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Bringing AI to Main Street: Maximizing Artificial Intelligence's Positive Impact on Municipal Economies

A Report by the
National Academy of Public Administration
for Google

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Executive Summary

Local leaders are frequently tested by multiple competing priorities and increasingly limited resources. Artificial intelligence (AI) represents a tremendous opportunity for all levels of government, sectors of society, and communities. But national-level debates often dominate conversations about AI's opportunity for economic transformation. This report shifts the focus to the local level, where AI's impact on communities, jobs, and services will be felt most directly.

Our analysis finds that while AI's effects will depend on the local context, it offers a significant opportunity for communities to boost local productivity and create new jobs.

This report presents a new framework for building community "AI readiness," urging municipal leaders to embrace proactive planning. By providing a robust digital infrastructure and committing to continuous workforce upskilling, communities can ensure that AI's economic benefits translate into shared prosperity.

Supporting AI readiness will require regular community engagement to educate, inform, and train. AI is not a static technology, so the infrastructure, policies, and communications supporting it should not remain static. A community must understand its gaps and resources. There is no one-size-fits-all plan for developing a community that will best attract and support AI. Collaboration across jurisdictions, levels, and sectors of society will allow communities to engage in ways they could not manage alone.

AI will change society in many ways. Rather than waiting, local leaders should proactively act to help design the future of local government operations and service to their constituents.

List of Tables and Figures

Acronyms and Abbreviations

Acronym or Abbreviation	Definition
Academy	National Academy of Public Administration
AICOE	AI Center of Excellence
AI-SERVE	AI Support for Equitable and Resilient Food Distribution During Extreme Weather Events
ACHD	Allegheny County Health Department
AI	Artificial intelligence
CMU	Carnegie Mellon University
CRM	Customer relationship management
DOR	Data Opportunity Roadmap
EAI	Experiential AI
GenAI	Generative AI
HEandR	Hershey Entertainment and Resorts
LMI	Low-to-moderate-income
NIST	National Institute of Standards and Technology
NIR	Near-infrared
OCR	Optical character recognition
SMB	Small to medium-sized businesses
TIZ	Transportation Innovation Zone
TTP	Tech talent pipeline
UM	University of Maryland
UMB	University of Maryland, Baltimore
UMCP	University of Maryland, College Park
UM-3-IHC	University of Maryland Institute for Health Computing
USCoC	US Chamber of Commerce

I. Introduction

Artificial intelligence (AI) is a transformative technology with the potential to reshape governments, industries, communities, and economies. It enables machines to process vast amounts of data, recognize patterns, and make decisions. These capabilities can drive innovation and improve productivity, unlocking global economic opportunities.

However, these benefits are not guaranteed. Without planning and investment, AI could deepen existing imbalances, leaving some communities behind while others surge ahead.

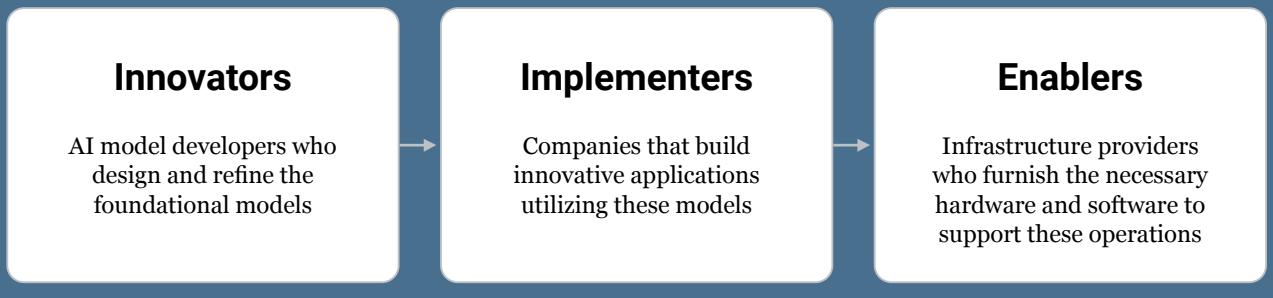
Local leaders can work with partners to develop local AI ecosystems and community AI readiness strategies to ensure that the benefits of AI are evenly distributed and that all residents and businesses can participate in and benefit from AI-driven growth.

What is an AI ecosystem?

An AI ecosystem is a dynamic network of technologies, service providers, users, models, infrastructure, hardware, software, workforces, and institutions that drive the development and adoption of AI tools. The term can refer to a fluid set of components that support an individual user or, more broadly, to the many different types of tech firms that have contributed to the advancement of AI. In either case, a foundational principle is that the various pieces are all necessary and must work together.

Figure 1 suggests a taxonomy of ecosystem participants. Local leaders would be among the "enablers" in a community-level AI ecosystem. They would work with partners to ensure adequate technical infrastructure, workforce training, and open data. They would also be instrumental in bringing community members into the ecosystem.

Figure 1. Players in the AI Ecosystem



Graphic based on Josh Partridge, Head of Sales EMEA @ Spotify, "Understanding the Players in the AI Ecosystem." May 4, 2024, at https://www.linkedin.com/pulse/understanding-players-ai-ecosystem-josh-partridge-zx4me/.

What is Community AI Readiness?

Community AI readiness refers to a community's capacity to adopt, adapt to, and benefit from AI technologies. This includes investments in digital infrastructure, workforce training, education, data governance, and local policy. The strategic goal is not simply to attract AI firms, but to position the area economy—public and private sectors alike—to integrate AI in ways that boost productivity, opportunity, and resilience. Community readiness is essential because some organizations do not have the capacity to adopt AI on their own. Without this broader readiness, AI initiatives may stall or fail to deliver meaningful economic impact. A community AI ecosystem provides the essential elements to help businesses, residents, institutions, and civic organizations engage with these technologies and benefit.

AI as a Local Economic Development Strategy

This report explores the concept of AI readiness through the lens of economic development. It reviews the components of readiness, surveys early strategies being pursued by localities, and evaluates what is known about the economic returns of investing in AI readiness at the community level.

This strategy to drive local economic development through AI readiness and deployment remains in the early stages. There is no single roadmap or universally accepted framework for becoming AI-ready, and the economic impacts of AI preparedness are not yet fully understood. At the national level, evidence suggests that AI has the potential to increase productivity and create new types of jobs. But localities face a range of uncertainties, such as the pace of automation, worker displacement, and infrastructure gaps that could exacerbate inequality.

Communities that invest early in digital capacity, inclusive education, and strategic planning are more likely to benefit from AI-driven growth. Local governments, regional economic development organizations, and educational institutions are beginning to recognize AI readiness not just as a technology issue but as a cross-cutting economic development imperative.

Using this Document: Where Do Local Leaders Start?

This document is organized to create a path for local leaders, such as local government officials, regional executives, academic and educational leaders, and the heads of civic organizations, to promote AI adoption in the community.

Chapter 2 (Economic Impact of AI) presents current understanding and predictions for overall AI-related productivity gains and economic growth. The technology and its use are changing too rapidly to predict the pace of growth or the distribution of benefits.

Chapter 3 (Framework for Building Community AI Readiness) emphasizes iterative design methods to collect and use feedback to inform decision making. Asset mapping, public engagement, and performance metrics can be valuable tools.

Chapter 4 (Support Structures for AI Adoption) describes the infrastructure, resources, and other supports a community AI ecosystem can provide.

Appendices provide examples of innovative use of AI tools, potential partners, a self-assessment checklist, and public engagement strategies.

II. Foundational Insights on the Economic Impact of AI

Impact on the U.S. Economy

AI is poised to be a powerful engine for economic change, with economists predicting it will boost national productivity and gross domestic product (GDP). But how quickly this transformation occurs will depend on a mix of public and private sector actions.

The optimistic view rests on an assumption that AI will supercharge efficiency. Experts estimate that widespread adoption could cut the time needed for work tasks by as much as 20%[1] to 30%[2,3], within a decade. One estimate suggests that by 2034, this could add 1.5 percentage points to annual US productivity growth[4] and 0.4 percentage points to the US GDP *growth rate*.[5]

The flip side? More conservative predictions temper these expectations, suggesting gains might be smaller and partially canceled out by AI's detrimental effects. Over the next decade, AI could increase the level of US GDP by a more modest 0.93%-1.56%.[6] This wide range reflects different assumptions about uptake, the availability of supportive infrastructure, technological advances, and other factors.

Impact on the Labor Force

The impact on the labor force will be complex. AI is expected first to reshape jobs and tasks. While certain roles will be disrupted or eliminated, most jobs will evolve rather than disappear. One study estimates that AI could support approximately 80% of occupations; AI tools could save 40% of workers' time by automating the routine portions of their jobs. Automation will likely focus on specific tasks (data processing, administrative duties, basic customer service, etc.) rather than entire jobs. As a result, most workers will shift to higher-value, more creative, or interpersonal tasks that AI cannot easily handle.[7] Several studies have attempted to measure productivity gains associated with specific jobs.

Call Center Employees (2023): A conversational assistant used by 5,179 customer support agents increased productivity, as measured by issues resolved per hour, by 14% on average, including a 34% improvement for novice and low-skilled workers but with minimal impact on experienced and highly skilled workers.[8]

Management Consultants (2023): A study involving 758 consultants demonstrated that those using generative AI systems completed 18 tasks 25% faster with, on average, 40% higher quality. The same report also noted that the tools helped lower performers more (43% improved quality) vs. high performers (13% improved quality).[9]

Developers (2023): A study of programmers using GitHub Copilot—a pair programmer tool—demonstrated that those using the AI tool completed tasks 56% faster than those not using it.[10]

Professional Writers (2023): A study involving over 400 college-educated professionals demonstrated that those with access to generative AI tools completed occupation-specific writing tasks 37% faster with higher quality (0.4 standard deviations).[11]

Physicians (2023): Automated transcription and summarization capabilities from generative AI allowed physicians to complete patient notes up to 83% faster with no increase in errors.[12]

Financial Analysts (2024): AI analysts can beat the majority of human analysts in stock-return forecasts. However, human analysts perform better for smaller, less liquid firms and those with asset-light business models. This is consistent with the notion that such firms are subject to higher information asymmetry and require better institutional knowledge or industry experience to decipher.[13]

AI could increase employment in certain sectors, such as technology, healthcare, and education roles that AI augments rather than replaces, even as it reduces demand in others, like routine office support. Some segments of the labor force might need substantial retraining; due to AI and automation, millions of workers could transition to new occupations by 2030. This would align with historical precedent, as past technological revolutions (from the personal computer to the internet) caused temporary disruptions but ultimately created new industries and roles. Analysts predict that new job categories and demand for skills (e.g., AI maintenance, data analysis, and other tech-enabled services) will emerge to offset jobs displaced by AI[16]. In short, AI over the next decade is seen as both a disruptor and a boon to productivity and economic growth. It will change the nature of work rather than simply cutting jobs.[17]

This macro context sets the stage for local leaders: a potentially larger economic pie, but with changes in how work is done and who benefits. The next question is how these broad trends intersect with community businesses, which are the lifeblood of local economies.

