



# The New Modernization Mindset

A GovLoop Guide



# Introduction

Across the public sector, agencies can cite many obstacles that hinder their modernization efforts, including a lack of reliable multiyear funding, outdated skills among IT staff and cumbersome procurement processes. Given the pressure to improve their operations' efficiency, a growing number of agencies are taking steps either to remove those obstacles or push ahead with modernization in any case. **That's the new modernization mindset: transformation or bust.**

In this guide, we highlight examples of this new mindset at work across federal, state and local governments. We begin by highlighting the evolution of some perennial themes in modernization: legacy technology, consolidation, secure cloud and, of course, artificial intelligence. Then, because of AI's importance, we explore four ways the technology could transform how government gets work done.

But a modernization initiative needs more than cool gadgets. It also needs good governance. For instance, with so many possibilities, how do you decide where to invest your money? And how do you ensure those investments pay off? We interviewed Zarina Baber, Chief Transformation Officer for Minnesota, to learn how she is answering these questions.

When it comes to modernization, 2025 is shaping up to be a pivotal year. We look forward to seeing how these issues continue to evolve in 2026.

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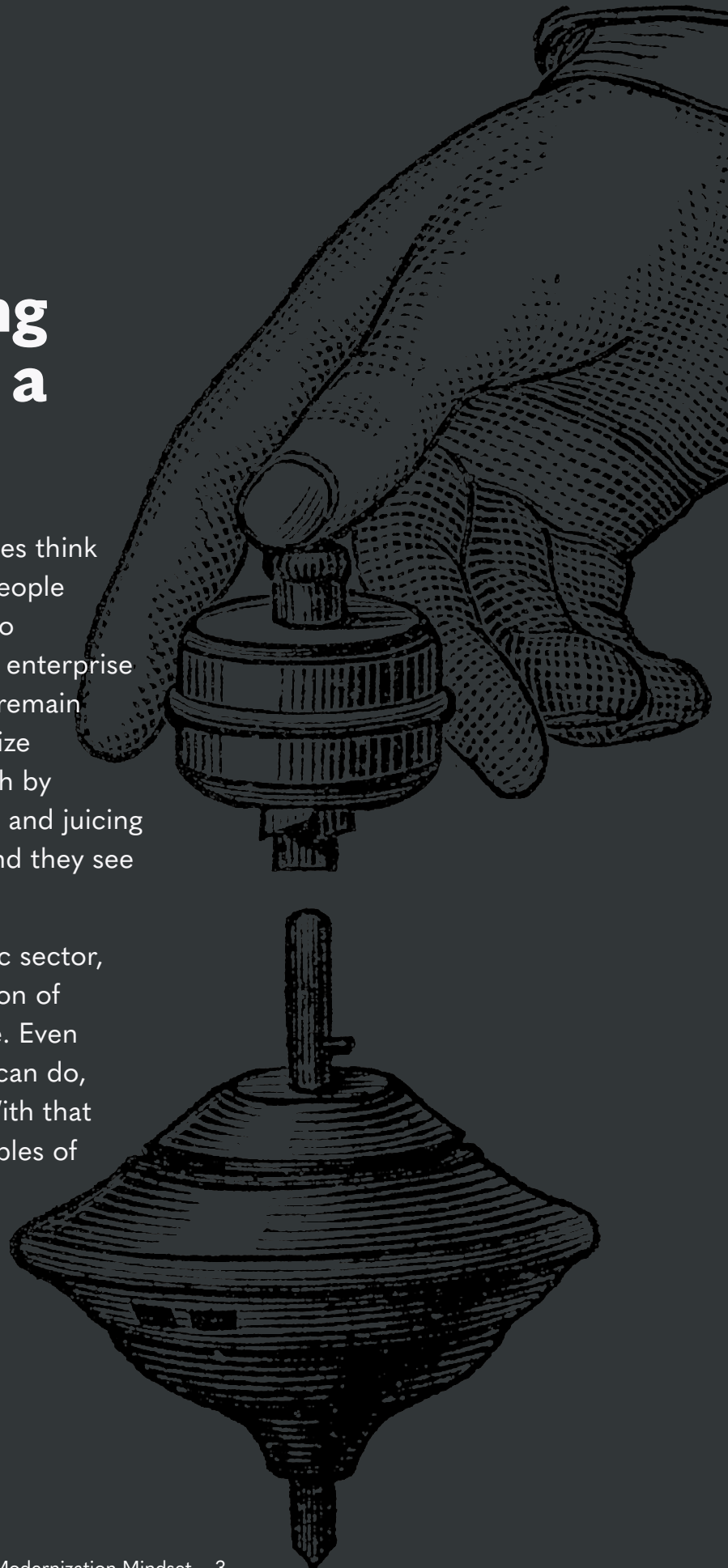
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# How AI Is Giving Modernization a New Spin

