

**2023 INTERNAL AUDIT**  
**WEBINAR SERIES**

# **COURSE 3**

## **ROBOTIC PROCESS AUTOMATION: RISK AND AUDIT CONSIDERATIONS**

September 26, 2023

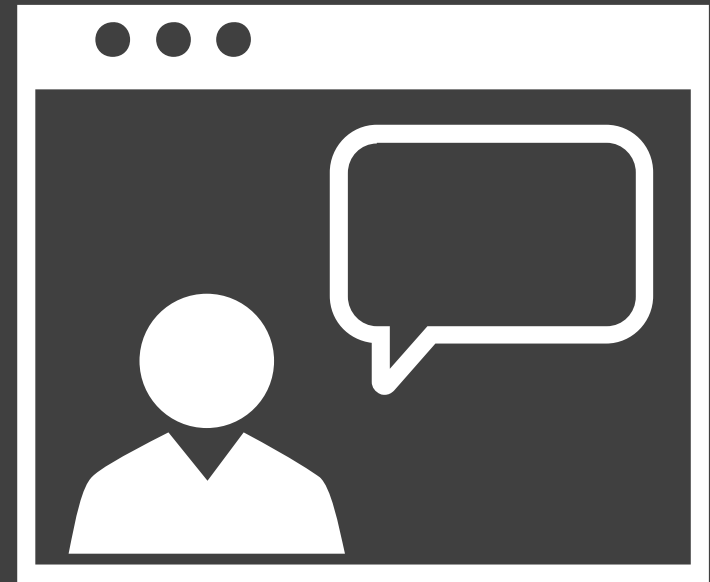


# CPE & Support

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# BDO and Our Internal Audit Webinar Series



# Savvas Georgopoulos

MANAGING DIRECTOR, ANALYTICS & INNOVATION  
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Savvas is a Managing Director in BDO's Risk Advisory Services and leads the Innovation and Risk Analytics practice. Savvas has more than 18 years of strategy and implementation experience supporting Fortune 500 clients with large digital strategy and solution implementation initiatives. His responsibilities range from developing strategies for optimizing Internal Audit functions, leading the implementations of technology solutions to automate audit and control procedures, and enabling data driven risk management and continuous monitoring with the use of analytics.

Prior to joining BDO, Savvas led the Intelligent Automation practice of a Big Four firm's Risk and Regulatory group focusing on helping Internal Audit functions drive adoption of digital technologies to improve their Compliance processes. Savvas has significant experience supporting clients in financial services, retail, pharma, manufacturing and technology sectors.



## EDUCATION

- ▶ MBA, Marymount University
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## PROFESSIONAL AFFILIATIONS

- ▶ Project Management Professional certification
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# Jorge Santiago-Escobar, CISA, CISSP, CIPP/US

DIRECTOR, BDO DIGITAL

Jorge is an IT director in the Risk Advisory Services practice at BDO USA. He has more than 25 years of experience in risk management, IT governance, internal audit, compliance, and oversight of process and technology integration engagements within the consumer products, financial services, healthcare, technology, and education industries, among others.

Jorge has extensive experience in a wide range of functional and technical areas that include IT financial audit support, privacy & security advisory, IT risk management, cybersecurity, internal audit outsourcing/co-sourcing, data analytics, disaster recovery/business continuity, controls design, implementation and testing, and project/program management. Additionally, he has more than 14 years of experience performing and leading service organization reporting examinations using AICPA standards.



## PROFESSIONAL AFFILIATIONS

- ▶ Member, ISACA
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- ▶ B.S., Computer Science, Bradley University
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# Shana McGee, CIA

DIRECTOR, ANALYTICS & INNOVATION  
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Shana McGee is a Director with over 18 years of audit and consulting experience, with four of those years working for a Big Four firm. She focuses on Internal Audit, Sarbanes-Oxley compliance, data analytics, ITGC reviews, and contract compliance.

Her experience and data analytics skill set allows her to analyze client system data for potential fraud, noncompliance of company policies, inefficient business processes, and excessive company costs. Shana is currently a member of the National Innovation team for RAS where she assists in the development of data analytic visualizations and automation solutions to help streamline SOX and internal audit procedures as well as provide continuous monitoring tools for clients.



