Digital finance
The robots are here

By Marc Mancher; Chris Huff; Robert Grabowski; and Jamie Thomas
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Federal finance organizations are entering the process robotics space at an ever-increasing rate, looking to take advantage of significantly improved processing times and data accuracy offered by intelligent, bot-driven processes. These efficiency improvements are the direct results generated when organizations empower their employees to leverage bots (robotic process automation, or process robotics) in their daily activities, significantly scaling their ability to process an ever-increasing workload.

While most recent process robotics (bots) discussions in the marketplace have revolved around bots replacing humans in the workforce, a collaboration between person and machine to empower the finance workforce may provide exponentially more value to an organization, significantly increasing the organization’s workload capacity at a fraction of traditional workforce costs. This complementary bot approach may prove to be a cornerstone capability for federal finance organizations as they progress toward an increasingly digital government.

What is process robotics?
Process robotics is a different way of looking at automation and just one point on the digital labor spectrum (see Figure 1), which spans from the simplest types of automation (scripting/macros) to advanced artificial intelligence. While process robotics is not quite computer learning, nor does it replicate human intelligence, it is the next evolution of rules-based software that can automate an end-to-end process across multiple applications.

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Process robotics, often referred to as “bots,” is software designed to execute computer-coded process automations that mimic human activities for repetitive, rules-based tasks. In simple terms, a process automation is a set of instructions to complete a process or task, and a bot is the tool that executes the instructions.

Bots operate at the user-interface layer, where processes are executed without compromising the underlying information technology (IT) infrastructure. Bots follow established organizational protocols and procedures with absolute discipline, resulting in improved compliance.

To create bots, developers and federal-finance-process subject matter experts collaborate to train bots to execute manual and repetitive processes, or subsets of a process, factoring in scalability of the automation and the overall impact to the organization. When completed, bots can be scheduled to run the automated processes or to be triggered by direct or indirect human interaction or by the bot itself (see Figure 2).

Figure 1. Digital labor spectrum

**The case for process robotics in federal finance**

Process robotics is applicable enterprise-wide, and strong use cases exist for all lines of business. So why is finance a prime candidate for process robotics?

Transaction processing is a key activity performed by every finance organization. Budget distribution, obligation tracking, accruals, invoice processing, journal vouchers, reporting — the day-to-day activities for finance organizations seem to primarily be manual, repetitive and rules-based. Additionally, the subject matter requires a high degree of accuracy to reduce the risk of rework or an audit finding. Couple this with directives for agencies to be increasingly mission-focused, resulting in shrinking back office budgets, and it becomes very clear why finance is a prime candidate for process robotics. This may finally be the solution that can answer the age-old question, “How do I do more, with less?”

For these reasons, federal finance leaders are thinking creatively about their operational processes and workforce. The increasing interest in process robotics within...
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Bots perform manual processes normally completed faster than currently performed by the workforce, 24 hours a day, without making processing errors. These new organizational capabilities allow employees previously performing these tasks to focus on higher-value tasks that require human thought and decision-making or to work on an ever-increasing work backlog.

**Finance organizations leading the bot revolution**

Virtually any organization that has implemented or started a bot project can attest — the interest only grows as the first bots are deployed and everyone else gets to witness the excitement around bots and the impact the bots have on the organization. These organizations quickly realize they need a plan to wisely grow and scale the bots to meet growing demand for process automation. Without a plan, the various organizations across the agency could quickly start up their own bot projects, driving up software/licensing costs and introducing quality risks into the process automations.

Due to the high volume of transactional work, finance often is the first consumer of robotics at scale. Cost efficiencies can be gained by centralizing the management of bots (e.g., filling bots to capacity before buying additional bots). In addition, cost models can be created and managed to allow organizations to “purchase” development and management services for process robotics in a shared-services environment. Finance organizations have the capability and experience to manage these types of activities and drive value throughout the agency. Imagine a world where the mission is acquiring bots through the finance organization!