AI is changing how government agencies think about modernization. Until recently, people typically used modernization to refer to upgrades to core IT infrastructure and enterprise applications. Although such upgrades remain essential, agency officials now emphasize transforming how work gets done, both by automating a wider range of workflows and juicing the productivity of their employees, and they see AI playing a big role in all of it.

Given all the talk about AI in the public sector, it's worth noting that the new generation of AI technology is still in a nascent stage. Even as agencies are trying to learn what it can do, the technology continues to evolve. With that caveat, here are some emerging examples of modernization in the age of AI.





# Agentic AI Extends Automation's Reach

## What's New

Generative AI and other automation tools excel at performing specific tasks, but agentic AI can automate entire processes or workflows with minimal human intervention, significantly enhancing operational or service efficiency.

## How It Works:

Agentic AI is goal-oriented. Given an objective, it determines how to accomplish it. The technology can break down a broad goal into subgoals or individual tasks; access the necessary data sources, large language models and tools to complete those tasks; and adapt its approach based on the results. Autonomy is its superpower.

For example, consider an agency that processes applications for a benefit or service, said Ted Kaouk, Chief Data and AI Officer at the U.S. Commodity Futures Trading Commission, during a recent event.

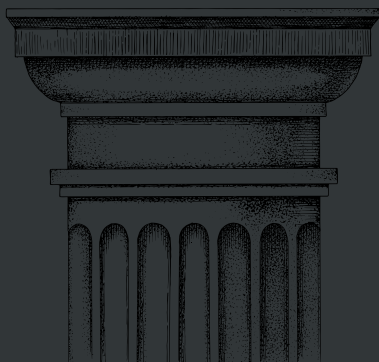
Today, an agency might use AI and other tools to automate individual steps in the process. But with agentic AI, it can create a seamless, end-to-end workflow, Kaouk explained: "The intake of an application can be cross-referenced against multiple databases, draft reports generated, and then reviewed and verified by a human, ensuring that a human remains in the loop."

## What's Next:

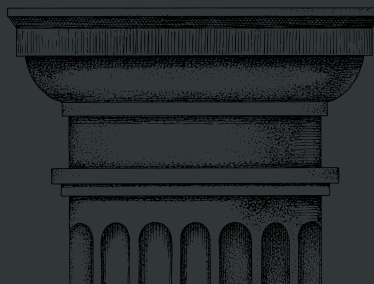
Eventually, agencies should be able to use agentic AI to modernize even more sweeping processes across the enterprise, according to a study by [Forrester Research](#), but we're not there yet. "Today's agentic AI can't achieve an enterprisewide level of broad-based autonomy and agency because of limitations on integrations, security, and explainability — but it's evolving along that path," the report states.

