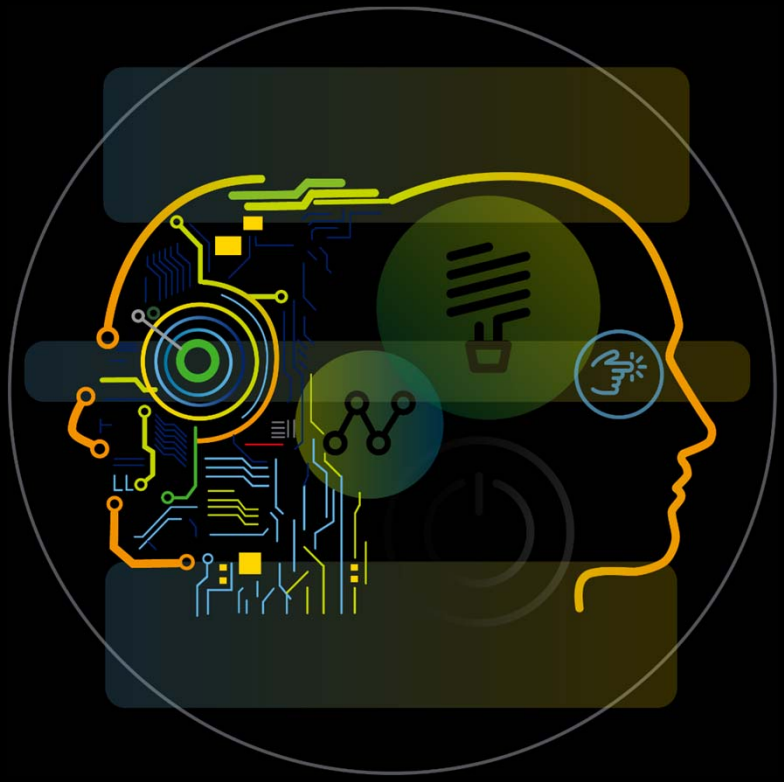
Deloitte.

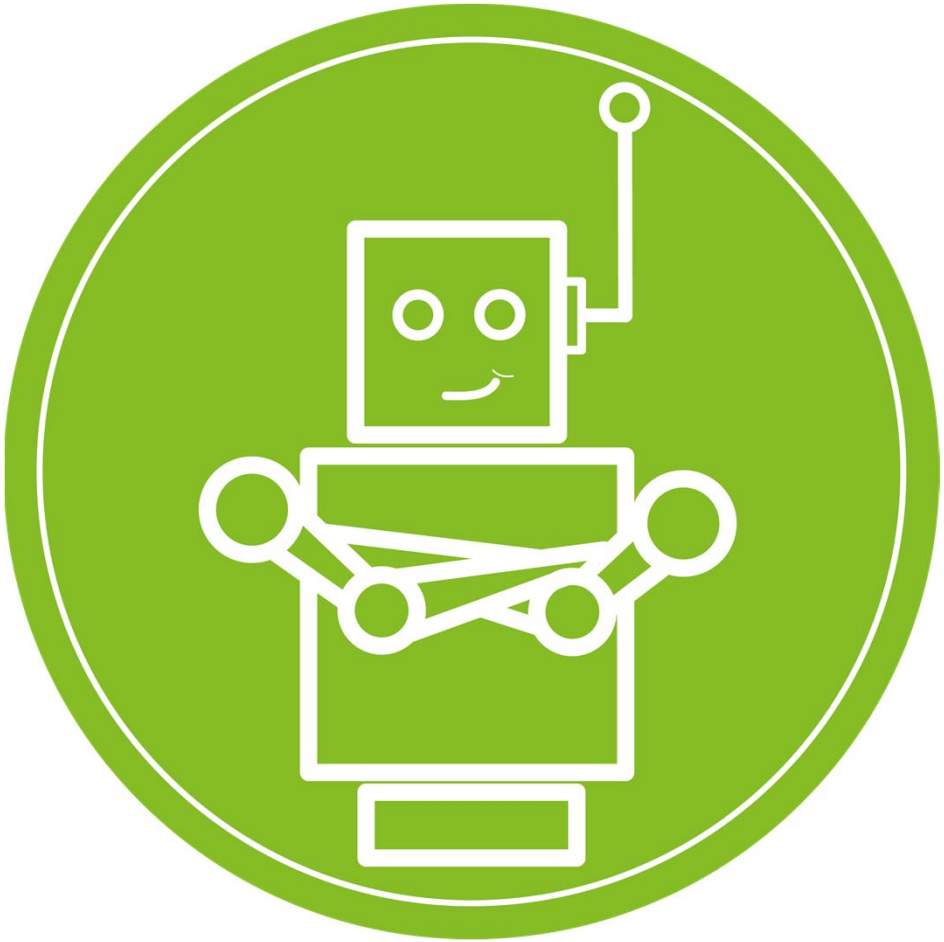


Deloitte Process Robotics

A Digital solution to automating transactional work that empowers valuable labor and improves operational efficiency

October 2018

Robots are coming…



Office of American Innovation (OAI) will create task forces to focus on initiatives such as modernizing Government services and information technology…and developing "workforce of the future programs"

-White House OAI

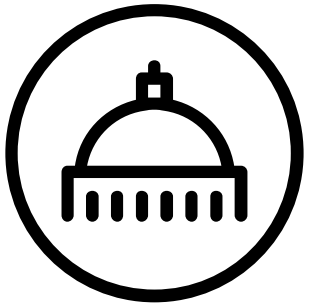
Despite growing citizen dissatisfaction with the cost and performance of the Federal government, Washington often crafts costly solutions in search of a problem"

