NATIONAL ASSOCIATION of COUNTIES NACo

July 2024

AI County Compass

A Comprehensive Toolkit for Local Governance and Implementation of Artificial Intelligence

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Letter from the Co-Chairs

Dear Reader,

The genie is out of the bottle.

Over the past two years, we have witnessed the rise of an innovative new technology poised to transform our economy and society: generative artificial intelligence (GenAI). The advent of GenAI is bringing vast new opportunities in computing power and capability that will alter how society utilizes technology for the public good.

Perhaps a more significant leap than the dawn of the internet, GenAI is laying the groundwork for how companies, organizations and governments will operate in the future with great speed. Building on artificial intelligence, which is not new, the generative technology offers the ability to produce text, audio, and video in a novel way, as well as support vastly increased productivity.

In light of this moment, we face an unprecedented challenge — and ultimately, a significant opportunity — to frame the rise of GenAI in a way that will promote its responsible enablement and not endanger humanity's rights or roles. This challenge is mirrored by few other moments in the history of technological progress, such as the invention of nuclear technology or the dawn of the industrial revolution.

Four key themes emerged during our committee's year-long exploration of GenAI: Prepare the Workforce, Establish an Ethical Framework, Promote Policy Models and Enable Responsible Applications. Each theme prompted our committee to study the impact of GenAI deeply, specifically through the lens of county governance.

The goal of this report and toolkit is to enable county government leaders to recognize low-risk versus high-risk implementations of artificial intelligence (AI) and GenAI and address the risk and rewards that both bring to local government. This report represents the cumulative discussions and contributions of a diverse collection of county leaders, policymakers, administrators and CIOs. We hope it will provide you with a framework for approaching GenAI. You will also find more in-depth information and valuable resources on the NACo.org website.

As a society, we are entering a new frontier and our goal is to help prepare America's county officials for this technological moment.

Sincerely,

Co-Chair Andy Brown
County Judge, Travis County, Texas

Co-Chair Gregg Weiss
Commissioner, Palm Beach County, Fla.

Executive Summary

The Rise of Artificial Intelligence

The advent of generative artificial intelligence (GenAI) worldwide presents unique opportunities and challenges for county governments. NACo has convened an Artificial Intelligence Exploratory Committee, with the goal of developing a knowledge base and best practice resource hub for counties to utilize in considering, adopting and regulating the use of GenAI in their respective operations, services and communities.

As county officials, we have a vested interest in the development and oversight of GenAI policies and usage. While artificial intelligence (AI) has been around for decades, the unprecedented rise of GenAI has created heightened awareness of both the risks and rewards that this new evolution in technology brings.

This toolkit is tailored specifically for counties. As a committee, we investigated four key themes with respect to GenAI: Enable Responsible Applications, Promote Policy Models, Establish an Ethical Framework and Prepare the Workforce. Our toolkit is divided into the following sections: an overview that includes an executive summary and recent survey, a list of guiding principles and work group recommendations that address the four key themes. The toolkit ends with suggested next steps and a path forward.

Through the use of this toolkit, the AI County Compass, the reader will:

- **Increase** county official awareness and understanding of key GenAI terms and definitions
- **Learn** about key opportunities as well as challenges with respect to the development of policy models, ethical frameworks, applications development and preparation of the workforce
- **Explore** county lessons learned and best practices with the use of GenAI
- **Strategize** next steps for a county's journey in GenAI
- **Expand** county official knowledge base for what GenAI will bring to county government today, in the near future and beyond
- **Acclimate** to resources that will keep county officials informed while keeping track of the revolutionary technologies that will continue to unfold.

Executive Summary – Work Group Recommendations

(Recommendation details can be found starting on page 14)

WORK GROUP	RECOMMENDATION
Policy Working Group *"Promote Policy Models"*	1. Establish your county's policy framework for GenAI 2. Review key legal considerations 3. Review and assess existing procurement policies
Ethics Working Group *"Establish an Ethical Framework"*	1. Fairness, Equitableness and Impartiality – ensure the development, deployment, use and impact of GenAI is fair and impartial 2. Transparency – utilize GenAI in an open and explainable fashion, while practicing responsible disclosures 3. Privacy – follow applicable local, state and federal policy guidelines 4. Accountability – assess impact, remediate risk, create an audit trail and validate results 5. Train and educate employees on the "why", along with guidance on best practices
Applications Working Group *"Enable Responsible Applications"*	1. Review and evaluate potential use cases based on description and sensitivity 2. Familiarize yourself with federal resources on the application of artificial intelligence tools, including the National Institute of Standards and Technology (NIST) as well as Information Technology Infrastructure Library (ITIL) standards 3. Regularly assess the current landscape of publicly available resources 4. Practice robust data governance and management 5. Update and expand the county's cybersecurity measures 6. Design procedures to train data used in GenAI models 7. Determine software, hardware and procurement minimum standards and needs
Workforce Working Group *"Prepare the Workforce"*	1. Focus on skills development, training and capacity building 2. Consider skills acquisition options that best fit your county needs 3. Develop a multi-year workforce strategy 4. Inform and seek feedback from unions, skilled trades and the broader workforce

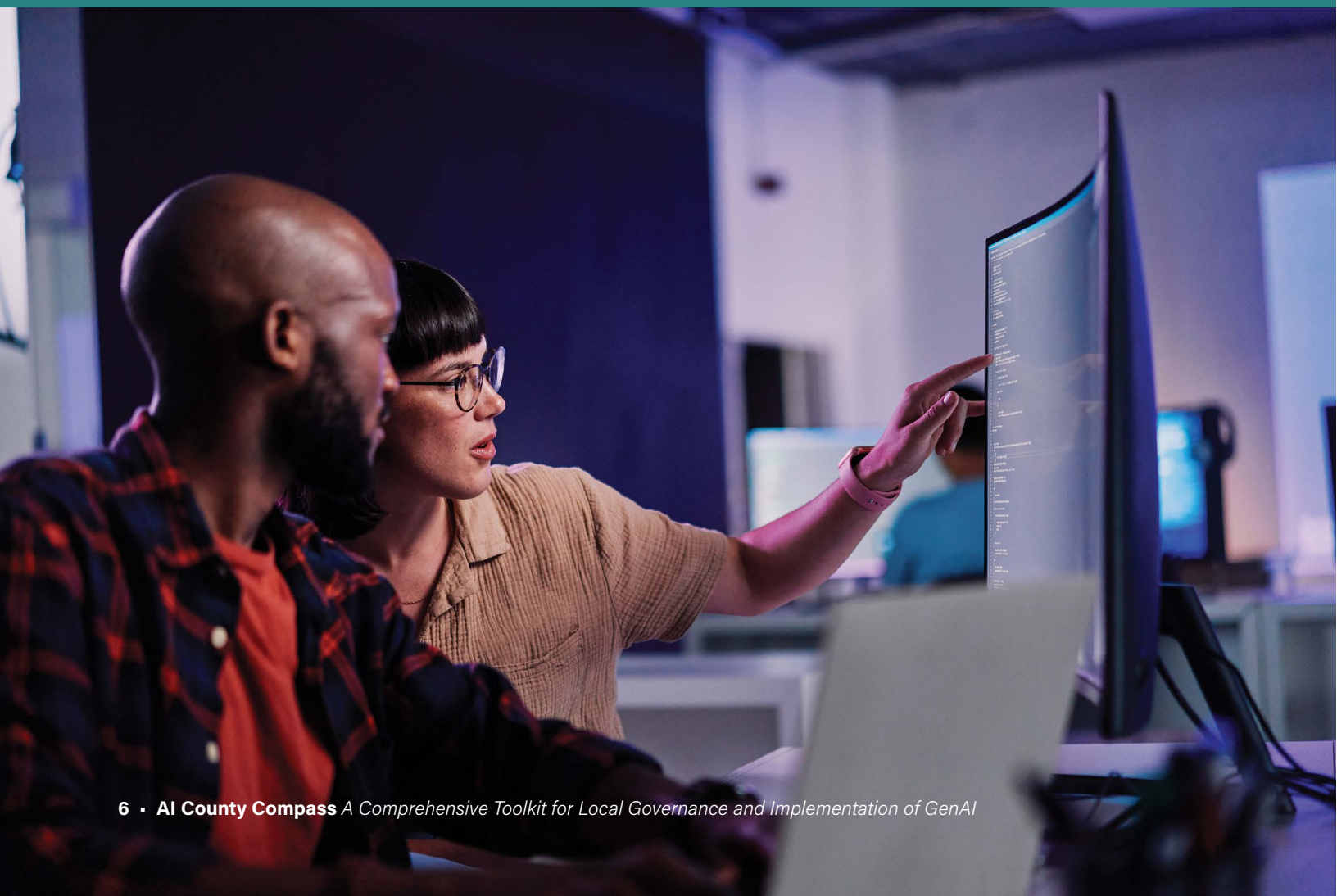
The full report and toolkit is available on the NACo AI Compass and Resource Hub

Myth-busting

The unprecedented growth of GenAI has led to many myths, mixing up facts and false ideas, which makes it hard to separate truth from fiction. Check out some of the top articulated myths on AI below:

- My county can avoid the use of GenAI by not ever permitting employees to use the technology.
- AI is a new technology that has not previously been utilized by society.
- GenAI models are always accurate and do not need their outputs to be verified.
- I can turn off GenAI features in applications if I don't want to use them.
- All GenAI tools are designed using the same underlying open-source model.
- GenAI tools will return the same answer every time, so long as the prompt you offer is written the same exact way.
- AI and GenAI can steal any data that I enter into the model.

