How Automation and AI Are Changing The Traditional Approach To Government IT Modernization

Agencies are on the threshold of taking back control of an IT modernization process that many agree has become unsustainable.

A Scoop News Group Report

Federal agencies are undertaking the "largest wholesale modernization in government history." At the same time, says a long-time government technology executive, agency leaders are entering a historic watershed period where the power of automation and AI gives agencies control of an IT modernization process that many agree has become unsustainable. The approach gives agency leaders the ability to empower their workforce to solve problems, change their processes and produce improved employee and citizen experiences without the lengthy, costly modernization methods agency leaders have come to loathe.

The big picture: For decades, when government agencies found it necessary to overhaul or substantially upgrade their IT systems, it seemed the only way forward involved hiring outside consulting groups and then enduring a costly, multi-year journey that often introduced as many problems as the project was intended to solve.

That model no longer makes sense, says Todd Schroeder, a former U.S. Department of Agriculture IT systems chief who has worked in key leadership roles at Salesforce and Google before joining UiPath as public sector vice president.

Rethinking the modernization model: "Modernization has always been sort of a 'burning systems situation,'" says Schroeder.

"So agencies traditionally hire a big-name contractor to study the problem and tell us where things were broken. About a year goes by, maybe two, and they come back with their highly subjective report based on the people they interviewed, what they believe they heard, and what they believe you should do to rectify that situation. That puts you on a trajectory that will take about five years and likely cost hundreds of millions of dollars. In the end, they promise you'll be more productive and have better outcomes. That model is no longer tenable. The returns have not been realized. By the time it's done, your requirements have changed, and you need to start this process over again. It doesn't have to work this way anymore."

What's changed: For one, the technology environment continues to evolve at an ever-quickening pace. At the same time, agency leaders face a new sense of urgency to generate better outcomes and support their changing workforce. Consequently, they need to adopt a different perspective on modernizing. That begins, Schroeder suggests, by:

- Focusing on business transformation as a cultural and workplace force multiplier for better agency outcomes.

- Empowering your people, giving them tools they can use to improve mission outcomes by working across organizational boundaries and technology platforms.

New capabilities: The emergence of enterprise process and task mining tools now allow business users to readily identify critical operational and process chokepoints and determine where automation and consolidated technology experiences will deliver the most value. It also gives them the knowledge to strategically implement and continuously monitor automation solutions where and when they're needed most.

- Those capabilities, augmented by AI, give agency executives the ability to "empirically identify the IT bottlenecks that have the biggest impact on workforce productivity and mission outcomes — and the information they need to fix them," says Schroeder.

- While process mining started within finance departments, public and private sector organizations have leveraged the concept across their enterprises, from HR to operations to customer engagement, case management, and benefit fulfillment.

- More than that, he adds, "It allows executives to shift their dependence on outsourced knowledge to in-house control for continuous problem-solving. That translates into a radically different time-to-value modernization quotient — and a radically lower cost structure."

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Todd Schroeder,
UiPath Vice President, Public Sector

Overcoming the big obstacle: One of the entrenched challenges agencies must confront in reimagining the modernization process is finding smarter ways to escape the trappings of captive systems.

- "Every technology that's been in this market for the last several decades has had a data gravity play," says Schroeder. "They want you to put all your data in their cloud because the only way you can improve is by buying more."

- Automation provides the means to bypass many of those constraints by working across technology platforms and ecosystems. UiPath's automation workflow solutions, for instance, "work agnostically across on-premises data centers, the AWS, Azure and Google Clouds, and low-code platforms like Salesforce and ServiceNow," regardless of where the data is processed or stored, Schroeder explains.

- This is a pivotal moment. Gains in mission efficacy, workforce productivity improvement and citizen benefits are all locked up between the old technology and new technology. Orchestrating, integrating, and providing experiences that blend together is where the exponential improvement is.
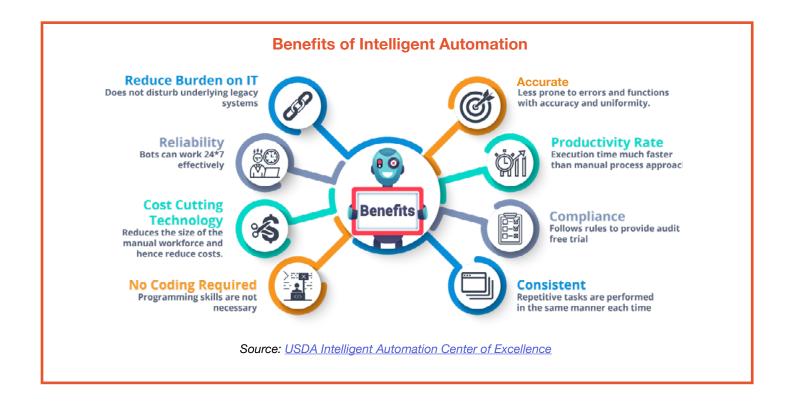
Accelerating efficiency: Beyond bridging IT systems and applications, automation also helps agencies streamline workflows — and even collapse technology touchpoints.