-White House Memo M-17-22

"Better leverage technology and improve underlying business processes. Agencies should identify opportunities where adopting new technology will automate processes and result in increased efficiency and budgetary savings"

- Mick Mulvaney, Director, OMB

Digital labor… an impact driver that can transform the way that the public sector delivers citizen-focused services



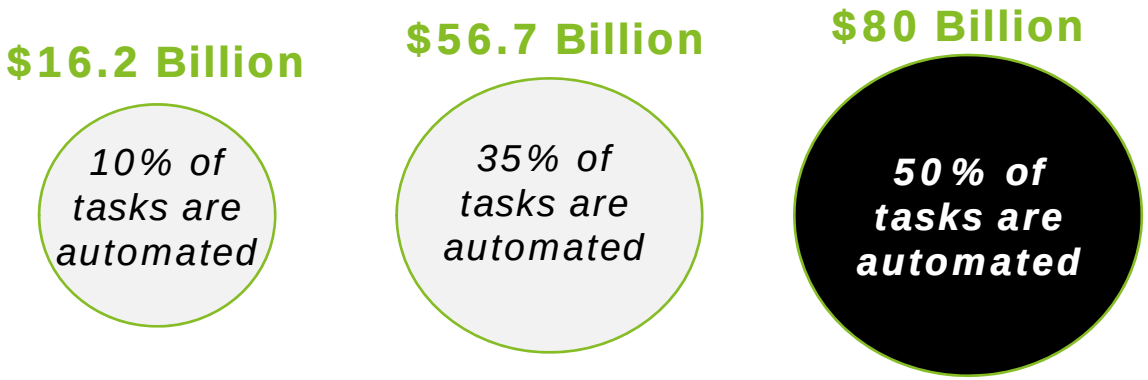
This is right here

This is right now

This is supported by the top-most levels in government

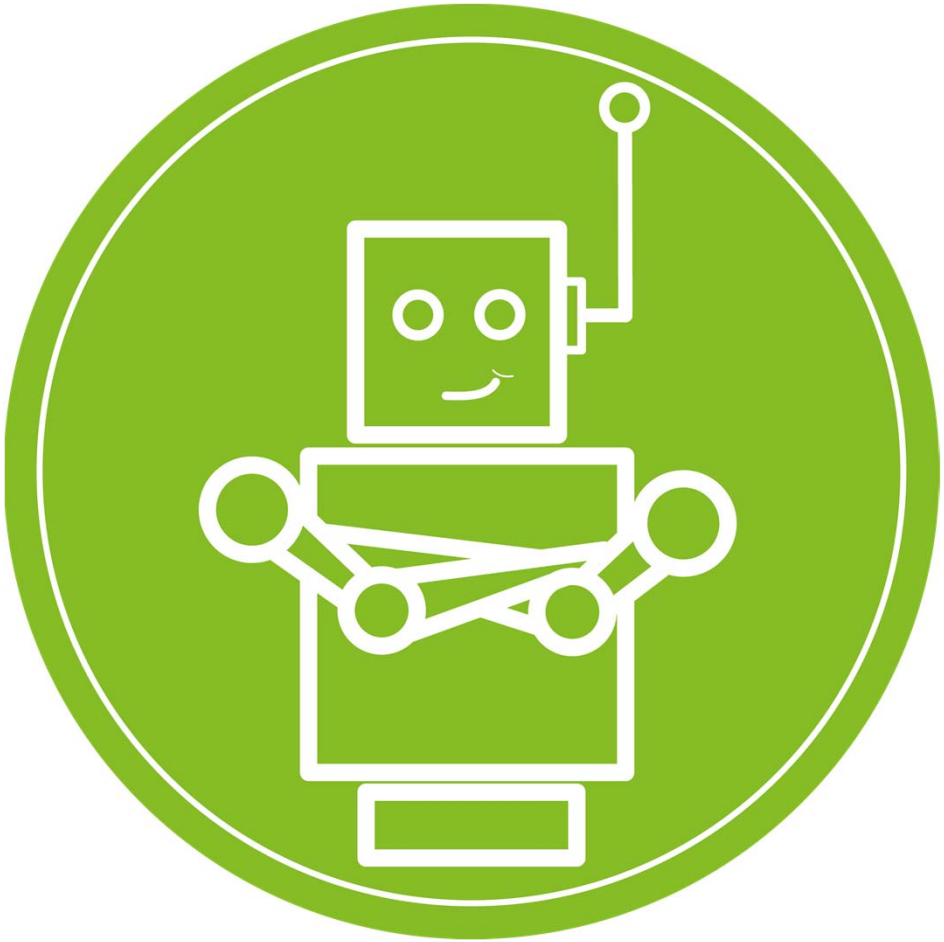
Digital Labor solutions can save the federal government $80 billion per year

HfS concluded that **Digital Labor solutions such as Process Robotics** can save the **Federal Government $16.2B - $80B** per year by freeing up valuable across a range of functions



Imagine what $80B in redistributed resources could do to improve service to citizens without increasing the size of the budget

What are Bots?



Process Robotics is one point on the AI spectrum

Process Robotics is the next evolution of rules-based software that can drive rapid ROI, while advanced Artificial Intelligence (AI) is the most complex and transformative.