Impact on Community Organizations

Community organizations are increasingly using AI, benefiting from AI tools, and projecting an increase in AI adoption in the coming years.

Community organizations, which include small to medium-sized businesses (SMBs) and other non-government organizations such as universities, play a large role in municipal economies across the US. For example, small businesses, usually defined as firms with fewer than 500 employees, employ about 61.6 million workers[18] and have generated about two-thirds of net-new jobs in the US in the last 25 years[19]. They are critical for maintaining low unemployment and offering opportunities for upward mobility in communities.

Many newer AI tools require little to no computational coding, although familiarity with writing prompts can make the tools more effective. Many are inexpensive or free to try and can help with many operational tasks in a business, such as data analysis, sales, and inventory management.

While AI adoption is growing, evidence linking it to productivity gains at the organizational level remains limited, and much of what we know is based on self-reported outcomes. For instance, a 2024 Salesforce survey of 3,300 SMB leaders who had already adopted AI revealed widespread operational improvements.[20] Similarly, a June 2025 U.S. Chamber of Commerce (USCoC) survey of 3,870 U.S. small businesses found that 58% were using generative AI (GenAI), with the highest adoption rates in marketing, human resources, and customer relations—functions common across most SMBs and community organizations. The outlook is overwhelmingly positive: 87% of respondents expressed optimism that AI would support future growth, and 86% agreed that AI had already improved their operations.[21]

Yet, significant barriers remain. Among businesses that have not adopted AI, the USCoC survey found that the top concerns were tool quality (33%), cost (30%), and legal or compliance risks (28%). These concerns highlight the need for clearer standards, better guidance, and more accessible tools to ensure that the benefits of AI are broadly shared. WSI's 2025 AI Business Insights Report found that more than 80% of the 600 global business leaders surveyed expressed confidence in AI's potential. However, many had yet to invest in AI, develop formal training programs, or integrate AI into their broader business strategies.[22]

Impact on Communities

While national-level predictions suggest AI's potential to drive large productivity gains and GDP growth on average, these projections do not translate well to the local level. Growth is not uniform across communities; some will exhibit large impacts while others will see minimal ones. One reason is that these models assume a diversified economy, whereas local economies may be concentrated in a few sectors, such as tourism, education, or retail sales. In addition, national models often rely on an average or assumed baseline level of readiness, but local conditions vary widely in terms of broadband access, workforce training, and digital infrastructure.

Compounding the challenge is that the impact of any new technology can be difficult to predict. Productivity gains and cost savings are likely to change as AI becomes more

effective over time, but the pace of those gains across industries will hinge on many factors, such as design improvements, data availability, and user innovations. On the cost side, the resource demands will also likely shift over time as energy, internet speed, and other support needs change.

Widely used regional economic impact analysis tools, such as IMPLAN, are not well-suited to model AI's community-level impact. IMPLAN relies on input-output modeling, which assumes fixed production functions and static technology; these assumptions do not hold for a rapidly evolving, general-purpose technology like AI. Moreover, AI is not a discrete industry with a specific NAICS code, making it difficult to isolate within IMPLAN's sector-based framework. There is also a lack of standardized, localized data on AI adoption by small businesses, nonprofits, or local governments. This makes it difficult to calibrate or validate any model. Furthermore, AI's economic effects—such as productivity gains, labor shifts, and service improvements—are often indirect, nonlinear, and context-dependent, challenging traditional economic models' linear structure.[23]

Despite these modeling challenges, AI adoption can still be a powerful local economic development strategy.

AI has the potential to help businesses, institutions, and non-profit organizations, especially those that lack the resources, expertise, or confidence to explore AI on their own. AI can help local firms become more efficient, competitive, and innovative, leading to job creation and economic growth.

Local governments actively supporting AI adoption may also attract startups, tech investment, and talent, positioning themselves as forward-looking innovation hubs. Supporting community organizations in less tech-saturated regions can help level the playing field because AI adoption is currently concentrated in large firms and tech hubs.[24]

Even if AI's direct economic benefits fall short of expectations, investments in AI-related capacity-building can yield broad results. For example, workforce training that improves digital literacy can enhance worker productivity across many sectors. Expanding digital infrastructure, such as cloud computing and data center access, can create jobs and support economic activity beyond AI. These investments are valuable in their own right and can help the community prepare for a more digital and data-driven future.

However, developing AI infrastructure, cultivating community buy-in, and taking other critical steps can be challenging. Communities face barriers such as a workforce that lacks digital skills, inadequate infrastructure to support AI tools, and limited awareness or capacity among SMBs to engage with AI. Overcoming these challenges will require strategic investment, community engagement, and sustained support from local governments and partners.

Examples

While the economic impact of AI at the local level remains difficult to quantify, communities across the country are already experimenting with AI in ways that offer valuable insights. The examples in Appendix D (and summarized in Figure 2) serve as both inspiration and evidence.

They illustrate what is possible when communities align technology with local needs, underscore the importance of readiness, partnerships, and inclusive planning, and demonstrate how community organizations use AI to solve real problems, improve services, and create economic value. They may help local leaders spark ideas, identify potential partners, and consider how to adapt similar strategies to their local context. These cases span various sectors, such as hospitality, finance, and insurance. They show that AI adoption is not limited to large tech firms or major cities. Instead, they highlight how even modest investments in AI tools, training, and infrastructure can yield measurable benefits, such as cost savings, job creation, improved service delivery, and increased community resilience.

To help address the rising demand for AI skills, Google is providing $1 billion to support AI education and job training programs and research in the U.S. This includes making its AI and career training free for every college student in America through its AI for Education Accelerator. More than 100 colleges and universities have already signed up.[14]

Similarly, to address the growing need for a modern energy grid to support AI, Google.org is partnering with the electrical training ALLIANCE. This partnership, which includes the International Brotherhood of Electrical Workers and the National Electrical Contractors Association, provides funding to integrate AI tools and the "AI Essentials" course into the curriculum. The goal is to train 100,000 electrical workers and 30,000 new apprentices to boost the workforce pipeline by 70% over five years.[15]

Figure 2. Case Examples Summary Table

Industry	Location	AI Used	Impact
Food and Agriculture	Chicago, Illinois	Web-based order streamlining platform	Improved order intake process, reduced review time from 1.5-2 hours to 20 minutes, increased accuracy to 80-90%.
Hospitality	Honolulu County, Hawaii	Customer resource management AI tool, chatbot booking support tool	Increased engagement rates by 50%, sales by 40%, and conversions by 20%.
Hospitality, tourism, and entertainment	Hershey, Pennsylvania	Natural language chatbot, agentic AI Interactive Voice Response (IVR) solution	Improved the guest experience through automated services like a chatbot for invoice requests and managing over 50% of password reset calls. Increased employee efficiency, automating over 25% of absence reports, saving a full eight hours of work per day.
Insurance (pt.1)	Portland, Maine	AI-driven claims processing tool	Saved $100,000 in the first year, trained employees to build future AI tools.
Insurance (pt.2)	New York City, New York	Cloud-based, AI-powered financial management tool	Reduced closing time by 76%, eliminated 40 hours of manual work per month, and improved accounting efficiency by a factor of three.
Insurance (pt. 3)	California	A generative AI document verification tool	Automated verification of eligibility documents, achieving an 84% verification rate (up from 28-30%). Simplifed access to health insurance for residents and allowed staff to focus on more complex tasks.
Public sector, claims processing	Wisconsin	AI-powered claims adjudicator, trained on 4 million earlier claims	Handled tens of thousands of claims and passed repeated audits, freeing up human adjudicators to only deal with rejected claims.
Banking and Finance	Kansas City, Missouri	AI-powered lending platform	Grew loan volume to $12 million per month, attracted over 3,000 new customers, and increased access to credit for low-to-moderate-income borrowers.
Banking and Finance	Durham, North Carolina	An AI/ML-powered lending platform that uses optical character recognition (OCR) and a rules-based decision engine to speed up the loan closing process.	The company helped secure more than $100 million in loans in 2020. It also helped businesses stay afloat during the pandemic through a North Carolina loan program, where 58% of the loan recipients were minority- or women-led companies.
Environment and Health	Allegheny County, Pennsylvania	Crowdsourced data collection app, machine learning	Improved understanding of air quality, supported EPA investigation, and enhanced community health.
Environment and Health	Detroit, Michigan	AI, ML, and data tools used for data accuracy and source detection	Provided individuals with real-time air quality data to help them safeguard their health. The AI tool helped pinpoint pollution sources to enable targeted solutions.
Holistic City	Miami-Dade, Florida	AI Marketing Accelerator, AI middleware	Increased task completion by 129%, adoption of AI tools by 75%, and business growth.
Academic and Nonprofit Collaboration	Harris County, Texas	AI decision-making support system (AI-SERVE)	Improved food distribution during disasters, coordinated resources, and supported community health.
Academic	Los Angeles, California	An advanced AI-powered transcript processing solution that relies on a parent AI tool	Connected community college transfer students with 4-year universities for enrollment and bachelor's degree completion. Enrolled over 1,500 new transfer students.
Recycling	Oakland, California	AI-powered robot for wood recycling	Reclaimed construction and demolition wood waste, reduced environmental impact, and created job opportunities.

III. Framework for Building Community AI Readiness Through Iterative Design

AI presents major opportunities for economic growth, service improvement, and innovation across communities (see Section II: 'Foundational Insights on the Economic Impact of AI' in "AI's Impact on Municipal Economies" white paper). However, realizing these benefits requires more than just access to technology. It demands thoughtful leadership, community buy-in, and collaboration across sectors and jurisdictions. It also requires a flexible, adaptive approach to planning and implementation. This section is designed to help community leaders build a framework for developing their community's AI readiness.

Iterative design helps local leaders identify and respond to changing community needs. The support structures listed below are discussed in detail in the next section.

- Technological infrastructure (broadband, cloud computing, etc.)
- Workforce development
- Open data

Local leaders can be central actors in a community AI ecosystem by working with partners and community members to ensure that support structures connecting users to AI tools are in place.

An iterative design approach emphasizing short, testable cycles, continuous feedback, and user-centered design will allow local leaders to keep pace with evolving technical requirements and user needs. This approach also allows local leaders to customize their approach to the local context with its unique set of resources and goals.

This framework requires local leaders to consider key implementation elements and understand the cyclical process linking feedback mechanisms with the support structures needed for community-wide adoption.

