

The State of Federal RPA

An Analysis of Governmentwide RPA Impact, Deployment, and Best Practices

Nearly two years after the first Robotic Process Automation (RPA) application was deployed in the federal government, RPA has become a widespread process automation tool. Several agencies are implementing the technology at scale and achieving significant results in alignment with CAP Goal 6—Shifting from Low to High Value Work. This report assesses RPA's impact, identifies implementation trends, and highlights best practices for future deployment.

Version 1.0 — Published by the Federal RPA Community of Practice (CoP)

November 1, 2020



Note from the CoP Sponsor



Gerard Badorrek

GSA CFO
CAP Goal 6 Co-Lead
Federal RPA CoP Sponsor

Federal Community:

The President's Management Agenda (PMA) Cross-Agency Priority (CAP) Goal 6 sets an important governmentwide focus for all agencies to shift from low- to high-value work. One important element of this goal is adopting innovative workload automation technologies like Robotic Process Automation (RPA), Artificial Intelligence (AI), and Intelligent Automation (IA).

As a co-lead for CAP Goal 6, I look forward to working with agency leaders to help them adopt these technologies faster. I know firsthand that interagency collaboration can prove to be instrumental. When initiating the GSA RPA Program, we contacted the experts at NASA who had successfully implemented the government's first RPA applications. Starting from the foundational wisdom they shared, GSA has built one of the largest federal RPA programs. It has deployed 70 automations totaling over 200,000 hours in annualized capacity.

The Federal RPA Community of Practice (CoP) seeks to replicate this experience across the government. The CoP pursues a two-fold mission to share best practices and lessons learned, as well as to break down common technology and management hurdles that can slow RPA deployment. Often, when the government seeks to adopt an innovative technology, each agency works in a silo and develops a unique solution to achieve design and deployment. The CoP seeks to break down these walls and tackle RPA adoption and workforce productivity as governmentwide priorities under CAP Goal 6.

Specifically, the CoP provides functional webinars (e.g., process selection, program management), use case webinars (e.g., finance, human resources), the Federal RPA Program Playbook and subsequent addendums, and the Federal RPA Use Case Inventory. In FY 21, the CoP will facilitate mentoring support directly within agencies. For more information on these initiatives or to contact the CoP, please visit our website at <https://digital.gov/communities/rpa/>.

This *State of Federal RPA* Report continues the CoP's work to promote efficient and effective adoption of RPA governmentwide. Similar to every CFO's mandate to be an effective steward of federal funds, the CoP seeks to ensure that agencies use RPA tools to solve impactful, complex business processes. The CoP also promotes using standardized metrics within all federal RPA programs to provide accurate broad-scale statements of RPA impact and outcomes.

This report furthers both of those CoP goals. It clearly conveys that RPA is having a significant impact across the federal sector. Demand for RPA solutions is strong and growing. Automations that are creating more annualized capacity are being deployed in less time. Programs are starting to automate agencywide business processes across functional organizations. These are all exciting trends and show a strong future for RPA in the federal space.

I appreciate all federal partners who contributed to this report. Together, we can make significant progress on improving the productivity of government resources and shifting work from low to high value.

— Gerard Badorrek

Table of Contents

Section Name	Page Number
State of Federal RPA — Introduction	4
Methodology and Approach	5
Key Findings	6
Program Showcase	15
Conclusion and Contributors	21

Note: The RPA Community of Practice developed this report with input from key federal RPA practitioners. All participation was voluntary. Do not interpret this document as official agency policy or mandated action.

State of Federal RPA — Intro

REPORT PURPOSE

This report was published by the Federal RPA CoP to provide a comprehensive and insightful analysis of RPA's adoption and impact in the federal government. It describes RPA programs' maturity and growth to convey agency progress in digital transformation and automation. This report aims to:

- Provide a standardized framework for measuring RPA program maturity.
- Establish a baseline to measure RPA program growth on an annual basis.
- Create a methodology for gauging the governmentwide impact of RPA on federal strategies such as the President's Management Agenda, Cross-Agency Priority Goal 6.
- Identify incremental and obtainable steps to mature federal RPA programs.
- Acknowledge barriers to RPA adoption and reassess the CoP's strategy for achieving its mission to "accelerate the adoption of RPA across Government."

A BRIEF INTRODUCTION TO RPA

Robotic Process Automation (RPA) is a low- to no-code Commercial Off the Shelf (COTS) technology that can automate repetitive, rules-based tasks. RPA products vary in their exact capabilities. All RPA technologies emulate human actions, enabling process owners or staff with appropriate training to rapidly design, test, and deploy automations. RPA dramatically reduces an organization's low-value workload. Popular uses of RPA include data entry, data reconciliation, spreadsheet manipulation, systems integration, automated data reporting, analytics, scheduled communications, and prepopulated responses to customer inquiries.

For more information on RPA in the federal government including best practices, lessons learned, and proven strategies for RPA program development and maturity, please go to the RPA Program Playbook at <https://digital.gov/pdf/rpa-playbook.pdf>.

CAP GOAL 6: SHIFTING FROM LOW-VALUE TO HIGH-VALUE WORK

The President's Management Agenda, Cross-Agency Priority Goal 6 states "federal agencies will shift time, effort, and funding from low to high value work through the elimination of unnecessary requirements, burden reduction, optimization and streamlining, and workload automation".

RPA is an important enabling technology for the CAP Goal 6 strategy. The Federal RPA CoP is a key stakeholder in accelerating the adoption of workload automation technologies across government.

Find more information on CAP Goal 6 including action plans at <https://www.performance.gov/CAP/low-value-to-high-value-work/>



ABOUT THE RPA COP

nsisting of 1,000+ members from over 65 federal agencies, the RPA CoP helps agencies convert RPA enthusiasm into action.

The mission of the RPA CoP is to accelerate the adoption of RPA in the federal government. As such, the RPA CoP hopes to see more RPA programs emerge in government and for existing RPA programs to mature to deliver value across the federal government.

To join and learn more visit digital.gov/communities/rpa

Study Methodology

The Federal RPA CoP conducted detailed maturity assessments with 23 government RPA programs. They assessed the following eight areas of program maturity: 1) automations in production, 2) annualized hours of workload reduction, 3) process improvement capabilities, 4) program impact, 5) opportunity identification, 6) production environment, 7) security and technology approach, and 8) intelligent automation capabilities.

The CoP began by distributing a survey to all federal RPA programs. Responses were gathered, analyzed, and validated through individual interviews with program leads. During these interviews, RPA programs were evaluated based on automations and capabilities that were already released in production, at two different points in time: the end of FY19 and as of August FY20. Automations forecasted to be completed by end of FY20 were incorporated on a case by case basis.