Scripting / Macros	Process Robotics	Cognitive	Advanced Artificial Intelligence
"Sequence of computing instructions available to the end user"	***"Mimics Human actions using RPA software"***	***"Mimics / Augments Qualitative Human Judgment"***	***"Mimics Human Intelligence"***
Used for single application, rules-based processes, such as moving data in Excel	Used for multi-application, rules-based processes, such as invoice processing	Processes requiring judgment such as commercial contract understanding, insights, and implications	Systems that replicate natural interactions

Deloitte Process Robotics...*what it is and isn't*

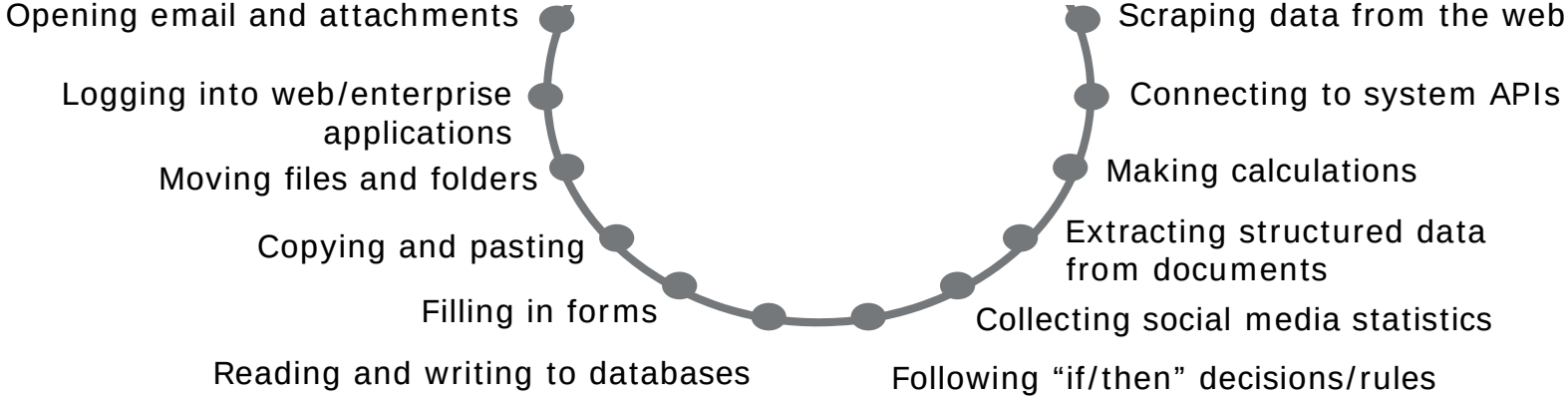
PROCESS ROBOTICS is...

- Software
- Rules-based
- In production
- A tool

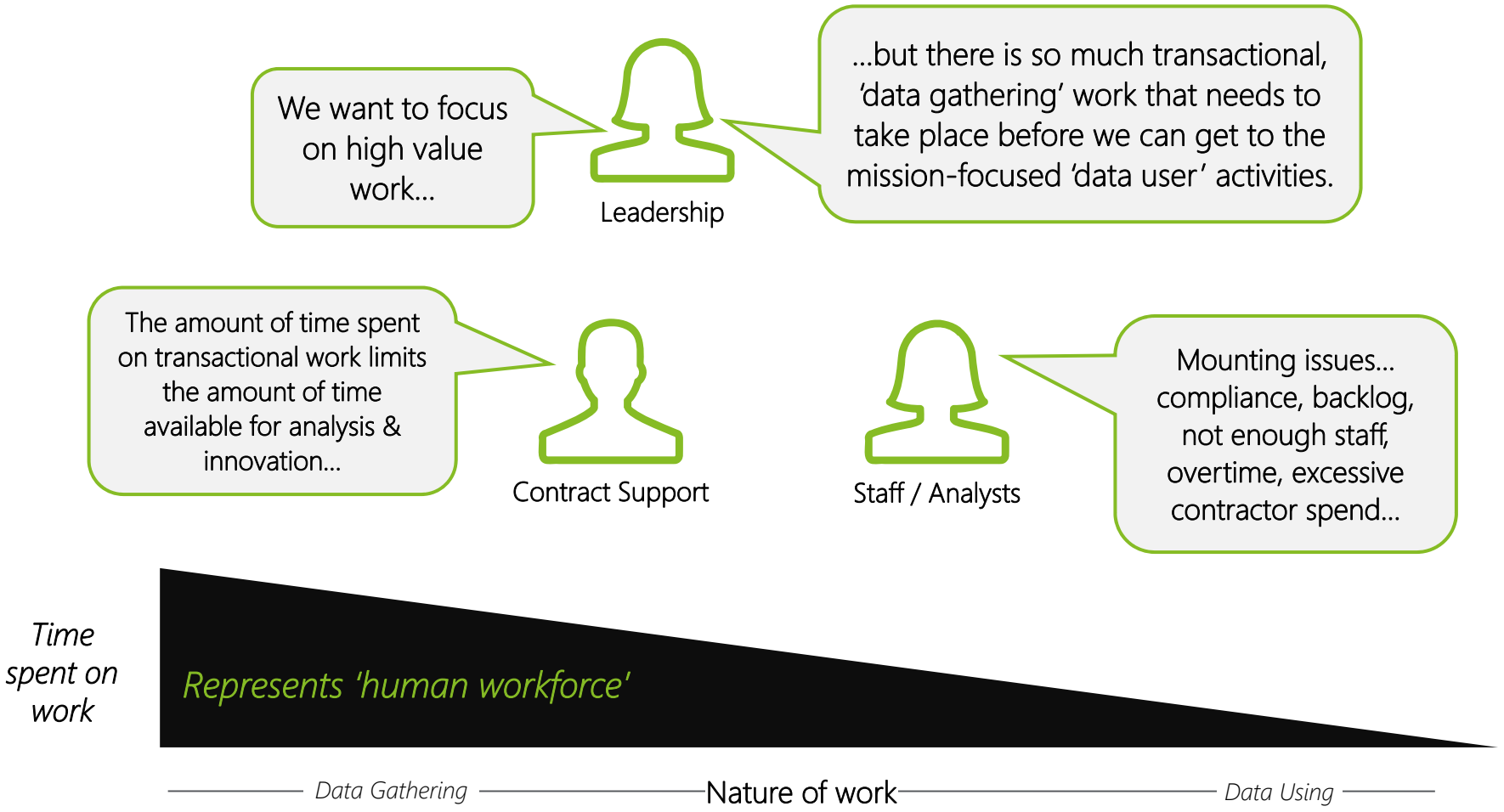
PROCESS ROBOTICS is not...