Some of the above myths may lead readers to dismiss the possibilities of AI based on uncertain outcomes for utilizing such technology. Ultimately, our toolkit seeks to clarify and educate readers on some of these key myths that may emerge as your county begins to encounter GenAI tools and resources. As you read through this toolkit, you will discover that all of the above myths can be thoroughly addressed with the proper resources and tools. Further responses are in **Appendix A.**



Landscape Analysis

Benefits of GenAI

- **Enhance productivity and cost savings** by automating routine tasks, such as data entry, document drafting, contract negotiation, grant writing and help desk support.
- **Improve service delivery** by providing quick access to information, streamlining processes and enhancing communication and retention.
- **Generate new ideas and solutions** by synthesizing data, proscribing actions and creating applications.
- **Increase equity and accessibility** by providing multilingual and inclusive services, addressing biases and bridging language gaps.

Challenges of GenAI

- **Ensure governance, compliance and accountability** by establishing clear policies, standards and oversight for GenAI usage and decision-making.
- **Protect security and privacy** by securing data and systems against cyber threats and unauthorized access and respecting data ownership and consent.
- **Address copyright issues** when a GenAI tool utilizes other people's work without proper attribution or express permission.
- **Validate the accuracy** of the information that is being returned through GenAI tools.
- **Prevent bias and ethical issues** by auditing algorithms for fairness and accuracy and disclosing GenAI involvement and limitations.
- **Manage change, trust and decision-making** by educating policymakers, staff, and residents about GenAI's role and benefits, and mitigating fears of job displacement and AI misuse.
- **Train county staff** in light of a rapidly changing landscape for GenAI tools and applicability, where peer institutions may be taking a more cautious approach.

Opportunities for Counties

- **Optimize social services** by helping constituents identify and access resources, track performance and engagement and provide early intervention and crisis support.
- **Improve public safety and security** by using AI technology in video cameras, drones and body cameras for surveillance and analysis and providing real-time cyber response and threat detection.
- **Personalize service delivery** by using AI to help people better identify local needs and connections to services, including providing interactive assistants and chatbots.
- **Create tailored local solutions** by using county-centric AI models with local data and ensuring relevance and responsiveness to community needs.
- **Utilize forecasting** so that counties can direct resources to the greatest needs for resident services.
- **Engage community stakeholders** and voices of the most vulnerable and underserved in the county.

NACo Artificial Intelligence Exploratory Committee Survey

How are counties currently interacting with AI and GenAI?

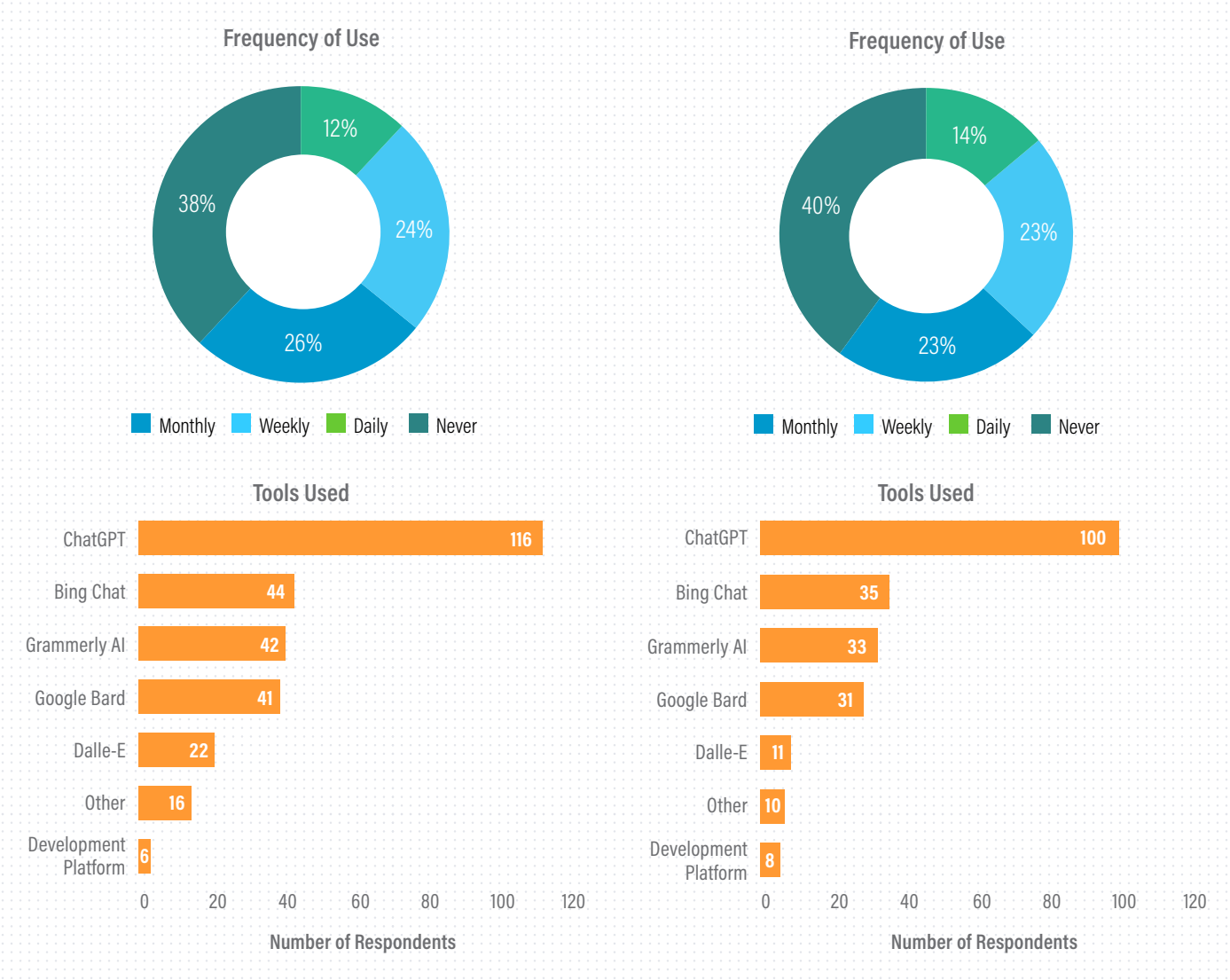
From late 2023 to the spring of 2024, the NACo AI Exploratory Committee and Deloitte surveyed NACo members to identify key trends for county utilization of GenAI. Among the survey participants, over 75 percent of county officials and staff reported using GenAI tools both at work and in their personal lives.

GenAI Usage | Personal Life

The charts below illustrate the frequency of GenAI usage in respondents' personal lives and highlights the top GenAI tools used. Data shows that GenAI is used at least monthly for personal use by at least 60% of respondents and ChatGPT is used signficantly more than other GenAI tools.

GenAI Usage | Work Life

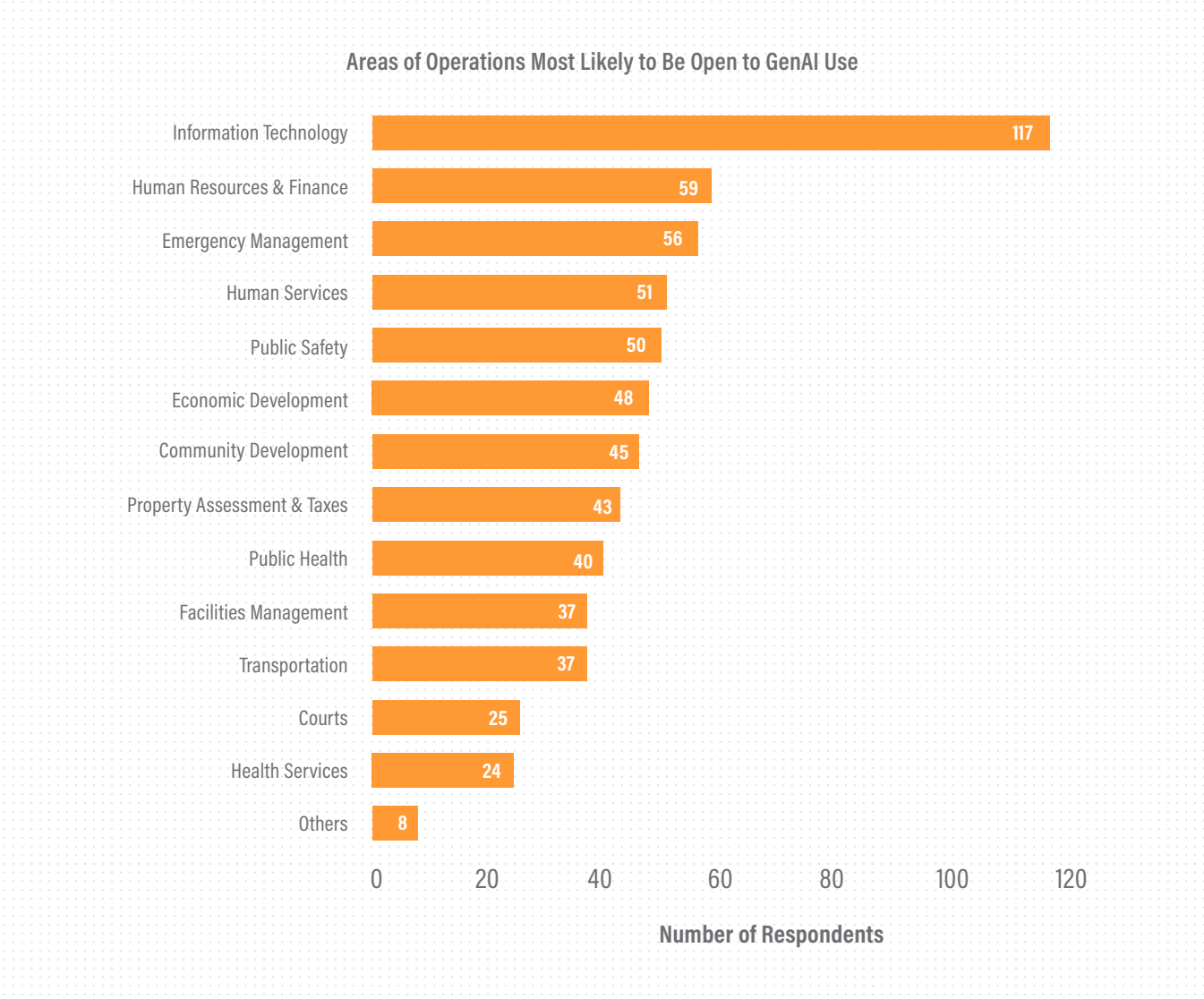
The charts below illustrate the frequency of GenAI usage by respondents within county operations and services and highlights the top GenAI tools used. Data shows that GenAI is used within county operations and services at minimum monthly by 60% of respondents. ChatGPT is used significantly more than other GenAI tools.