## PROFESSIONAL AFFILIATIONS

- ▶ Certified Internal Auditor
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# Learning Objectives

At the conclusion of this session, attendees will be able to:

- ▶ Describe the key categories covered in an RPA program
- ▶ Define the benefits of RPA
- ▶ Describe potential risks when starting an RPA program
- ▶ Identify internal audit's obligations related to setting an RPA program up for success

## Discussion Topics

- ▶ The Evolution of RPA
- ▶ Automation/RPA Program Framework
- ▶ RPA Risk Assessment
- ▶ RPA Risk and Controls





# RPA Overview and Evolution

# What Is Robotic Process Automation?

RPA is a type of software that mimics the activity of a human being in carrying out a task within a process. It can **do repetitive stuff more quickly, accurately and tirelessly than humans**, freeing them to do other tasks requiring human strengths, such as emotional intelligence, reasoning, judgement and adding value for customer.

LESLIE WILLCOCKS

Professor of Technology, Work, and Globalization  
London School of Economics, Department of Management

# What Can RPA Do?

## AUTOMATION TASKS

- ▶ Open email and attachments
- ▶ Log into web/enterprise applications
- ▶ Move files and folders
- ▶ Copy and paste
- ▶ Fill in forms
- ▶ Read and write to databases
- ▶ Scrape data from the web
- ▶ Connect to system APIs
- ▶ Make calculations
- ▶ Extract structured data from documents
- ▶ Collect social media statistics
- ▶ Follow “if/when“ decisions/rules



**REPLACES**  
REPETITIVE TASKS



**SYSTEMS**  
INTEGRATION

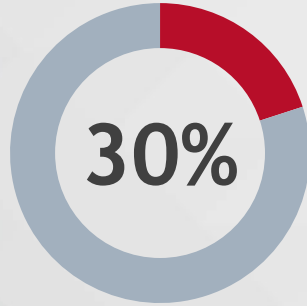


**CONFIGURES**  
SOFTWARE TO  
AUTOMATE TASKS



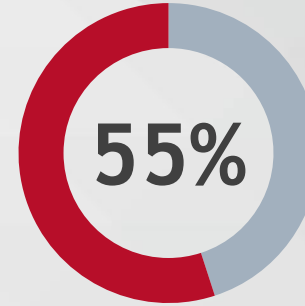
**INTERNET**  
INTERFACE WITH ANY  
WEBSITE DATA

# The Power of Automation



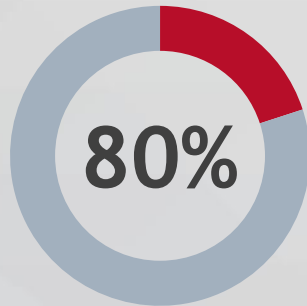
## INCREASED BUSINESS CAPACITY

RPA frees up to 30% of an employee's time that can be directed to more strategic activities with RPA accounting for 52% of business capacity in some organizations.



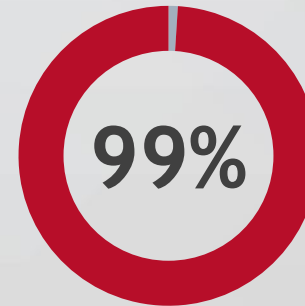
## IMPROVED DECISION-MAKING

More than half of senior managers report that RPA helps them make better decisions.



## EFFICIENCY INCREASE

As many as 80% of your standard, rules-based processes can be automated using robots. As the volume of data grows by an estimated 50% annually, RPA enables you to meet increasing workloads without increasing headcount.




## IMPROVED DATA ACCURACY


When properly implemented, RPA delivers 99% data accuracy with zero errors. Robots can operate 24x7 without getting tired or needing a break.



# The Intelligent Automation Journey

Artificial intelligence and robotics are part of the same automation journey, building upon the traditional IT methods for automating manual processes.