- Mechanical / physical, walking, talking robots
- Cognitive / AI / machine learning
- Conceptual
- A system or application

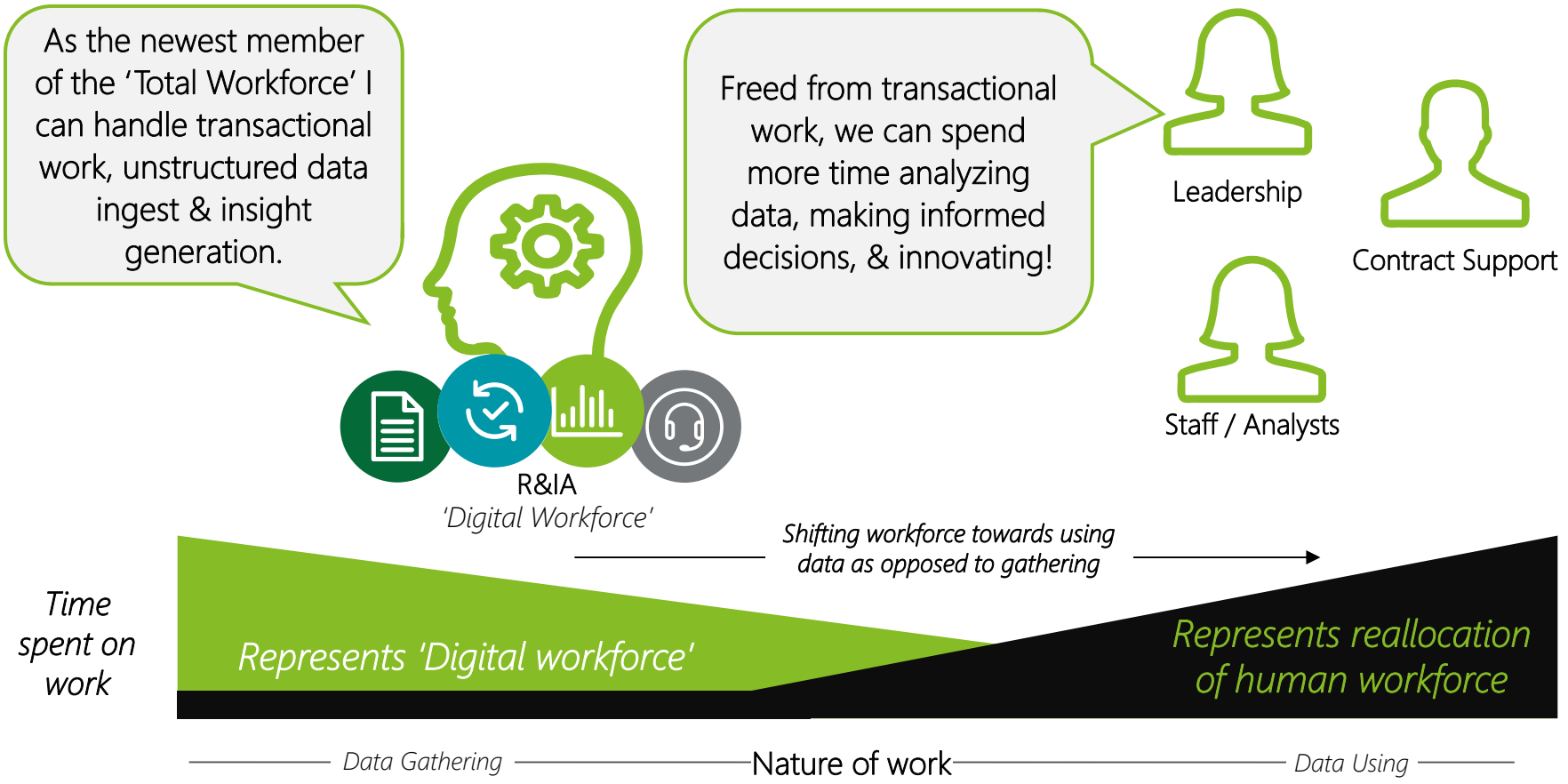
What PROCESS ROBOTICS can do



The workforce of today has three primary personas doing all transactional/administrative work along with mission driven work