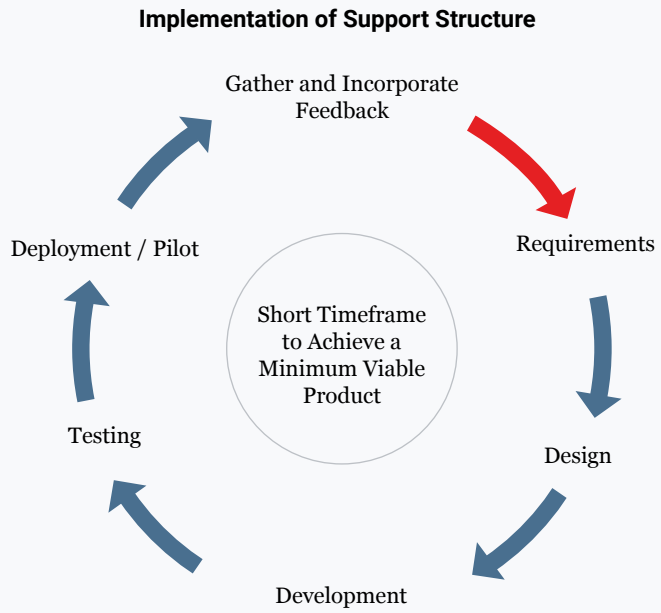
Networks: Partnerships among local leaders, technical experts, educators, advocates, and end users can help achieve broad input and smoother implementation. State and federal agencies may also play important roles. All these players are part of the community AI ecosystem, even though facilitating AI adoption is not central to their missions. As a result, the network will operate in a context of individual members' competing priorities. Appendix A suggests potential partnerships.

The U.S. Chamber of Commerce's Commission on AI Competitiveness is a bipartisan and multistakeholder Commission comprised of the private sector, academia, and civil society. The Chamber's AI Commission considers the complex issues and real-world impacts that AI will have economically, individually, and globally.

User Focus: Engaging residents and stakeholders throughout planning and execution creates a dynamic source of user-centered information. This information is critical to local leaders' efforts to refine strategies, address concerns, and ensure that the strategy remains relevant and equitable.

The NewDeal Forum AI Task Force regularly brings together state and local elected officials, non-profits, and industry leaders to explore AI's potential and review state and local AI adoption in compliance with federal legislation.

Figure 3: Framework



Feedback Mechanisms	
Public Engagement	Focus Groups, Townhalls, Surveys
Metrics Available to Government	Economic Data, Requests for Support Structures
Asset Mapping	Identify existing resources and the community's standing

Support Structures	Tools within Each Structure
Technological Infrastructure	Broadband, Fiber Networks, Power Grid, Cloud and Computing, Cybersecurity
Workforce Development	Reskilling and Upskilling programs
Open Data	Publish high-quality machine-readable datasets, redact PII
Local Government Guidance	Promote ethical adoption; develop clear guidelines; align with state and national frameworks

Source: Developed by the National Academy of Public Administration

Community Input and Feedback

Before planning for support structures, local leaders will need information on available resources, needs, and metrics. Strategic engagement helps identify opportunities to reduce barriers to AI adoption, strengthen the local innovation ecosystem, and set priorities. Periodic feedback can be used to gauge progress. Regularly updated metrics alongside public input and feedback can provide an evidence foundation for decision making.

Asset Mapping: Identify supportive strengths and the capacities already in place. Without a clear picture of current assets, communities risk overestimating their readiness or underutilizing valuable resources. A self-assessment checklist appears in Appendix B.

Public Engagement: Collect insights from community businesses and residents through surveys, interviews, and forums. This includes anecdotal evidence, metrics not openly accessible to the government, and workforce/ productivity measures. Appendix C lists options for public engagement.

Performance Metrics: Leverage open-source and internal datasets (e.g., labor, economic, energy) to inform decisions and prioritize actions.

Bowling Green – one of the fastest-growing cities in Kentucky – faced a significant challenge: managing rapid growth while preserving its history. Seeking guidance, they initiated a new kind of public engagement strategy, powered by AI. They engaged their community in one of the largest online civic conversations in the U.S. by partnering with Google's Jigsaw. Using Jigsaw's AI tool, Sensemaker, Bowling Green was able to quickly analyze and summarize the online discussions, delivering an actionable report in minutes, with key insights around community values and engagement topics.

IV. Support Structures for AI Adoption

Community businesses and organizations need basic support to deploy AI effectively. Whether adopting a single AI tool or deploying it across regions, AI adoption and economic growth depend on infrastructure. Local governments, businesses, and organizations benefit from adequate foundational infrastructure elements and should collaborate to ensure they have them in place. This section identifies key infrastructure and investment opportunities to support AI adoption in the community.

Technical Infrastructure

The successful deployment of AI depends on a robust foundation of technical infrastructure. The key components described below work together to support the high-speed data transfer, real-time processing, and scalable computing power that AI systems require.

> Every community has different resources, but efforts to expand broadband and fiber networks are important. For example, Montgomery County, MD, operates two services, FiberNet and MoCoNet. MoCoNet offers 300/300 MBPS internet service for residents in affordable housing, while FiberNet facilitates efficient government, public school, and community college operations.

Broadband and Fiber Networks

Fast and reliable data connectivity through broadband and fiber optics is essential for AI. Most AI tools are hosted in the cloud, requiring large data transfers. Without high-volume, high-speed internet, these data flows can become bottlenecked, leading to delays, errors, or system failures. These issues can be inconvenient when doing general AI-enabled work, but some applications, such as speech recognition, visual sensors, and autonomous operations, require reliable, scalable, and near-instantaneous results.

Power Grid

AI systems vary in complexity, but current estimates are that AI searches require 10 times the energy of a traditional internet search. Additionally, a typical data center that trains and operates AI systems uses as much power as 100,000 households, and the largest data centers use 20 times that amount.[25] Providing enough power to residents, communities, and organizations stresses aging grids and dated electrical generation facilities.

In most parts of the US, the electrical grid is managed by a public utility regulated by the state. Local governments do not generally have a direct role in power grid decisions, although they can encourage the state to take action. Additionally, some local governments have undertaken decarbonization programs that focus on reducing emissions related to energy production and use.

In Virginia, data centers account for 25 percent of the state's total electricity, the largest share of any state. To address this demand, Virginia's primary energy provider is upgrading its networks and considering advanced nuclear technologies like Small Modular Reactors. The state also collaborates with companies like Google, whose data centers are a major part of Virginia's digital economy. As part of its commitment to operate all data centers using carbon-free energy by 2030, Google partnered with AES Corporation to source 500 MW of local renewable energy and battery storage. This initiative will help its Virginia data centers achieve 90 percent carbon-free energy.

Data Centers and Cloud Computing

The need for large data centers relying on these networks will increase as AI grows.[26,27,28] Insufficient network capacity can hinder communities from fully engaging with AI. Ensuring broad, equitable AI adoption across regions will help achieve widespread economic benefits.

A data center is a physical structure that houses servers, network equipment, storage systems, and other equipment needed to support AI tools and other digital services. Cloud computing delivers the computing resources housed in data centers.

Data centers are often located near concentrations of users because a greater distance can create issues related to latency (the longer time needed for data to travel from the user to the server and back) and reliability (the larger number of connections and segments of the journey that can fail). Reducing the distance data must travel can lower energy consumption. Some regions, such as Silicon Valley, Northern Virginia, the New York metropolitan area, and Dallas, have embraced data centers. Other desirable site characteristics include cloud and network access, a stable and abundant power supply, and a low incidence of weather disruptions.[29]

Local leaders can take steps to attract data centers to their area if the available cloud computing services are inadequate. They may also try to increase local data center capacity to support public-sector AI and computing-intensive initiatives, such as public-health modeling, automated call centers, and traffic flow.

The Hershey Entertainment and Resorts Case Example (#3 in Appendix D) highlights how they used AI tools to provide personalized guest experiences. A key factor in their success was using cloud computing to create a unified data platform, which allowed them to analyze large datasets and automate guest interactions, leading to increased efficiency and a better overall experience for their guests. (For an additional example, see #2 in Appendix D)

Resources and Capacity Building

Workforce Development

AI expansion will impact jobs across sectors, causing displacement and requiring new skills. Local governments, businesses, and organizations can help ensure the community can take advantage of new AI job opportunities by offering training and reskilling programs. A skilled workforce attracts AI companies, ensures residents can access new job opportunities, reduces displacement, and increases local income.

Reskilling and upskilling initiatives can help workers transition from traditional roles to AI-related roles (e.g., workshops, online courses, and certifications focused on emerging technologies). Digital literacy, computing, and AI preparation in schools, colleges, and universities can prepare students for many modern professions. Tech firms can create apprenticeships or fellowships that place local talent in positions where they can learn on the job. Online platforms like Coursera and edX may provide free or low-cost learning options.

In the U.S., New York City developed the NYC Tech Talent Pipeline (TTP) in 2014. This initiative supports the growing tech sector by bringing together industry professionals, educators, and individuals, and expands technology access and training across the city. TTP works with colleges and universities to increase tech graduates and connect students to jobs and resources. It also offers accelerated training through tech boot camps for individuals looking to enter the tech workforce. It also partners with private organizations to provide apprenticeships and fellowships to increase the number of tech workers.

Beyond TTP, New York City offers unemployed people free Coursera access and entry-level certificates. Those who complete these courses gain access to a hiring consortium with over 200 employers.

Open Data

Community-level open data can significantly enhance AI applications across various sectors, such as real estate, transportation, health, and finance. While not all data is suitable for open sharing, and privacy laws must be observed, the availability of high-quality open data can improve AI learning and performance. Specific types of data can make AI tools more effective for community organizations. Data owners should create governance structures that provide transparency, ease of access, quality, and integrity. Strong data governance fosters responsible AI innovation, reduces business risks, and builds public trust, creating a stable environment for AI-driven growth. Many resources that discuss how to develop open data resources are available.

Other Ecosystem Supports

Adopting AI tools can present several challenges for organizations, including the risk of using biased or harmful systems, unethical applications, tools misaligned with business needs or budgets, and premature adoption without fully considering the potential impacts. While organizations' needs vary, guidelines and resources can improve decision making. For example:

- Raise awareness about AI's goals, risks, and benefits, and provide use guidelines to community organizations.
- Communicate ethical AI guidelines with community organizations, such as human oversight, transparency, and accountability.
- Align with state and national guidelines to prevent confusion surrounding AI use in community organizations (reference NIST AI RMF, AI Bill of Rights, etc.).
- Create a vendor registry of trusted AI vendors for community businesses and organizations to reference when adopting AI tools safely.
- Promote strategic AI adoption, incorporating evaluation methods such as pilot programs, sandboxes, and ROI and CBA tools.
- Publish dashboards that display statistics on community adoption of AI and its impact on the economy and workforce.

The City of San Jose developed AI FactSheets for its vendor registry. This registry allows San Jose leaders to identify companies with AI practices and values that align with the city's AI and privacy values. The registry identifies trusted vendors and informs customers about those vendors for possible collaboration, helping government, community organizations, and other stakeholders determine an optimal service provider for them.

The City of Tempe Ethical AI Policy provides an ethical framework for AI adoption that focuses on transparency, fairness, accountability, and human-centered decision making. It is equally applicable to the public and private sectors. This policy recognizes the benefits of AI and aims to balance innovation opportunities with risk mitigation. This policy established a Technology and Innovation Steering Committee to monitor AI implementation, develop reporting mechanisms, increase public awareness through campaigns and educational initiatives, and oversee non-compliance measures. The policy requires the semi-annual evaluation of AI solutions and directs IT to create AI review processes and provide training programs to promote responsible AI practices. This policy highlights the importance of collaboration and public engagement to solicit various perspectives and feedback to ensure that AI benefits the community.