GenAI Implementation | Overview

This chart illustrates what areas of operations within counties respondents believe are most likely to be open to the use of GenAI, as well as the benefits and challenges identified with GenAI implementation. Data shows that Information Technology (IT) is believed to be far more likely than other areas of county operations to be open to GenAI use.

At the time of this survey, the use of GenAI focused primarily within the IT area, with human resource and finance functions in second place, followed closely by emergency management and human services.



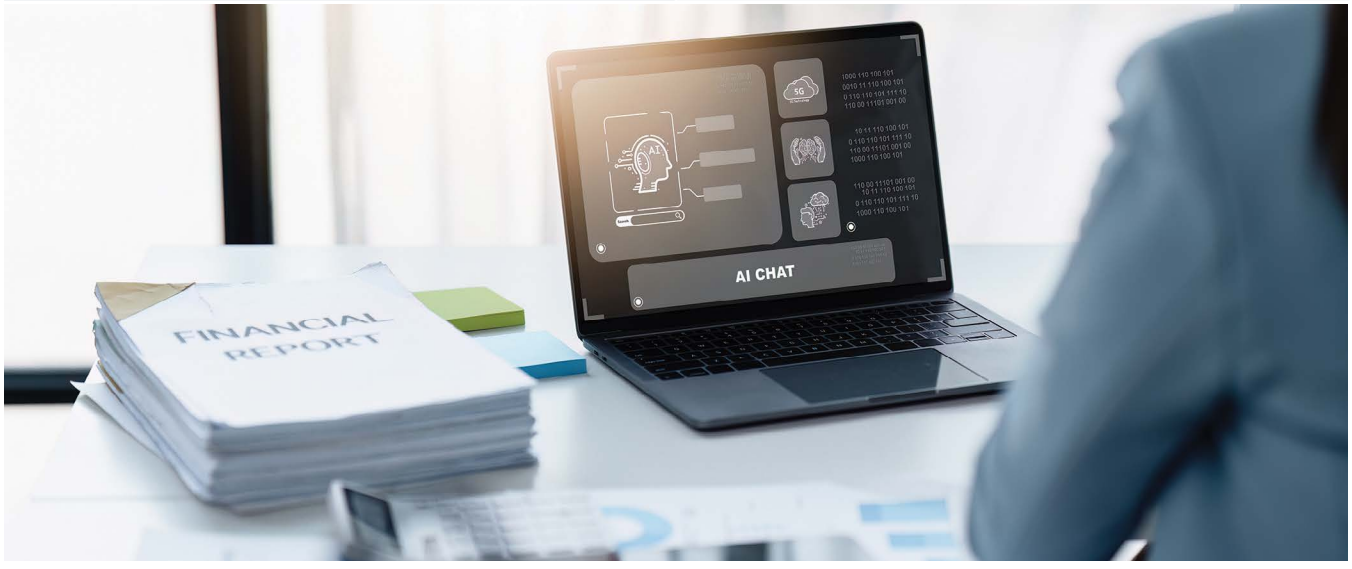
The full report is available on the NACo AI Compass and Resource Hub.

Introduction to GenAI and Its Relevance to Local Governance

To conceptualize the impact of AI and GenAI on county governments, the committee developed a set of definitions to establish an initial framework for investigation.

Understanding Artificial Intelligence vs. Generative Artificial Intelligence

AI	GenAI
Technical Definition	**Technical Definition**
The automation of tasks utilizing computer systems where little to no human intervention and oversight is required. Examples include speech recognition, language translation, security cameras and software applications such as computer monitoring of HVAC systems that automate heating/cooling.	The development and deployment of artificial systems that can generate novel content by relying on large language models, data sets and other methods of machine learning, including inputs from humans. Examples include ChatGPT, Copilot, Google Bard, Einstein, Claude and Otter.ai.
Layman's Definition	**Layman's Definition**
AI is like a digital assistant, automating processes that organize data for employees to make informed decisions. Examples include smart devices such as lights in the courthouse or self-driving cars that collect data. Other examples include transcribing apps, voice command prompts, and customer relationship management scripts used in chatbots. This is similar to a behind-the-scenes advisor.	GenAI, such as ChatGPT, generates creative content, which not only assists in regular tasks but also is capable of drafting documents, designing educational materials, or creating public service announcements, showcasing its ability to produce new and original content when you ask it questions, otherwise known as prompts.



Guiding Principles

The committee identified seven guiding principles for counties to consider as we embark on or continue the journey towards implementation of GenAI policies and procedures. Readers are reminded that AI and GenAI are technologies and counties should approach these technologies in the same way you would adopt any type of technology. With that in mind, the seven guiding principles are:

1. Be agile, flexible and creative. Think big!

The sky is not the limit. However, while thinking of solutions for the impossible, keep in mind that AI and GenAI are just tools and that these technologies are evolving rapidly. The responsibility of reviewing and utilizing the tools and the subsequent outcomes still resides with the county and users.

2. Set the outcome(s) that you want to achieve for your county and in your community by identifying and evaluating use cases.

Knowing and focusing on the end goal is crucial, whether it involves improving direct service delivery, modernizing internal processes to enhance employee productivity or strengthening cybersecurity defenses. This can be accomplished through identifying low, medium and high-risk use cases and prioritizing accordingly in reference to cost and privacy. A best practice is to start with your desired business outcomes and then tie each to potential GenAI use cases.

3. Be proactive, not reactive. Approach staff utilization of GenAI with guardrails and guidance, rather than saying "we won't allow or implement" AI or GenAI.

Taking the time to educate staff on the benefits and risks will greatly reduce unwanted outcomes. Ignoring the advancements in AI, particularly GenAI, will be detrimental to your county. County staff are most likely using these technologies and implementing them into their daily workflows.

NACo AI Exploratory Committee - Silicon Valley Tour

NACo 2024 Legislative Conference: CIO Forum Pre-Conference

4. Maintain vigilance when it comes to accuracy, privacy, bias and ethical challenges.

AI and GenAI are influenced by both the inherent and systemic biases in their training data, as well as the human biases involved in decision-making. Keeping this in mind as you develop a solid review process is critical to the successful use of GenAI. Further, avoiding the input of private or confidential data, as well as verifying the accuracy of the results, is critical to successful GenAI implementation.

5. Communicate how GenAI can bring positive change to the workforce, and address challenges up front.

Everyone has seen stories about GenAI replacing the workforce and disenfranchising residents. In reality, implementing GenAI tools may allow employees to deliver higher-value services and help reduce employment gaps that many counties are experiencing. Counties will need to offer opportunities to their existing workforce that include training, reskilling and upskilling, which encourages career advancement.

6. Establish functional requirements for implementing AI systems that include strong data governance measures.

County data, whether public or internal, may be outdated, inconsistent or inaccurate. The emergence of AI and GenAI tools offers an excellent opportunity to develop a comprehensive data catalog and ensure high-quality data is available to both staff and the public, with consistent quality reviews becoming routine.

7. Plan ahead for the transition to GenAI technologies and tools, which will involve financial commitment, staff time and resources.

When entering into a GenAI implementation, the positive return on investment may not be immediate. Some of the return is more than monetary; this includes improved work environment and faster client service delivery. Utilizing cost models that keep these intangible properties in mind will help manage budgetary expectations.

Workgroup Recommendations: Preparing for GenAI

Each of the NACo AI Exploratory Committee's four key themes evolved into a broader exploration of recommendations for county governments to consider. For each theme, a workgroup composed of committee members and non-committee members helped to formulate the below recommendations.

Promote Policy Models: The Policy Workgroup

The Policy Workgroup explored the implications for regulating, monitoring, guarding and promoting the use and application of AI and GenAI in county governance and operations as well as across various sectors in the broader economy. Conclusions from this group focused on the county perspective and areas of potential contribution to a broader policy lens.