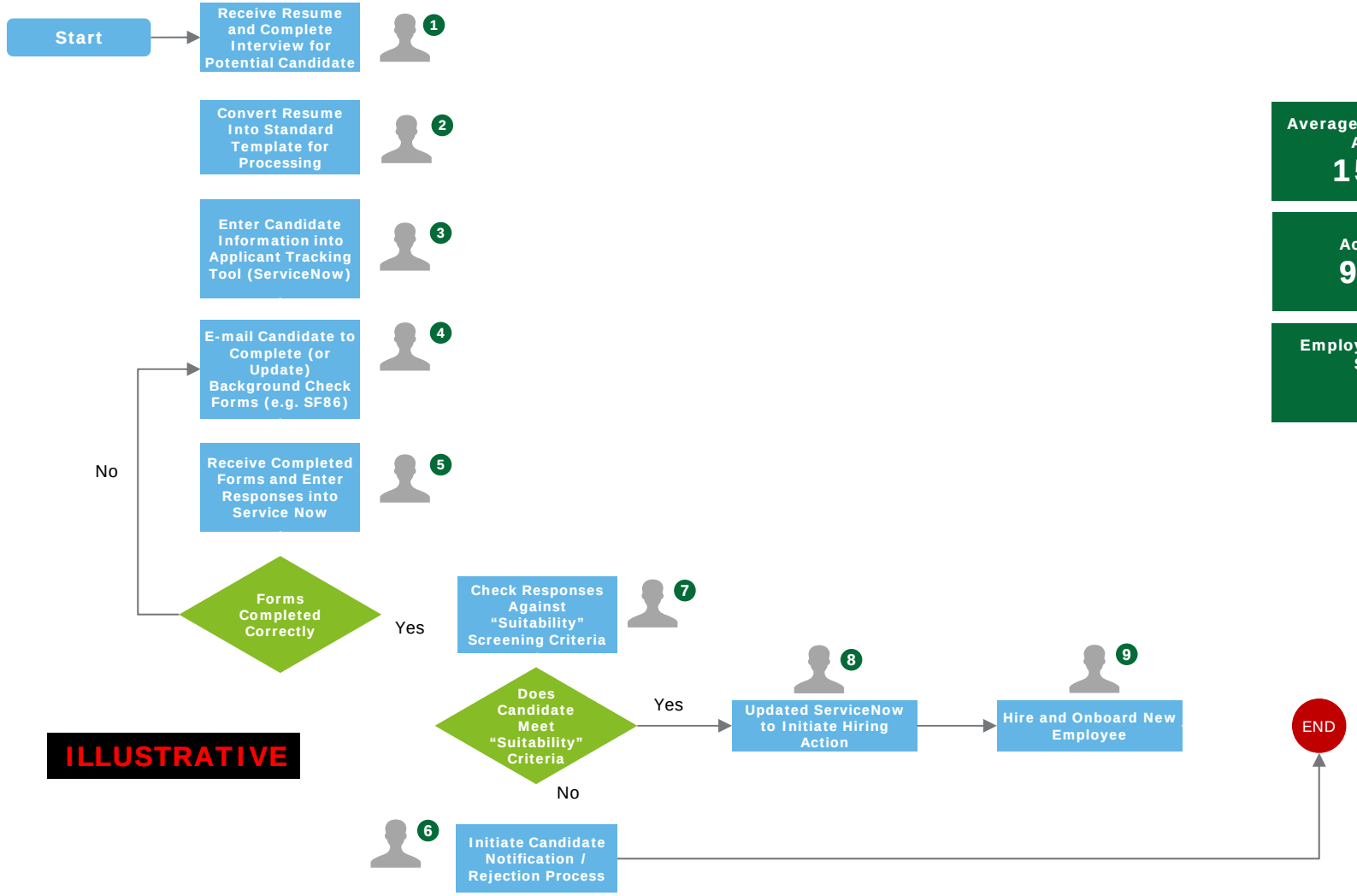


Add a fourth ‘Digital Personal’ to the ‘Total Workforce’ of tomorrow



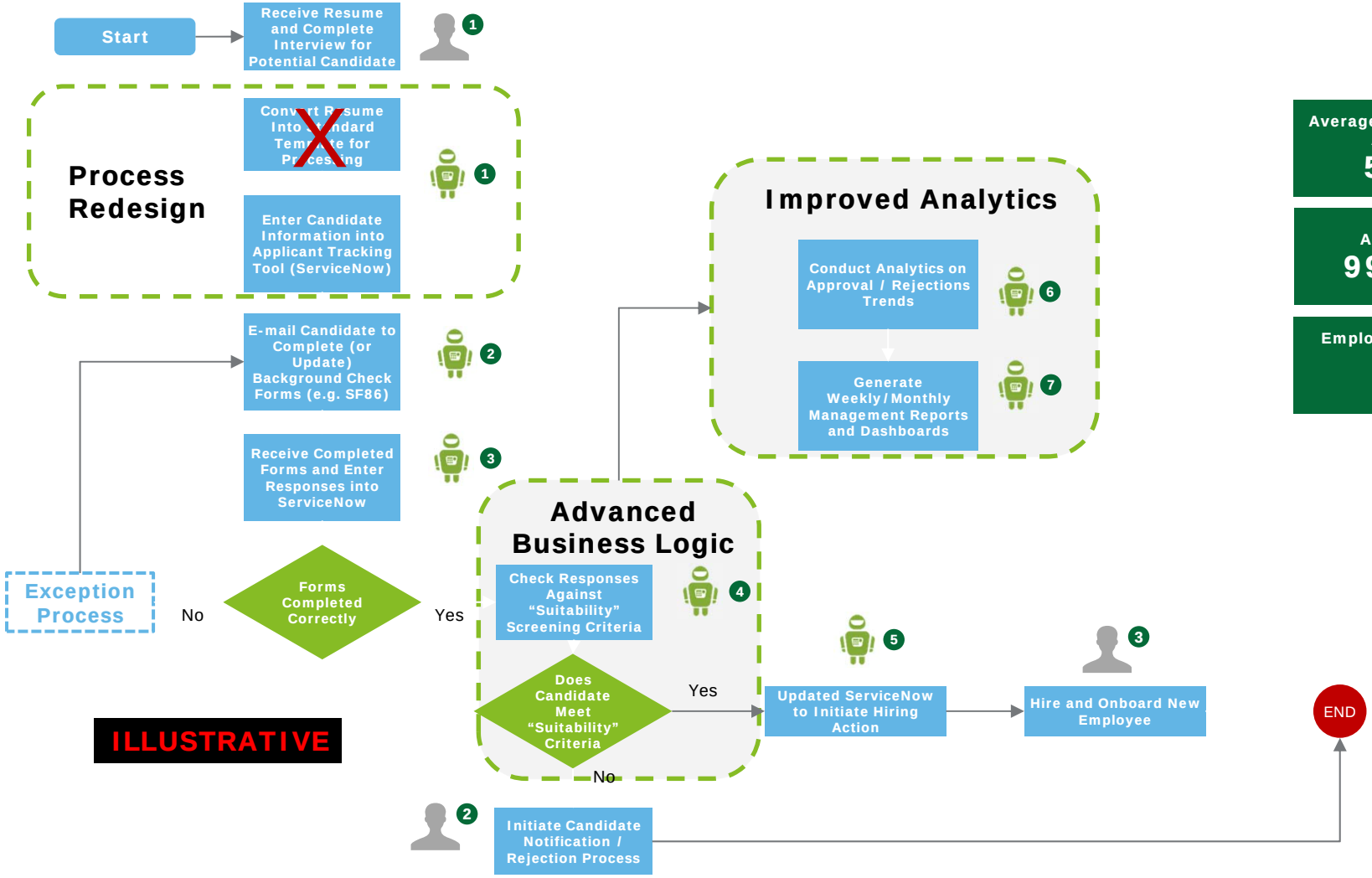
End-to-end Human Resources Process | As-is Process Flow

Use case example for automation opportunity in HR “suitability” background