V. Conclusion

Artificial intelligence is not an abstract force or a far-future decision but a rapidly evolving technology already reshaping economies, communities, and work. For local leaders, the question is no longer whether AI will have an impact, but how to ensure their communities are prepared to benefit from it. While the full economic implications of AI remain uncertain, the potential for transformative change is profound. Communities that begin investing now in foundational support structures will be better positioned to thrive in this new era of innovation.

Local leaders must lead this effort, but they cannot do it alone. Cross-sector and cross-jurisdictional partnerships are essential to expanding capacity, sharing knowledge, and aligning efforts. These collaborations can help communities overcome barriers, increase AI uptake, and unlock new opportunities for economic growth.

To keep pace with technological change, governments must adopt an iterative design approach that is flexible, user-centered, and grounded in continuous feedback. This approach requires mapping community assets, identifying infrastructure and resource gaps, and tracking progress through clear metrics. It also demands a commitment to holistic engagement, ensuring that all residents and businesses can participate in and benefit from AI-driven transformation.

AI is here, changing how communities work, learn, and grow. While the path forward is complex and constantly evolving, the opportunity is clear: communities that take stock of their current assets, build support structures, and collaborate across sectors will be better positioned to adapt and thrive. With thoughtful planning, shared investment, and a commitment to continuous learning, local leaders can ensure that AI becomes a broad-based economic resilience and opportunity tool.

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Appendices

Appendix A: Opportunities for Partnerships

Partner Type	What They Can Contribute
State & Federal Agencies	Funding, regulatory guidance, broadband and workforce grants, innovation pilots, oversight of power grid upgrades and smart grid technology, cybersecurity, workforce training, grants, and technical support
Educational Institutions	Literacy and digital skills training, AI training programs, certifications, apprenticeships, research, data governance expertise
Nonprofits & Civic Tech Orgs	Community outreach, digital inclusion, privacy tools, open data support, public engagement campaigns
Private Sector Providers	Cloud services, data centers, AI tools, middleware, sandboxes, technical assistance
Regional & National Networks	Shared infrastructure, policy alignment, peer learning, coalition-building, national standards, ethical guidelines, vendor vetting
Utilities & Infrastructure Firms	Smart grid upgrades, broadband expansion, energy resilience planning
Chambers, Business Associations, and Civic Organizations	Community business engagement, feedback loops, co-hosting expos, connecting businesses to resources, data portal support
Community Organizations	Needs identification, worker training, apprenticeship placements

Appendix B: Self-Assessment Checklist

Foundational Infrastructure

- ☐ Do we have community-wide, affordable high-speed broadband, satellite, and fiber optics?
- ☐ Is our power grid reliable and scalable for AI workloads?
- ☐ Are cybersecurity standards in place for public systems?
- ☐ Do we offer cloud access or shared computing resources?

Workforce Development

- ☐ Is the general population equipped with basic digital skills?
- ☐ Have we identified and addressed gaps in digital access across our community?
- ☐ Have we surveyed residents to understand their access to devices and the internet?
- ☐ Are we involving residents in AI planning and decision making?
- ☐ Do we offer AI education and support tailored to underserved populations?
- ☐ Are we building an AI talent pipeline?
  - ☐ Are we partnering with local colleges or bootcamps to offer AI-related education or certifications?
  - ☐ Do we offer reskilling for mid-career workers?
  - ☐ Are there youth-focused AI education programs?
  - ☐ Do we provide free or subsidized online learning?

Open Data

- ☐ Have we conducted a data audit?
- ☐ Do we have privacy and consent policies?
- ☐ Are we using privacy impact assessments?
- ☐ Have we trained staff on data hygiene?

Sustainability

- ☐ Do we use an agile, iterative approach?
- ☐ Are we reviewing and updating policies regularly?
- ☐ Do we track performance metrics?
- ☐ Is there a long-term funding and staffing plan?

Technical and Financial Assistance

- ☐ Do we offer AI adoption grants or subsidies to help local businesses adopt AI?
- ☐ Is there an AI help desk or resource hub for businesses to access AI tools, guides, and support?
- ☐ Do we host AI expos or vendor showcases to connect community businesses with AI experts and vendors?
- ☐ Are we promoting middleware or low-code AI tools that allow community businesses to adopt AI without needing deep technical expertise?

Intergovernmental and Cross-Sector Collaboration

- ☐ Are we part of regional or national AI networks?
- ☐ Do we collaborate with state/federal agencies?
- ☐ Have we partnered with universities or nonprofits?
- ☐ Do we share data or infrastructure regionally?

Appendix C: Public Engagement Strategies

1. **Conduct Surveys or Interviews:** Develop tools to assess AI awareness, needs, and barriers in the community. Utilize the findings from the outreach initiatives to prioritize deploying strategies based on need.
2. **Host AI Expos, Vendor Showcases, and Roundtables:** Invite the community to participate in conversations and learn from AI providers to enable smarter decision making. Host convenient sessions to educate residents on AI technologies, fostering engagement and reducing misconceptions or fears.
3. **Create a Dedicated Community Engagement Lead:** Dedicate one local government employee to lead the outreach to the community surrounding AI to streamline actions.
4. **Develop Targeted Outreach Materials:** Develop educational materials for an AI resource hub that guide community adoption of AI, informed by insights from previous engagement efforts such as case studies and how-to guides.
5. **Use Newsletters or Digital Platforms:** Utilize pre-existing outreach platforms to share funding opportunities, tools, and training.
6. **Develop Partnerships:** Solidify partnerships with chambers of commerce, business incubators, and minority business associations to ensure communication around community needs and government resources.
7. **Offer Grants and Incentives:** Provide funding for AI pilots, tools, and training.
8. **Offer Technical Assistance:** If possible, dedicate government employees to providing technical assistance to community organizations that are working to adopt AI solutions.
9. **Join Regional AI Coalitions:** Local governments should join groups to share infrastructure, data, and best practices, which can then be incorporated into their local strategic plans.
10. **Collaborate with Academia and Nonprofits:** Work with community organizations to develop tools and training programs surrounding AI adoption and use to improve community knowledge and preparedness.
11. **Engage in National Networks:** Participate in national groups that bring together government leaders and other industry leaders to share lessons learned and collaborate about regional and national approaches to AI adoption.

Appendix D: Case Examples

Case Example #1: Food/Agriculture

A Chicago meat supplier adopted an AI-enabled, web-based order platform to streamline order intake, saving time and improving accuracy. This example demonstrates how otherwise low-tech SMBs can benefit from AI.

Background: Based on 2022 Census data, Chicago, Illinois, has a population of 2.27 million and a median household income of $71,673. There are 1.3 million small businesses in Illinois, which account for 99.6% of the total. Small businesses employ 2.4 million people, or 44.1% of all employees.

Legislation and Notable AI Deployment by Government: Chicago has developed the City of Chicago Roadmap for AI, which assists the city government and public employees in successfully and safely implementing GenAI. Additionally, the State of Illinois has established the Generative AI and Natural Language Processing Task Force, which covers various topics, such as the protection of customer information with GenAI; AI in the classroom; the use of GenAI to improve public services; protecting civil liberties; impact on the workforce; and any potential challenges with AI and cybersecurity. In addition to these initiatives, Illinois has enacted nine relevant laws prohibiting specific uses of some AI or data that may be utilized in an AI system. The state has also passed an open data law protecting businesses' access to public data.

Problem: A Chicago-based meat supplier founded in 1956 now employs 21 people and operates in a 15,000-square-foot building. They bring in and sell meat as a primal piece or portion into items such as steak and sausage. This meat is sold exclusively to food service providers such as restaurants, hotels, and country clubs.

The company faced a problem connected with the order intake process. Before adopting an AI solution, customers would call the company during business hours and provide their orders to an employee. This employee would then need to manually enter the order into the company's enterprise resource planning (ERP) system, print the order, and then have other employees fill the order. In addition to business-hour calls, customers could leave a voicemail message or send an email. The employees would then need to process these orders in the same manner the following day. This process was time-consuming and labor-intensive.

AI Used: The company turned to a private third-party online platform that enables restaurants and suppliers to streamline ordering processes. With the adoption of this new system, the meat-supplying company now accepts orders through an app. Additionally, the AI system transcribes any emails and voicemails, which are then placed into a queue to be reviewed and accepted by an employee. Every 10 minutes, the system automatically checks the order queue and immediately sends accepted orders to the ERP system for printing. As employees review and correct orders, the system learns from their edits, gradually improving its accuracy over time.

Implementation & Challenges: The meat supplier discovered the third-party company through its marketing efforts and adopted its system after an initial meeting. The first integration was challenging and time-consuming, requiring manual verification of item codes and custom software development to enable system communication. This experience later served as a template for future partnerships with American wholesalers and distributors.

Outcomes & Next Steps: After deploying the system, the meat company saw strong results. Initially 75% accurate, the system improved to 80–90% accuracy by learning from employee edits. It also proved more intuitive than manual processes, for example, identifying specific types of sirloin based on a customer's past orders. Additionally, it reduced the time spent reviewing voicemails and emails from up to two hours to just 20 minutes.

AI tools can help similar sectors and businesses improve both internal operations and external communication. For small and medium-sized businesses, finding the right balance is key. When used effectively, these tools can streamline customer engagement and potentially drive economic growth for the business and its surrounding community.

Case Example #2: Hospitality

An independent Hawaii resort combined three AI and cloud-based data sources to personalize the guest experience and improve the booking conversion rate.

Background: The City-County of Honolulu encompasses the main island, Oahu, and some outlying smaller islands. It has a population of around 990,000. Census data reports that 95.6% of residents have a household computer, and 91.5% have a broadband internet subscription. In 2023 dollars, its median household income was $104,264.

Legislation and Notable AI Deployment by Government: Hawaii's AI legislation remains limited but targeted. In 2024, the state passed a law regulating AI-generated deepfakes in political campaigns to protect election integrity. Another law established a two-year, $1 million program at the University of Hawaii to develop an AI-powered wildfire forecasting system to improve emergency preparedness and response statewide.

While Hawaii lacks a comprehensive AI governance framework, the state and Honolulu County have begun deploying AI tools practically. One notable example was using an AI-powered call center and chatbot service following the Lahaina wildfires. Since then, AI has been further applied to support traffic management, evacuation planning, and wildfire prevention. Additionally, Hawaii has enacted an open data law that ensures businesses have access to public data, supporting transparency and innovation.

Problem: A resort on Oahu Island in Honolulu County, Hawaii, was operating with outdated and disconnected internal data systems. Seeking to boost booking conversions, customer satisfaction, and retention, the resort aimed to re-engage existing customers and attract new ones, particularly across different generational groups.

AI Implementation: To achieve its goals, the resort implemented several technology upgrades under the guidance of its Chief Commercial Officer. First, it migrated its siloed internal data systems to the cloud and connected them through an AI-powered customer relationship management (CRM) tool. Next, it launched a chatbot named Honu to support bookings and improve communication, enhanced by an asynchronous messaging service.

Implementation & Challenges: The resort faced data privacy risks, as customer information could be stored in the cloud or other systems. However, the most pressing concern was the upfront cost of deploying AI tools and cloud infrastructure. To manage expenses, the rollout was phased, focusing on quick wins and demonstrating return on investment early.