**43%** of all processes can be automated using **classic RPA**

  
▶ **Macros and Scripts**  
Rules-based automation within a specific application

  
▶ **Business Process Automation (BPA)**  
Reengineering existing business processes, by integrating systems

  
▶  **Robotic Process Automation (RPA)**  
Automating labor-intensive, repetitive activities across multiple systems and interfaces by replicating user workflows at the presentation layer

  
▶  **Intelligent Process Automation (IPA)**  
Combining RPA with artificial intelligence technologies learn over time and optimize workflows

  
▶ **Artificial Intelligence**  
Systems that are adaptive and can autonomously carry out tasks without human intervention

TECHNOLOGY STATE

▶ Current State

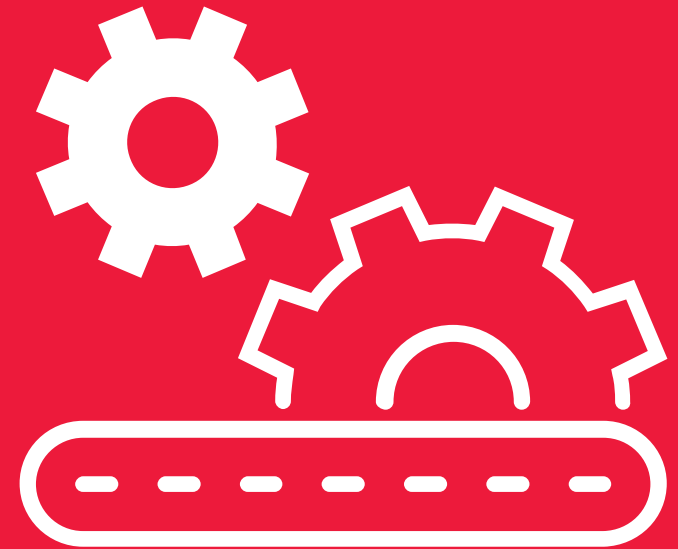
 Trending

▶▶ Future State

Today

Future

# RPA Risk and Audit Considerations



# Adopting a Risk & Controls Framework with RPA

Getting risk & controls right from the onset of an RPA program startup is critically important to building and deploying bots in the most efficient and scalable manner

## Functional Risk

- ▶ Business process controls
- ▶ Business process redesign
- ▶ Functional requirements
- ▶ Performance
- ▶ Methodology

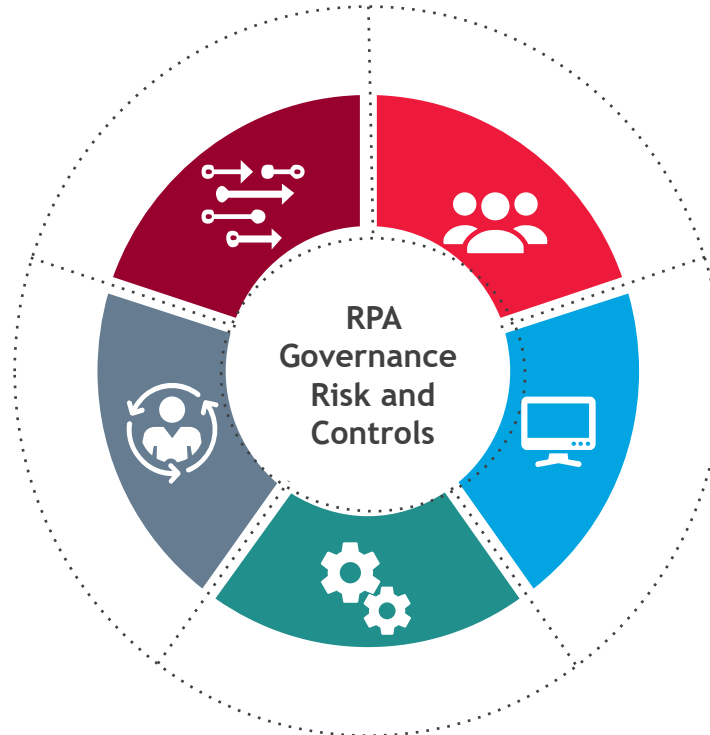
## Operational Risk

- ▶ Regulatory compliance
- ▶ Governance
- ▶ Operating effectiveness
- ▶ Business continuity and disaster recovery
- ▶ Monitoring/quality control

## Change Management Risk

- ▶ Planning
- ▶ Scope
- ▶ Integration oversight
- ▶ Decision Making
- ▶ Resource

## BDO's Risk & Controls Framework



## Executive Risk

- ▶ Commitment
- ▶ Sponsorship
- ▶ Business objectives
- ▶ Organization priority
- ▶ IT asset management

