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Hyperautomation for Federal Agencies

Overcoming the Challenge of Scaling Automation
for Government Operations

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The Automation Journey for Federal Agencies

Federal agencies know they must become more automated. Faced with both expanding mission workloads and constrained budgets and staff resources, agency CIOs, CFOs, and other leaders have little option but to find more efficient ways of operating. Events such as natural disasters and pandemics also drive home the need for agencies to deliver on their missions, even when employees cannot work as planned.

Most agencies still have large amounts of manual data entry and manual processes that are repetitive and consume vast amounts of resources. These resources could be better directed to more valuable work and are ripe for disruption with intelligent automation. In fact, the President's Management Agenda (PMA) has set an aggressive cross-government goal to shift employees from doing low-value work, which tends to be rote and repetitive, to more high-value work. Even a small gain in efficiency across the federal and contractor workforces could yield billions of dollars in savings.

The Office of Management and Budget has identified robotic process automation (RPA) as a critical, low-cost approach to achieve that PMA goal. RPA is a process automation technology that automates manual tasks that are largely rules-based, structured, and repetitive — such as copying and pasting information between sources, for example. It leverages software robots known as "bots."

As the federal government's RPA Playbook points out, the opportunities for automation to transform federal operations are enormous and could yield billions of dollars in savings. And when smartly implemented, RPA can also improve quality of work, reduce human error, increase compliance, strengthen controls environments, and add new services to an agency's portfolio.

Many agencies have begun employing RPA to automate tasks across a myriad of functional areas, including finance, acquisition, IT, human resources, mission support, and security assurance. One federal agency, for example, has deployed more than two dozen RPA projects. In one case, bots are used to usher hundreds of incoming invoices per day to the right offices for payment. In another, bots help vendors pull data from multiple sources into a central report, and in so doing, have increased customer and employee satisfaction while minimizing errors and backlogs.

Another federal agency deployed RPA in its financial shared services center, resulting in 40 processes being 100 times faster. This will enable the bureau to reallocate $7 million worth of labor over five years.

While RPA offers agencies much value, that value is limited when compared to the full potential that automation offers.

To Reap the Full Value of Automation, RPA is Not Enough

RPA capabilities are a great way for federal agencies to begin their automation journeys, but they can get an agency only a relatively short way up the automation value curve.

That's because RPA — while great at performing simple, tasked-based processes — cannot address more complicated processes that deliver greater value to the organization. For example, one of the most common automation use cases at agencies across the government is the challenge of transferring and processing data from PDFs, emails, images, and hard-copy formats. RPA by itself is simply incapable of processing high volumes of unstructured or semi-structured data.

Likewise, RPA cannot take on more complex processes and workloads, such as in cases where understanding the context surrounding data is important to the task of discerning its value. For these types of operations, other capabilities are needed, in addition to RPA, such as Natural Language Processing, to enable agencies to better exploit their data for better insights and decision-making.
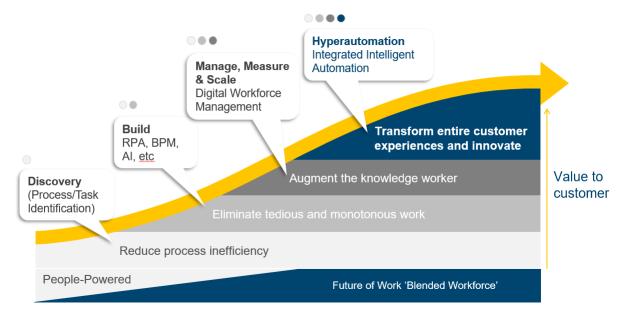
These limitations of RPA can often stall an agency's automation journey and curb progress to just a few simple routine processes. When agencies get started with RPA, they may struggle to advance and scale their automation efforts for a variety of reasons including:

- Agencies often quickly learn that processes and workflows are more complex than they expected and that those processes and workflows often require some degree of intelligent workflow or optimization that RPA alone cannot provide.

- They may have multiple, disparate automation systems in place that are difficult to manage and integrate.

- Automating the processing of unstructured or semi-structured data is often difficult to do because those data are dispersed across many systems that do not talk to each other.

- They may lack needed governance to ensure that automation is done properly and reliably.

- Automation instances are often architected together from multiple, stand-alone components and solutions, making it hard or impossible to scale to any degree.

From RPA to *Hyperautomation*

To advance and scale their automation efforts, agencies need what industry analyst firm Gartner calls hyperautomation, which refers to a combination of complementary tool sets that can integrate functional and process silos to automate business processes.

Hyperautomation relies upon an array of capabilities beyond just RPA, to deliver a greater depth and breadth of functionality. These capabilities include business process management, artificial intelligence, advanced data analytics, cognitive data capture, AI and others.

Hyperautomation Maturity Model

Moreover, it is critical that these complementary capabilities be natively integrated so they operate seamlessly and collectively produce functionality that can tackle a far wider set of use cases. Just as importantly, these capabilities need to enable the enterprise to mature their capabilities over time. This begins with an initial "build phase" of capabilities, matures to deployment of a digital workforce management, and ultimately leads to hyperautomation as described in the graphic above.

