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Is it automatic?

Five keys to deploying AI and automation in government

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Governments get comfortable with AI

Two years ago, few government organizations—aside from some military and intelligence agencies—were truly using artificial intelligence (AI) and automation capabilities.

That was the consensus of a group of executives from the public, private, and not-for-profit sectors we brought together in June 2017 to discuss the potential impact of AI and automation on the business of government.[1]

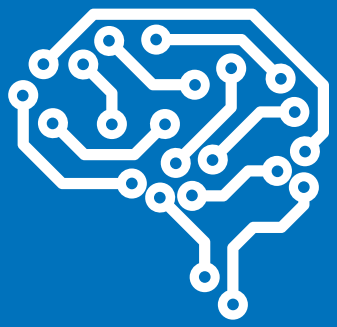
Times have changed.

Since then, hundreds of articles and reports have detailed conceptual applications in government. Fewer publications have described actual implementations of AI and automation technologies, including robotic process automation (RPA), machine learning (ML), natural language processing (NLP), and other cognitive tools to support business and mission tasks. Although limited in number, these applications have included pilots and proofs of concept (POCs) with demonstrated results.

These projects have spanned a wide range of use cases. Back office functions—like HR, finance, procurement and accounting—are using intelligent automation to expedite high-volume, repetitive tasks, including employee onboarding, account reconciliation, and contract closeout, among others.[2] Program offices are harnessing AI to gain deeper insights into their data, while citizen-facing services are deploying chatbots to more accurately and rapidly respond to people's inquiries thereby improving the citizen experience.[3]

Agencies have another incentive to pursue AI. The Trump Administration has made automation a top priority in the President's Management Agenda to shift the federal workforce to focus on high-value work and has issued an Executive Order promoting the advanced use and research of AI.[4]

How we define intelligent automation



Intelligent automation represents the overall umbrella of technologies to enable the transformation and automation of business processes by leveraging any combination of software robotics, cloud, AI, and smart machines. It is composed of RPA, low code Business Process Management (BPM), and cognitive automation and is enabled by a confluence of capabilities that include rules-based macros, APIs, and algorithms. AI and intelligent automation are complementary initiatives and successful deployments often utilize and integrate both toolsets.

At its most basic level, bots automate the steps in a process instead of having people move transactions from one step to the next. At its most complex level, cognitive systems draw on historical data to handle exception processing, make judgments to resolve customer issues and complement staff to provide new insights. ●

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Although many government organizations are embracing these AI tools, most are applying them to individual use cases or processes without a strategy to scale them across the agency. While that's a good start, greater efficiency and productivity gains, cost savings, and improved workforce morale can be more fully realized when automation is integrated with multiple systems and business processes.

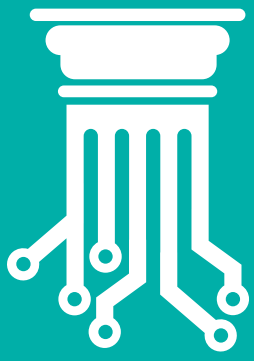
As this momentum toward AI implementation continues to grow, agencies are faced with the daunting task of moving pilots or POCs into production. Operating in unique environments, government organizations must navigate a number of hurdles, including an inability to delay operations and services, multiple legacy ERP systems, and cumbersome governance, security, and compliance requirements.

In addition to the technological expertise needed, agencies deploying AI and automation at scale require business-process reengineering capabilities, as well as strategies on change management, risk management, data management and workforce management. Understanding these challenges and how other organizations have overcome them can help agencies achieve their desired business and mission outcomes through AI and automation. ●

What do we mean by "at scale"?

Intelligent automation deployments that are beyond pilot stage and into full production across multiple end-to-end functions or processes are considered to be "at scale." It is when deployments are fully ramped up and operating in steady-state mode.

Examples of deploying AI and automation at scale



Federal Healthcare Agency
In order to reduce improper payments and recover invalid claims, the agency must review and validate over 50,000 PDF records and claim documents. With limited resources, the intake and review process has been highly manual and time-consuming. A new solution using RPA, NLP, optical character recognition, ML, and microservices is projected to streamline the process, enable more reviews, and generate significant cost savings while improving workforce utilization.

State Government Land Authority
Charged with verifying the accuracy of payments for numerous land leases, a state agency was only able to examine a small percentage of leases each year. A solution combining IBM Watson and enhanced data analytics allowed the agency to achieve 100 percent reconciliation, compliance and uncover millions in potential revenue.[5]

State Health Insurance Marketplace
Inundated with millions of customer phone calls, emails, and other inquiries each fall during open enrollment, the state deployed a web-based chatbot to answer common questions and process basic transactions while more complex questions and transactions are escalated to call center agents. The chatbot answered over 250,000 questions within the first week and performs an average of 1,500 customer interactions per day. In addition to lowering the cost per transaction, the state is less reliant on costly, seasonal staffing surges and can provide more consistent and timely customer service. ●

Five keys to success

We have helped more than a dozen government organizations strategize, pilot, and implement AI and automation. From that experience, we have developed five keys to success and lessons learned that can help government organizations avoid common pitfalls.

1 Establish an agency-wide digital strategy.

Instead of individual business units or offices embarking on digital transformation initiatives in silos, all functions and programs should be involved in setting an agency-wide strategy that supports and enables the organization's mission. Committing to AI and automation is a shift toward a digital operating model that requires business- and mission-related functions to share tools and integrate resources. Without clear objectives, documented goals, and accountability for results, AI and automation projects will inherently fail to meet expectations when moved into production.