A key part of overcoming cost-related challenges was educating and gaining buy-in from the C-suite and other decision makers. While some staff adapted easily to new technologies, others required training. This education was equally important for frontline employees who needed to use the tools effectively and for leadership, who needed to understand the strategic value and ROI of the upgrades.

Outcomes & Next Steps: The resort saw a significant boost in customer engagement and personalization by implementing AI tools. Booking conversions rose by 20%, sales by 40%, and engagement rates by 50%. The system enabled end-to-end guest interaction—from initial booking through post-stay follow-up.

While the chatbot's deployment may have shifted some job responsibilities, the overall adoption of AI tools led to job growth. Enhanced coordination and personalized guest experiences increased staffing needs across concierge services, activity management, and occupancy operations.

The resort's successful AI transformation and physical renovations in 2020–21 drove economic growth and culminated in its $725 million acquisition by a private equity firm in spring 2024. The acquiring company plans to replicate the resort's AI systems across its portfolio.

This case illustrates how internal AI tools—used for customer engagement, data integration, and resource tracking—can benefit hospitality providers and other sectors. Breaking down data silos and using insights to enhance customer experiences can deliver meaningful economic returns, especially for SMBs in service-driven industries.

Case Example #3: Hospitality, tourism, and entertainment

An entertainment and resort company leveraged an AI tool that analyzes conversational data from across the customer journey to analyze customer interaction data to prioritize automating the most frequent customer service interactions and provide personalized responses to enhance customer experience.

Background: In 2020, Hershey, Pennsylvania, had a population of 13,858 and a median household income of $78,750. Small businesses make up over 99 percent of all businesses in Pennsylvania. In 2025, data shows that small businesses employed 2.5 million people in the state, roughly 45.2 percent of the state's private sector workforce.

Legislation and Notable AI Deployment by Government: Pennsylvania has enacted a couple of policies that limit the use of AI. Some policies require companies to clearly and conspicuously disclose when they have used AI, criminalize the creation and distribution of deepfake intimate content, and direct the study of AI's impact by the Joint State Government Commission. Pennsylvania has also established a Generative AI Governing Board, which has defined core AI-use values, initiated training programs, and developed pilot programs for state employees. The Board has partnered with Carnegie Mellon University to develop additional research and to provide advisory support to the Board. Pennsylvania has an open data portal that allows businesses and the public to access state data.

Problem: The Hershey Entertainment and Resort company consists of numerous resorts and entertainment companies all under the same umbrella. This company has been around for 97 years and hires many seasonal workers rather than relying on a static workforce.

The company wanted to create engaging, relevant experiences for different audiences. For many years, it used data from customer service calls and web activity to determine how it can improve the customer journey. The team would have to manually extract, review, and analyze data. This manual process was time-consuming, yet the data was still incomplete. Manually pulling and reviewing a truly comprehensive data set simply wasn't possible, which limited the team's ability to make the best decisions possible.

AI Used: The company adopted AI tools that analyze conversational data from across the customer journey. The tools analyze entire datasets, identifying frequent guest queries and patterns. They then deployed a natural language chatbot to automate responses, especially for invoice requests and password resets, with dynamic content tailored to guest segments.

Implementations and Challenges: The company began by centralizing all customer data to enable analysis through a single AI tool capable of summarizing millions of feedback entries. This allowed the team to quickly identify areas of the customer experience that needed improvement. Acting on these insights, they deployed a fully functional natural language chatbot in under 40 hours.

After resolving key customer experience issues, the company expanded its use of AI to address internal communication challenges—specifically, employees calling in to report absences, delays, or scheduling needs. They implemented an additional AI tool to manage these notifications and handle password reset requests.

Centralizing data proved essential to rapidly deploying new AI solutions. However, the company faced several hurdles, including consolidating fragmented call and web interaction data to train AI models, ensuring chatbot accuracy across diverse guest segments, and securing internal buy-in for automation while maintaining service quality.

Outcomes & Next Steps: The chatbot now manages over 25% of internal employee absence (“call-off”) requests and handles more than half of all password reset inquiries. It also automates invoicing by identifying eligible users and sending PDF invoices based on a single customer input. Additionally, it enables autonomous invoice retrieval, reducing call center volume and improving the user experience. Through AI-powered analysis of customer interactions, the system has also uncovered valuable insights from previously underutilized data.

Case Example #4: Insurance (1)

A Portland, Maine insurance company partnered with Northeastern University to build an AI claims tool, saving $100,000 in the first year.

Background: Portland, Maine, had a population of 68,280 and a median household income of $71,498 in 2022. There are 149,493 small businesses in Maine, which account for 99.2% of all businesses. Small businesses employ 55.9% of all Maine employees, contributing a net increase of 17,020 jobs.

Legislation and Notable AI Deployment by Government: Maine has taken several steps to address the opportunities and risks associated with artificial intelligence. In December 2024, the governor established the Maine Artificial Intelligence Task Force through executive order. The Task Force is charged with examining the implications of AI for the state's economy, workforce, and public services, and is expected to release its policy recommendations in October 2025. Its mandate includes exploring how AI can improve service delivery, protect consumer data, and mitigate algorithmic bias. SMBs in Maine anticipate that the Task Force's recommendations, developed in collaboration with industry stakeholders, will encourage broader AI adoption across the state, especially if paired with workforce training and data governance support.

In addition, Maine adopted a GenAI Policy in January 2025, which sets guiding principles for the responsible, transparent, and ethical use of GenAI tools within the Executive Branch of State Government. The policy outlines safeguards against risks such as misinformation, bias, and privacy violations, and mandates human oversight for GenAI-generated outputs. However, this policy does not apply to private sector AI adoption.

While Maine has not enacted a comprehensive open data law, it has made progress on data governance. In June 2025, the Legislature passed LD 1822, the Maine Online Data Privacy Act, which will take effect on July 1, 2026. This law regulates how businesses collect, process, and share personal data, including sensitive information. It grants consumers rights to access, correct, and delete their data, and imposes strict requirements on data security and transparency. Although not an open data law, LD 1822 represents a significant step toward protecting digital privacy and may influence how AI systems are deployed in the private sector.

Problem: An insurance company based in Portland, Maine, partners with health plans and insurance providers to bring new products to market that enhance offerings and provide clients with new solutions. This small business serves four Fortune 500 companies and five of the top 30 disability and life carriers in the US.

The company aimed to enhance its disability insurance offerings through AI. However, its data systems were disorganized and lacked the advanced analytics needed to support effective AI implementation. Given the industry's cautious approach to innovation, the company first needed to identify and prioritize data opportunities to enable a strategic and responsible adoption of AI.

AI Used: The company partnered with Northeastern University's Roux Institute (in Portland) and Institute for Experiential AI (EAI, in Boston) to develop a claims processing tool that analyzes language to flag inconsistencies between unstructured data and disability claims. Through this partnership with EAI, the company underwent a three-stage adoption process to improve work efficiencies and decrease costs.

Implementation & Challenges: In the initial phase, the insurance company partnered with EAI and the AI Solutions Hub to develop a Data Opportunity Roadmap (DOR). This involved conducting research and employee interviews to identify key business challenges and explore how data could help address them. After identifying millions of potential use cases, company leadership worked with EAI to prioritize the most impactful opportunities.

One high-leverage solution identified in the DOR involved Natural Language Processing (NLP). EAI's research scientists built a system that flagged inconsistencies between unstructured data and disability claims. Human case managers then reviewed these flagged claims. This critical step ensured responsible AI use and prevented errors.

Employees received training on the new system and workflows to support this process. In partnership with Northwestern, staff worked alongside data scientists to learn how to automate and scale data processing, accelerating claims investigations and improving system effectiveness.

Outcomes & Next Steps: Through its three-phase AI adoption process, the insurance company identified millions of data-driven opportunities to address business challenges. Implementing the AI claims processing system led to $100,000 in savings within the first year, while employee training built a workforce capable of using the system and developing additional tools to improve efficiency across the organization.

These benefits are not limited to the insurance sector. Small and medium-sized businesses (SMBs) in any industry can leverage AI to unlock insights from their data, identify operational challenges, and implement targeted solutions. Such deployments enhance trust and decision making when paired with responsible AI practices. The resulting operational improvements can drive economic growth not only for the business itself but also for the surrounding community or region.

Case Example #5: Insurance (2)

A New York insurance company improved internal financial management and human resource processes through a cloud-based, AI-powered tool. The investment reduced closing time by 76%, eliminated 44 hours of manual work per month, and improved accounting efficiency by a factor of three.

Background: In 2022, New York City had a population of 8.62 million and a median household income of $76,607. There are 2.2 million small businesses in New York State, which account for 99.8% of all businesses. Small businesses employ 47.1% of all employees, contributing a net increase of 389,007 jobs in 2023.

Legislation and Notable AI Deployment by Government: New York City has taken a proactive approach to AI governance through its NYC AI Action Plan, released in October 2023. The plan outlines 37 actions across seven initiatives to guide responsible AI use in city government, engage residents, upskill the municipal workforce, and support agency-level AI adoption. The plan aims to expand AI use safely across both public and private sectors, while emphasizing transparency, equity, and risk mitigation.

New York enacted Assembly Bill A7278 in March 2025, prohibiting state agencies and state-owned entities from using large language models or other AI systems to make decisions affecting individuals' rights, benefits, or services. All such decisions must be made by human personnel, although AI may still be used in advisory or analytical roles. This law does not apply to private sector AI use.

While New York has not passed a comprehensive open data law, it introduced the New York Data Protection Act (Assembly Bill A8101) in April 2025. This legislation requires government entities and contractors to disclose the personal data they collect and provides individuals with rights to access, delete, and control their information. Though not an open data law, it marks a significant step toward stronger data governance and privacy protection.

Problem: An insurance tech company founded in 2016 helps small businesses acquire insurance online. It has about 50 employees and works with more than 300 types of businesses, including retailers, pet groomers, and home improvement stores. As its business grew, the insurance company sought to improve its financial management. Before adopting AI, the company utilized a manual spreadsheet and an outdated desktop system through a VPN. This process was difficult to navigate; all invoices and cash entries were done manually, reporting was input through spreadsheets, and there was limited visibility of the finances across the business.

AI Used: To address this problem, the insurance company upgraded to cloud accounting software that utilizes AI to streamline financial management across small and medium-sized enterprises. The software includes AI-powered accounting, human resources, payroll management, integration with robust APIs, dashboards, reports, and budget monitoring.

Implementation and Challenges: After determining which system the insurance company wanted to adopt, it initialized its new platform in about two weeks through the expedited implementation offering.

Outcomes and Next Steps: The AI tool reduced their closing time by 76%, from three weeks to five days. They also eliminated 40 hours of manual accounts payable work per month and four hours a month in credit card reconciliations. Manual AP entries no longer occur; all payment entries are automatically generated. The new system has also been connected to credit cards, meaning employees no longer need to recode general ledger accounts each month.

The company shortened its monthly bank reconciliations cycle by several days, improved overall accounting efficiency by a factor of three, and increased the monthly report volume.