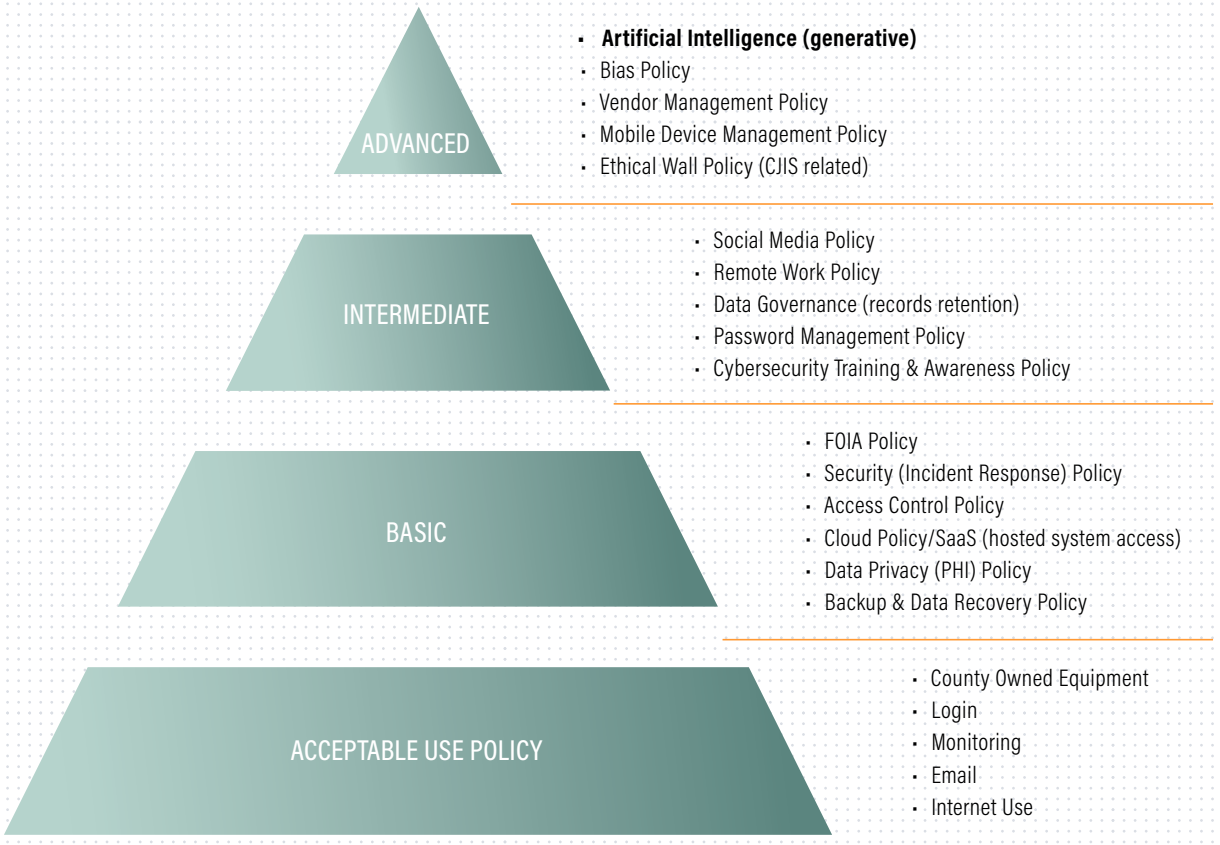
The key to regulation for GenAI is when to apply a policy, a standard or a guideline.

Policies	**Strict impact:** A rule that sets the boundaries for approved use and non-approved use. Policies provide clear guidance and consequences for not following the policy. *Counties should consider only implementing a policy when the objective is well understood and "future-proofed," in order to avoid a policy that becomes outdated or ineffective.*
Standards	**Moderate impact:** Establishes general conduct that outlines minimum requirements. Can be utilized to help establish ethical utilization of GenAI tools and technology. *Counties should consider implementing standards when establishing clear expectations of behavior for how an artificial intelligence technology should operate, be utilized and be deployed across functions and services. Further, the county should be careful to address the ability to enforce standards when utilizing AI and GenAI tools.*
Guidelines	**Light impact:** Recommends best practices for users, which may or may not be mandatory. Can be used to help guide productivity in the workforce, or to develop in response to applications of AI and GenAI. *County should consider implementing guidelines when seeking to establish transparency over the utilization of GenAI technology use for public-facing mediums and constituent-facing resources.*

Recommendation 1: Establish your county's policy framework for GenAI.

The Policy Workgroup recommends following a pyramid approach for how to implement a GenAI policy within the county. Each level of the pyramid aligns with the National Institute of Standards and Technology (NIST) security and privacy controls for information systems and organizations, which can be found on the agency's website. Sample county policies are available on NACo's website, with a full library of county policies available through the NACo Tech Xchange.

NACo Tech Xchange



Framework developed by the NACo AI Exploratory Committee policy workgroup

The recommended approach, which is not exhaustive, is to begin with a stand-alone policy on GenAI that will include references to other policies that have applicable guidelines and are relevant. The workgroup also recommends establishing a process for regularly reviewing the existing policies on GenAI (i.e., every six months) for continued applicability and relevancy to the then-current state of GenAI.

Recommendation 2: Review key legal considerations.

As of Spring 2024, there is not a universal legislative framework at the federal level which addresses the utilization of generative artificial intelligence in society, the economy or uniformly at the state and local government levels. However, the U.S. House of Representatives has formed an Artificial Intelligence Task Force, and in May 2024, the U.S. Senate Working Group on Artificial Intelligence released recommendations and guidelines on AI. Additionally, the National Conference of State Legislatures (NCSL) estimates in a 2023 report that approximately 35 states introduced bills or resolutions pertaining to artificial intelligence in 2023 alone.

As state legislatures and Congress begin to actively deliberate the policy frameworks to implement on GenAI, counties will need to be mindful of legal considerations that may include:

- Accuracy and factual integrity including the use of watermarks, or identifiers to define content as AI-generated
- Plagiarism and originality
- Bias and fairness
- Intellectual property (IP)
- Data protection and privacy
- Contractual commitments and obligations, and
- Areas of permissible and non-permissible use

Continuing to monitor the legal landscape regularly through resources such as NACo will help ensure your county is operating under a fully legal framework.

Recommendation 3: Review and assess existing procurement policies

Robust procurement policies and practices are key to ensuring the county's interests are maintained as third parties are contracted and partnered with to help deliver county services to residents. The county procurement team should always verify that protective clauses are included in requests for proposals (RFPs), requests for information (RFIs) and final contracts with solution providers, vendors and other consultants who seek to assist counties in the delivery of government services. This policy should apply regardless of whether the service or solution is technology based.

Counties can consider following a checklist as a means to ensure the county can meet minimum requirements to securely and adequately contract with third parties who utilize generative artificial intelligence in services procured for the county. Additional information can be found under Recommendation 7 of the Applications Workgroup.

From a contractual and procurement perspective, guidance can be found under the Application Workgroup recommendations.

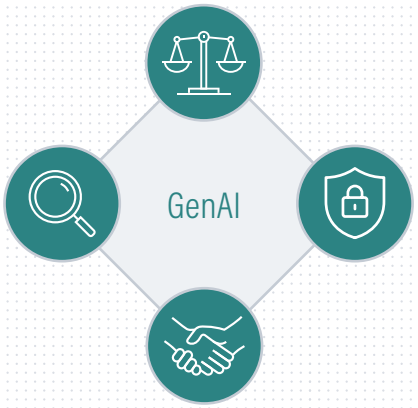
*These recommendations highlight the importance of **security** and **authenticity** when implementing GenAI tools and the results.*

Establish An Ethical Framework: The Ethics Workgroup

The Ethics Workgroup focused on developing ethical principles in the use of AI and GenAI. It is understood that there are challenges with respect to bias, access concerns with adoption and utilization of AI, privacy of use, accountability for decisions made based on AI and GenAI technology, transparency of services and ensuring human dignity is prioritized.

Foundational ethical principles for use of GenAI should include:

- *Fairness, Equitableness and Impartiality*
- *Transparency*
- *Privacy and*
- *Accountability*



Recommendation 1: Fairness, Equitableness and Impartiality.

Counties must ensure that the development, deployment, use and impact of AI technologies is fair and impartial. The design, access to and the outcomes derived from AI must eliminate bias as much as possible and should be available to all, regardless of socio-economic background or level of education. This is especially true for counties who lack access to high-speed broadband connectivity, who may be at a significant disadvantage for being able to access AI and GenAI technologies.

Bias can exist within GenAI models, either from the model construct itself, or from the systemic bias inherent in the data and assumptions provided to the model. Keep a balance between education and presenting facts in an impartial manner when utilizing a GenAI tool. Follow the below action steps:

- Ensure that AI decisions are explainable, repeatable, transparent and accountable.
- Carefully craft prompts to avoid adding bias, as question phrasing affects output.
- Implement a loopback function to fine-tune queries or update training data based on human input.
- Consistently fact-check AI results and regularly verify the model to prevent bias from developing over time.
- Keep humans in the loop from start to finish when using GenAI tools and reviewing results.


AI CHATBOT DEVELOP

Recommendation 2: Transparency.

Counties using AI and GenAI should implement transparency in the development and use of AI. This means that the use of AI and GenAI should be open, explainable and accessible, with responsible disclosures in place in areas such as official county communications for elections administration or county artwork and presentation materials.

Action steps include:

- Evaluate use of artificial intelligence for whether there should be disclosure to the user that an AI technology is being used, in chat sessions for example, to ensure that the data is accurate and up to date.
- Create an easy way for the end user to reach a human whenever possible (for example, when implementing a chatbot).
- Consider the use of watermarks for artificially generated graphics or art produced by the county for information-sharing purposes. Balance this, however, by comparing it to how you do business today, and how you cite a source of information, such as a direct quote.

Recommendation 3: Privacy.

Follow applicable local, state and federal privacy guidelines. This may include data protection, gaining consent, anonymizing the data, being transparent and conforming to regulatory compliance.