*Agentic AI workflows are based on three pillars, according to the [Prompt Engineering and AI Institute](#):*

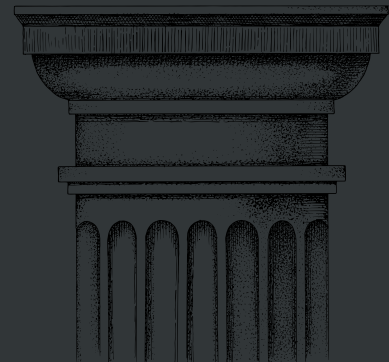
**AI agents:** Individual instances of large language models, which can carry out tasks



**GenAI networks, or GAINs:** A network of agents that can collaborate to carry out the various tasks that make up a process or workflow



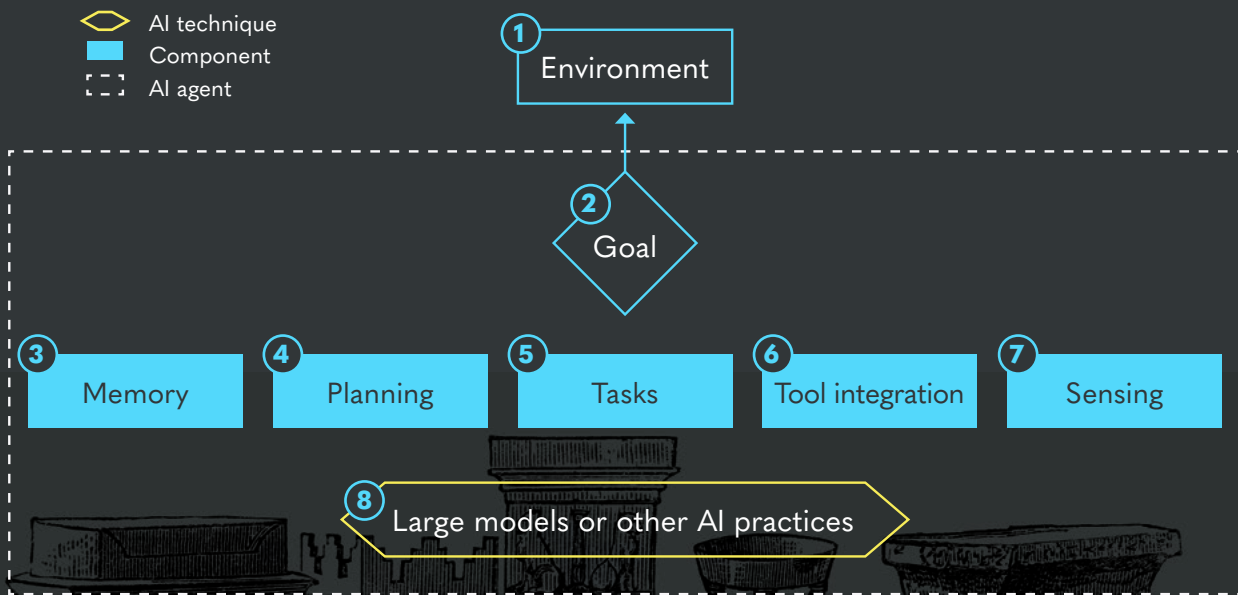
**Prompt engineering frameworks:** Advanced techniques for defining the work to be done



## Key Components for Building AI Agents

Here is how Gartner describes the architecture of AI agents:

- ① **Environment:** The agent's physical or digital arena
- ② **Goal:** The agent's overall purpose
- ③ **Memory:** Stores information, past experiences and task-relevant preferences
- ④ **Planning:** Breaks down the goal into smaller tasks
- ⑤ **Tasks:** List of assignments for execution
- ⑥ **Tool integration:** Allows the agent to interact with various resources, such as databases, software and browsers
- ⑦ **Sensing:** Enables the agent to gather information from its surroundings
- ⑧ **AI model:** Gives the agent access to critical skills and knowledge, such as natural language processing and problem-solving, with the ability to access multiple types of models (large, small, other)



Source: Gartner

## INDUSTRY SPOTLIGHT

# How to Bring Greater Efficiency to Network and Cyber Operations

WATCH VIDEO



*"You can create a consolidated environment that provides the full breadth of required services but with highly efficient management."*

– Bill Lemons, Fortinet Federal

Network and security modernization initiatives have taken on new importance in recent months. With return-to-office mandates, agencies are concerned about their legacy infrastructure's ability to handle the surge in bandwidth requirements. At the same time, as the threat landscape continues to evolve, agencies also are looking to adopt advanced cyber capabilities, such as defense-in-depth, micro-segmentation and zero trust.