As depicted in Figure 1 below, the RPA CoP created a formal maturity model based on best practices and lessons learned for rapid, effective RPA deployment. Weights and scoring were applied for each factor to determine an aggregate maturity level. Participation in this study was strictly voluntary, and therefore results do not capture every RPA program across the federal government. The CoP is confident the assessment contained herein represents the federal landscape and indicates key trends.

Figure 1: State of Federal RPA Maturity Model

Maturity Component	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
	(0-29 Points)	(30-49 Points)	(50-69 Points)	(70-89 Points)	(90-100 Points)
Automations in Production	1-5 Applications (5)	5-20 Applications (10)	20-50 Applications (15)	50-100 Applications (20)	100+ Applications and Monthly Production of 5+(25)
Annualized Hours of Workload Reduction	0-5,000 Program Cumulative (0)	5-50,000 Program Cumulative (5)	50-150k Program Cumulative (10)	150k-300k Program Cumulative (15)	300k+ Program Cumulative (20)
Process Improvement	No Capability (0)	Basic PI Capability (3)	Intermediate PI Capability (4)	Advanced PI Capability (5)	
Program Impact	Processed Automated for Work Teams (1)	Processed Automated for Office-Level Units (2)	Processed Automated for Bureau/Divisions (3)	agencywide Processes Automated (4)	governmentwide Processes Automated (5)
Opportunity Identification	Ad Hoc Approach (1)	5+ Application Pipeline (3)	10+ Application Pipeline (5)	20+ Application Pipeline and Active Opportunity Generation (7)	30+ Application Pipeline & Multi-Customer Demand (10)
Production Environment	Pilot Desktop Automation (1)	VDI Attended Automations (5)	On-Prem Enterprise Platform (10)	Enterprise Cloud Platform (20)	
Security and Technology	Pilot Security Approvals and Publicly Available Data (0)	RPA Software ATO / Approval, Using PII on Ad hoc Basis, and Human User Credentials (3)	RPA Software & Enterprise Platform ATO / Approval, Standard Approach to Using PII, and 50%+ Unattended Automations (5)	RPA Software & Enterprise Platform ATO / Approval, Standard Approach to Using PII, and 50%+ Unattended Automations (7)	RPA Software & Enterprise Platform ATO / Approval, Standard Approach to Using PII, and 75%+ Unattended Automations (10)
IA Capabilities			Basic IA Capability (1)	Intermediate IA Capability(3)	Advanced IA Capability (5)

Key Definitions:

Basic PI Capability includes the introduction of standardized automation design documentation; **Intermediate PI Capability** includes process assessment, mapping, and improvement tools; **Advanced PI Capability** includes reengineering and metric definition.

Basic IA Capability includes use of native sensory tools to the RPA workflow; **Intermediate IA Capability** introduces advanced sensory tools to automation workflow; **Advanced IA Capability** includes NLP, ML, image analysis, cognitive agents, or chat bots.

Key Findings Summary



1

Overall RPA program maturity increased significantly during FY20



2

RPA programs are deploying more impactful automations across more functional areas



3

RPA programs are deploying complementary process improvement capabilities



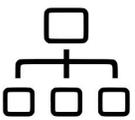
4

RPA programs have reported strong demand for automation solutions within agencies



5

RPA programs have had limited success in incorporating IA solutions



6

RPA programs are increasingly adopting a COE, agencywide provider model



7

RPA programs are meeting security requirements, but these requirements continue to limit program capabilities and impact



8

RPA programs are adopting more sophisticated technology platforms, ensuring long-term program effectiveness, capacity, and impact

Key Finding 1: RPA Program Maturity Increased Significantly During FY20

At the end of FY19, most agency RPA programs were Level 1, indicating limited success in deploying actual automations. By the end of FY20, the federal RPA landscape noted significant shifts in program outputs and maturity. As noted in Figure 2 below, programs from agencies of all sizes increased capabilities, deployed automations, and workload reduction hours, netting attendant gains in maturity levels.

Average RPA Program Maturity increased from 1.3 in FY19 to 2.2 in FY20, a 70% increase. Average Maturity by program capability area is noted below (FY20).