Here are some useful action steps:

- Know the regulations you must follow, including but not limited to state privacy laws, federal HIPAA law, payment card industry (PCI) compliance and other applicable laws.
- Review online forms already in place and focus on training with staff concerning text fields where end users may enter personally identifiable information (PII). If you are creating dashboards from that data or using that data as part of an AI training model, then you must have a process in place to redact PII.
- Develop a training plan for both your employees and elected officials that avoids putting PII in the AI or GenAI tool or process. Remember, certain individuals may not have exposure to government and privacy regulations, such as those new to county government, newly elected officials, elderly individuals, developmentally disabled individuals and non-English speaking individuals.

While all of these subpoints apply to GenAI information and tools that are accessible to the public, an internal GenAI tool can be less restrictive, due to the way data is used and how the tool is trained. As a county, decide on those differences for when an open source or closed environment should be used.

Recommendation 4: Accountability.

Accountability hinges on being transparent, responsible and legally compliant, all of which have been covered under the three previous recommendations. Accountability also includes assessing impact, remediating risk, creating an audit trail and validating results.

Action steps include:

- Assess the impact of a potential project, program or process you are considering using AI and GenAI by implementing a known assessment tool (samples located on the NACo AI Compass and Resource Hub). Then include an ongoing monitoring process to evaluate the real-world use of the AI tool.
- Remediate negative impacts as quickly as possible. This may include turning off the tool for a period of time, revisiting or updating the data or tagging the tool as a “pilot” or “beta” resource.

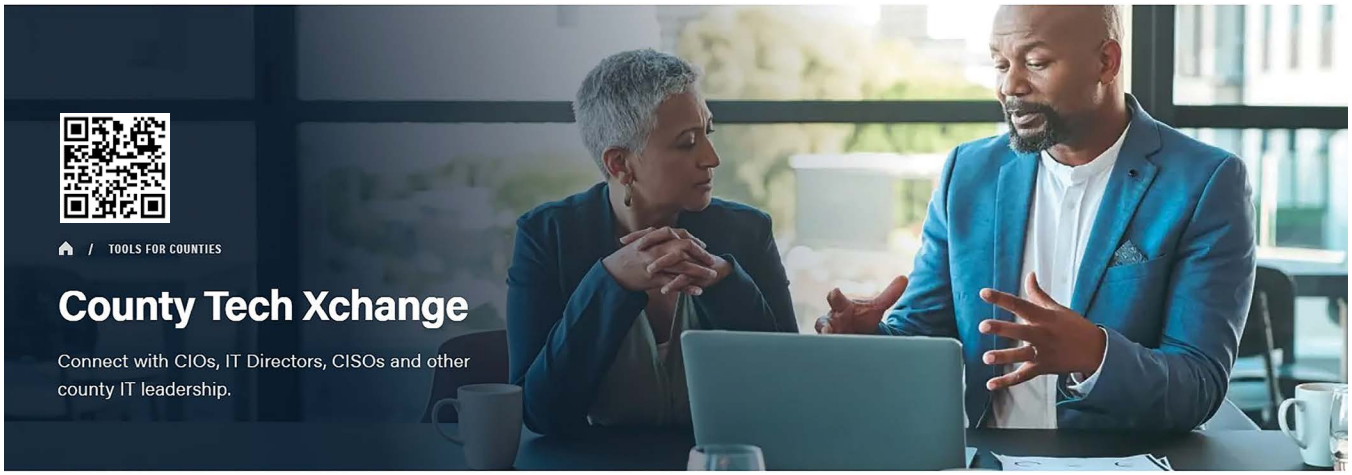
- Be sure that your IT team or the solution provider has demonstrated that there are audit logs for an agreed period (follow your records retention policy or practices).
- Create a mechanism for residents and employees to share feedback. An example of this is an online survey form.
- Develop a process that ensures results are verified and that questions are answered. For the verification of results, this most likely will involve a variety of county staff personnel to review for potential bias. This could be HR staff or other appropriate subject matter experts. At the end of certain AI processes, include an icon or a one question survey, saying "On a scale of 1-5, how did this answer your question?" Keep in mind that AI services you provide, like a chatbot or other media that interacts with residents or employees, needs to rely on accurate and transparent information.

Recommendation 5: Training.

Finally, the Ethics Workgroup recommends training, recognizing that the purpose of training is not only the "how" of a tool, but also the "why," along with guidance for best practices and lessons learned. Action steps include:

Action steps include:

- Develop a training program for staff and consultants that will convey the county rules and guidelines on addressing ethics in the use and development of GenAI solutions. This will help mitigate risk and improve the output of the engine.
- Work with solution and GenAI service providers to ensure that they are following similar training and education with their employees.
- Form partnerships with local colleges, universities and other experts in order to stay current on developments concerning the application of ethics.



Enable Responsible Applications: The Applications Workgroup

The AI Applications Workgroup focused on identifying and evaluating current use cases of GenAI. The working group similarly identified risks of applying AI to county services and operations.

Recommendation 1: Review and evaluate potential use cases based on description and sensitivity.

AI Use Case Catalog		
Department – Areas of Application	**County Spotlight**	**Risk Measure**
All departments - Analyzing agenda items, emails, documents	Santa Cruz County, Calif. Industry: Westlaw Research	1
Commissioner or executive office - Analyzing agenda items, emails, documents	Santa Cruz County, Calif.	1 or 2
Human services (mental health, aging, children's services) - Documentation, intake & referrals, development plans services availability (eliminate client redundant data)	Riverside County, Calif. New Hanover County, NC.	3
Community services (pet application)	Miami-Dade County, Fla.	1
Planning, assessor, tax collector - Property taxes, code review, permitting proposals	Douglas County, Neb.	1
911 non-emergency calls	Buncombe County, NC.	1 or 2
District attorney, courts, public defender - Court records (or pdfs), translation services	Lehigh County, Pa.	3
Technology - Cyber monitoring, application code development (solutions, router configurations, website)	Santa Cruz County, Calif.	2
Human resources - Recruitment, job descriptions, analysis of pay, policy development, development/review of union contracts	Chester County, Pa.	3
Automated fire detection	Travis County, Texas	1
Grant proposal development	Berrien County, Mich.	1

Markers: 1 = Low risk (public information); 2 = Medium risk (protected information classes, such as SSNs, health data, etc.) 3 = High risk (such as criminal justice information sharing)

An up-to-date list of county examples can be found on the NACo AI Compass and Resource Hub. Scan for more information

Recommendation 2: Familiarize yourself with federal resources on the application of artificial intelligence tools, including the National Institute of Standards and Technology (NIST) as well as Information Technology Infrastructure Library (ITIL) standards.

Counties may benefit greatly with responsible implementation of AI and GenAI solutions. It is recommended that counties make themselves familiar with federal resources for governmental use of AI and GenAI, including the AI.gov website that contains up to date information and resources on the federal approach to AI, as a baseline guide.

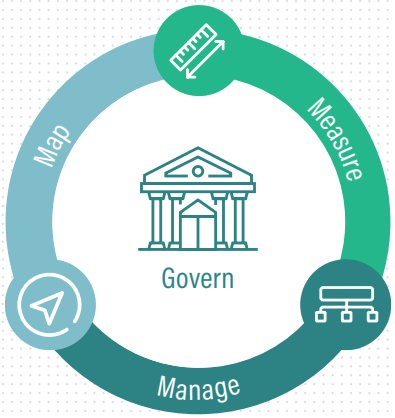
Utilize the National Institute of Standards and Technology (NIST) AI Risk Management Framework Versions 1 and 2 as a basis for determining the best applications of AI.

- **Establish** infrastructure and technical requirements for implementation of systems.
- **Identify** both necessary hardware and software for implementation of artificial intelligence.
- **Strategize** data management practices, including data collection, retention, storage, protection and analysis.
- **Ensure** security, including implementing cyber security measures and protecting against breaches.

As public servants, counties are stewards of private information for residents – if counties are using AI to place information into databases and open learning models in a manner that is replicated, this could involve privacy considerations. Personal data of residents needs to be protected to the greatest extent possible.

Counties should follow standards established by the Information Technology Infrastructure Library (ITIL), which include service strategy, service design, service transition, service operation and continual service improvement.

AI Risk Management Framework



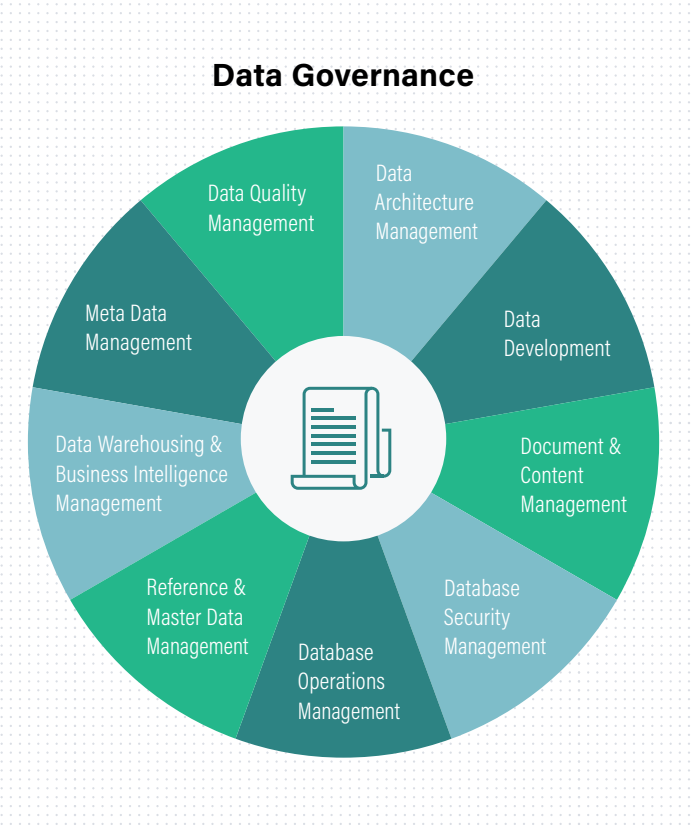
Another way of viewing this is to map, measure, and manage the risk for AI implementations.