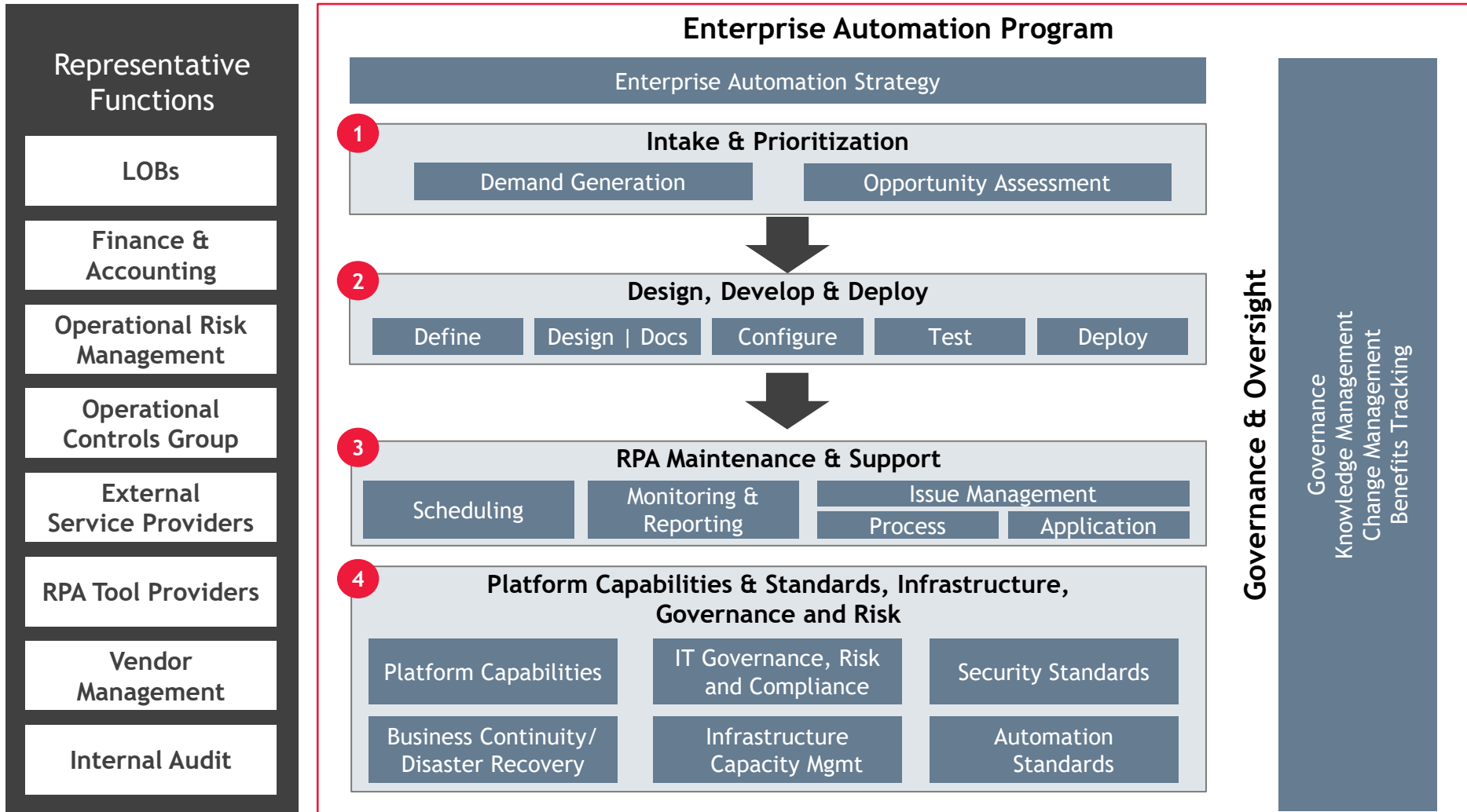
## Technical Risk

- ▶ Methodology
- ▶ Configuration
- ▶ Testing
- ▶ Operational readiness
- ▶ Deployment
- ▶ Legacy system changes
- ▶ Information security
- ▶ Data and privacy security

## DISCUSSION POINTS FOR INTERNAL AUDIT

- ▶ Internal Audit professionals also have a responsibility to understand risks introduced by RPA and ensure their firm's controls are well designed and operating effectively to mitigate those risks
- ▶ Automation can certainly increase compliance and reduce risk if robot performs the task accurately and completely without bias or any variation. However, RPA can also introduce risk if appropriate controls are not in place and monitored. For instance, because RPA action is consistent, any error becomes a systemic and widespread issue across that business process and data set
- ▶ Internal Audit departments need to understand how the organization is using RPA and how that impacts its risk profile by thinking broadly about exposure across multiple categories of risk