The system also allowed them to gain reporting insights that were then used to make more informed business decisions. The finance team now provides custom reports to the department leaders and has increased their monthly reports from two to eight. These custom reports have allowed them to view trends over time and identify redundant products, unused projects, and affordable alternatives. This process led to savings in the tens of thousands of dollars a year.

These challenges are not exclusive to the insurance industry or the private sector. Improving financial management and human resources processes can improve any organization's operations.

Case Example #6: Banking and Finance (1)

A bank in Missouri expanded services and product offerings by implementing an AI-powered lending platform. Monthly personal loan volume expanded from $500,000 to $3,000,000. The bank attracted over 3,000 new customers and increased credit access for low-to-moderate-income borrowers.

Background: Kansas City, Missouri, has a population of approximately 510,704 as of 2023. The median household income is $67,449, with a per capita income of $49,122. The city has a poverty rate of 14.57%. 95.2% of households own a computer, and 88.9% pay for a broadband internet subscription. Kansas City is home to a vibrant small-business community, with more than 50,000 businesses employing fewer than 100 people, equating to about 25 small businesses per 1,000 residents.

Legislation and Notable AI Deployment by Government: In 2025, Missouri introduced several legislative efforts to address the risks and ethical concerns surrounding artificial intelligence. House Bill 673 would require all political advertisements created using generative AI to include a clear disclosure, regardless of whether AI was used for the entire ad or just a portion. Similarly, Senate Bill 509 mandates disclaimers for AI-generated political content that depicts individuals saying or doing things they never did, especially if the content is intended to mislead voters or harm candidates.

While Missouri has not enacted a comprehensive open data law, recent changes to the Sunshine Law have raised concerns among transparency advocates. A 2025 amendment allows government agencies to require full payment of records request fees before processing, and to cancel requests if fees are not paid within a set timeframe. Critics argue that this could create barriers to accessing public information.

Problem: A small to mid-sized community bank operating 11 branches across Kansas and Missouri is primarily recognized for mortgage lending. The bank focuses on consumer banking within its local region, aiming to help everyday customers “move down the path to prosperity.”

The bank did not offer unsecured personal loans, even though many customers needed them to consolidate high-interest debt. This gap limited its ability to help customers refinance credit card balances at lower rates. The bank wanted to add personal loans to stay competitive and meet customer needs. However, building a digital lending platform from scratch would cost too much and require more technical resources than the bank had. The bank needed a way to offer fast, affordable personal loans without putting pressure on its small IT and operations teams.

AI Used: The banking institution turned to an AI-powered lending platform to facilitate its ability to offer unsecured personal loans. The AI tool assesses credit risk based on thousands of data points, not just credit scores. This helps identify borrowers who may not qualify under traditional methods. The AI tool provided a full solution, including an online loan portal, AI underwriting models, and credit bureau integration. The bank did not need to build these tools itself. The bank launched the new system in about three months. The AI reviews loan applications in real-time, approves or denies credit within minutes, and sets interest rates based on risk. The bank kept control over its lending policies by setting its own risk limits and approval rules. Staff focused on customer service, while the AI handled credit analysis and onboarding.

Implementation & Challenges: This conservative community bank was cautious about partnering with fintech companies due to previous experiences with vendors lacking transparency. To address this, the Chief Innovation Officer (CIO) promoted the AI project internally, highlighting the AI tool provider's collaborative approach. Beyond the CIO's efforts, the AI tool provider built trust by providing real-time insights into their models and performance data.

Resource constraints posed another hurdle. The bank lacked the in-house expertise to develop an AI underwriting platform and sought a turnkey solution. The bank offered comprehensive integration and support services, but its small IT and compliance teams still needed to ensure seamless integration and adherence to regulatory standards. Close collaboration during the three-month implementation facilitated connections to credit bureaus and compliance with fair lending laws.

Internally, the bank managed risk by adopting a "crawl, walk, run" strategy. Given the uncertainty about how the AI-driven loans would perform, the bank set an initial small loan volume target of $500,000 per month when it launched in April 2019. This cautious rollout allowed them to monitor performance closely.

During the COVID-19 pandemic, many individuals held onto their money. However, this led to the bank being flooded with customer deposits post-pandemic and needing to lend out that capital to maintain margins. The AI system faced a real stress test in this volatile economy. Weekly meetings between the AI tool provider and the bank helped adjust lending criteria in real time as market conditions changed. Thanks to the AI's flexibility, the bank could quickly tweak its risk thresholds and even pause or dial back lending if needed.

Outcomes & Next Steps: The bank launched its AI-powered personal loan program in about three months. This fast rollout helped the bank offer a new product without building it from scratch, avoid high development costs, and quickly gain a competitive digital lending option. As a result, loan volume grew steadily. The bank started with $500,000 in monthly loans and reached $12 million per month by early 2022. This growth happened without large increases in credit losses. The AI helped assess risk accurately, even during the uncertainty of the post-pandemic.

The program also helped the bank attract over 3,000 new customers in three years. Many were outside the bank's usual branch areas because AI allowed the bank to reach more people through digital channels. These new customers may later use other services like checking accounts or mortgages. AI has also made the lending process more efficient. Loan officers spent less time reviewing applications. The bank did not need to hire a large team or build its own system. The AI tool provider's platform also supported marketing, which helped lower the cost of finding new borrowers.

The Bank controlled lending rules, like loan size and risk cutoffs. As results improved, the bank raised the maximum loan amount from $30,000 to $50,000. The program increased access to credit. Before using AI, about 24.5% of loans went to LMI borrowers. However, by mid-2021, that share had grown to 38%. The AI made it easier to approve creditworthy people who lacked high credit scores. This helped more families in modest-income areas cover important expenses such as home repairs or education.

The success of the personal loan program has opened doors for the bank to expand into other areas. Encouraged by results, the bank decided to extend AI-driven lending into auto refinancing loans by Q2 2022. This variance can create new revenue streams. Moreover, the executive team's mindset shifted to be more innovation-friendly.

Taking calculated risks with AI tools can lead to economic upsides for organizations and the municipalities they serve. This banking institution's efforts have led to an increased uptake of its products and, given that it offers financial products, economic improvements for its customers and the region. Modernizing and improving product offerings through the responsible, risk-considered application of AI tools is an improvement worth considering in many different organizations and across sectors.

Case Example #7: Banking and Finance (2)

A fintech company developed an end-to-end platform that enables community banks, credit unions, CDFIs, and foundations to reach more entrepreneurs, reduce operational inefficiencies, and expand access to capital for underserved borrowers.

Background: According to 2020 and 2023 census data, Durham, North Carolina, has a population of 283,506, a median household income of $80,064, and a poverty rate of 10%. Small businesses make up 99.6% of the state's businesses.

Legislation and Notable AI Deployment by the City's Government: North Carolina has adopted the State Government Responsible Use of Artificial Intelligence Framework, which outlines principles, practices, and guidance to promote the ethical and effective use of AI across public agencies. This framework emphasizes transparency, accountability, and responsible innovation.

In addition to this framework, the state has enacted legislation addressing several key areas of AI governance:

- Election and Media Integrity: Laws regulate the use of deepfakes in political campaigns and media to prevent misinformation.
- Data Privacy: Residents have the right to opt out of personal data processing, enhancing individual control over digital information.
- Healthcare Applications: AI cannot be used to determine the medical necessity of healthcare services, ensuring human oversight in critical decisions.
- Youth Data Protection: Using minors' data for advertising or algorithmic recommendations is prohibited.
- AI Chatbots and Platforms: Regulations govern chatbot transparency and impose a duty of care on covered platforms, requiring them to implement the highest privacy settings by default.

At the local level, Durham, North Carolina, has embraced open data principles and provides public access to datasets through an online portal. This supports transparency, civic engagement, and innovation by enabling residents, researchers, and businesses to leverage public data for community benefit.

Problem: A fintech company founded in 2017 in Durham, North Carolina, offers an automated, customizable end-to-end platform for lending and grantmaking. The company was initially launched as a direct-to-consumer crowdfunding platform for small business loans, but high customer acquisition costs and scalability challenges threatened its viability. Like many community lenders, it lacked efficient, technology-enabled loan processing systems, relying instead on manual and disconnected processes. This limited their ability to serve borrowers efficiently, especially those in underserved communities.

AI Used: The company pivoted to providing its technology directly to lenders as a B2B platform. It developed a white-labeled, end-to-end platform that manages application intake, underwriting, servicing, reporting, and compliance. This enables community banks, credit unions, CDFIs, and foundations to reach more entrepreneurs, reduce operational inefficiencies, and expand access to capital for underserved borrowers.

It integrated AI tools to automate document processing, reduce loan closing times, and lower costs. The platform also leverages AI-enabled workflows to improve underwriting efficiency and help lenders better evaluate and service a wider pool of borrowers.

Implementation and Challenges: The company's strategic pivot from DTC to B2B emerged after lenders expressed interest in using the software themselves. The company faced challenges integrating AI tools with lender systems, building trust among cautious financial institutions, and hiring specialized staff. Participation in an accelerator program provided mentorship, legal guidance, and technical expertise. A major implementation challenge was balancing speed of deployment with compliance and data security, which are critical in the financial services sector.

Outcomes and Next Steps: The company's platform quickly scaled, enabling thousands of entrepreneurs to access hundreds of millions of dollars in loans. During COVID-19, the platform powered North Carolina's $140 million Rapid Recovery Loan Program, with 58% of loans going to minority- or women-led businesses. A grant allowed them to expand their team, improve customer support, and secure multi-year licensing deals. The company plans to scale sales, develop partnerships with community lenders, and roll out new capital-access products to further broaden financial inclusion.

Case Example #8: Environment and Health (1)

Carnegie Mellon University (CMU) worked with Allegheny County, Pennsylvania, to develop a crowdsourced data collection app to better understand and support air quality decision making.

Background: Allegheny County, PA, had a population of 1,224,825 in 2023 and a median income of $76,393. The county encompasses the city of Pittsburgh along with several surrounding urban and suburban communities. 93.3% of households reported having a computer, and 89.8% of households paid for a broadband subscription. In 2022, Pennsylvania had 1.1 million small businesses, which employed 2.6 million people.

Legislation and Notable AI Deployment by Government: Pennsylvania has taken two notable actions on AI. First, a 2023 Executive Order from the Governor established a Generative-AI Governing Board. The board helps manage the state's deployment of AI but does not address the use of AI by local governments or other sectors. The second was S.B. 1213 from the 2023-24 session, which addresses AI deepfake images of minors.

In the current session, H.B. 95 aims to differentiate between AI-generated content for consumer goods by requiring disclosure of AI-created content.

Pennsylvania has not enacted any open data laws.

Problem: Allegheny County is a former industrial region, known for its coal and steel industries. Despite those industries' changes and declines, the area still struggles with air pollution. Low air quality caused by high ozone concentrations and other particulate matter can lead to various health complications, odors, reduced quality of life, and other externalities that impact the county. The 2021 American Lung Association assessment ranked the Pittsburgh metropolitan area 19th in year-round particle pollution among 204 metropolitan areas.