Increasingly, agencies recognize they need to take what's known as a converged approach, integrating their network and cyber infrastructure in a common platform. This approach also helps improve the efficiency of IT operations, said Bill Lemons, Director of Systems Engineering at Fortinet Federal.

In this [video interview](#), Lemons discusses best practices in shifting to a converged approach. Topics include:

- Closing the knowledge gap that hinders cybersecurity efforts
- Reducing the total lifecycle costs associated with managing infrastructure
- Incorporating new and emerging technologies into the IT environment

## About Fortinet Federal

Fortinet Federal, a wholly owned subsidiary of Fortinet, Inc., is dedicated to delivering trusted cybersecurity and IT modernization solutions to U.S. federal government agencies. Fortinet Federal provides the public sector with a comprehensive cybersecurity platform that combines advanced threat protection, secure access, and integrated cloud and network security to anchor any agency zero-trust architecture. Trust Fortinet Federal to safeguard your agency operations and mission-critical assets.

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# Chatbots Accelerate Information Access

## What's New

GenAI makes it much easier for employees and the public to find information without having to sift through long strings of search results or navigate website menus.

## How It Works:

Although no one is predicting the demise of traditional search engines just yet, some experts believe that a growing number of users and organizations will increasingly turn to chatbots and related AI technology, given their ability to deliver more targeted results. Gartner has predicted that search engine volume could decrease 25% by 2026 as that shift picks up speed.

For example, the U.S. Coast Guard has launched an internal GenAI tool called Ask Hamilton, named after Alexander Hamilton, founder of the service. It helps service members navigate the Coast Guard's human resources policies and regulations. Initially, the service developed Ask Hamilton as a general-purpose "sandbox" for testing AI applications, said Brian Campo, Deputy Chief Technology Officer at the U.S. Department of Homeland Security, speaking at a May 2025 event.

But at that time, the Coast Guard was also in the process of updating a significant number of its HR regulations, and "it was really hard for our service members to keep up with those changes," Campo said. "We saw Ask Hamilton as an opportunity for us to address that."

So, they trained a chatbot on the full corpus of Coast Guard regulations and policies. Not only can users retrieve specific documents, but they can ask questions to get further insights, he said, adding that the system will not answer any questions unrelated to that knowledge base.

## What's Next:

The Computing Community Consortium, a nonprofit focused on advancing the use of technology in research, recently held a workshop to study the impact of GenAI on information retrieval (IR). The final report identified eight issues that could be key to developing GenAI-based IR systems and methodologies (see sidebar). "As we witness the proliferation of generative AI-driven models, such as diffusion and large language models (LLMs), it has become increasingly evident that the boundaries of IR research are expanding," the report states.

## How to Advance GenAI-based Information Retrieval

*The Computing Community Consortium recommends conducting research in the following eight areas in the next five to 10 years:*

- 1. Evaluation:** Developing tools and techniques for evaluating future LLMs for IT
- 2. System training:** Collecting and using user feedback to train GenAI-based IR systems
- 3. User modeling:** Taking a user-centered approach to developing new systems
- 4. Social ramifications:** Studying socio-technical and ethical challenges that might arise with GenAI-based IR
- 5. Personalization:** Exploring how users could turn a GenAI-based system into personal assistants
- 6. Scalability:** Ensuring that an organization's capacity for computing power, data and human effort can increase as demand increases
- 7. AI Agents:** Building IR-focused agents that are ubiquitous, effective and inexpensive
- 8. Foundation Models:** Identifying the needs and potential next steps in creating foundational models for information access and discovery



# Natural Language Processing Gives Analytics a Human Touch

## What's New

One of the basic challenges for a data analyst is to find a way to translate a hypothesis or question into language a computer can understand. But recent advances in AI have sparked new interest in the promise of a decades-old concept known as natural language processing.