- "Instead of going to five different systems to answer the question from your call center, adjudicate your case, perform your time and attendance and performance evaluations, or whatever else it is, you have a digital assistant that allows you to do all of that, from a single button. So everyone actually

interfaces with less technology," which helps every employee work more effectively, says Schroeder.

"Inside that digital assistant, the automation applies AI-assisted document understanding to read a form and automatically enter that data into the appropriate systems."

- The IRS is among a growing number of federal agencies deploying automation solutions, for instance, to read tax forms, enter the data into various systems and run post-processing calculations to reduce fraud, according to Schroder.

- FEMA offers another example. According to FEMA's assistant administrator for financial systems, Chris Kraft, speaking at a recent UiPath public sector event, the agency now relies on automation to manage and reconcile credit card payments paid out by some 20,000 employees who are dependent on their credit cards to administer aid in response to emergencies.

AI under the hood: A growing array of those digital assistants are now benefitting from UiPath's big push into AI and UiPath's AI Trust Layer.

Benefits of Intelligent Automation

Reduce Burden on IT
Does not disturb underlying legacy systems

Reliability
Bots can work 24*7 effectively

Cost Cutting Technology
Reduces the size of the manual workforce and hence reduce costs.

No Coding Required
Programming skills are not necessary

Benefits

Accurate
Less prone to errors and functions with accuracy and uniformity.

Productivity Rate
Execution time much faster than manual process approach

Compliance
Follows rules to provide audit free trial

Consistent
Repetitive tasks are performed in the same manner each time

Source: USDA Intelligent Automation Center of Excellence

USDA Center of Excellence points to the *expanding role of enterprise automation*

The evolution of the U.S. Department of Agriculture's focus on automation — from a robotic process automation shop within the CFO's office into an enterprise-wide service led by the CIO's office — in many respects, reflects the widening adoption of automation at federal agencies and where automation is heading.

Known now as the Intelligent Automation Center of Excellence, the USDA unit continues to develop and deploy automated bots for use within the Office of the Chief Financial Officer. Those bots — some 70 in total — help with everything from pulling unique vendor identification numbers from SAM.gov to loading appropriations data into the correct accounts within the department's financial ERP system.

However, according to Brian Mohr, enterprise automation initiative program manager, USDA's senior leaders see a broader opportunity to capitalize on intelligent process automation at an enterprise level to enhance the department's human resources, financial, and IT operations.

Historically, for example, the USDA's 29 agencies have relied on different human resources management systems for their 100,000-plus employees spread out at more than 4,500 locations in the U.S. and abroad. Automation would allow USDA to streamline and standardize processes without requiring large-scale system overhauls. He pointed to one example going into

production in the coming weeks that would automatically capture and uniformly enter employee information from Standard Form 52 directly into agency HR systems.

In another example, USDA is looking at automation to reconcile unliquidated obligations. The current process requires going into the ERP, looking at obligations that have an outstanding balance, and contacting the appropriate individuals to determine what actions must be taken within the ERP. The process is time-consuming and manually intensive. According to Mohr, "That's where at the enterprise level we're asking, 'How can we get people the information they need to key in on the action they need to take?'"

To that end, the USDA plans to identify the best way to automate based on process complexity, technology fit, availability, and cost and then take a tiered approach to implementing intelligent process automation. Those tiers are defined as:

- **Tier 1** – Robotic process automation (RPA) tasks
- **Tier 2** – Intelligent automation capability – utilizing pre-trained models
- **Tier 3** - Big data analytics AI/ML – where larger processing is required to train models for high-risk, high-reward projects.

Developing citizen developers
In addition, the department has taken the unusual step of providing every USDA employee

with a system development license that allows them to experiment with automating their specific tasks, according to Mohr. USDA is also using UiPath Automation Hub, which Mohr likened to a crowdsourcing platform that allows individuals to view and share automation in use across the USDA.

Mohr foresees the evolution of three categories of "citizen developers" — a cohort of power users who want to leverage it to solve problems, a group of moderate users who might try different automations, and a third group of consumers who recognize their work is ripe for automation but will seek out power users to help them automate.

Ultimately, Mohr believes that automation will not only help USDA streamline workloads but also help with broader IT modernization initiatives. "What automation does is relieve the burden as we move to modernize," he says. "It allows us to stretch the modernization timeline out a little further because we've applied automation in appropriate areas."

Brian Mohr
Office of the Assistant Secretary for Administration, USDA

How automation unit aims to streamline Navy operations workloads

When a team within the Department of Navy's Financial Management and Comptroller's Office began experimenting with process automation in 2019, the goal was to identify ways to reduce the heavy burden of manual and redundant accounting tasks. The vision wasn't just to streamline workloads; it was also about improving business operations to "bring finance to the fight," as Assistant Secretary Russell Rumbaugh put it in the office's most recent strategic plan.

What has transpired since is a growing wave of automation projects beyond the FM&C's office, according to Danny Bethke, automation-as-a-service portfolio lead within the office's Financial Management of Data and Digital Transformation Automation unit.