checks for national security and sensitive positions.

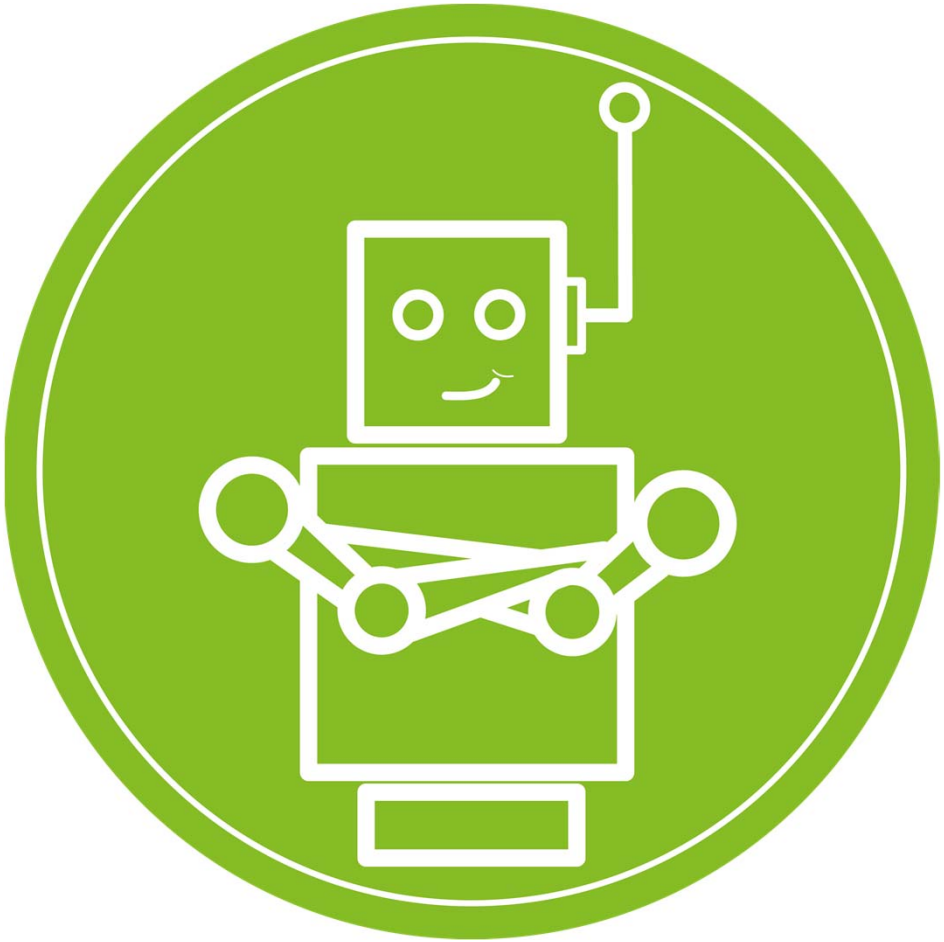


End-to-end Human Resources Process | To-be Process Flow

Use-Case example for automation opportunity in HR “suitability” background checks for national security and sensitive positions.