# Automation Program Framework

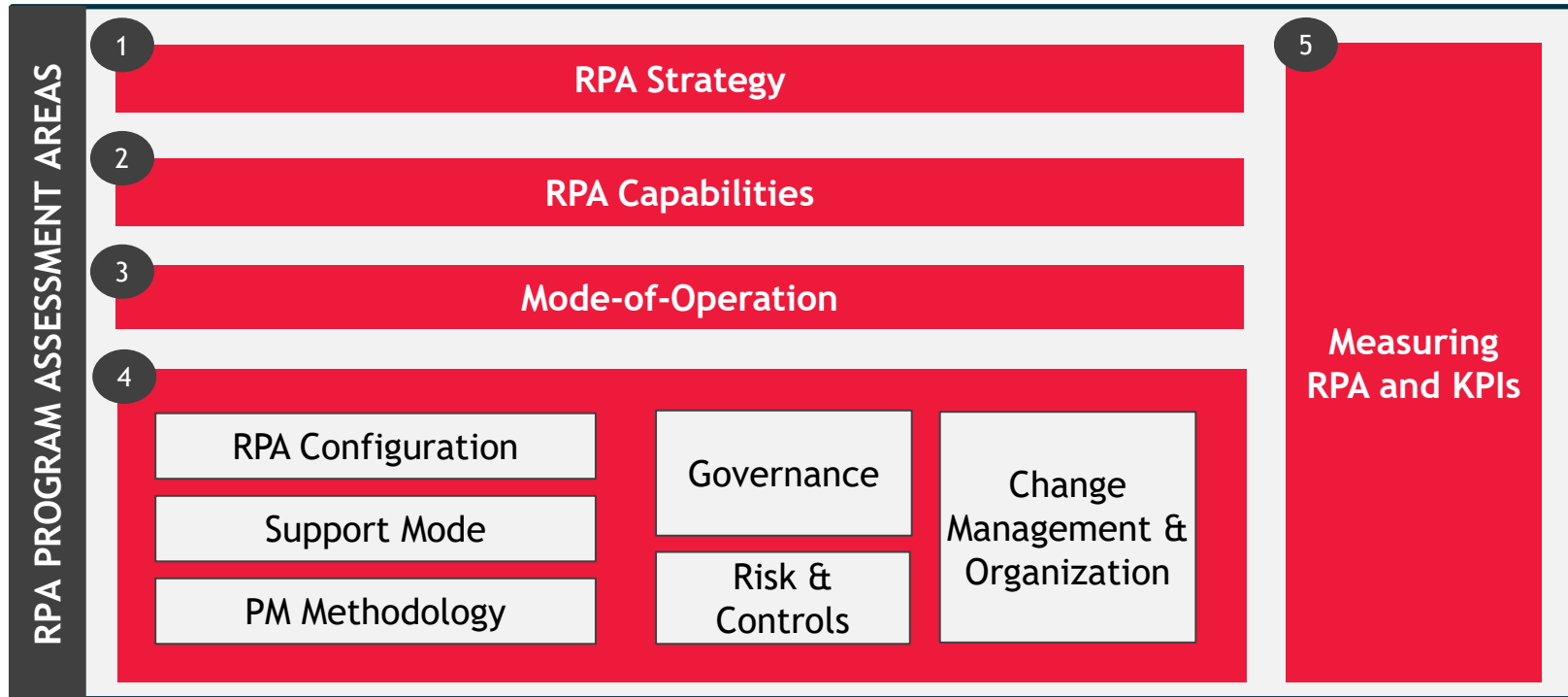




# Our RPA Program Assessment Approach

An RPA assessment should encompass the following areas:

- ▶ Overall RPA Strategy
- ▶ The effectiveness of program's operating and governance model
- ▶ How bots are configured
- ▶ How value is measured
- ▶ How risks are contemplated