**Implementing process robotics in your organization**

It is easy to find excuses as to why a process robotics project stalls or never starts. Funding could be an issue, new software discussions could raise eyebrows or important stakeholders could be skeptical of organizational benefits. Fighting through these barriers can prove to be difficult, but as you venture into the process robotics world, being prepared to face these issues and naysayers will improve your likelihood for success. As you embark on your process robotics journey, the considerations below can help you effectively drive value into your organization.

**Step 1 — Make the leap**

When you’re ready to establish process robotics in your organization, you are likely headed into uncharted territory. Process robotics is a relatively new competency for most federal agencies, which will require a collaborative effort across functional areas.

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**Figure 2. Unattended vs. attended bots**

Bots can be designed to interact with an organization’s workforce or run independently to make the greatest impact:

<table>
<thead>
<tr>
<th>Unattended Bots</th>
<th>Attended Bots</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commonly Known As</strong></td>
<td>Back Office Automation</td>
</tr>
<tr>
<td><strong>How It Works</strong></td>
<td>Automations are designed to execute a full, end-to-end process, set to run outside the view of every day users. These processes are either scheduled to run at a certain time, when a specified rule is true, or can be self-triggered based on the completion of other automated processes. Automations are executed at the server level and provide notifications to users when the processes are complete.</td>
</tr>
<tr>
<td><strong>Execution Environment</strong></td>
<td>Automations are executed and managed on a server</td>
</tr>
<tr>
<td><strong>Benefits to an Agency</strong></td>
<td>Bots perform manual processes normally completed by an employee, freeing them up to work on higher value, non-automatable tasks.</td>
</tr>
<tr>
<td><strong>Best Fit</strong></td>
<td>Processes that are rules-based, logic driven, highly predictable, and have few exceptions.</td>
</tr>
<tr>
<td><strong>Examples</strong></td>
<td>Period-end close, reconciliation, maintain master data, cost accruals, travel accruals, labor accruals, daily report generation and compilation, PP&amp;E activities (valuation, inventory, accountability)</td>
</tr>
</tbody>
</table>

*Source: Deloitte Consulting LLP*
organizations, including IT, systems and security stakeholders. Additionally, the mountain of process robotics information and potential decisions that affect your organization can often derail an implementation before it begins. As you make the leap into process robotics, keep the following in mind:

• **Start small** — Begin training your first bot with a process that is highly manual and short. This will provide your organization with a quick win, which when communicated effectively, will spread like wildfire throughout the organization. A simple bot development also limits the amount of risk encountered when training the bot.

• **Involve the right stakeholders** — Bring in your IT organizations early in the process. While process robotics is touted as a business-led solution, not technology-led, you will still need the support of your IT department to approve and download the vendor software.

• **Don’t go at it alone** — There are process robotics specialists with years of specialized knowledge and lessons learned available to help you establish process robotics in your organization.

Leverage their collective experience to significantly improve your chances of success. The best professionals will work hand-in-hand with your organization, helping you navigate through each step of the process.

• **Pick a vendor** — Many process robotics vendors have commercially-available software application packages, each with its own cost structure, strengths and weaknesses. As each organization has its own set of unique systems and automation requirements, a vendor assessment should be completed with the organization’s requirements in mind. This helps to ensure that the most appropriate process robotics software package is selected for the organization.

• **Train your people** — Communication with the organization’s stakeholders is key throughout the process robotics implementation process. Your organization’s employees will have a substantial impact on the success of the project, whether positive or negative. A high-functioning, process-robotics-enabled organization has employees who embrace the idea of augmenting their work with automated processes, and are a source for identifying additional processes to automate. To create this organizational culture, involve your people in the implementation, communicating with them about the benefits of automated processes and teaching them how to identify additional processes as they go about their work day.

### Step 2 — Establish your operating model early

Once you have begun to train your first bot, you should start establishing your organization’s process robotics operating model.

**Prioritize your governance.**

Establishing governance early in the implementation, including program management policies, organizational structure, and roles and responsibilities, is key to starting up a successful process robotics program. While it may feel strange to be developing governance at a time when there are very few, or zero, bots in production, establish these critical policies with the end in mind.