Bots in Action



Eight evaluation criteria can be used to identify strong process candidates

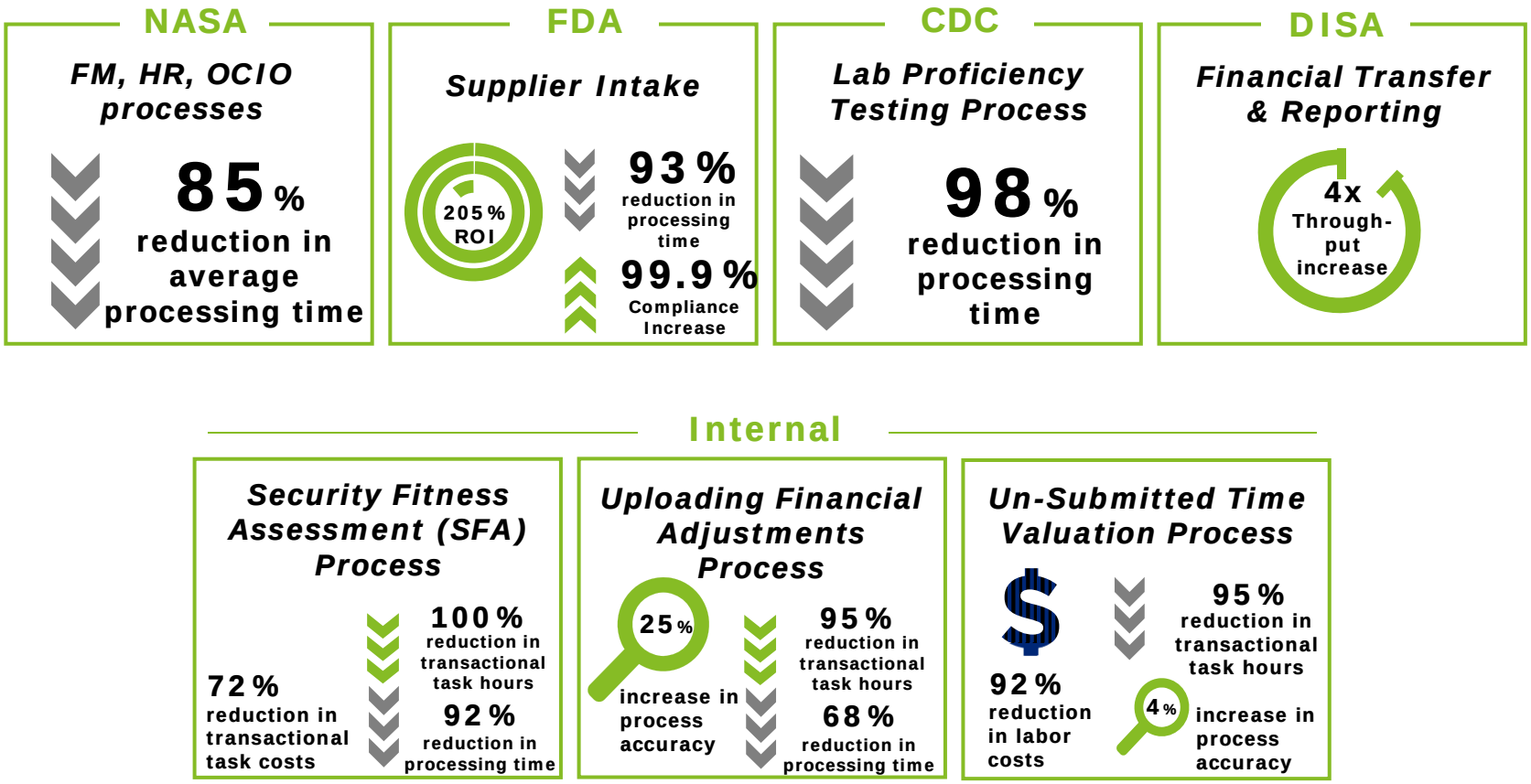
Criteria	Description
Number of Systems Used	Process should typically require employees to access multiple independent systems to complete the process.
Transaction Volume	Process has high-volume transactions, but candidates for automation are not limited by this. Any process that is labor intensive, time-consuming, or has high-cost error impacts qualifies.
Prone to Errors or Rework	Process involves manual activities which may result in errors due to human operator mistakes (e.g. complexity of work).
Process Predictability	Process needs to be defined by a set of unambiguous business rules.
Rules Based Exception Handling	Processes with few exceptions in delivery are excellent candidates in the beginning. With experience, there is potential to expand to processes that are more complex or error prone.
Manual Work Involved	Process should have little automation support today and large amounts of manual work.
System Upgrade Timing	Process should be avoided if it interacts with a system scheduled for a major planned upgrade within 6 months. Major upgrades beyond minor enhancements need to be planned for in order to prevent rework.
Controls Importance	Process is high-risk or has sensitive data that requires strong oversight and set of internal controls.

Process evaluation helps differentiate and prioritize candidates for automation

The following example demonstrates the analysis of six candidate processes to determine how ‘fit’ the process is for Process Robotics.