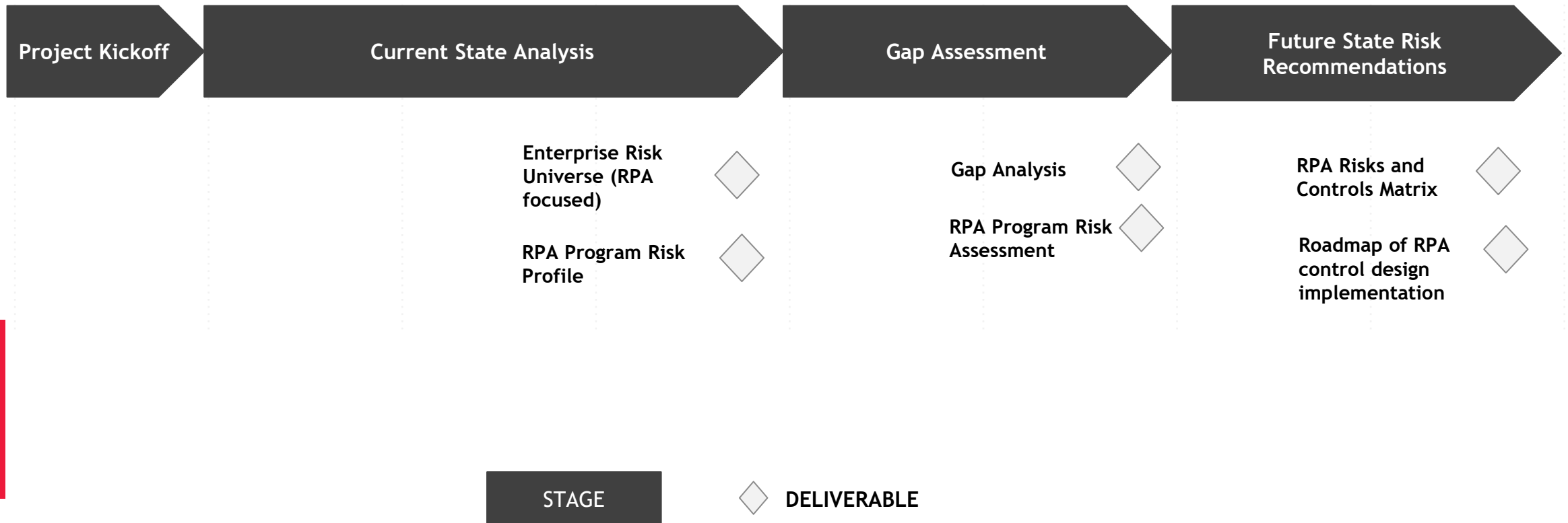


An RPA Program Assessment evaluates the health condition of an RPA program.

- 1** **WHAT** is the overall RPA Strategy and leadership sponsorship
- 2** **WHAT** capabilities exist to execute the RPA program
- 3** **HOW** RPA capabilities are organized
- 4** **HOW** your RPA capabilities are operated on a daily basis
- 5** **HOW** you currently measure RPA impact and adoption; promote implementations


# Approach and Roadmap for performing an RPA Risk Assessment

An RPA Program Risk Assessment involves the assessment of the current state control environment and the appropriateness and completeness of risk considerations for governing the enterprise implementation of their RPA program and governing individual robots. The main outcome of the Assessment effort is to perform a risk evaluation, provide control design considerations and a implementation roadmap.




DELIVERABLES

# RPA Risk Framework (Illustrative)

	<b>Application Risk Framework- Risk Dashboard (Summary)</b>	Control Identified Appropriate Mitigates Risk
		Control Identified with Possible Gaps
		Control Identified with Gap
		No Control Identified- Gap
Risk Area	Risk Category	Rating
<b>Program Governance</b>	Commitment & Sponsorship	
	Business Objectives	
	Organization Priority	
	Roles and Responsibilities	
	Planning	
	Decision Making	
	Resource	
	Benefits Management	
	Overall Program Monitoring	
	Data Governance	
Audit		
<b>SDLC for Application</b>	Planning	
	Design	
	Configuration build	
	Testing	
	Configuration	
	Operational Readiness	
	Deployment	
	Operating Effectiveness	
<b>Logical Security</b>	Control center governance	
	Regulatory compliance/data and privacy	
	Information Security	
	Access Provisioning	
	Data Privacy	
<b>Infrastructure and Vendor</b>	Resource	
	Integration oversight	
	Business continuity and disaster recovery	
	Backup and recovery of RPA processes	
	Disaster Recovery	
	Vendor IT asset management	
<b>Digital Worker Monitoring</b>	Control center governance	
	Operating effectiveness	
	Business process redesign	
	Business process controls	
	Regulatory compliance/data and privacy	
	Business continuity and disaster recovery	