For example, these capabilities must be well integrated to manage a digital workforce of bots. Those bots must be smart, which they get from AI and analytics technologies, including natural language processing (NLP), machine learning, and cognitive automation. They must be orchestrated smartly and adhere to a set of rules or governance framework, which they get from business process management capabilities. Finally, their actions must be continuously monitored and to ensure auditability and performance which is supported by AI, analytics, workflow governance capabilities.
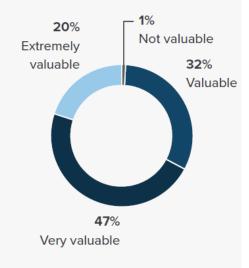
The Value of an Integrated Platform of Complementary Capabilities

The current push to advance AI and automation across government reflects the vast, and mostly untapped, opportunity to realize gains in productivity, efficiency, and quality. This is where adopting an integrated, platform-based approach to automation can be a game changer for agencies.

Deploying integrated, complementary capabilities allows for greater gains in operational efficiencies and customer satisfaction and is critical to advancing digital transformation. That's because when disparate automation technologies — such as RPA, process orchestration, advanced analytics and cognitive capture — are deployed as separate solutions, integration challenges are common; this drives up total cost of ownership, and hard-to-maintain systems drive down efficiencies.

In Forrester Consulting's 2020 Intelligent Automation Benchmark Study, 67 percent of respondents surveyed said a "single vendor with a broad breadth of complementary automation technologies" was either very valuable or extremely valuable, and only 1 percent said it was not valuable. This shows that organizations are realizing the importance of having an integrated, platform-based approach to automation that allows these disparate capabilities to work together seamlessly to digitize end-to-end business operations. They are also realizing that integrating these technologies can be more involved than expected, costly to maintain, and yield suboptimal results.

Take cognitive document automation (CDA), for example, which automates the processing of unstructured data contained in documents, emails, and online chat sessions. From invoices and enrollment forms to claims, contracts, and correspondence, CDA can process any document of importance to any business process. Whereas RPA performs the repetitive "hand work" of processing electronic data, CDA performs the intelligent "head work" of understanding what the document or email is about, what information it contains and what to do with it.

"How valuable do you believe it would be for your organization to work with a single vendor with a broad breadth of complementary automation technologies?"

20% Extremely valuable

1% Not valuable

32% Valuable

47% Very valuable

Base: 450 automation and AI decision makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Kofax, January 2020

But to work efficiently, these capabilities must work together seamlessly. Although information capture systems excel at extracting raw data from documents and electronic data sources, they typically struggle to deliver contextual understanding of that extracted data for better decision-making. This is where the ability to seamlessly weave in multiple intelligent automation capabilities becomes important. True cognitive document automation employs AI algorithms to understand, decide, learn and better automate business processes that require information capture. AI can cluster, classify, separate, OCR, extract, understand human language and machine-learn information from any document type or data source.

When it comes to assigning meaning to language, understanding the context is critical. Natural language processing (NLP) can help with this. NLP software can read or interpret those nuances in human language and inform bots that create structured data out of documents and other unstructured content.

Machine learning and cognitive automation are also critical capabilities to automating many document processes. Cognitive automation uses document, data and process analytics to build models that learn, estimate, plan and decide on the best action to take, while machine learning enables computers to acquire knowledge and then act on that knowledge. These important capabilities must be tightly interwoven to effectively tackle different use cases of varying complexity.

This is why a federal agency may start down the automation path using only RPA, but as agencies scale and expand upon their use cases, they typically realize they need a broader set of tools, such as cognitive capture, process orchestration, analytics, and other capabilities for help. And having these capabilities integrated natively within the same platform often makes the difference between failure and success as agencies scale their automation efforts.

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Putting Hyperautomation Into Action: A Federal Example

To better understand how an integrated set of intelligent automation capabilities can help agencies advance and scale their automation efforts, consider the example of the eligibility verification process of the Affordable Care Act health insurance program. This program processes tens of millions of consumers each year and 45 million documents annually. Kofax automation plays a key role in almost every one of them.

Kofax's Intelligent Automation platform automates the eligibility verification process, and intelligent, AI-enabled, data-capturing tools extract data at massive scale. The analytics capabilities of our platform monitor the processes and workflows. A robotic workforce uses the same case management systems, rules and governance as human employees, but does so at up to six times faster.

The Kofax solution completes as many as 300,000 processes per month, saving substantial labor hours while providing a surge capacity that otherwise would have to be manual. As a result, the program can accommodate regular spikes in processing requirements without hiring the same peak-level additional support workers that would otherwise be required. Moreover, automation has helped dramatically improve the consistency, accuracy, quality, and speed of its work.

Conclusion

Federal agencies desire to reduce the low-value work that takes employees away from higher-value activities, drives down overall efficiency, and lengthens response times to constituents. Kofax's integrated platform approach delivers the full spectrum of capabilities needed for agencies to start their automation journey and then progressively add more capabilities as they advance up the automation maturity value curve and begin scaling across the enterprise.

With Kofax's single-platform, integrated approach to intelligent automation, federal agencies can meet their transformation goals and simultaneously empower their workforce to focus on more meaningful, high-value work. Delegating repetitive, low-value work that starves federal agencies of their productivity and effectiveness to an AI-enabled digital workforce is a win for federal employees and for taxpayers.

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