## How It Works:

A branch of AI dating to the 1940s, NLP essentially enables a human and a system to talk to each other without using a traditional programming language as a go-between. Many people already use NLP. When you ask Alexa to look up a movie or dictate a text message to Siri, NLP translates your request into a language the system can understand and then translates the results into speech.

The same technology supports customer service chatbots, language translation tools and, increasingly, analytic tools. By taking manual queries or coding out of the process, NLP allows the user to spend more time thinking about the task at hand.

For example, the Navy collects a constant stream of data on ship systems and equipment that it can use to anticipate potential problems and to devise more effective maintenance schedules. NLP could make it much easier for maintenance teams to gain insights from that data.

If a problem arises with a piece of equipment, "I want to look at the data and know immediately why that may have happened," said Stuart Wagner, Chief Data and AI Officer at the Department of Navy, speaking at a recent event. "Instead of needing to interrogate that with code, interrogate it with human language."

## What's Next:

Advances in NLP will continue to reshape how organizations interact with data. For example, by providing a common language for data queries, the technology could make it easier for users to conduct multimodal data analysis, the integration of insights from text, images, audio and numerical data. However, technology vendors and researchers are working to improve the ability of systems to translate natural language into more precise queries and to deliver results that are more readily understandable.

## The Art of Translation

**Natural language processing is a form of AI that uses machine learning and other techniques to train systems to understand human communications, whether written or spoken. NLP has two major components →**

### 1. Natural language

**understanding:** Given a command or asked a question, NLU parses the sentence to discern both the intent and the context of the user's request and uses that information to generate a query that the system can understand.

### 2. Natural language generation:

Given the results of a query, NLG translates the information into natural language for the user. In crafting a response, the technology is designed to consider not just the literal meaning of words, but tone and phrasing that can provide more human-like expression.



# GenAI Finds Role as an All-Purpose Digital Assistant

## What's New

Despite all the talk about AI wiping out jobs in the private sector, government leaders are more optimistic. They see AI, and GenAI in particular, serving more as a digital assistant for employees, boosting their productivity and reducing a lot of tedious work.

## How It Works:

In a sense, any automation tool can be described as a digital assistant. But GenAI's versatility sets it apart: It can help employees working both in general administration and more specialized roles.

In 2024, Pennsylvania conducted a 12-month [GenAI pilot project](#) in collaboration with the Carnegie Mellon University Block Center for Technology and Society. The state's Office of Administration provided ChatGPT to 175 employees at 14 agencies and encouraged them to explore different use cases, from writing assistance and idea exploration to policy revisions and computer coding.

In a post-pilot survey, [users estimated](#) they saved an average of 95 minutes per day by using GenAI, with 85% describing their experience as either somewhat positive or very positive. Still, the experiment "also reinforced that generative AI is not the right tool for every job and that it requires our employees' expertise and judgment to be used effectively," according to the Office of Administration.

Similarly, in July 2024, New Jersey's Office of Innovation launched the [NJ AI Assistant](#), a secure GenAI platform that employees can use to develop and test use cases. Hosted on an internal server, the platform includes robust privacy and security safeguards, along with filters that prevent the generation or use of inappropriate content.

