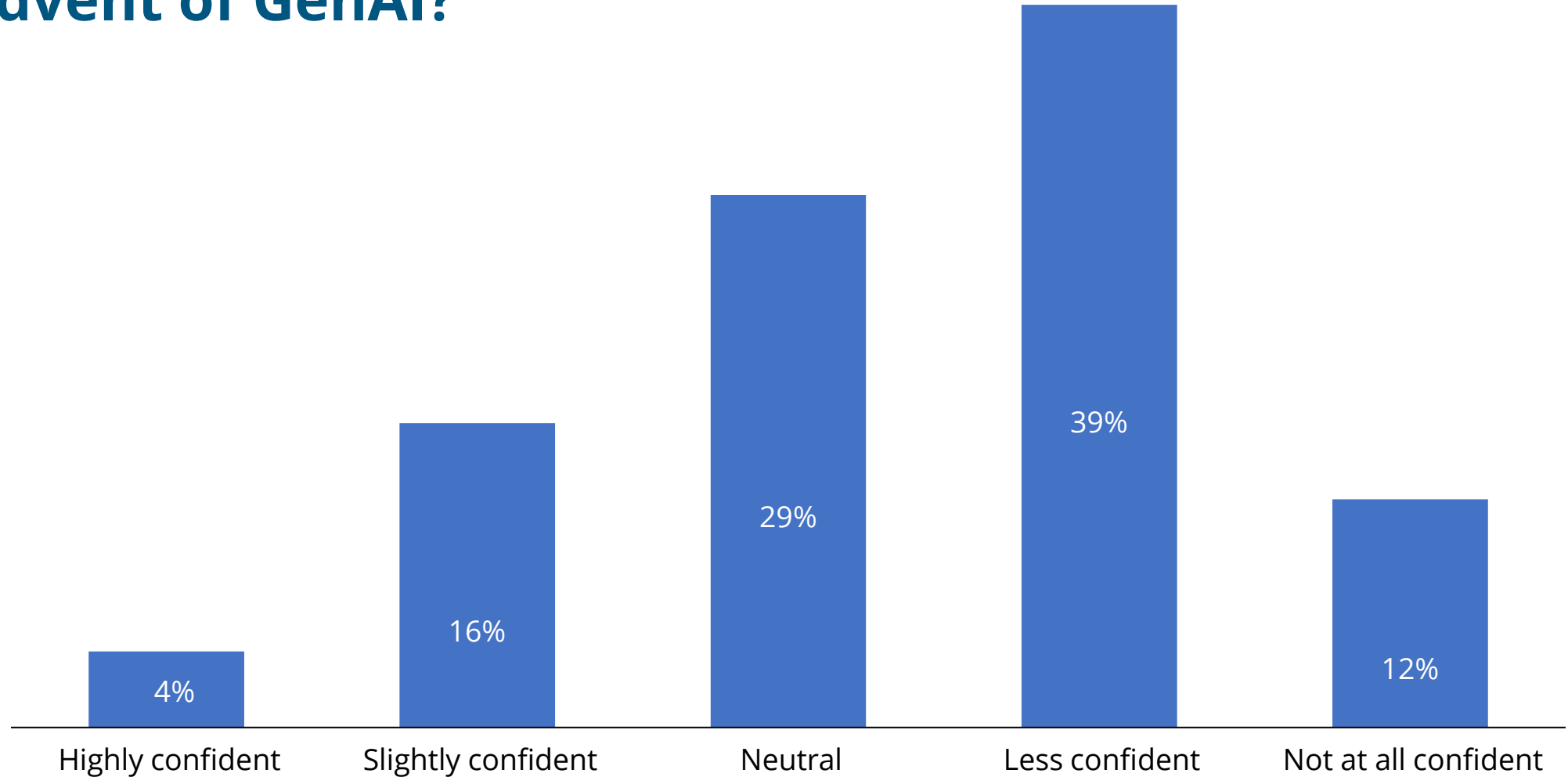
GenAI in the tech workforce: efficiency improvement



Concerns Regarding the Impact of GenAI on State Government Technology Workforce



Are you confident that your state's current technology workforce has the expertise to fill key roles and skillsets with the advent of GenAI?



NASCIO-McKinsey Study: Generative AI and its Impact on State Government IT Workforces, April 2024

Five dimensions for consideration in improving GenAI effectiveness



Governance

- **Finalize legislative processes** for government AI use and **appoint AI oversight roles**
- **Implement practical tools and establish oversight mechanisms**, including risk-based assessments and human validation
- **Mobilize a center of excellence** to coordinate and share resources across the state



Funding

- **Allocate adequate capital and operational budgets** for scalable deployment
- **Prioritize high-value, low-risk use cases** to generate economic self-funding and social acceptance
- **Develop cost-effective, agile proofs of concept (POCs)** to refine benefit estimates and capture intended value from GenAI through benefits harvesting



Workforce/skills

- **Assess existing capabilities and forecast future skills** demand and supply
- **Develop and execute a strategic workforce plan** aligning capabilities with demand, emphasizing recruitment and retention of talent
- **Implement competency-based hiring, reskilling programs, and clear communication strategies** to attract, retain, and upskill employees



Infrastructure

- **Enhance AI/ML Ops infrastructure** to facilitate scalable deployment and refinement of generative AI solutions
- **Leverage center of excellence** to develop reusable assets, accelerating product development and adoption across the state
- **Evolve all layers of the client technology stack**, including the experience layer, gen AI use cases, models and ML Ops, data platforms, and cloud foundations



Data

- **Evaluate and customize data architecture** to accommodate unstructured data, **leveraging specialized tools for management and governance**.
- **Tailor data integration efforts** to GenAI implementation strategies, **utilizing appropriate tools for data transformation and seamless integration** across systems, while aligning with the organization's data maturity level.