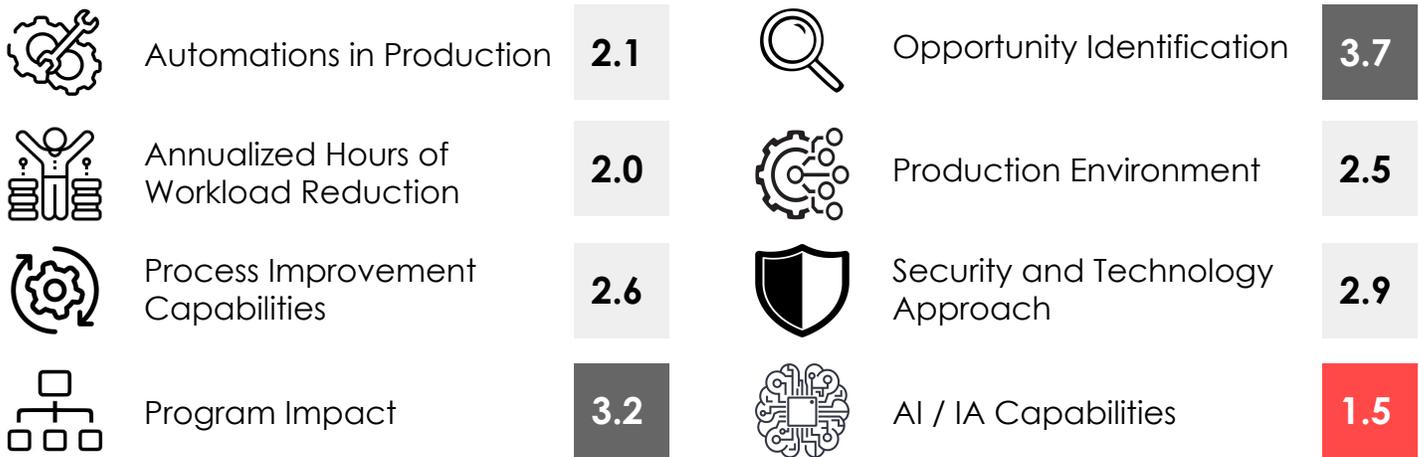
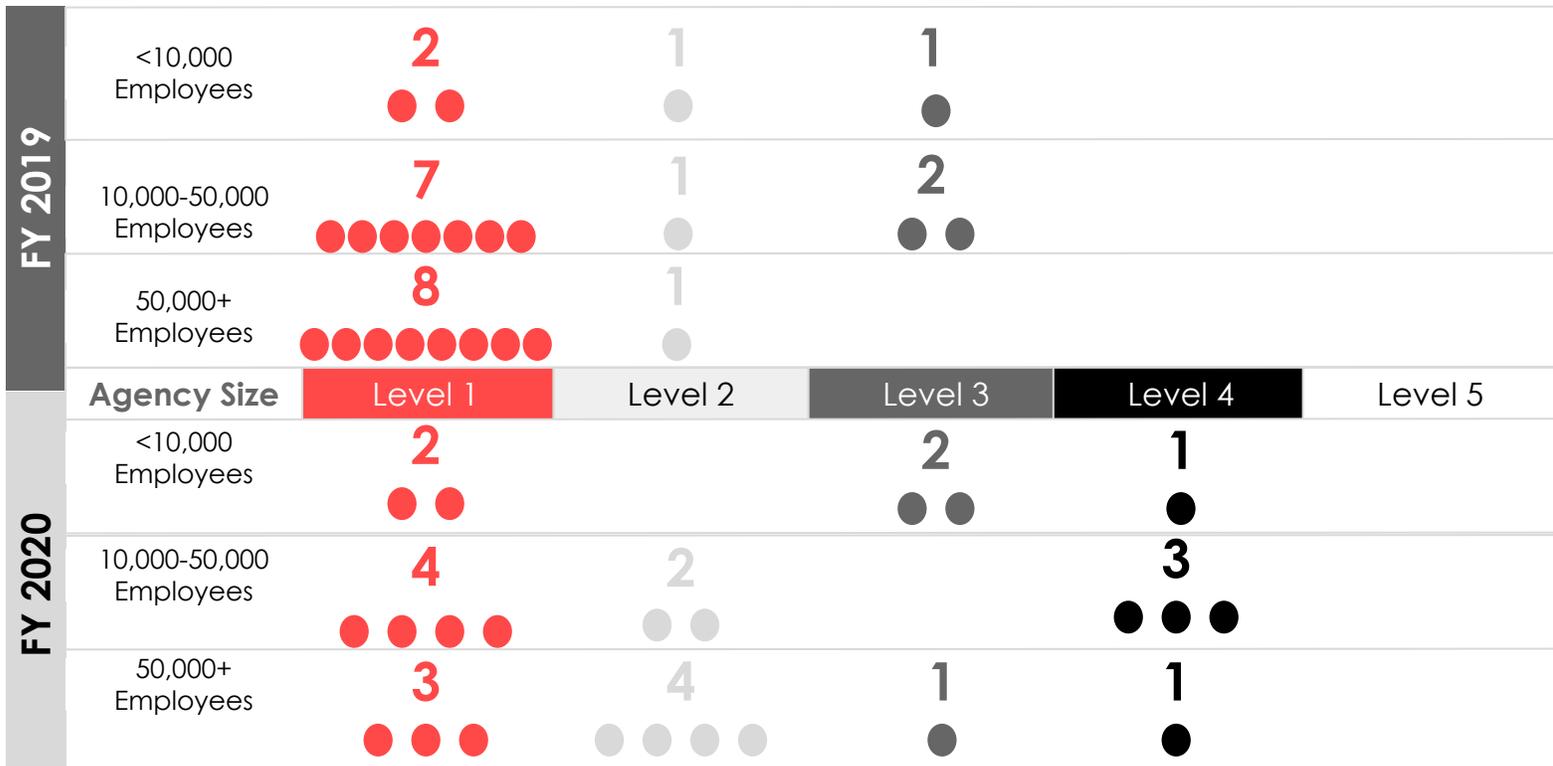


Figure 2: RPA Program Maturity Levels by Agency Size (FY19 and FY20)



Key Finding 2: RPA Programs are Deploying More Impactful Automations across Functions

 Automations in Production **2.1**

 Annualized Hours of Workload Reduction **2.0**

Maturity assessment results convey that RPA programs are deploying automations at a faster rate, implementing more complex automations, and working to develop automations in new functional areas. Specific findings include:

1. Within the 23 programs assessed, **the number of automations deployed increased** from 219 in FY19 to 460 in FY20, a 110% gain. This indicates a significant improvement in program ability to accelerate automations' deployment.
2. Preliminary results from the 23 programs assessed convey **the annualized hours saved by automations deployed increased** from 285,651 to 848,336, a 195% increase.
3. **The average hours of annualized capacity created per automation has increased** from 1,335* hours per automation at the end of FY19 to 1,708* hours in FY20. Agencies should continue to focus on improving this area. The more workload is reduced, the better the return on investment (ROI) and overall program impact.

**Numbers calculated using only the programs with number of automations and hours saved reported for FY19 and FY20.*

FY 19 Automations Deployed

 219 Automations

FY 20 Automations Deployed

 460 Automations

FY 19 Annualized Hours

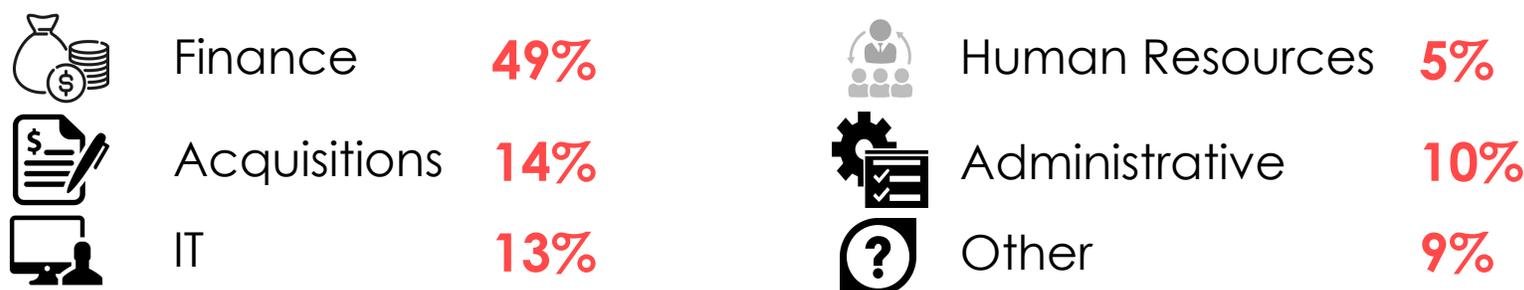
 285,651 Hours

FY 20 Annualized Hours

 848,336 Hours

The Federal RPA CoP recently developed a Use Case Inventory of federalwide RPA applications. The data from this inventory complements the maturity assessment and demonstrates that RPA adoption is spreading rapidly across organizational functions. RPA was mostly a finance tool in FY18 and FY19. It has since been deployed to great success in acquisition, information technology, human resources, and administrative services functions. Figure 3 below shows RPA adoption across business functions in the Federal RPA CoP's Use Case Inventory.