AI Used: CMU planned to study air quality in the county to increase understanding and improve community decision making. CMU developed a crowdsourced data collection app to better understand and support action and decision making around air quality challenges. Its development was supported by a local endowment and in collaboration with the Allegheny County Health Department (ACHD). The app allows the public to submit data for good and bad conditions, collecting various information and media to support the reported air quality. This data is processed using machine learning and provided to ACHD.

Implementation and Challenges: CMU released the app on iOS and Android devices, enabling most individuals with a smartphone to participate in the data collection. Users submit "Smell Reports" detailing the rating, location, symptoms, time, and description of the smell. This data is delivered to the ACHD as a daily bulk report.

One of the primary challenges with this type of AI deployment is securing consistent user engagement. While residents may notice poor air quality or detect odors, they often do not report these observations through the app or other channels. Ensuring the app is intuitive and efficient is essential to encouraging widespread participation and collecting meaningful data.

In addition, outreach and visibility are essential to collecting sufficient data. Unlike popular social media, marketing, or gaming platforms, this app does not naturally attract high user traffic. Ensuring that residents across the county are aware of the app—and motivated to use it—remains a significant hurdle for this initiative and similar efforts globally.

Outcomes and Next Steps: The public-facing interactive map allows one to visualize the reports and other critical information about air quality. The crowd-sourced and machine-learning-analyzed data allowed Allegheny County and surrounding communities to improve their understanding of air quality. Additionally, the data helped develop a case for an EPA investigation into a factory's compliance due to the reported deleterious impacts on the surrounding community.

A better understanding of the cause of inferior air quality leads to better air quality, improved community health, and, ideally, enhanced socioeconomic activity in the community and region. Additionally, deploying similar crowd-sourced and AI-evaluated tools can help benchmark and monitor other regional conditions. These data sources increase citizens', businesses', and the government's understanding of what changes and improvements their community needs to improve their quality of life and, hopefully, economic activity.

Case Example #9: Environment and Health (2)

A private company partnered with resident associations and corporate collaborators to build a localized air quality monitoring network across Detroit's Transportation Innovation Zone (TIZ) to support data-driven advocacy and healthier communities.

Background: According to 2020 and 2023 census data, Detroit, Michigan, has a population of 639,111, a median household income of $38,080, and a poverty rate of 31.9%. Small businesses make up 98% of the state's businesses.

Legislation and Notable AI Deployment by Government: Michigan has very limited legislation related to AI. One law regulated the use of AI in political advertising by requiring a clear and conspicuous disclaimer. Michigan's Civil Rights Commission has developed five guiding principles for AI use.

Detroit has enacted an open data policy and provides information to business owners and residents through an online portal.

Problem: A small business in Detroit, Michigan, is committed to making air quality information more accessible by partnering with various groups and working with the community to determine what data is needed.

Detroit residents experience disproportionately poor air quality, posing an ongoing environmental justice challenge. Traditional top-down monitoring systems often fail to capture neighborhood-level variations, limiting residents' ability to advocate for change or make informed health decisions. This underscores the urgent need for community-driven, data-rich air quality monitoring that reflects local conditions and empowers residents with actionable insights.

AI Used: The company's platform supports Universal Air Monitoring, which integrates diverse sensor types, from low-cost to reference-grade, and applies automated quality control, data standardization, anomaly detection, and alert systems such as real-time text notifications. While not explicitly AI-labeled, these features function like AI-driven data processing to transform raw sensor readings into actionable, trustworthy insights.

Implementation and Challenges: The project kicked off in August 2023, and a partnership was developed with Green Door Initiative's Air Quality Installation team. In December 2023 and July 2024, this company held community workshops that engaged residents, particularly from Hubbard Richard, North Corktown, and Corktown neighborhoods, to select monitor locations jointly.

Six monitors were deployed within the TIZ. These sensors are connected to the company's dashboard, and residents can sign up for real-time text alerts. The project used multiple tools for data accuracy and source detection.

Some challenges that needed to be addressed included coordinating with diverse stakeholders (such as residents, environmental justice groups, corporate entities), deploying and calibrating monitors in urban environments, maintaining sensor quality and reliability, and ensuring data trust and accessibility to drive real-world engagement and policy impact.

Outcomes and Next Steps: Detroit now hosts a resident-informed air monitoring network in the TIZ, featuring live sensor data, actionable public dashboards, and SMS-based alerts that empower community awareness and advocacy.

The next steps include expanding the monitoring network beyond the TIZ, deepening partnerships with local organizations and policymakers, leveraging data for regulatory or zoning advocacy, and scaling this participatory model across Detroit and beyond. After the success of this pilot, they plan to scale this operation and develop recommendations to improve resident health and reduce overall pollution.

Case Example #10: Citywide - Miami-Dade, FL

Examining Miami-Dade's emergence as a technological innovation hub demonstrated the impacts of communities of practice, start-ups, and convenient learning opportunities.

Legislation: Florida has enacted AI laws regarding political campaign deepfakes, forming a technology modernization advisory council and a healthcare innovation council, and its use in state education. Florida has not enacted any laws restricting AI use for private businesses' regular operations. The state has also enacted open data laws protecting businesses' access to public data.

Harnessing AI: Small Businesses in Greater Miami: In recent years, the greater Miami area has become a dynamic center for technological innovation, with small businesses leading the way in adopting AI to improve operations and boost competitiveness. This transformation is driven by a series of strategic initiatives and partnerships that have enabled local entrepreneurs to integrate AI tools into their business models in practical and impactful ways.

AI Marketing Accelerator: One such initiative is the AI Marketing Accelerator course, organized by the District 5 Commissioner in partnership with a digital marketing and education firm. This course is specifically designed to help local merchants master AI tools for marketing and sales, ensuring they can thrive in the digital economy. The program has proven successful, with participants from previous cohorts reporting that it spurred new revenue and saved time.

Digital Competitiveness: The AI Marketing Accelerator addresses a pressing need for digital competitiveness among small businesses. It provides entrepreneurs with practical, hands-on training in a range of AI marketing tools, helping them generate leads, create compelling visuals, and improve outreach. The course is delivered virtually via Zoom, making participation accessible to a wide audience.

Benefits and Results: The impact of this initiative is reflected in the performance metrics reported by previous cohorts. Participants reported a 129% increase in task completion and a 75% rise in the adoption of AI tools. Notably, 68% reinvested the resulting time and cost savings into business growth, customer acquisition, and improved work-life balance. One company credited the tools with securing a significantly larger client and opening the door to potential national brand distribution. A company representative remarked that the tools could "double, triple, quadruple growth this next year." These outcomes highlight the transformative potential of AI in driving efficiency and expansion for small businesses in Miami.

Case Example #11: Montgomery County AI Adoption and Collaboration

A county focused on internal AI adoption, reasonable policies supporting its use, and effective education of its employees on AI and their use of the tools. The state of Maryland and other counties are considering adopting this approach.

Background: Based on 2022 census data, Montgomery County, Maryland, has a population of 1.06 million and a median household income of $125,583. Data indicates that 98% of households have a computer, and 95.3% pay for a broadband internet subscription. More than 95% of businesses in Montgomery County have fewer than 50 employees.

Legislation and Notable AI Deployment by Government: AI is not one of the Maryland state government's established policy priorities, though more legislative action could occur in the 2024-25 legislative term. Maryland has three existing state policies related to AI use. Maryland regulates the use of facial recognition technology by law enforcement, prohibits the use of facial recognition technology without consent, and requires mandatory reviews of and policies for AI use by state agencies and higher education institutions. The state has also enacted open data laws protecting businesses' access to public data.

Problem: AI adoption across sectors and throughout communities leads to new challenges. Businesses, governments, academic institutions, and citizens must consider various data security, transparency, bias, and other issues as they engage with the technology. As a result of AI's increasing popularity, the Montgomery County Government decided to take a proactive approach to safely adopt AI and provide guidance on AI adoption in the public and academic sectors. In response to emerging challenges and needs, the County developed its AI Action Plan.

Steps to Adopting an AI Action Plan: Montgomery started the process by establishing their AI Center of Excellence (AICOE). The AICOE aims to "utilize nascent technologies to improve service delivery, optimize resource utilization, and ensure a higher quality of experience for stakeholders and residents." The AICOE has two current key initiatives. The first initiative is to prioritize coordinating resources across the county to support the adoption of AI. This process includes:

- Collaboration between different aspects of the public sector, forming partnerships between the private sector, academia, and other internal teams;
- Coordination with other jurisdictions to share best practices; and
- Recruitment of specialized talent that can enable the successful adoption of AI.

The second initiative is to update and create human-centered policies to ensure ethical use of government data when adopting and using AI tools. This process includes:

- Developing and updating AI-related policies and guidelines;
- Researching best practices;
- Collaborating with stakeholders; and
- Ensuring that AI policies are followed.

Following the establishment of the AICOE, Montgomery County prioritized stakeholder engagement. Recognizing the importance of collaboration across sectors, the county sought to involve internal teams, residents, private sector partners, nonprofit organizations, academic institutions, and other government entities.

To lead this effort, the AICOE appointed a Community Relations Manager responsible for cultivating partnerships, forming project cohorts, maintaining clear communication with stakeholders, encouraging student involvement in research, and identifying shared resources and expertise to advance common goals.

Once a strong foundation of engagement was established, Montgomery County developed its Government AI Action Plan. The plan is organized into four key areas: AI strategy, AICOE structure and staffing, AI governance, and AI partnerships. Looking ahead, the county acknowledges the need for continued growth in AI adoption and readiness. Over the next year, it plans to implement 13 high-level action items to advance this work.

Intergovernmental Collaboration: While developing its AI Action Plan, Montgomery County officials met with representatives from the State of Maryland to present their proposed strategy. This dialogue helped align messaging and foster collaboration between county and state leaders on AI adoption. The discussion also explored a long-term, statewide approach to AI implementation focused on enhancing efficiency and sustainability.

Change Management and Workforce Upskilling: Montgomery County partnered with a third-party organization to train government employees on the ethical use of AI tools. As part of this initiative, the county developed and launched a self-paced learning course accessible through its internal education portal. The course covers foundational AI concepts, ethical considerations for public sector use, and guidance on effectively applying the county's AI tools. To assess comprehension and improve future training, the county collects employee feedback throughout the course.

In parallel with training efforts, Montgomery County is updating job descriptions and recruiting for new roles to reflect the evolving digital environment. For example, positions such as data specialists now include responsibilities related to data hygiene and AI adoption, ensuring the workforce is equipped to support and sustain AI integration across departments.

Outcomes and Next Steps: To foster a more successful adoption of AI throughout the government, Montgomery County understands that change management and adapting the workforce to meet technology's evolving needs are important goals. However, the county also recognizes that it must extend its efforts beyond its internal operations.

AI in Public Services: In March 2024, Montgomery County launched an AI-powered MC311 chatbot, recently upgraded to Monty 2.0. The enhanced version can respond to over 3,000 topics, support interactions in more than 100 languages, and collect user feedback through thumbs-up/down ratings and comments to continuously improve its performance.