When your fully-matured process robotics offering includes 20 bots processing 100 automations for multiple customers, you will be glad you established this structure when there was less pressure on the program.

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**Figure 3. Funds-transfer use case**

Funds transfers are a common activity performed in financial systems across the federal government. The agency featured in this use case executes 160,000 transfers in their ERP system on an annual basis. These transfers, which contain 150+ manual key strokes, typically take 8-10 minutes to perform manually — and under one minute when executed by a bot. When fully implemented, this agency will be able to redirect over 20,000 hours of work annually to more impactful activities. More importantly, the error rate on these transfers due to keying data incorrectly is reduced to zero, eliminating any time spent on fixing transaction errors.

Based on our client experience, bots can be trained to complete funds control activities at a higher accuracy and a speed of 15x that of a human (a bot can complete these activities, including verifying transaction details, confirming the transaction, and updating agency systems with the completed transaction details in 10 seconds). Attended (human triggered) bots can be trained to complete transactions that require timing flexibility, while Unattended scheduled bots can complete transactions controlled by established processes, such as monthly funds control rollup and reporting.

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Shared service or center of excellence? If you plan to spread process automation throughout the organization, organizational leadership should determine how the service will be offered to other business units. Is a shared-services model, where all automation development, bot execution and program decisions are completed in one location, the right model for your organization? Or is a center-of-excellence model with decentralized automation development more appropriate? These decisions are largely dependent on the organization’s process robotics capabilities and preference on who should control development and process prioritization, which could significantly impact the long-term success of the program.

How do you handle scaling? An additional aspect to keep in mind as your bot offering grows is how your organization will handle an increase in bot activity. Are you prepared to add additional bot capacity as more automations are deployed into production and the interest level throughout the organization increases? Closely managing bot uptime and planning for bot capacity is essential when managing current and future bot utilization. Establishing a plan to accommodate a surge in bot interest, including when and how to increase bot capacity, will help keep your efforts successfully moving forward.

Step 3 — Explode the value
At this point in the process, you have proven that process robotics is valuable, you have established an operating model, and you are likely fighting off requests for new process automations from across the enterprise. Now that you have the support and momentum, it is time to explode the value of process robotics. This can be done in multiple ways, including:

- Bots, bots everywhere! Depending on your organizational structure, the first logical step could be to scale bots across the enterprise. Think of the value you were able to obtain by automating your first several processes. Extrapolate that value to other organizations and you will quickly see how scaling up on bots not only adds excitement in your agency or department, but also exponentially drives value in time savings, data quality and employee morale.

- Build an internal staffing model. You likely will require external support to start your bot program, but also will likely have a lot of interest from within the organization. Why not start a robotics staffing plan to train existing staff and dip into the local universities and talent pool to bring in new employees to grow your bot program?

- Bots as a service. Scaling bots will likely occur naturally. Managing this scale and developing a charge-back model that allows you to recoup your costs allows you to formalize process robotics, bring in new vendors and drive value across other service organizations — and even into the agency’s mission. Someone needs to manage this growth, and the office of the chief financial officer (or equivalent organization) is a logical place to own and run this process.

- Take the next leap. You likely already went out on a limb to establish process robotics in your agency. It is never too early to think about the next innovation when it comes to digital labor enhancement. Cognitive automation and machine learning are just around the corner for federal agencies. Think about how impactful a chat bot might be to support customer-service functions or a bot that can quickly analyze significant amounts of data and make strategic recommendations to leadership can be for your organization. This may still seem to be a bit too futuristic for the federal sector...but so did process robotics not more than a year ago.

Are you ready?
Process robotics is here and is rapidly growing in the federal space. Finance organizations across the government are getting smarter each day, creating intelligent, efficient processes, freeing up resources to perform thought-driven work and creating additional capacity within the organization. The only question that remains is who will drive process robotics across your agency or department? And what role will your finance organization serve in the initiative?
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