Figure 3: RPA Use Cases by Business Function in CoP Use Case Inventory



Key Finding 3: RPA Programs are Deploying Complementary Process Improvement Capabilities



Process Improvement Capabilities

2.6

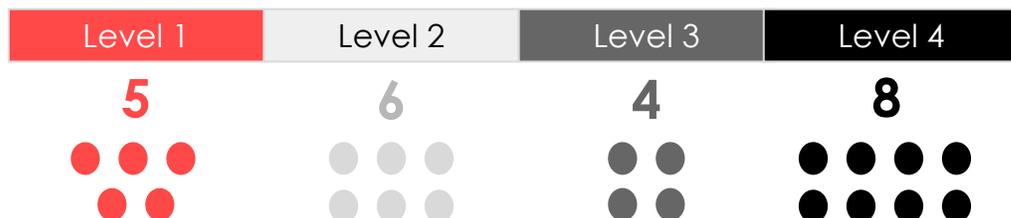
As noted in the Federal RPA CoP's *RPA Program Playbook*, process improvement is an integral element of a mature automation capability. RPA provides an effective tool for task automation that is simple, low cost, and quick to implement. But by itself, RPA is just a technology solution. For an agency to best use RPA, it requires process transformation work to standardize sub-processes and data elements, redesign handoffs, and maximize efficiency.

The maturity assessment shows that most federal RPA programs are incorporating process improvement capabilities. The average maturity score indicates that most programs have introduced standardized automation design documentation, process assessment, mapping, and improvement tools. Eight of the 23 programs interviewed have even added process reengineering and metric definition services.

The importance of this area of program growth cannot be overstated. By transforming processes and applying RPA solutions together, agencies can expand the impact of automations deployed, and make accelerated progress toward the federalwide strategies of CAP Goal 6. Specific findings include:

- Of the 23 programs interviewed for the maturity assessment, only five agencies report no process improvement capabilities. All five programs are at the pilot stage of RPA deployment, currently automating less complex candidates as proofs of concept.
- Most programs have created standardized automation design documentation. This important initial step ensures compliance with internal controls standards. In the long term, this should set up RPA programs to more effectively work across agency components, and eventually governmentwide. Level 2, 3, and 4 programs can share their automation design standards and artifacts to augment Level 1 program process improvement capabilities.
- 50% of programs offer RPA customers process assessment, mapping, and improvement tools. The Federal RPA CoP can create a governmentwide toolkit that consolidates these strategies and templates to lead capability development and cross-government standardization.

Figure 4: RPA Program Maturity — Process Improvement



Key Finding 4: RPA Programs Have Reported Strong Demand for Automation Solutions



Opportunity Identification

3.7

The CAP Goal 6 team is working to assess whether stakeholders and business process owners are interested in adopting RPA and to what degree. The best metric for assessing RPA demand is the number of automations in each RPA program's development pipeline. This indicator clearly demonstrates both RPA's applicability as a solution to an agency's operating challenges and key stakeholder interest in pursuing RPA solutions.

The maturity assessment conveys strong demand for RPA solutions within federal agencies. In fact, the strength of each RPA program's opportunity identification capability received the highest maturity score of any area assessed. On average, RPA programs have 10-20 automations in their development pipeline, with 10 programs having 30+ automations generated from multiple customers. Analysis of RPA program pipeline data led to the following findings at a governmentwide level:

Subfindings on Strong RPA Demand

1

The strong development pipelines at level 3, 4, and 5 programs indicates **sustainability in customer demand for RPA**. RPA should be a strong investment candidate for agencies, as ROI increases when RPA is deployed at scale.

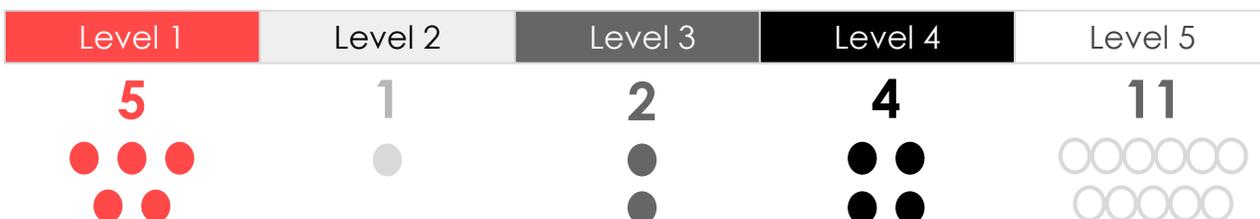
2

With strong RPA demand, programs need to consider staffing and long-term workforce planning. They need to make key decisions about using federal full time employees (FTE) or contractors for development and program management roles.

3

The Federal RPA CoP forecasts that the strong demand identified within these 23 programs is similar across government. Agencies face similar challenges in finance, human resources, acquisitions, IT, and administrative operations.

Figure 5: RPA Program Maturity — Opportunity Identification



Key Finding 5: RPA Programs Have Had Limited Success in Incorporating IA Solutions



IA Capabilities

1.5

Figure 6: AI Maturity Level Definitions



Basic IA Capabilities

Basic IA capabilities include using embedded, native sensory tools in the RPA software within the automation workflow. An example of a sensory tool native to the RPA software is leveraging Optical Character Recognition (OCR) as part of an RPA's application design and development.



Intermediate IA Capabilities

Intermediate IA capabilities include using advanced sensory tools, most often external to the RPA software, within end-to-end automation workflow. An example of an advanced sensory tool is the introduction of Intelligent Character Recognition (ICR) to process handwritten text, along with computed text, as part of the automation solutions' design and development.



Advanced IA Capabilities

Advanced IA capabilities include using advanced artificial intelligence tools to conduct decision making activities within an automated workflow. An example of an advanced artificial intelligence tool is the integration of machine learning (ML) or natural language processing (NLP) to process unstructured data and automate tasks that require judgment into the automation workflow.