The original Monty 1.0 was developed in partnership with the private sector and piloted within weeks. Following the pilot, the county identified the most frequent resident service requests and expanded the system to include a telephony interface capable of routing emergency calls and handling non-emergency inquiries.

Within just two months of deployment, Monty 1.0 reduced average call hold times from five minutes to two and lowered call abandonment rates from 25% to 11%. Since the launch of Monty 2.0, chatbot usage has more than doubled, reflecting increased public engagement and improved service delivery.

AI in Academia: The University of Maryland (UM) established the AI Interdisciplinary Institute at Maryland (AIM). AIM aims to "support interdisciplinary research and education that promotes responsible, ethical, and trustworthy AI and prepare the future workforce." AIM has received funding for different AI-related projects. One project underway is a $4.5 million grant to improve math instruction and increase learning through AI use.

The University of Maryland, College Park (UMCP) is partnering with UM, Baltimore (UMB) in the Institute for Health Computing (UM-3-IHC), a collaboration with the University of Maryland Medical System and Montgomery County. The Institute will leverage AI and computing to create a healthcare system to evaluate de-identified digital medical health data to diagnose, prevent, and treat diseases.

In the UM-3-IHC partnership, Montgomery County has committed $40 million to create the next-generation health care model. In addition to the $40 million, UMB and UMCP committed $30 million to this project.

AI in the Private Sector: An employee-owned construction company in Montgomery County has embraced AI to enhance its operations. The company began by assessing and standardizing its digital processes, then consolidated its financial, project management, and business development data into a single cloud-based data warehouse.

With its data infrastructure in place, company leadership developed a strategic, enterprise-wide approach to technology adoption, actively incorporating employee feedback to identify promising AI use cases. The company then built proprietary AI tools using natural language processing to generate conversational outputs based solely on its internal data. These tools can personalize tenant communications, produce tailored one-pagers for meetings, and search and analyze content across the data warehouse—streamlining workflows and improving efficiency.

Case Example #12: Academic and Nonprofit Collaboration (Food Bank and Emergency Management)

An academic and nonprofit collaboration championed food distribution during severe weather and other emergencies, deploying AI tools to mitigate food insecurity, support disaster partners, optimize supply chains, and minimize health impacts.

Background: Harris County (Houston), Texas, has a population of approximately 5.01 million and an average median household income of $73,104. As of 2023, 96.1% of households reported owning a computer, and 91.0% had broadband subscriptions.

Legislation and Notable AI Deployment by Government: Texas state-level legislation of AI is predominantly focused on deepfakes and facial recognition/biometrics data collection (HB 2278 – 2019). Texas enacted SB 1361 (2023), HB 2700 (2023), and SB 751 (2019), addressing deepfake images and videos containing sexual content and making it a criminal offense to produce fabricated or deepfake political material aimed to injure a candidate or influence the outcome of an election within 30 days of an election.

Texas has enacted the Texas Responsible AI Governance Act (HB 1709). TRAIGA introduces obligations for high-risk AI, "a category defined expansively to include systems that make consequential decisions related to employment, finance, healthcare, housing, and education."

The state has also enacted open data laws protecting businesses' access to public data.

Problem: Harris County, Texas, faces many of the same challenges as other major metropolitan areas in the US, including persistent food insecurity. Pre-pandemic data indicated that over 14% of county households experienced food insecurity. This figure tends to rise during and after severe weather events. These emergencies further strain the limited resources of local food banks by disrupting supply chains and critical infrastructure, compounding the challenge of meeting community needs.

AI Used: To address this problem, the nonprofit Houston Foodbank partnered with the University of Houston, UTHealth Houston, and Vanderbilt University, along with a regional Community Advisory Council, to establish an AI-based decision-making support system aimed at improving the accessibility and resiliency of food distribution systems during severe disasters and emergencies. To accomplish this, the collaboration deployed an AI decision making tool, AI Support for Equitable and Resilient Food Distribution During Extreme Weather Events (AI-SERVE).

Implementation and Challenges: The AI-SERVE tool was developed and deployed through a National Science Foundation Civic Innovation Challenge award. It includes four modules—Planning, Preparedness, Response, and Recovery—that help identify needed disaster and food distribution partners, assess resource vulnerabilities, locate available assets, and track the needs of organizations and communities during emergencies.

Addressing food insecurity during disasters is complex. While food banks play a vital role, they often operate as fragmented networks of small community groups with limited coordination. This lack of integration can hinder efficient service delivery during crises. AI-SERVE helps bridge these gaps by cataloging and connecting decentralized efforts, improving responsiveness and resource allocation when it matters most.

Outcomes and Next Steps: The Houston Food Bank served approximately 159 million meals in 2019 through a network of 1,800 partnering organizations. This number increases during disaster and emergency scenarios. Still, the AI-SERVE platform has helped coordinate the scattered resources to meet the needs of food-insecure individuals in the Harris County region.

Since its initial success, the AI-SERVE tool has aimed to evaluate and expand its ability to communicate in real time through the platform with/between the various organizations it serves. Additionally, the collaboration is conducting tabletop exercises to help prepare for disaster events and coordinating with other regions and services that might benefit from the AI-SERVE platform's capabilities. Additionally, the collaboration offers demonstrations of the platform to facilitate that expansion.

Case Example #13: Academic

Stony Brook University relied on manual processes and spreadsheets for transcript evaluation and data entry, but switched to an AI solution, which led to application growth, increased automation, and less duplication.

Background: According to 2020 and 2023 census data, Stony Brook, New York, has a population of 13,467, a median household income of $162,054, and a poverty rate of 4.3%. Small businesses make up 98% of the state's businesses. Stony Brook University is a flagship R1 research institution with over 25,000 students based in Stony Brook, New York.

Legislation and Notable AI Deployment by the University: New York State enacted a law that limits state agencies' use of AI tools. Related to the private sector, New York has adopted a bill that targets AI companion models and algorithmic pricing to increase transparency and consumer protection. New York has not enacted any open data laws.

Problem: Stony Brook University has experienced a 73% surge in undergraduate applications in a five-year period. This overwhelmed the admissions team, which relies on outdated manual workflows such as spreadsheets and manual GPA recalculations.

Implementation and Challenges: Stony Brook University implemented an advanced AI-powered transcript processing system to modernize its admissions workflow. The solution automates GPA recalculations, detects and removes duplicate transcripts, and accurately processes a wide range of transcript formats—far outperforming legacy OCR tools, which had error rates as high as 55%.

Integrated directly into a CRM, the system now automates over 60% of transcript processing, enabling the university to manage high-volume workflows efficiently. Key challenges included scaling the technology to handle inconsistent transcript formats, replacing unreliable OCR capabilities with robust AI, and building trust within the admissions team to ensure alignment with institutional standards for fairness and accuracy.

Outcomes and Next Steps: Implementing this AI solution has enabled automated processing of over 60% of high school transcripts, eliminated duplicate entries, and improved workflow clarity and efficiency. Standardized, automated processes have replaced manual GPA calculations and course classifications, allowing staff to focus more on holistic review and student engagement. The system has also helped maintain evaluation quality during periods of high application volume and shifting policy demands.

Case Example #14: Wood Recycling

A small start-up business in California uses AI and machine-based solutions to efficiently recycle wood, which will save money and benefit the environment by limiting waste.

Background: According to 2023 census data, Oakland, California, has a population of 438,072, a median household income of $97,369, and a poverty rate of 13.7%. Small businesses make up 85% of the city's businesses.

A small company founded in 2021 aimed to reclaim lumber, glued laminated timber, and heavy timber in Oakland, California. Eleven employees are committed to recycling wood waste.

Legislation and Notable AI Deployment by Government: In 2023, the Governor of California signed an executive order that requires state agencies to study the potential uses and risks of GenAI. In this review, state agencies were required to engage stakeholders and develop policy recommendations. Results were published in 2024, leading to formal guidelines for buying GenAI tools.

The Generative AI Accountability Act of 2024 requires the review of beneficial uses of GenAI tools and a joint risk assessment of potential threats posed to the state's critical energy infrastructure.

Additional laws related to AI include a requirement to disclose when an AI chatbot is being used to communicate, AI developers disclose on their website what datasets are used in the development and training of their systems, AI providers to offer an AI detection tool to users for free, and automatic dialing services to announce if the artificial voice was altered using AI.

Beyond these requirements, California has laws in place that require state criminal justice agencies to evaluate potential biases in AI-based pretrial tools and prohibit the use and distribution of political and sexually explicit deepfakes.

In healthcare, California has enacted two laws that require a disclaimer if AI is used to develop communication with patients and require insurers that use AI in utilization review and management decisions to comply with requirements, including federal rules and guidance, and ensure that the application is equitable and fair.

Finally, California has enacted two data-related laws. One law categorizes neural data as sensitive personal information and requires businesses to obtain consent before accessing it. The second law clarifies that AI-generated data is treated as personal information. California has not enacted any open data laws.

Problem: The US generates about 37 million tons of construction and demolition wood waste, which takes an environmental and economic toll. A strategy for recycling wood did not exist. Incorrectly disposed of wood waste can lead to water and air pollution, habitat destruction, and increased greenhouse gas emissions. Reducing wood waste can lead to cost savings through material reuse, job opportunities in the recycling industry, and increased revenue due to sustainable production practices.

AI Used: The company's founders developed a robot to automate metal-fastener removal and created AI software that powers the machine. The machine is mobile and can be used to reclaim wood onsite. It uses high-speed gantries, precision end effectors, and vision systems to identify and remove metal pieces from the wood using robotic arms. The wood is then cleaned and can be sold for use in new construction projects.

Implementation and Challenges: After identifying the problem, the company's founders developed a benchtop prototype and raised pre-seed funding. In just a year, the company was able to fabricate its first production machine. In just over a year, the company built four iterations, including development, testing, and iteration.

Implementation and development are ongoing. Following the development of the AI system, the company partnered with recycling facilities to begin running pilot projects. The pilot programs included bringing their AI machines to different facilities for a few months, running the machine on various products to determine its effectiveness, and then noting errors to be addressed in the next iteration of updates.

Outcomes and Next Steps: The company plans to have over 12 machines operating by the end of 2025. With this growth, it predicts that it will be able to reclaim about 50% of the 37 million tons of wood waste in the U.S.

Recycling poses a significant financial challenge for municipalities and regional governments. To generate revenue from selling collected plastic back to manufacturers, recyclers must meticulously sort through waste to find nearly pristine plastic. To address this issue, NIST is exploring AI- and machine-based solutions.

One promising approach involves using machine learning to detect near-infrared (NIR) light signatures unique to different types of plastic. The system can automatically and efficiently sort materials by training a computer to recognize these NIR characteristics. This innovation could streamline recycling operations and reduce costs for local governments.

Some municipalities have already begun integrating AI into their waste management systems. In East Lansing, Michigan, a citywide pilot program equipped recycling trucks with AI-powered cameras trained to identify and photograph non-recyclable materials. Residents then receive postcards notifying them of sorting errors. Similarly, at the Seattle-Tacoma Airport and the Bell Harbor Conference Center, new AI waste-sorting technology allows users to place items in front of a camera, guiding them to the correct disposal bin.

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