Additional information may be found online at NIST's AI Risk Management Framework Playbook webpage.

Recommendation 3: Practice robust data governance and management.

Now, more than ever, counties need to have a strategy for data collection, storage, records retention, protection and analysis. The accuracy and relevance of county data (both structured and unstructured) is paramount to successful use of AI and GenAI.

Consider resources, such as the model provided on the next page by DATAVERSITY.com, which offer a comprehensive approach to data governance and a framework that includes nine areas of importance, as well as guidance on how to form a data governance committee and assign roles and responsibilities.



Source: *DATAVERSITY.com*

Keep in mind any applicable local, state and/or federal laws related to protected data retention and management.

Recommendation 4: Regularly assess the current landscape of publicly available resources.

Become familiar with the various tools that are available, that may be needed to implement GenAI responsibly. An updated list is available on the NACo AI Compass and Resource Hub.

The workgroup also has identified a list of existing GenAI tools with overall guidance on their use for counties. These GenAI tools may be broken down into the following categories:

- **Traditional** - Traditional AI systems are excellent at solving well-defined problems and performing repetitive tasks, yet lack the ability to adapt to new situations or generate novel ideas. This includes tools such as voice assistants, autonomous vehicles, drones and robots.
- **Generative** – Tools that may be used in either a commercial (open and public) way, or in an enterprise way accessible only by county staff. An assessment on which approach to use should be based on the use case listing and potential sensitivity level as well as whether you are inputting data into the tool or just requesting output from the tool. Generative tools can be classified in the following categories based on type of content generated:
  - Text – OpenAI's ChatGPT, Microsoft Co-Pilot, Google Gemini (Bard), AWS Claude
  - Image - Open AI's DALL-E, Google Gemini
  - Audio - Open AI's Jukebox
  - Video – Deepfake technology
  - Code generation – GitHub Copilot by Open AI Codex
  - Creative writing and storytelling - Jasper AI, Writesonic, StoryLab

Recommendation 5: Update and expand the county's cybersecurity measures.

While AI and GenAI have many advantages, your county must be up to date on cybersecurity standards that will protect county staff and residents against breaches, especially as it pertains to data loss protection.

- Train new end users by including county AI guidelines in your regular onboarding process. Provide regular training to all end users on AI in general and then on the county AI policy.
- For GenAI, be sure to include citations for source of content and applicable disclosures and/or watermarks. Also, understand when a model may be producing an AI hallucination, which is when a GenAI model presents false information as if it

were true by verifying outputs and implementing control mechanisms.

- Be aware that the potential misuse of GenAI raises significant concerns in various areas, including county board operations. For instance, recorded meetings could be altered using GenAI when released to the public after a period of time. Moreover, there is a risk of individuals using "meeting bots," posing as citizens to record proceedings for unauthorized purposes. Additionally, GenAI technology could be misused in phone calls to county departments, such as finance, allowing impersonation of council members' voices for fraudulent purposes like requesting money transfers.
- Be sure to have safeguards and fraud detection policies and practices.

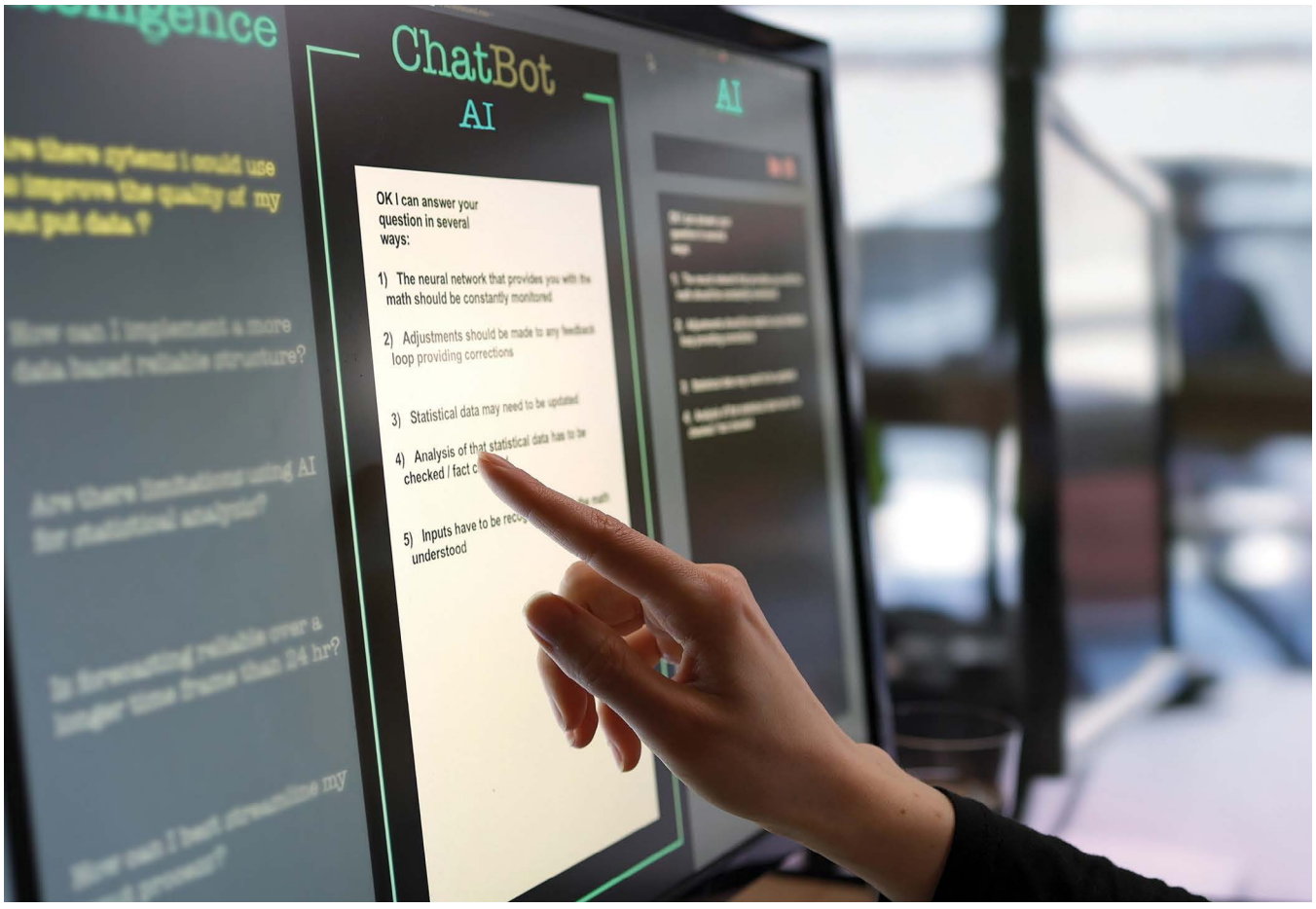
Recommendation 6: Design procedures to train data used in GenAI models.

It is important to understand that GenAI tools may be trained based on wide sets of data from the public domain. It is recommended that counties consider GenAI tools and models that can be customized to utilize an identified set of documents and other data sets that contain accurate, up-to-date and relevant data.

Recommendation 7: Determine software, hardware and procurement minimum standards and needs.

Understanding the tools and how each works as a component of your overall GenAI strategy.

This understanding is achieved through preplanning to determine your county and departmental business needs. Most often this will be assessing the cloud software offering. Work with your IT team and/or



trusted IT vendor to determine what is needed and if it is financially prudent.

A few additional action items when engaging in the procurement process:

- Embed terms and conditions into your regular procurement process that cover the county perspective of the use/reuse of data.
- Many vendors currently use or have added AI to their products. Learn how and whether they are using the county data to build other products and whether they have updated the vendor terms and conditions, and if so, what those updates are.
- Be sure your IT team is collaborating with the procurement office and counsel to provide AI and GenAI questions and requirements in all RFPs, RFIs and contracts. A sample list of questions is below:

AI software and procurement questions to ask

- Are you using GenAI in your solution?
- Is it a closed environment, where the customer data is not used to train the model that then becomes available to other customers?
- Where do you get the data that your model is trained on?
- How long do you retain the data and does your model consume new client provided data to further train the model?
- Have you done a security assessment of your model and run any GenAI solution through a code review?
- Do you have ongoing security monitoring in place to detect viruses or anomalies?
- How often do you reassess the model for data accuracy and model methodology?
- What is the computing cost as well as other underlying costs, including access and egress, and is it monthly, yearly or transactional?
- A complete template with additional questions is available through the NACo Tech Xchange Unlimited Subscription.

NACo Tech Xchange

Prepare the Workforce: The Workforce Workgroup

The AI Workforce Workgroup assessed opportunities for the future of promoting employee skills and exploring opportunities for upskilling the county workforce to integrate AI in a productive and non-disruptive manner. This working group also considered broader dynamics on the implementation of AI and implications for the workforce, both from a job description perspective to the perspective of business use case implications. The working group's recommendations cover the short-term, mid-term and long-term.

Recommendation 1: Focus on skills development, training and capacity building.