Intelligent Automation

Federal agencies have made limited progress in adopting more advanced technologies within automation programs, as reflected in the average maturity score of 1.5 (the lowest of all areas assessed). As agencies look to mature program capabilities, adopting and incorporating advanced sensory tools and artificial intelligence will give programs the ability to implement more robust and capable automation solutions for end-to-end processes.

Agencies should consider the following before incorporating advanced technologies into an RPA program: agency strategy for incorporating and implementing artificial intelligence within an organization; security approvals for the desired technology or application; any potential ethical and legal considerations surrounding the data that is used or the decision making that occurs within the workflow of the automation.

Figure 7: RPA Program Maturity — IA Capabilities

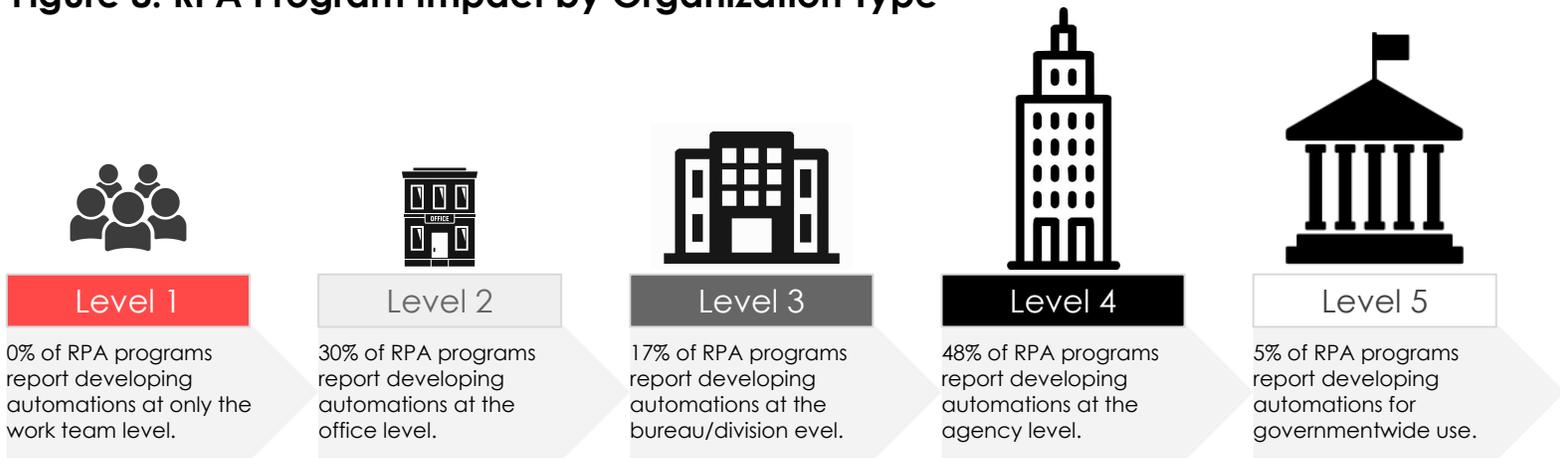
Note: Most Programs Scored at Level 0, indicating no IA capabilities.



Key Finding 6: RPA Programs Are Increasingly Adopting a COE, Agencywide Provider Model



Figure 8: RPA Program Impact by Organization Type

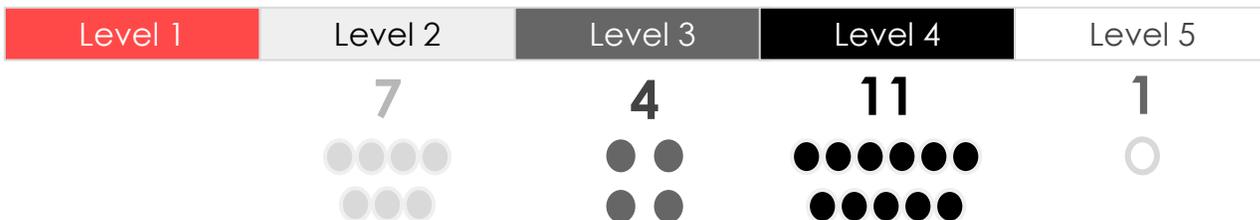


The CAP Goal 6 mandate to shift from low- to high-value work requires a thoughtful and streamlined strategy for governmentwide adoption of automation technology. Specifically, agencies should not implement initiatives to reduce workload and increase efficiencies inefficiently. In the early adoption of RPA, and still to some extent, pilot programs and small automation deployments proliferated across government. In addition to the security and compliance concerns this generated, it also created an environment for duplicated effort and resource spend.

As the maturity assessment results in Figure 9 convey, RPA programs are increasingly adopting a Center of Excellence (COE) model in which multiple customers within a larger organization receive services from one expert provider. This strategy enables the program to consolidate RPA spend within an agency and use government's economies of scale in purchasing power for technology, licensing, and contract resources. RPA's future will likely hold more consolidation opportunities, as agencies look to provide governmentwide automations.

Finally, the increase in RPA program impact maturity will almost certainly bring challenges in managing and deploying automations. Collaborating with customer groups requires RPA programs to achieve consensus on process improvements, secure more systems and IT approvals, and manage toward milestones that meet customer needs. These factors often manifest in slower development times. The Federal RPA CoP recommends adopting a customer-centric approach that includes customer liaisons, a development group designed like a factory (role specialization), and program management capabilities to closely monitor operational metrics.

Figure 9: RPA Program Maturity — Program Impact



Key Finding 7: RPA Programs are Overcoming IT Approval Challenges, but These Hurdles Continue to Limit Program Capabilities and Impact



Security and Technology Approach 2.9



IT SECURITY APPROVALS

Definition: RPA programs need formal authority to operate (ATO) select applications and enterprise platforms/services within an agency's IT environment. Individual automations also require various approvals from systems owners, process owners, and other relevant stakeholders.

Successes:

- Most RPA programs consulted for this study have achieved ATO approval for RPA software. This was a significant hurdle for early RPA adopters in the federal space.
- Agencies have created strategies for approving individual automations.

Ongoing Challenges:

- Approaches to individual automation approvals continues to vary significantly in terms of rigor within federal RPA programs.
- FY 21 efforts should focus on streamlining and standardizing automation approvals.



AUTOMATION CREDENTIALING

Definition: RPA programs are required to develop and promote credentialing processes to manage RPA identity and access to IT systems and data (in alignment with federal guidance). These processes establish a formal policy for authenticating users, monitoring access rights, and ensuring compliance with relevant policies.