	Business Processes					
Evaluation Criteria	**Candidate Process 1**	**Candidate Process 2**	**Candidate Process 3**	**Candidate Process 4**	**Candidate Process 5**	**Candidate Process 6**
Number of Systems Used	High	High	High	Medium	High	High
Transaction Volume	High 1.4M+	High 104K+	High 134K+	High 89K+	High	High 233K+ (43% of volume)
Prone to Errors or Rework	Medium	Low	High 25% of volume	Low	Low	Low
Process Predictability	High	Medium	High	High	High	Low
Rules Based Exception Handling	High	Low-Medium	High	High	Low	Low
Manual Work Involved	High	High	High	High	High	High
System Upgrade Timing	Weekly	Monthly	Semi-Annual	Annual	Monthly	Annual
Controls Importance	High	High	High	High	Medium-High	High

Robotics is currently being delivered across 26 federal agencies, and multiple State and Local Governments, helping client realize rapid ROI



RPA vendors

	Automation Anywhere	blueprism	UiPath	WorkFusion	Oracle	Pega	kapow Software A Kofax Company
Specializations	*Rapid automation of rules-based tasks, specifically targeting HR and Finance processes*	*Enterprise wide solution that focus on automated workforce scalability over individual bot deployments*	*Back-office or agent assist front-office solutions with dedicated Citrix, SAP and BPO integration*	*Sophisticated tool for deploying Process Robotics and Machine Learning capabilities*	*Extensive integration with Siebel, CRM, and Case Management tools for capturing, managing and deploying complex policy changes.*	*Powerful business rule management system and predictive analytics decision management engine in unified RPA platform.*	*Utilizing automation to connect applications with external enterprise sources*
Summary of Vendor Strengths	**Ease of Implementation:** • Reliance on screen recorders to minimize technical development • Focus on simple, linear processes by non-tech resources **Depth of Deployment Experience:** • Largest breadth of clients and multi-sector experience surpassing other vendors experience combined	**Efficient Scale Deployment**: • Ability to deploy robot instances rapidly and a licensing structure with minimal additional infrastructure costs when scaling **Large-Scale Robot Management / Control:** • Centralized control center provides greater management of robots with granular scheduling and visual dashboards	**Ease of System Integration:** • Capability to automate processes with multiple systems easily, specifically SAP/CITRIX **Remote Desktop Strength:** • Dedicated CITRIX integration package for quicker access and fewer errors **Ease of Implementation:** • Simple and intuitive drag-and-drop process creation similar to MS Visio	**Advanced Data Extraction Capability:** • Mature OCR and ability to handle unstructured data with machine learning to continually improve **Pre-Built Functionality:** • Library of pre-built "off-the-shelf" processes rather than individual components, speeding up process development by leveraging complete processes	**Empowering Policy Owners:** • Enable policy owners to assess the impact of existing and proposed policy using business rules and data – quickly and with ease **Data Management:** • Natural Language Policy capture, policy debugging and data mapping for seamless integration to external systems. • Browser based rule editing and testing	**Monitoring and Reporting:** • Advanced monitoring and reporting of robot health, work status, and SLA compliance **Robotic Automation and Workforce Analytics Capabilities:** • Centralized control center provides greater management of robots with granular scheduling and visual dashboards	**Enterprise Focused Design:** • Acquires, enhances, and delivers information from websites and web portals, into enterprise applications • Broad website and external application coverage **Production Management Efficiency:** • Advanced production management environment can run jobs in parallel and have each bot running its own thread
Leading Competitors	• Security & Compliance • Process Development	• Security & Compliance • Robot Management • Scalability • Supported Technology	• Sys. & Workforce Int. • Process Development • Development Tools • Hosting Requirements • Technical Skills Required	• Security & Compliance	• Development Tools • Reporting & Monitoring • Security & Compliance • Data Extraction • Hosting Requirements • Training & Support • Partnerships	• Reusability	• Implementation • Hosting Requirements
Lagging Compared to Competitors	• Sys. & Workforce Int. • Development Tools • Reporting & Monitoring	• N/A	• N/A	• N/A	• Technical Skills Required • Supported Technology • Implementation • Process Development	• Security & Compliance • Data Extraction • Robot Management • Hosting Requirements • Scalability	• Reusability • Development Tools

The future workforce will be building bots as part of their everyday tasks

The Situation

A large company needed to develop a compliance system to monitor and drive progress of the **COO's Strategic Initiatives** to "turn the tables" for the remainder of FY17.

The Solution

Two employees took the initiative to build automated bots which eliminated daily **data pulls, cleansing, and uploading…which took 30min per day.**

*The bot was **built once and will run forever**…performing the process in **just 5 minutes each day.***

Bob Grabowski – Biography

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Robert Grabowski is a Senior Manager with Deloitte Consulting's Enterprise Operations practice specializing in digital transformations for CFOs and finance executives. He has over 18 years of experience applying financial management capabilities across the Public Sector, including the development, deployment, and operation of finance operating models and technologies. He has supported a wide-range of transformative efforts for finance executives, including ERP system implementations, analytics, reporting/ dashboard solutions, and most recently – process automation and cognitive capabilities.

He has extensive Robotic Process Automation (RPA) and Cognitive experience, delivering bots and automations across multiple Federal Government departments and agencies. Most notably, he was the lead for Deloitte in supporting the National Aeronautics and Space Administration (NASA) with the deployment of process robotics – the first Federal Agency to deploy a bot in production. He also was the Deloitte lead for the first server-based production automation at the Department of Agriculture (USDA).