Daniel Bethke
U.S. Dept. of Navy Office of Financial Management Systems

The success of business process automation has caught the attention of Navy officials responsible for military standard requisition and issue procedures, fund balances with the Department of Treasury, and resolving unmatched transactions. Automation is also being put to work in areas related to human resources, travel procedures, and improper military pay.

"Automation has really allowed the Navy to improve its efficiency and effectiveness through reducing manual procedures, reporting errors, and variance in our financial reporting," says Bethke. At the same time, automation is not only facilitating strategic efforts by the Assistant Secretary's office to narrow gaps in complying with financial regulations and audit standards but also allowing financial experts to reallocate more time to strategic and high-value tasks.

Bethke says at last count, the DON has deployed 159 process automations, translating into a savings of 161,500 man-hours. One of those automations, aimed at identifying instances where a collection does not match an obligation, helped the DON resolve $163.4 million worth of unmatched transactions and saved 5,000 man-hours.

Six steps to enabling automation
One of the tools the DON uses to develop and deploy these automations is UiPath Studio. Using a six-step process, they can document the current manual process, define the technical requirements, design and then code the solution, test the code and then roll it out into the production environment. The last step is sustainment — ensuring the coding continues to operate efficiently.

In terms of what's next when it comes to expanding and refining its automation use, Bethke says the Department of Navy is focused on both an enablement initiative and getting to an unattended infrastructure.

When it comes to enablement, that will involve continuing the programs they've developed to create automation developers internally across the department. One is the Citizen Developer Training program, which is focused on training DON personnel who have no prior technical experience to develop automations. They also have the Department of Navy robotic process automation standards, which boost efficiency by providing predefined templates that allow bots to be designed and developed using a consistent approach.

Another automation priority is moving to unattended infrastructure. For the most part, DON is currently operating from an attended environment, which means the automation software sits on a person's workstation and they must initiate the bot process. While the bot is performing the process quicker and reducing human error, workers are not able to use that laptop. By moving to an unattended infrastructure, the bots will run on a virtual machine in a cloud environment, giving personnel even more time back to focus on other high-value tasks and strategies.

Automation allows organizations like DON to rethink the modernization process. "The DON will never be done modernizing, but the use of digital tools like automations will make the process of modernization much more manageable," says Bethke.

- The AI Trust platform is designed to "give customers auditability, traceability, observability, and replicability of AI model performance within the context of the business process that must be followed when using AI," according to Schroeder.

- Combining it with UiPath's agnostic workflow orchestration tools has the added benefit of reducing the number of technologies employees must interact with and the volume of processing errors and delays they often create.

- No matter what type of AI is appropriate to improve process speeds, reduce errors, improve customer experiences and overall program quality, he adds, it must be orchestrated and applied to the processes for how data moves through regulated entities. Automation is the catalyst and accelerant for the trusted adoption of AI into these highly complex technology portfolios.

Revamping the operating model: Schroeder predicts that beyond efficiency and effectiveness, automation will yield bigger or longer-lasting dividends.

- "The empirical data arising from process and task mining across technology-agnostic platforms will not only lead to quicker and more intelligent investment decisions but also to greater organizational and stakeholder alignment," he says.

- One agency spearheading that concept is USDA, with its Intelligent Automation Center of Excellence. "Intelligent Automation aligns with one of the Secretary's top priorities to ensure USDA programs are delivered efficiently, effectively and with integrity and focus on customer services as well as the [Office of the CIO's] strategic goal to optimize the value of its IT services," according to the center.

- Inherent in the USDA's example is the shift from the "long shadow of the old modernization paradigm," as Schroeder puts it, to a new paradigm that eschews the "rip-and-replace" model and focuses instead on continuous system insights and more targeted investments.

- "Think about what Monday morning meetings between the deputy secretary and the CIO might look like now that they can do this. Or how you would prioritize funding allocations based on empirical evidence. It fundamentally changes one of the hardest things in government, which is organizational alignment," says Schroeder, speaking from experience.

Elevating the federal workforce: It may sound paradoxical, but "to produce bigger impacts, whatever the mission is in government, we need to use less technology — or at least, use different technology, use it smarter and more in the background," concludes Schroeder.

- "Technology has become a job unto itself. Today's federal employees are knowledge workers. They're not clerical workers. Clerical work can be handled by technology. We need to find new ways to let employees concentrate on their mission," he says.

- "This is the moment," he adds, "when agency leaders not only have the means to rethink how they modernize but reimagine how federal workers can accomplish their work in new and more effective ways. And that's critical if the government is to catch up and meet the needs of society's requirements."

- And lastly, this will change the boundaries of who is responsible for IT – business automation platforms and AI will blur those responsibilities and will pose the greatest opportunity for government effectiveness in the last several decades. We must get this right. And it starts with trust.

Learn more about how UiPath is helping federal agencies reimagine IT modernization and "The seven automation and AI trends to know (and act on) right now.

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