Successes:

- Federal RPA programs continue to make significant strides in adopting credentialing policies to issue Non-Person Entity (NPE) accounts for automations.
- Agencies are increasingly able to deploy fully unattended automations due to issuing NPE account credentials.

Ongoing Challenges:

- Standardized policy updates to active directories (ADs) are required to track digital workers.
- Standardized protocols for issuing NPE accounts are needed to streamline RPA program access to shared federal systems.



DATA PRIVACY CONTROLS

Definition: Data privacy controls are often decided at the individual automation level. All agencies have privacy policies in place to govern how data is stored, accessed, and used. Privacy thresholds are generally applied based on the sensitivity of data stored and manipulated by the individual RPA application.

Successes:

- Most RPA programs consulted for this study have created and used standard protocols for handling Personally Identifiable Information (PII).
- More mature RPA programs have also developed ad hoc solutions for more sensitive data types.

Ongoing Challenges:

- Consistent policies are needed to transmit data external to an agency's internal operating environment.
- Standard protocols required for recertifying applications interacting with data that is considered controlled unclassified information (CUI), restricted, or classified.

Figure 10: RPA Program Maturity — Security and Technology Posture

Note: One program did not have a production environment in place to run its automations.



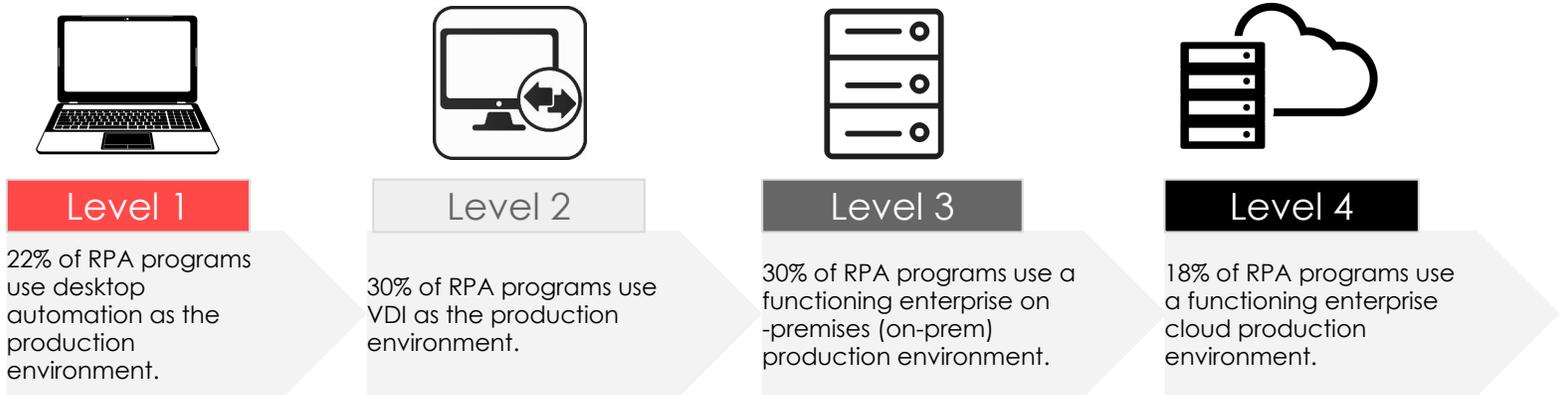
Key Finding 8: RPA Programs are Adopting More Sophisticated Technology Platforms, Ensuring Long-Term Program Effectiveness and Capacity



Production Environment

2.5

Figure 11: RPA Program Production Environment Maturity Levels



The maturity assessment conducted for the *State of RPA Report* revealed that most programs are using either a virtual desktop infrastructure (VDI) or enterprise on-premises (on-prem) production environment. This finding holds three important considerations for the future of governmentwide RPA adoption:

1. The enterprise production environment (both on-prem and cloud) enables RPA programs to optimize performance with enhanced capabilities including operational consistency and scalability, unattended and scheduled automations, 24/7 available uptime, security and compliance mechanisms, and operational dashboarding. The more programs can implement enterprise solutions, the greater governmentwide impact RPA can achieve.
2. Due to the federal procurement cycle, early RPA adopters must often wait one to two years to budget the resources necessary to make the significant investment in an approved, enterprise production environment. IT approval, design, and implementation phases can also cause significant delays. These delays can create a multi-year delay between deciding to pursue RPA and achieving the first deployed automation.
3. The Federal RPA CoP can help agencies make progress on program development while waiting for an enterprise solution. It can also share best practices to speed up enterprise solution design and implementation.

Figure 12: RPA Program Maturity — Production Environment



RPA Program Showcase

In addition to the 23 programs included in this *State of RPA Report*, many other federal agencies are pursuing pilot automations or considering implementing RPA in their agency. For those groups, the CoP developed its RPA Program Showcase to outline the different approaches five Level 4 programs used to rapidly move from pilot to deploying automations at scale. Those programs include:

1. U.S. Department of Agriculture, Office of the Chief Information Officer
2. General Services Administration, Office of the Chief Financial Officer
3. National Aeronautics and Space Administration, Shared Services Center
4. U.S. Department of the Treasury, Bureau of the Fiscal Service
5. U.S. Department of Defense, Defense Logistics Agency

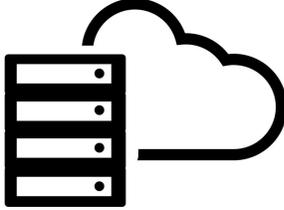
The main takeaway from these Level 4 programs' experience is that there are many ways to building a successful RPA program. Several commonalities from the showcase are worth noting:

- All programs have achieved significant executive buy-in, which has helped overcome implementation hurdles.
- All programs deploy an agencywide Center of Excellence (COE) model that consolidates RPA capabilities into one organization that serves customers.
- All programs have developed mature process improvement capabilities to standardize program inputs (design documents, process maps) and to help customers design automations that best use RPA functionality.
- All programs have deployed program management tools and metrics to drive continued progress against program goals.



Program Showcase 1: U.S. Department of Agriculture (Office of the Chief Information Officer)

Figure 13: USDA RPA Program Highlights

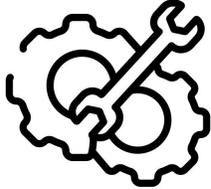
Program Impact	Opportunity Identification	Production Environment	Security and Technology
			
Level 4	Level 5	Level 4	Level 5
The USDA RPA Program has developed automations used on an agencywide basis. The infrastructure to support governmentwide automations is already in place, and program leads are looking into future feasibility.	The USDA RPA Program has identified over 70 future automation possibilities. Business relationship managers from any USDA mission area fill out a form for prospective automations. The RPA SMO governance board then assesses the forms.	The USDA OCIO created an enterprise RPA service, which comprises an RPA Digital Infrastructure Services Center Cloud Hosting Environment. This is scalable, allows for disaster recovery, and accommodates many customers.	The USDA RPA Program has maximized efficiency and security by deploying unattended automations. With more than 95% of automations deployed being unattended, the USDA RPA program has realized over 2,500 hours per bot.