Your AI Blueprint: 12 Key Considerations as States Develop Their Artificial Intelligence Roadmaps

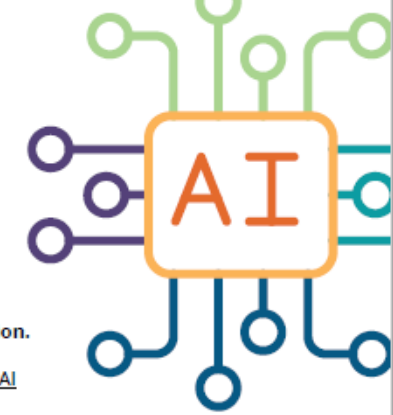
With the mass availability of generative AI (GenAI) tools and large language models in the last year, states are updating or creating new policies and road maps for artificial intelligence (AI).

The NASCIO State CIO Top Ten Priorities list for 2024 includes artificial intelligence for the first time ever. As AI becomes increasingly integrated into the technology infrastructure of government agencies, an AI roadmap will emerge as an indispensable tool for states in the months and years ahead. An AI roadmap not only facilitates the seamless adoption of AI but also enhances efficiency for an already strained state government workforce.

There are several benefits to creating an AI roadmap including improving stakeholder and executive buy-in for AI initiatives, flexibility to adapt as the technology changes, efficient resource allocation and cost savings, risk management and improved service delivery.

Here are a dozen considerations states should include in their AI roadmaps for 2024 and beyond:

- 1 Align AI initiatives to strategic drivers for the organization.** First determine how AI fits into the overall goals of the state IT strategic plan. Don't assume AI will solve every problem or help you reach every goal. In addition, don't go looking for a problem to solve with AI. Identify the business case and overall strategic goals of the organization before deploying an AI tool.
- 2 Establish governance and oversight processes.** Absence of proper AI governance exposes states to potential risks such as data leakage, violations of privacy laws and erosion of citizen trust. To navigate these challenges, it is crucial to adopt established AI governance frameworks such as the [NIST AI Risk Management Framework](#), [OECD Recommendations on Artificial Intelligence](#) and the [European Union AI Act](#).
- 3 Inventory and document existing AI applications.** Discover the extent of AI tools employed by agencies, both knowingly and unknowingly. Some long-standing technology tools have undergone updates to incorporate new AI functionalities.
- 4 Address data quality and sourcing.** Prioritize data governance and classification to ensure the highest quality data available is used. Evaluate data sources, mindful of potential biases.



- 5 Collaborate with stakeholders and industry partners.** Create an advisory board or task force with key stakeholders such as agency heads, the chief information officer, chief privacy officer, chief information security officer, chief artificial intelligence officer, chief information accessibility officer, general counsel and those with expertise in AI ethics. Build industry partnerships to leverage expertise and innovation.
- 6 Assess privacy and cybersecurity risks of AI adoption.** Consider performing privacy and security impact assessments for new AI technologies. Again, the [NIST AI Risk Management Framework](#) can be a useful tool.
- 7 Infrastructure and technology.** Assess the current state of the technology infrastructure and identify areas for improvement. Legacy infrastructure has been a common roadblock for states in the adoption of AI.
- 8 Create acquisition and development guidelines.** Develop best practices and guidelines for acquisition/procurement, development and operation of secure AI systems. Update procurement language as needed to cover AI and generative AI concerns, while also incorporating considerations for accessibility.
- 9 Identify potential use cases.** Research potential use cases of AI by learning from other government entities, organizations and AI leaders. Concentrate on use cases that align most closely to the strategic goals of the state.
- 10 Expand AI workforce expertise and training.** Identify and amplify existing staff expertise, recruit interns and staff, partner with local educational institutions and provide training and educational opportunities for employees. This includes not only technical expertise but also coverage of legal, ethical and policy considerations. Assess positive and negative workforce impacts.
- 11 Create guidelines for responsible use, ethics and transparency.** Ensure that users of AI systems are informed about the risks associated with discrimination and bias. State government should prioritize transparency measures to foster trust among citizens.
- 12 Measure and communicate effectively.** Have clear metrics in place to measure progress and success of AI initiatives. Communicate the outcomes of the metrics with key stakeholders, legislators and other policymakers.

While each state's AI roadmap will be unique to its specific needs, strategic plans and priorities, including these important considerations ensures the establishment of a solid foundation for the seamless integration of AI into state IT initiatives.