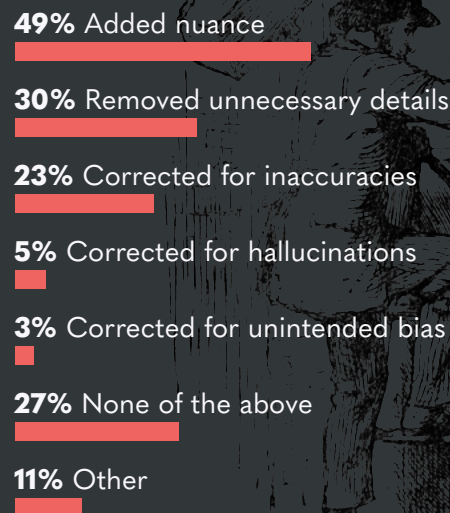
## What's Next:

GenAI can succeed as a digital assistant only if employees understand how to use it effectively. After a survey of city officials found interest in the technology tempered by a lot of uncertainty, the Urban Institute, a nonprofit research organization, recommended creating recommended creating learning cohorts. These cohorts would allow employees to share ideas and lessons learned, with some cohorts open to all staff and others tailored to specific domains or functions, such as HR or housing policy.

### The GenAI-Human Partnership:

#### A Work in Progress

During Pennsylvania's GenAI pilot project, employees often found it necessary to revise or fine-tune the content generated by the tool. Based on the use cases they rated most helpful, here were the [most common types of changes](#) they made to AI responses.



## INDUSTRY SPOTLIGHT

# Asset Lifecycle Management: Stop Wasting Money on Outdated Tech

WATCH VIDEO



*“Agencies can experience significant upticks in efficiency by establishing a program that puts newer technology in the hands of employees, reducing downtime and wasted cycles.”*

– Brian Young, Iron Mountain

For agencies aiming to rein in costs and boost efficiency, outdated technology is a problem hiding in plain sight. As long as devices still function, agencies may be tempted to keep them, even after manufacturers stop providing updates or support (i.e., end of life). But the math never works out. Over time, agencies end up spending more to maintain increasingly inefficient devices.

Often, the challenge lies in visibility. Agencies may not know which devices are approaching or have passed end of life, said Brian Young, Vice President of Federal Business Development at Iron Mountain. That’s where asset lifecycle management comes in, tracking IT devices from configuration and deployment through decommissioning and disposal.

In this [video interview](#), Young discusses best practices in asset lifecycle management. Topics addressed include:

- Incorporating asset lifecycle management into efficiency and modernization initiatives
- Reducing data security risks associated with devices as they reach end of life
- Developing a comprehensive asset lifecycle management policy

### About Iron Mountain Government Solutions

IMGS, a trusted partner of government agencies for more than 70 years, leverages specialized expertise to provide secure and compliant solutions specifically tailored to the public sector. The company helps agencies achieve enhanced citizen services, operational resilience, and elevated efficiency through streamlined information management practices.

[Learn more about Iron Mountain Government Solutions](#)



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# Minnesota Maps Out a Customer-Centric Modernization Strategy

People-centered transformation. A customer-centric operating model. Human-centered design and innovation. These are terms that Minnesota's Zarina Baber uses to describe the state's approach to modernization.



Baber, Assistant Commissioner and Chief Transformation Officer at Minnesota IT Services, said MNIT and other state agencies have long had a customer focus. But now that mindset is embedded in the state's modernization efforts.

"It's not that we're introducing customer experience as a new novel idea," said Baber. "What we are bringing is a standard way, a modern, repeatable approach, so that no matter where the customer is interacting within the state system, their experience is consistent."

These efforts make government services easier to use, more efficient and fairer, she said. By focusing on CX, Minnesota builds a government that serves everyone better. Improving CX is also a priority for Gov. Tim Walz and is a goal of his [One Minnesota Plan](#).

## A New Playbook

Minnesota began this shift at the urging of the Governor's Blue Ribbon Council on Information Technology. Walz created it in 2019, bringing together leaders from state and local governments, the state legislature and the private sector to review IT operations and all related legislation, policies and practices.

Now called the Technology Advisory Council, the group wrote in a [2023 report](#) that the state must "place customers and end users at the center of their work — including how they define and measure success — to align business processes and services with the needs of all users."