Program Strategy	Best Practices
<p>The USDA RPA Program shifted from the OCFO to the OCIO to pursue agencywide adoption. RPA aligns with one of the USDA Secretary's top priorities to ensure programs are delivered efficiently and effectively, with integrity and focus on customer service. RPA also aligns with USDA OCIO strategic goal 5 "Optimize Value of IT Services".</p> <p>The program supports two development models: centralized and federated. In the centralized model, mission areas and agencies can use the RPA Service Management Office (SMO) development team. In the federated model, mission areas can use their own developers. The RPA program provides governance and policy in bot development, while at the same time streamlining the development process for the RPA SMO. The RPA SMO offers a firm-fixed-price, certified developers, and operation and maintenance for the performance period.</p>	<ul style="list-style-type: none"> • Standing up a cloud enterprise platform compatible with unattended automations that maximize automations' efficiency and security. • Creating a RPA Service Management Office (SMO) using certified developers and a standardized approach to expedite agencywide adoption. • Providing ancillary service capabilities such as automation development and automation operation and maintenance at a firm-fixed-price. • Using a robust program management dashboard to track all automations deployed, in development, and under evaluation. • Promoting flexibility within mission areas by supporting two development models that maximize suitability

Program Lead and POC: Latrice Goldsby, RPA Project Manager

Program Showcase 2: General Services Administration (Office of the Chief Financial Officer)

Figure 14: GSA RPA Program Highlights

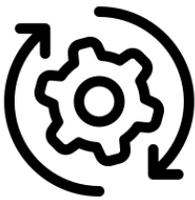
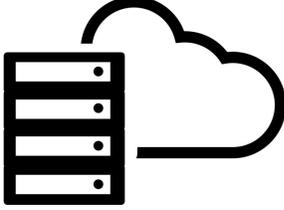
Program Impact	Annualized Hours	Process Improvement	Automations Deployed
			
Level 5	Level 4	Level 5	Level 4
The GSA RPA Program is developing the first automations to be used on a governmentwide basis. Infrastructure is currently being deployed to support this new capability with expected availability in mid-FY21.	The GSA RPA Program has created over 200,000 hours of annualized capacity by deploying automations across most GSA functional areas. Some of that capacity has been redeployed within OCFO to fund a strong team of six federal RPA developers.	The GSA RPA Program offers its customer organizations access to deep process improvement expertise including Lean Six Sigma Black Belts. These experts help customers reengineer processes to best use RPA solutions and to achieve their business goals.	GSA's RPA program has delivered over 65 automations during its two year history. It recently produced five+ automations per month. Most importantly, the program is taking on more impactful automations, with a government-leading average of over 3,000 hours per bot.

Program Strategy	Best Practices
<p>The GSA RPA program pursued a results-first strategy that prioritized getting automations in place early in the program's development. This enabled the program to limit upfront investment, create organizational momentum behind RPA, and to grow steadily and predictably. This approach has also paid dividends in the long term, as the entire agency became well acquainted with RPA capabilities and benefits while the IT Platform worked its way through acquisitions, approvals, and deployment.</p> <p>The program also was the first in the federal government to use full-time employees to develop and manage RPA operations. This enabled the OCFO to provide the capability within existing resources, including a small investment in development training. FTE developers have proven to enhance efficiency, as they often have a working background in the processes they seek to automate.</p>	<ul style="list-style-type: none"> • Adopting an assembly line approach to managing development that includes role specialization, clearly defined process handoffs, and robust dashboarding/operating metrics to monitor throughput. • Providing ancillary customer service capabilities like process transformation support, opportunity identification, and tailored performance reporting to ensure satisfaction and progress. • Leveraging a robust program management dashboard to track all automations deployed, in development, and under evaluation. • Following a private sector approach to investing in a new technology solution by limiting total spend until it is a proven commodity with verifiable customer demand. • Consolidating all RPA efforts into a COE model that enhances agencywide efficiencies, economies of scale, and program results.

Program Lead and POC: James Gregory, RPA Program Manager

Program Showcase 3: National Aeronautics and Space Administration (National Shared Service Center)

Figure 15: NASA RPA Program Highlights

Program Impact	Process Improvement	Production Environment	Security and Technology
			
Level 4	Level 5	Level 4	Level 5
The NASA RPA Program recently expanded to offer automations agencywide. To meet new customers' demands, they are developing automations at a drastically increased rate.	The NASA RPA Program offers its customers access to advanced process improvement capabilities. Upon submission of automation opportunities, the RPA program will aid in process mapping, process assessment, minor improvements, or large-scale reengineering.	The NASA RPA Program developed an enterprise cloud platform to better serve their expanding customer base. It previously used an on-prem enterprise platform, but shifted to cloud hosting to make future growth easier.	The NASA RPA Program prioritized unattended, scheduled automations to maximize efficiency. The RPA program initially deployed attended automations. But after obtaining the necessary security approvals, they have deployed almost entirely unattended automations.

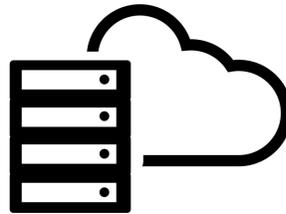
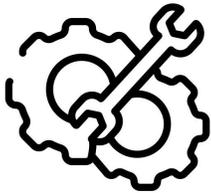
Program Strategy	Best Practices
<p>The NASA RPA Program was among the earlier programs in the federal government. The program operates out of NASA's Shared Services Center, under the agency's Working Capital Fund. It just recently expanded operations agencywide. NASA's trailblazing leadership has led to their offering lessons learned to other federal agencies.</p> <p>As the program continues to forge ahead, they are looking to incorporate more advanced technology for increased functionality. Their most recent accomplishment was shifting from an on-prem enterprise platform to a cloud enterprise platform. This new platform will help them offer agencywide solutions. Their next challenge will be to incorporate artificial intelligence (AI) to their RPA program to achieve intelligent automation. The program currently uses basic OCR capabilities. They are exploring the necessary policies for ethically implementing Machine Learning and chat bots.</p>	<ul style="list-style-type: none"> • Standing up a cloud enterprise platform compatible with unattended automations that maximize automations' efficiency and security. • Consolidating all RPA efforts into a COE model that enhances agencywide efficiencies, economies of scale, and program results. • Offering insight to overcome internal obstacles and sharing lessons learned to other RPA programs to support governmentwide adoption of RPA. • Using a robust program management dashboard to track all automations deployed, in development, and under evaluation. • Prioritizing change management practices to ensure a thorough understanding of the new RPA technology to create organizational awareness and foster faster deployment.