- Start small with staff through transition, training and re-skilling and then build up over time.
- Provide accessible training for county staff roles, including administrative, programmatic, technical and executive leaders.
- Ensure ongoing learning and development in AI and related technologies for all workforce positions based on the level of hard skills versus generalized skill training. The training will range in complexity based on whether it is end user training, career development training, technical training or executive level training.
- Partner with educational institutions to provide ongoing AI and GenAI training. This may include community development agencies, post-secondary education opportunities, training centers, and federal and state resources.
- To build capacity, stay open-minded when reviewing job applications. The traditional "go to college and get a job" approach may be augmented by the non-traditional skills development workforce.
- Explore other retention options that include retirees. As the older workforce enters retirement, there are examples of professionals with a desire to continue giving back. Such examples exist in counties like Fairfax County, Va. and Flagler County, Fla., with more detailed case studies available on the NACo AI Compass and Resource Hub.

Recommendation 2: Consider skills acquisition options that best fit your county needs.

This may include the consideration of a singular chief AI officer or other skilled position or office that will provide the overall guidance, governance and monitoring needed to successfully implement responsible AI solutions, tools and policies. Other skilled positions to consider are:

- In-house AI developers.
- In-house AI analysts who are more focused on the outcome and business needs and how to successfully apply GenAI and AI processes.
- Contracted professionals, either individual or through a staffing firm, which may be more cost effective for a county budget both initially and long-term.
- For smaller counties, consider working strategically with existing IT staff or the county administrator's office to seek low-cost or free technical resources to educate and learn how to responsibly govern and guide the county's AI utilization.
- Consider regional collaboration with other counties as well as with your state association for staff sharing opportunities.
- Counties may also consider exploring a variety of low- or no-cost resources, including the U.S. Digital Response's online GenAI resource hub and Microsoft's LinkedIn Learning series on GenAI.

Recommendation 3: Develop a multi-year workforce strategy.

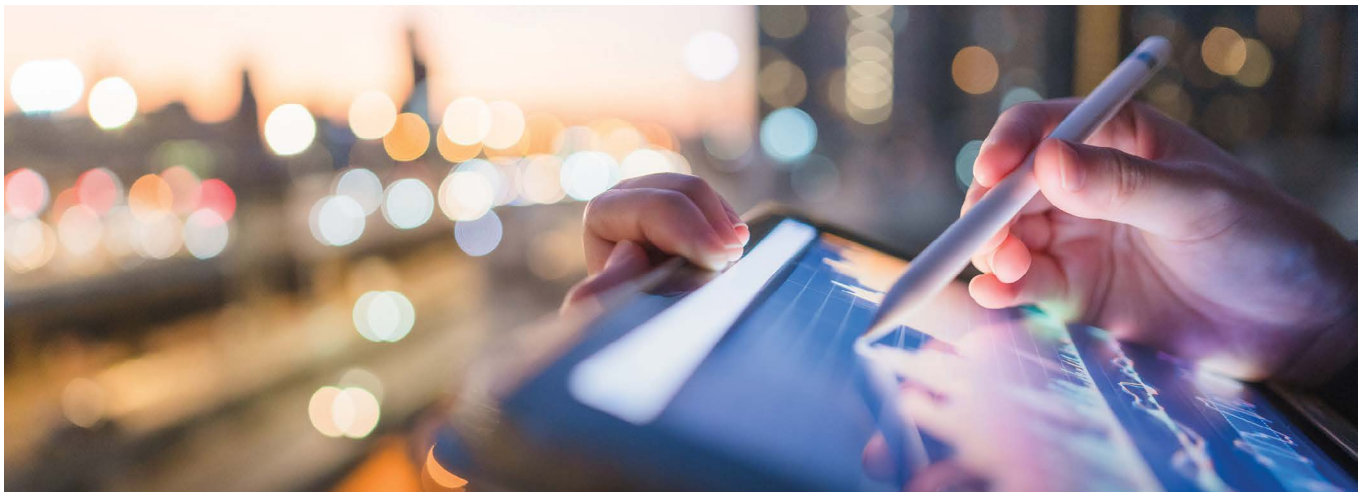
Consider how the county can re-organize efforts to fill vacancies and how to address the new paradigm of work (i.e., the rise of remote work in the post-COVID era,) through the development of a multi-year strategy that focuses on incorporating AI. This may include a short-term focus on recruitment, a mid-term focus on retention and a long-term focus on growing and identifying subject matter expertise even into retirement.

A few ideas include:

- Conduct an employee AI Idea Hackathon. An educational video is available through the NACo Tech Xchange.
- Regularly assess the landscape of vendor applications of AI tools and impact on counties.
- Assess areas of improvement for the use of robotics automation and other future technologies.
- Research and participate in focus groups and pilots with AI companies on beta testing business needs that can benefit from AI's potential and workforce automation or enhancements.
- Develop an ongoing and regularly updated training regimen.
- Consider engaging private consultants that can assist management with the new paradigm and help to develop, in collaboration with existing employees, revised job descriptions for today and into the future.
- Partner with educational institutions on curriculum development regarding use of GenAI.
- Apply for apprenticeship partnerships available through the current MS-ISAC AI cybersecurity program, and study examples such as the approaches of Miami Dade College or North Carolina State University, which can be found online.
- Continue to assess vendor applications of AI tools and the potential impact on counties. This may be done through NACo resources, state associations, and other national institutions that are monitoring the further development of GenAI.

Recommendation 4: Inform and seek feedback from unions, skilled trades and the broader workforce.

Many counties have organized workforce sectors, including unions, subcontractors, skilled trades and the broader workforce. It is important to communicate early and share with the organized workforce entities the benefits and challenges that GenAI will bring to the workforce, and jointly identify areas for change and how best to address that change in a collaborative manner.



A Path Forward

Roadmap to Implementing GenAI Solutions

In counties, GenAI is already making its mark in various ways. You might notice it in services you already use, test programs, projects developed within organizations, collaborations between public and private sectors and academic research. But as GenAI expands, it brings up important questions about how it is managed, funded, secured and adopted.

Next Steps

As you embark on your AI Journey, here is a proposed list of next steps:

Step 1 Review this publication in its entirety and share with your county team on AI use, implementation and policy.

Step 2 Familiarize yourself with the NACo AI Membership Survey publication located on the NACo AI Compass and Resource Hub.

Step 3 Survey your county departments to assess current utilization of AI and GenAI tools. A sample of questions to include in your survey is located in the NACo AI Primer.

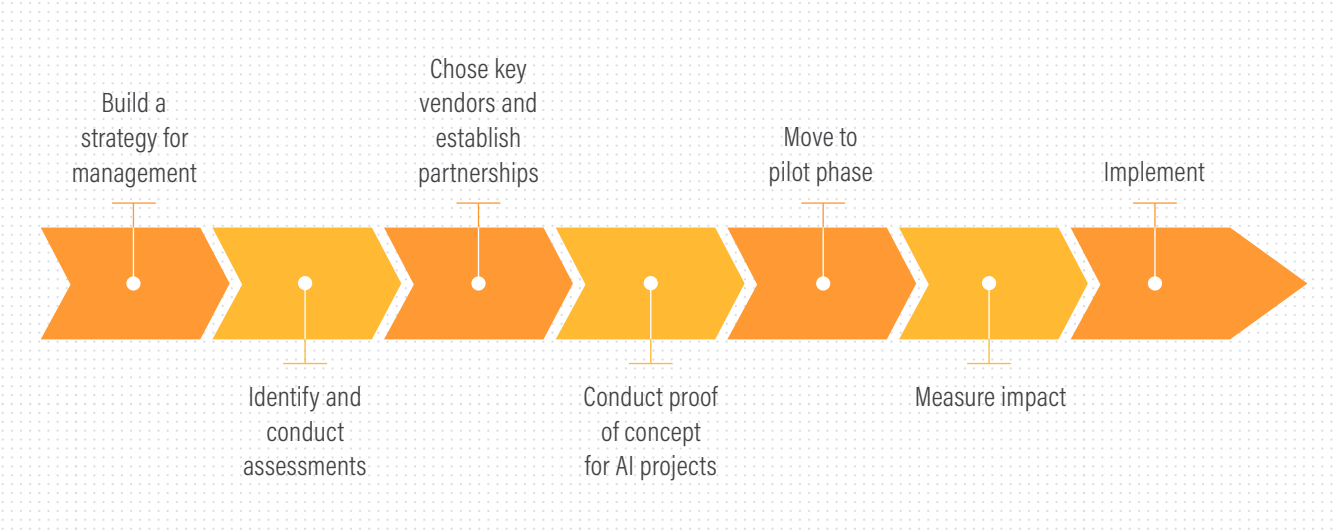
Step 4 Sign up for NACo's on-going AI webinar series. Register interest by completing the online form available through the NACo AI Compass and Resource Hub.

Step 5 Develop your GenAI policy, guidelines and standards. Sample policies, guidelines and standards may be found by joining the NACo Tech Xchange Unlimited Program.

Step 6 Make available to your workforce online educational resources such as the no-cost LinkedIn AI Series.

Step 7 Assess projects and requests for proposals that may have an AI component by scheduling an AI Idea Hackathon and utilizing available tools such as Microsoft's assessment tool.

NACo AI Compass and Resource Hub



Conclusions

Lessons Learned

In closing, members from the NACo AI Exploratory Committee, workgroups and founding corporate partners offer some of their favorite takeaways from a year investigating the role of AI in counties, running the gamut from food for thought to specific recommendations. Below is a select list, with more quotes available on the NACo AI Compass and Resource hub:

"You have to incorporate cybersecurity – once you begin implementing AI, hackers and malicious actors will start to attempt to hack into and exploit GenAI tools. Monitoring and robust protections will be key."

"Everyone wants GenAI, but not everyone understands the technology. Education is essential."