That is a central tenet of the state's [Modernization Playbook](#), which the council published in 2020. It calls for streamlining business processes before choosing technology and promoting IT and business collaboration in service delivery, Baber said.

This partnership aims to improve services for everyone, making them accessible especially for communities that have faced challenges in the past. "Our business partners who are closer to the customer, whether that's internal users or the public, are a critical component of this operating model," she said.

## 5 Focus Areas

In a January 2025 report, Minnesota's Technology Advisory Council recommended that the state [prioritize projects](#) that support the following goals:

- **Innovating Responsibly:** Harnessing AI to serve all Minnesotans
- **Securing Minnesota:** Strengthening cyber defenses for today and tomorrow
- **Transforming Government Services:** Producing better CX and access
- **Shaping IT:** Creating a product-driven model for sustainable services
- **Empowering Collaboration:** Improving data sharing among Minnesota government entities

## Partnership in Practice

Minnesota’s transition from project to product management practices has further institutionalized the partnership between IT and business.

In traditional project management, a modernization initiative follows a regimented series of activities, known as a waterfall methodology. Each step leads to the next until the project is complete and user testing is often one of the final steps.

In contrast, a product management approach with a focus on CX is more iterative. The IT team rapidly develops, deploys and updates technology, getting user feedback throughout the process. The close partnership between IT and the business side is essential to this model, Baber said.

“The business is the product manager who understands the customers well, who understands what the pain points are [and] who evaluates and prioritizes the feasibility and the functionality of doing the work,” she said.

## Making the Case

The state also reinforces this partnership approach through its Technology Modernization Fund. The legislature set up the fund in 2023, providing \$40 million over four years to support initiatives that modernize systems or processes, strengthen security, or improve CX.

To receive funding, an agency must submit a proposal to the Modernization Steering Team, which includes senior leaders from MNIT and select agencies. The team vets each proposal to assess its feasibility, risk and potential impact of the use case, in addition to how it aligns with agency and state priorities.

Business and IT work together to develop a proposal, but when it comes to making the formal pitch, the IT team plays only a supporting role, said Baber. “It’s the business that drives the conversation,” she said. “Their IT partners are present, but it’s the business that is talking about the request, the outcomes, the need, the customers impacted and all the different criteria.”

These processes reflect how Baber understands her own job. Although her role focuses on modernization, she sees that as encompassing not just systems, but people and processes, with the work extending beyond MNIT to include agency partners. “We feel that it’s core to any transformation that we view IT and agencies as a cohesive partnership,” she said.

## A Rigorous Vetting Process

Here is how agencies are faring with their TMF proposals, according to MNIT’s first quarterly report of 2025:



# Additional Resources

Although this guide has focused on modernization as a discipline, we've done numerous reports on technologies and strategies that can inform modernization efforts. Here are three you might check out:

## How to Speak AI: A Glossary for the Rest of Us

Feeling a little uncertain about your AI knowledge? This glossary provides basic definitions and explanations for many key AI terms and concepts.

## Better Public Service Through Innovation

Our August 2025 State and Local Guide includes a look at some of the ways states are trying to improve the efficiency of their operations and the quality of their services.

## Focus on Cyber Force Multipliers

Our July 2025 Cyber Guide highlights four technologies and strategies that can enable agencies to strengthen their defenses while working within their existing budget.

## About GovLoop

GovLoop's mission is to inspire public-sector professionals by serving as the knowledge network for government. GovLoop connects more than 300,000 members, fostering cross-government collaboration, solving common problems and advancing government careers. GovLoop is headquartered in Washington, D.C., with a team of dedicated professionals who share a commitment to the public sector.

For more information about this report, please reach out to [info@govloop.com](mailto:info@govloop.com).

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## Thank You

Thank you to Carahsoft, Fortinet Federal, and Iron Mountain Government Solutions for their support of this valuable resource for public-sector professionals.

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