Program Lead and POC: Pamela Wolfe, Chief of the Enterprise Services Division

Program Showcase 4: U.S. Department of the Treasury (Bureau of the Fiscal Service)

Figure 16: Fiscal Service RPA Program Highlights

Automations Deployed Opportunity Identification Production Environment Security and Technology



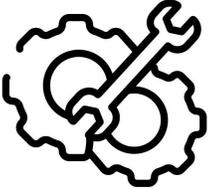
Level 4	Level 5	Level 4	Level 5
The FS RPA program has delivered 59 automations, and is forecasted to continue a steady production pace in FY21. Since the end of FY19, the FS RPA program has experienced a two-fold increase in the number of automations.	The FS RPA Program offers an intake form to any mission area within FS. The development pipeline has more than 30 automations. Automation requests are submitted through the intake form. The process is then mapped, assessed, and improved as necessary before automating.	The FS RPA Program uses an on-prem enterprise platform to support unattended, scheduled automations. All automations within FS are able to utilize this platform, and FS has future plans to allow shared services customers the ability to leverage existing automations.	The FS RPA Program has established NPE credentialing for unattended automations to run on their enterprise platform. 100% of FS' automations are unattended. They meet the security thresholds to safely interact with PII or other sensitive data.

Program Strategy	Best Practices
<p>Since the end of FY19, the program has experienced rapid growth. It had a 100% increase in the number of deployed automations, and it had increased annual workload savings by more than 300%. FS did this by standardizing their approach to design documentation. They first focused on automation opportunities that were suitable for automation with limited process reengineering. After realizing these opportunities, the program expanded its focus to include developing more complex and impactful automations.</p> <p>The FS RPA Program can currently use basic IA capabilities, with a limited use of OCR in a part of their deployed automations. Their future focus is on continued growth and expansion of additional capabilities and technologies.</p>	<ul style="list-style-type: none"> • Standing up an enterprise platform compatible with unattended automations that maximize the automations' efficiency and security. • Offering a standard intake form to all interested FS mission areas ensures all processes are evaluated and prioritized using similar criteria. • Realizing quick wins with initial automations to establish momentum and executive buy-in to RPA's potential benefits. • Using a robust program management dashboard to track all automations deployed, in development, and under evaluation. • Integrate IT security personnel early in RPA program planning to determine an appropriate security review process for RPA • Collaborate with other federal agencies that utilize RPA to gain insight from their experiences and lessons learned.

Program Lead and POC: Dave Weekley, Director of Operations Support Division

Program Showcase 5: Department of Defense (Defense Logistics Agency)

Figure 17: DLA RPA Program Highlights

Automations Deployed	Annualized Hours	Process Improvement	Security and Technology
			
Level 4	Level 4	Level 4	Level 5
The DLA RPA program has deployed 96 automations, and has plans to move additional automations into production before the end of FY20. The 96 automations in production was the highest number reported during the interviews.	The 96 automations currently in production have contributed over 200,000 hours of annualized capacity. The DLA program tracks hours contributed rather than hours saved, as the employees that previously did the work are still there, and are redeployed to focus on more complex work.	The DLA RPA team is engaged with the Process Owner community to ensure the right processes are being selected. They are also integrated with DLA's Business Transformation office and their Continuous Process Improvement (CPI) initiative to evaluate process improvements as needed.	DLA's RPA program pioneered the use of a Hardware Security Module (HSM) to create a truly unattended execution architecture. Currently more than 90% of their automations are executed 'unattended', utilizing the robots unique NPE credentials, running on an enterprise cloud platform.

Program Strategy	Best Practices
<p>The DLA RPA program supports the entire enterprise. They have deployed automations that provide benefits across each of DLA's Major Subordinate Commands (5) and Supply Chains (7). The DLA RPA team hopes to continue expanding their program's impact by offering 'Automation Workshops' to drive RPA adoption and understanding across new functional areas. These workshops fall under the Discovery phase of the RPA team's 4 foundational elements (Discovery, Enablement, Delivery, and Operations), alongside lessons on process evaluation and assessment.</p> <p>DLA's program office is working to incorporate intelligent automation in the near future and hope to complete pilot activities during Q1 FY 2021. Their program office is evaluating product offerings that include Document Understanding, which will introduce AI and ML through the use of OCR and model driven form/data processing.</p>	<ul style="list-style-type: none"> Establishing 4 foundational elements to drive continued RPA program growth - Discovery, Enablement, Delivery, and Operations. Integrating with DLA's Business Transformation Office and their Continuous Process Improvement (CPI) initiative to ensure processes are optimized before automating. Consolidated all RPA efforts into a COE model that enhances agencywide efficiencies, economies of scale, and program results. Providing ancillary customer service capabilities like process transformation support, opportunity identification, and tailored performance reporting to ensure satisfaction and progress. Focusing on continued growth and expansion of their program through the exploration of additional technologies and capabilities.

Program Lead and POC: Robert Zebroski, RPA Program Manager

Conclusion and Contributors

The State of Federal RPA, Community of Practice Contributors

The RPA CoP would like to thank the following individuals for their contributions to this report:

Erica Thomas	DOD	Kyle Brooks	State
Pamela Wolfe	NASA	Devin Ure	Transportation
Robert Zebroski	DLA	JoAnn Napolitano	FAA
Anju Anand	NSF	Derrick Rollins	FAA
Toya Stith	DHS	Shauna Eisenberg	USIP
Christine Gex	Army	Monique Bourque	DOJ
Neil Stewart	Navy	Arthur Chin	HUD
Kent Craig	USPTO	Russ Kuehn	SSA
Martin Engel	HHS	Carlos Colon	AF
Lattrice Goldsby	USDA	Dave Weekley	Treasury
Joe Zuniga	U.S. Courts	James Gregory	GSA
Rose Biroonak	Labor	Chase Levinson	Army

The State of Federal RPA Editors

James Geoghegan	GSA
Nathan Keene	GSA
Andrew Stegmaier	GSA - MSI