"Pay attention to who is logging into which tools when implementing GenAI into the county's internal operations and services. This will ensure you mitigate risk and manage the use of the tools responsibly."

"GenAI features are showing up in applications, where you may least expect it and/or don't want it (and may not be able to turn it off)."

"Make sure your data is accurate. Know the right question to ask and have the experts to provide the right answer."

"There is sticker shock in procuring GenAI tools; so you may need to be more judicious in deciding who gets access to the tools, at least in the beginning of your GenAI journey."

"Do you realize you are already using AI?"

"There is an expectation that it doesn't take long to implement. It is important to know and measure how much the AI or GenAI solution will improve or meet expectations."

"You can get staff trained on GenAI, but it may take time for some."

"Experiences are going to vary across the counties and with individuals."

NACo AI Exploratory Committee members participate on panel at NACo's Corporate Premier

Looking to the Future

What will the future hold for GenAI?

As counties plan for responsible GenAI implementation in the next one, two, or three years, county officials should also consider the impending adoption of video and Augmented Reality (AR) technologies that will dovetail with increased AI and GenAI use. Additionally, there is growing support for deploying robots to handle routine tasks within county operations. Envisioned applications include robot-assisted chores in settings like nursing homes and jails, such as floor cleaning, table clearing, laundry delivery, book distribution and advanced video surveillance.

There are many considerations for counties as we venture into the world of GenAI. It is important to keep in mind that humans must be an integral part of the implementation from start to finish, especially in the review process. Further, we cannot overestimate the need for high speed broadband and technology literacy to use GenAI effectively.

Other key issues to address will include helping individuals impacted with workforce disruptions and transitions, as well as the need for the on-going evaluation of energy and computing resources that are needed to run GenAI.

The possibilities are endless. Not too far in the future, some areas are already seeing applications such as the utilization of uncrewed vehicles, including drones and cars. Other uses include driverless lawn mowers or tractors for facilities management or agricultural purposes. From a public safety perspective, you may see the use of robotics to assess safety in a vehicle accident, safety in a collapsed building, and evaluation of a mud slide. With people's powerful imagination, GenAI will continue to evolve and expand.

We close by mentioning the ideas waiting around the corner because these potential uses highlight the diverse roles GenAI could play in county operations – a role we lay the groundwork for today. The breadth of current and future possibility demands careful planning for responsible integration. Counties should set our sights in a meaningful manner that will benefit county workers and residents, improve county operations, and leverage the future of AI and GenAI technology for the better of society.

Acknowledgements

Acknowledgements

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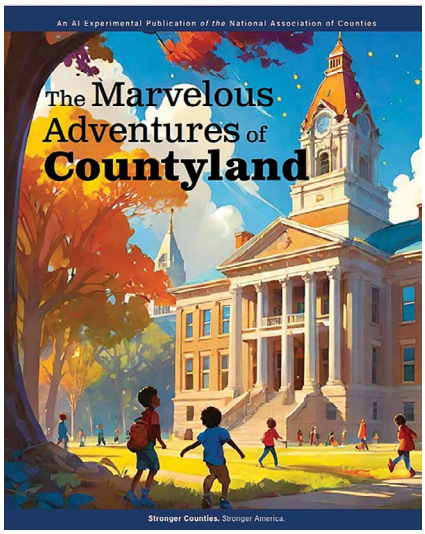
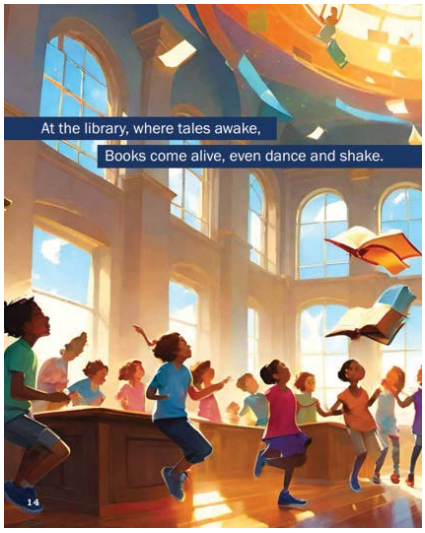
NACo Children's Book: A Real Example





The Marvelous Adventures of Countyland is available online and in print. Visit NACo's AI County Compass and Resource Hub for more information.

Founding Corporate Partners

NACo would like to thank our Founding Corporate Partners for their dedication to the NACo AI Exploratory Committee's activities, work, and collaboration.

Workgroup Members

For a list of workgroup members of the committee, go to the NACo AI Compass and Resource Hub.

Friends of the Committee

This toolkit also includes key findings and themes that have emerged from NACo's broader technology membership across the Information Technology Standing Committee, the FutureTech Standing Subcommittee, the County Technology Advisory Council, the Telecommunications & Technology Policy Steering Committee, and attendees of the 2024 CIO Forum at the NACo 2024 Legislative Conference.

Appendix

Appendix A

Answers to the Myths Glossary of AI Terms and Concepts

Myth-busting

The fast growth of GenAI has led to many myths, mixing up facts and false ideas, which makes it hard to separate truth from fiction. Check out some of the top articulated myths on AI below:

Myth One **My county can avoid the use of GenAI by not ever permitting employees to use the technology**

Answer Counties are already discovering that GenAI is being integrated into many common software applications and tools used in daily operations, making it impractical to completely avoid its use. Further, counties are hearing from staff as well, that they are already using GenAI to improve their productivity, speed, and quality of work.

Myth Two **AI is a new technology that has not previously been utilized by society**

Answer AI has been used in various forms for decades, such as in data analysis, automation, and even in early expert systems in the medical diagnosis and chemical analysis domains. What is new is the advanced capabilities that generative AI models offer, such as novel content creation and highly adaptive machine learning technologies.

Myth Three **GenAI models are always accurate, and do not need their outputs to be verified**

Answer GenAI responses are dependent on the context of their prompts; as a result, GenAI models can sometimes produce convincing but inaccurate or biased outputs. It is essential to always keep the human in the loop to verify the outputs of a GenAI model to ensure correctness and reliability.

Myth Four **I can turn off GenAI features in applications if I don't want to use them**

Answer Many applications are already integrating GenAI features deeply into their functionality, making it difficult or impossible to completely disable these features without losing essential functionality. If a county is considering a particular use case of GenAI, be sure to follow-up with the appropriate vendor to determine possible next steps.

Myth Five **All GenAI tools are designed using the same underlying open-source model**

Answer Just like different makes and models of cars, GenAI tools may be based on various models, including proprietary ones, and each tool may have different strengths, weaknesses, and design considerations. The user should be mindful to explore different tools and assess the relative strengths and shortcomings of each product.

Myth Six **GenAI tools will return the same answer every time, so long as the prompt you offer is written the same exact way**

Answer GenAI tools often apply probability methods in generating responses, which means that even identical prompts can yield different answers on different occasions

Myth Seven **AI and GenAI can steal any data that I enter into the model**

Answer While there are concerns about data privacy and security, AI and GenAI systems are not designed to "steal" data. Updating default settings during implementation and adhering to county data governance practices can mitigate risks of data misuse of AI and GenAI.

Appendix B

Glossary of AI Terms and Concepts

Automation: The use of technology to perform tasks where little to no human input is needed. Generally used to replace or minimize manual tasks that are repeatable.

AI Models: Software programs that use training data to autonomously make decisions or predictions. May or may not be generative.

Open Model: GenAI tool who's underlying model is publicly available, reviewable and customizable for a particular use case or function.

Closed Model: GenAI resource whose underlying model is proprietary and not available to the general public

Deepfakes: An image or recording that has been convincingly altered and manipulated to misrepresent someone as doing or saying something that was not actually done or said

Hallucinations: A phenomenon wherein a large language model (LLM) perceives patterns or objects that are nonexistent or imperceptible to human observers, creating outputs that are nonsensical or altogether inaccurate.

Large language model (LLM): A category of models that are pre-trained on vast amounts of data, making them capable of understanding and generating natural language and other types of content to perform a wide variety of tasks. Such large-scale models can ingest data, often from the internet, as well as other data sets such as Reddit, X (formerly Twitter).

Machine learning (ML): A subfield of AI; focuses on the use of data and algorithms to create models that enable machines to perform like humans. Machine learning often powers many of the digital goods and services we use every day. Machine learning is widely used today for such things as recommending products to consumers based on their past purchases and translating text from one language to another.

Natural language processing (NLP): The process of making human communication, such as speech and text, understood by computers. Some of the most common ways NLP is used include voice-activated digital assistants on smartphones, email-scanning programs used to identify spam, and translation apps that decipher foreign languages.

Prompts: Text commands or queries that you type or say to a GenAI tool to provide context and guidance to machine learning models.

Small Language Model (SLM): Similar to Large Language Models, except that they rely on a smaller set of data. Unlike LLMs trained on vast amounts of internet data, the smaller models use curated, high-quality training data.

Structured data: Typically categorized as quantitative data, is highly organized and easily decipherable by machine learning algorithms. Structured data is most often in a database or spreadsheet and is generally very easily used by machine learning, however it can be limited in its flexibility or applicability.

Unstructured data: Typically categorized as qualitative data and cannot be processed and analyzed via conventional data tools and methods. Since unstructured data does not have a predefined data model, it is best managed in non-relational databases.

Use Case: A term that explains how a solution meets a business need. Use of AI in identifying forest fires is a Use Case.

Watermarks: The process of embedding a recognizable, unique signal into the output of an AI model, such as text, audio, video, or an image, to identify that content as generated by an AI model.

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The full report and toolkit is available on the NACo AI Compass and Resource Hub

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