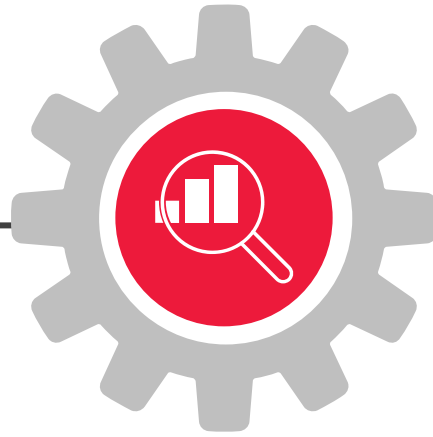
# RPA Risk and Controls Matrix (Illustrative)

 <b>RPA Risk Control Matrix</b>				
#	Health Check Section	Risk Category	Risk Statement	Illustrative Control Activity
1	Program governance	Sponsorship	Senior management is not actively involved in creating organizational awareness or championing the RPA program	A RPA steering committee, which includes executive leadership and senior members of the business, risk, compliance and RPA program management, meets on a quarterly basis to conduct business performance reviews of how RPA aligns with business strategy.
9	Program governance	Planning	Formalized methodology for inventorying, analyzing, prioritizing, and selecting eligible RPAs exists. If using a federated model, communication protocol has been formally documented to ensure consistency across business units utilizing the technology.	RPA program policies and procedures, which includes methodology for inventorying, analyzing, prioritizing and selecting eligible RPAs, are reviewed and approved on a periodic basis.
13	Program governance	Planning	RPA Program team has formally assessed the level of change readiness for the organization and its business units, stakeholders, and customers.	Management has considered the RPA program will have on resources and has designed a formal people and change process to mitigate the disruptions and resistance across the organization.
20	Program governance	Overall program monitoring	There is adequate consideration for organizations to not establish a strategy for monitoring the overall program and lose visibility on where they are with the program in terms of current status/success level.	RPA program has established KPIs and methodology to periodically monitor the success/maturity level of the overall RPA program.
22	Logical security	Control center governance - access to generic accounts	Access to vendor-delivered default accounts (with known passwords) have not been appropriately secured and controlled.	<ol style="list-style-type: none"> <li>1) The passwords of generic accounts (e.g., admin) have been changed and are secure.</li> <li>2) Generic accounts are properly secured and monitored (e.g., locked, monitored, etc.)</li> <li>3) If generic accounts are used to perform system administration functions, actions are traceable to a named user and auditable.</li> </ol>
25	Logical security	Regulatory compliance/data and privacy	Bots have access to sensitive data subject to restrictions/regulations (i.e. GDPR, HIPPA, PII, PCI) that have not been identified and categorized.	RPA policies and procedures outline data and privacy considerations and are made available to the organization. Policies and procedures are reviewed and approved on a periodic basis. The RPA selection criteria outlined in the RPA program policies and procedures contain additional criteria for evaluating processes with access to sensitive data.
37	SDLC for digital workers	Planning	Business process controls and monitoring have not been appropriately updated to reflect RPA processing within defined	The functional specifications for each new RPA business process are reviewed by RPA risk & compliance team member to assure the appropriateness of the design and operating effectiveness

# Final Thoughts & Takeaways



Involve Internal Audit from the onset of an Automation/digital transformation program



Intelligent Automation risks should be considered in addition to other types of IT related risks



Risk Assessment should be a continuous process and an integral part of an Automation CoE

Questions?



Thank you



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## Upcoming Events

**2023 INTERNAL AUDIT**  
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# Best Practices for Internal Audit Related to SOC Reporting

Tuesday, October 24, 2023  
3:00 – 4:00PM ET / 2:00 – 3:00PM CST

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## Upcoming Events

2023 **INTERNAL AUDIT**  
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# Skills Development: Technical Writing for Internal Audit

Tuesday, December 5, 2023

3:00 – 4:00PM ET / 2:00 – 3:00PM CST

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# Wrapping Up

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