In order to reap the full benefits of AI and automation, their use must pervade the organization. Agencies should begin by selecting use cases with the highest potential return on investment (ROI). Then executive leadership can evangelize the ROI and benefits to departmental and administration officials once the strategy has been established. And they should continue to monitor the ROI once in production for continuous support. ●

2 Create and communicate the workforce plan.

We've found that most government organizations aren't planning to lay off workers as a result of AI and automation. The agencies we are working with are careful to emphasize AI's and automation's role in enhancing or augmenting rather than replacing the critical work of their staff.

However, some employees remain fearful. Organizations must address this fear up front and clearly communicate how the workforce will be affected. Successful government organizations involve their staff in brainstorming sessions and use case identification.

Such involvement can help alleviate concerns while educating employees about the technology's capabilities. For example, years of antiquated systems, red tape, and inefficient processes have created backlogs within many functions and organizations. Enabling employees with automated processes and workflow, higher advanced tools, and analytics capabilities can help address backlogs and maintain service level agreements. Our clients have noticed morale improvements as the workforce recognizes mundane tasks are moving off of their desks.

Additionally, since a large number of baby boomers are set to retire in the coming years, automating functional processes can help institutionalize and retain their years of experience before they walk out the door with that accumulated knowledge. Also, government organizations that can demonstrate their application of advanced technologies can help attract millennials to a new age of public service.

Given the various impacts AI and automation will have on the workforce, it is critical to have the Chief Human Capital Officer or equivalent involved at the outset to create organizational change-management, communications, talent retention, and training plans. ●

* **During planning for a large automation project in a federal civilian agency, the CISO explained that there was no policy for a bot to access the agency's IT systems since every user is required to have a common access card (CAC) or personal identity verification (PIV) credential. As we and the client quickly learned, consider the potential policy implications and changes that may be required in order to begin a POC.**

3 Address governance and policy changes.

Integrating any technology into an organization generates risk, especially a relatively new spectrum of technologies that aren't covered by existing policies. From selecting technology that has the authority-to-operate (ATO) on government systems to navigating the complicated issues of access control, mobility, and security, government organizations must address governance early in the process.*

In order to have a successful project, organizations should develop plans to address these hurdles. For example, many RPA bots need to access internal and external websites to acquire data, but some websites don't permit bots. The chief Information security officer (CISO) and chief information officer (CIO) should advise on these issues and the organization's policies. Failing to mitigate risk can derail any technology implementation before it starts. Be prepared for internal and external auditors and inspectors general to review the automation's configuration, stability, and controls.

After a successful POC, one agency we worked with launched an aggressive plan to deploy more than 20 RPA bots in a short period of time. However, the plan raised serious governance and security concerns that it hadn't anticipated. We advised the client to adopt a Center of Excellence governance model in order to centralize the oversight of automation configurations. Those changes alleviated the concerns and minimized risk. ●

4 Evaluate your business processes and data.

Automation and the insights gained from AI are only as good as the data itself. It is well known that government has an ever-expanding mountain of data, but the lack of well-formatted, structured, and machine-readable data can be a significant obstacle to adopting AI and automation. Michael Conlin, chief data officer of the U.S. Department of Defense said, "You can't feed the algorithms if you don't have data—solid, clean data in large volumes, well-tagged and well organized."[6] Implementing automation and AI gives agencies the opportunity to address data quality problems. AI can process structured and unstructured data, and incorrect data can be quickly realized and addressed during development.

Similarly, attempting to use intelligent automation to streamline inefficient processes will result in inefficient automations. Therefore, documenting a process first can reveal the need for these processes to be redesigned or even eliminated. During the use case identification and assessment phase, the business processes most suitable for automation will rise to the top while red flags will become glaringly obvious. ●

5 View the CIO as an innovator, not just a technology guardian.

To date, much of the interest in AI and intelligent automation is coming from program offices and business functions, such as finance, compliance, HR, procurement and acquisition. These groups may view the CIO as a gatekeeper. However, we know that CIOs are looking to integrate technology to enable business and mission success. Back, middle, and front office groups should partner with and use the CIO as an innovator and technologist who can help them through each stage of the AI and automation journey.

If you have clear business and mission objectives, the CIO, as well as external providers, can recommend the appropriate technology solution that integrates with existing systems. In other words, desired outcomes determine technology. ●

Get moving

Since many government organizations are already undergoing some form of digital transformation or modernization, AI and automation must be considered as enabling tools. The potential benefits and ROI from applying these technologies far outweigh any potential risks. The greater risk is not taking advantage of these tools and falling further behind the technology curve.

Since improving citizen satisfaction and restoring public confidence are key priorities of government leadership at all levels, showcasing efficiency gains and cost savings through the implementation of innovative technologies can be a powerful story. Deploying AI and automation requires a well-planned, and thoughtful approach that can mitigate risk, navigate policy and security concerns, and achieve mission and business results.

Are you ready?

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How KPMG can help

KPMG is a pioneer in providing intelligent automation solutions. We take a business-first approach, working closely with our clients to pinpoint the exact business challenge they are trying to overcome. By focusing on mission and business objectives, we help agencies determine the best technology capability that can be integrated with their existing solutions that also aligns with their strategy. We have worked with agencies on a full range of intelligent automation projects, from process automation to advanced cognitive applications, to enable cost management, customer engagement, and risk management.

For more information, visit www.kpmg.com/us/govautomation.

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With more than 18 years of management consulting experience, Kirke specializes in delivering services and solutions in technology enablement, intelligent automation, artificial intelligence, business process reengineering, data analytics, information security and assurance, and IT risk management. As KPMG's Government Intelligent Automation leader, Kirke drives awareness of intelligent automation's business applications in federal, state, and local governments and frequently speaks at industry conferences on the topic. He is a Certified Information Systems Security Professional, Certified Information Systems Auditor, Certified in Risk and Information Systems Controls, Certified in the Governance of Enterprise IT, a Project Management Professional and a Certified Government Financial Manager.

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