Transforming government operations with agentic AI

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BY KEVIN TUPPER

Large language models (LLMs) have dramatically reshaped the AI landscape, laying the groundwork for the next significant advancement: agentic AI.

These sophisticated systems promise to revolutionize government operations by enhancing efficiency, planning and decision-making processes. For instance, agentic AI can streamline bureaucratic procedures and enhance data-driven policymaking.

Agentic AI integrates LLMs with memory, knowledge, planning and tools to perform complex tasks autonomously or alongside users. In the context of government, these intelligent systems can streamline workflows, address common challenges and improve productivity. By automating routine tasks, managing data more effectively and providing advanced analytical capabilities, agentic AI holds the promise of transforming public sector operations.

There are numerous practical applications for agentic AI to enhance government operations, support policy development and improve citizen services, potentially reshaping how public sector functions are managed and delivered.

What is agentic AI?

Agentic AI refers to cutting-edge autonomous systems that combine large language models with memory, knowledge bases, planning capabilities and various tools to perform complex

tasks with minimal human intervention. Unlike conventional AI systems that operate within predefined parameters, agentic AI demonstrates a higher level of autonomy and adaptability. These systems can understand context, set goals, formulate plans and choose appropriate tools to achieve objectives, much like a human agent would.

Agentic AI encompasses a range of AI entities such as assistants, copilots and fully autonomous agents. These systems can operate independently or collaboratively with users, offering versatile applications across various domains, including government operations.

There are three types of agentic AI:

- **Assistants:** In a government setting, an AI assistant might handle the routine management of emails for a public official, efficiently schedule meetings, or generate detailed reports based on specific commands, thereby freeing up valuable time for more strategic activities.

- **Agents:** Agents possess higher levels of autonomy compared to assistants. They can set goals, plan actions, and choose the appropriate tools to achieve these goals. For instance, a government agent could analyze large datasets to identify trends and recommend policy changes, autonomously preparing and presenting findings.

- **Copilots:** Copilots are a form of assistants or agents integrated into applications to

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- **Copilots:** Copilots are a form of assistants or agents integrated into applications to

work alongside users. They provide proactive suggestions and support within the context of the application, enhancing user experience and productivity. In a government context, a copilot might assist policy analysts by providing real-time data insights, suggesting relevant regulations and helping draft policy documents based on current legislative trends.

Here are four key features and capabilities of agentic AI systems:

- **Autonomy:** Agentic AI systems can perform tasks independently, making decisions and taking actions without constant human oversight. This autonomy allows them to handle repetitive tasks and respond to dynamic environments effectively. For example, they can automate the processing of citizen requests, freeing up human resources for more complex tasks.

- **Adaptability:** These systems continuously learn from new data and experiences, enhancing their performance over time. For example, in government, they can swiftly adjust to new regulations or policy changes, ensuring compliance and up-to-date operations.

- **Integration with tools:** Agentic AI can access various tools such as databases, APIs and other software to gather information and execute tasks. This integration allows for efficient data management and execution of complex operations. For instance, they can integrate with national databases to provide comprehensive reports for policymakers.

- **Memory and knowledge management:** They store and utilize data from past interactions to inform future decisions and actions. This capability ensures that the system can provide contextually relevant responses and maintain continuity in interactions. In government, this can mean maintaining a

> ❝ **In the context of government, these intelligent systems can streamline workflows, address common challenges and improve productivity.**

history of legislative changes and using that to inform future decisions.

Current capabilities and future potential

While the current capabilities of agentic AI are still nascent, they are rapidly improving. Today, these systems may not yet be fully adept at planning and learning autonomously, as frameworks and methodologies are still being developed. However, significant advancements are being made daily, enhancing the planning, adaptability and overall capabilities of these intelligent systems.

For example, an agentic AI can analyze regulatory documents, suggest an outline for analysis, access previous rules and draft documents autonomously. By understanding these features, we can appreciate how agentic AI can be applied effectively in government operations, providing significant improvements in efficiency and decision-making processes. Here a few possible practical applications in government:

- **Streamlining administrative tasks:** Agentic AI can automate routine administrative tasks such as processing citizen requests, managing correspondence and scheduling meetings. By automating these processes, government employees can focus on more complex and strategic tasks.

For instance, an AI system could handle the scheduling of appointments for a public health office, ensuring optimal time management and reducing the workload on administrative staff.

- **Enhancing data-driven policymaking:** By analyzing large datasets and identifying trends, agentic AI can provide valuable insights for policy development. These insights can help policymakers understand the impacts of existing regulations and forecast the outcomes of proposed changes, leading to more informed and effective policy decisions.

    For example, an agentic AI could analyze economic data to predict the impact of a new tax policy, providing legislators with a detailed report of potential outcomes.

- **Improving citizen services:** AI-powered chatbots and virtual assistants can enhance citizen engagement by providing timely and accurate information. These systems can handle a wide range of inquiries, from answering common questions to guiding citizens through complex processes, thereby improving the overall citizen experience.

    For example, a virtual assistant could help citizens navigate the process of applying for social services, providing step-by-step instructions and answering any questions along the way.

- **Augmenting decision-making:** Agentic AI can assist government officials in making informed decisions by synthesizing vast amounts of data and presenting key insights.

For instance, an AI system could analyze public health data to identify early warning signs of disease outbreaks, enabling proactive measures to mitigate their effects.

This capability can significantly enhance the ability of government agencies to respond to public health crises.

Addressing limitations and ensuring responsible AI use

While the potential of agentic AI is immense, it is crucial to address current limitations, such as the risk of generating incorrect or nonfactual results (hallucinations) and the possibility of overreliance on these systems.

To mitigate these risks, governments should adopt best practices for AI implementation:

- **Narrow the domain and ground with your own data:** Focusing AI models on specific, well-defined tasks reduces the likelihood of errors and enhances performance. Additionally, grounding the AI's actions and analysis with internal data, policies, processes and datastores ensures that the outputs are relevant and accurate.

    AI systems are fundamentally good at predicting the next word based on their training data but do not have access to specific internal information unless explicitly provided. For example, an AI system dedicated to drafting requests for proposals should be grounded on the organization's specific guidelines and historical data to ensure accuracy and relevance.

> **By strategically implementing these advanced AI systems and grounding their actions in internal data, governments can not only improve service delivery but also adapt more dynamically to the evolving needs of their citizens.**

- **Layer AI agents:** Using multiple smaller AI agents, each specialized in a particular task, can effectively handle complex operations. This approach allows for better management of tasks and improves overall system efficiency.

- **Ensure data security and fairness:** Governments must prioritize data security, fairness and transparency in AI applications. This involves implementing robust data protection measures and ensuring that AI decisions are unbiased and accountable.

- **Start with pilot projects:** Launching small-scale pilot projects allows governments to test and refine AI applications before scaling up. This approach helps identify potential issues and ensures that the systems are effective and reliable.

Agentic AI has the potential to revolutionize government operations by significantly enhancing efficiency, planning and decision-making. By strategically implementing these advanced AI systems and grounding their actions in internal data, governments can not only improve service delivery but also adapt more dynamically to the evolving needs of their citizens. Embracing agentic AI will pave the way for a smarter, more responsive public sector that benefits society as a whole. 🎇

Kevin Tupper is the federal AI evangelist for Microsoft public sector