Preparing for Robotic Process Automation (RPA): What You Need to Know

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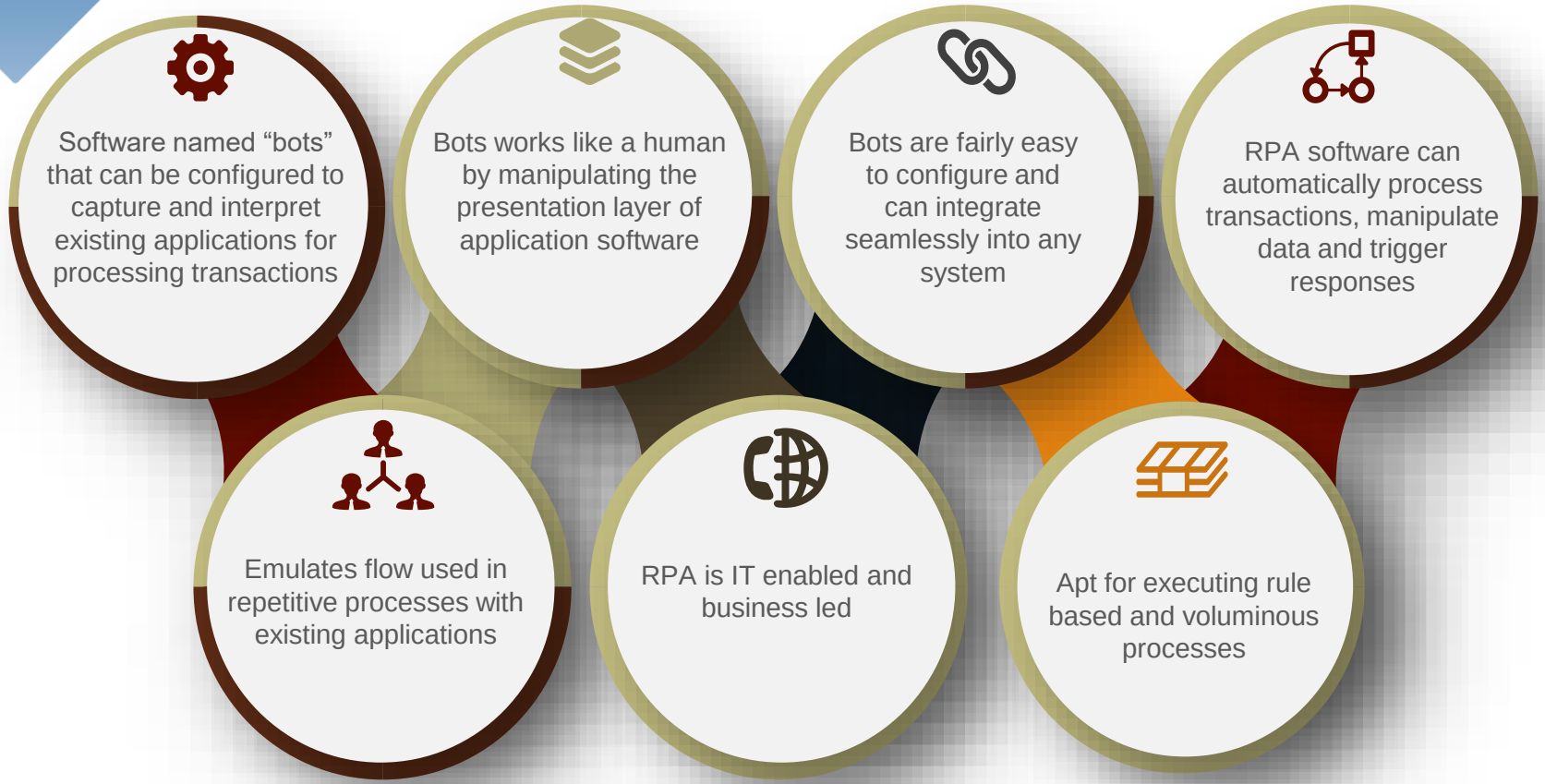
Introduction

During this presentation, we will address the following topics:

- What is RPA and where is RPA providing the most benefit and return for organizations
- Recognize the importance of effective Governance for RPA projects and the risks organizations should be thinking about
- Understand lessons learned and leading practices from successful RPA initiatives
- Evaluate impact on the nature, timing, and scope of future audits
- Highlight the role objectivity and independence has in assessing the overall RPA plan and the downstream impacts on business processes and internal controls

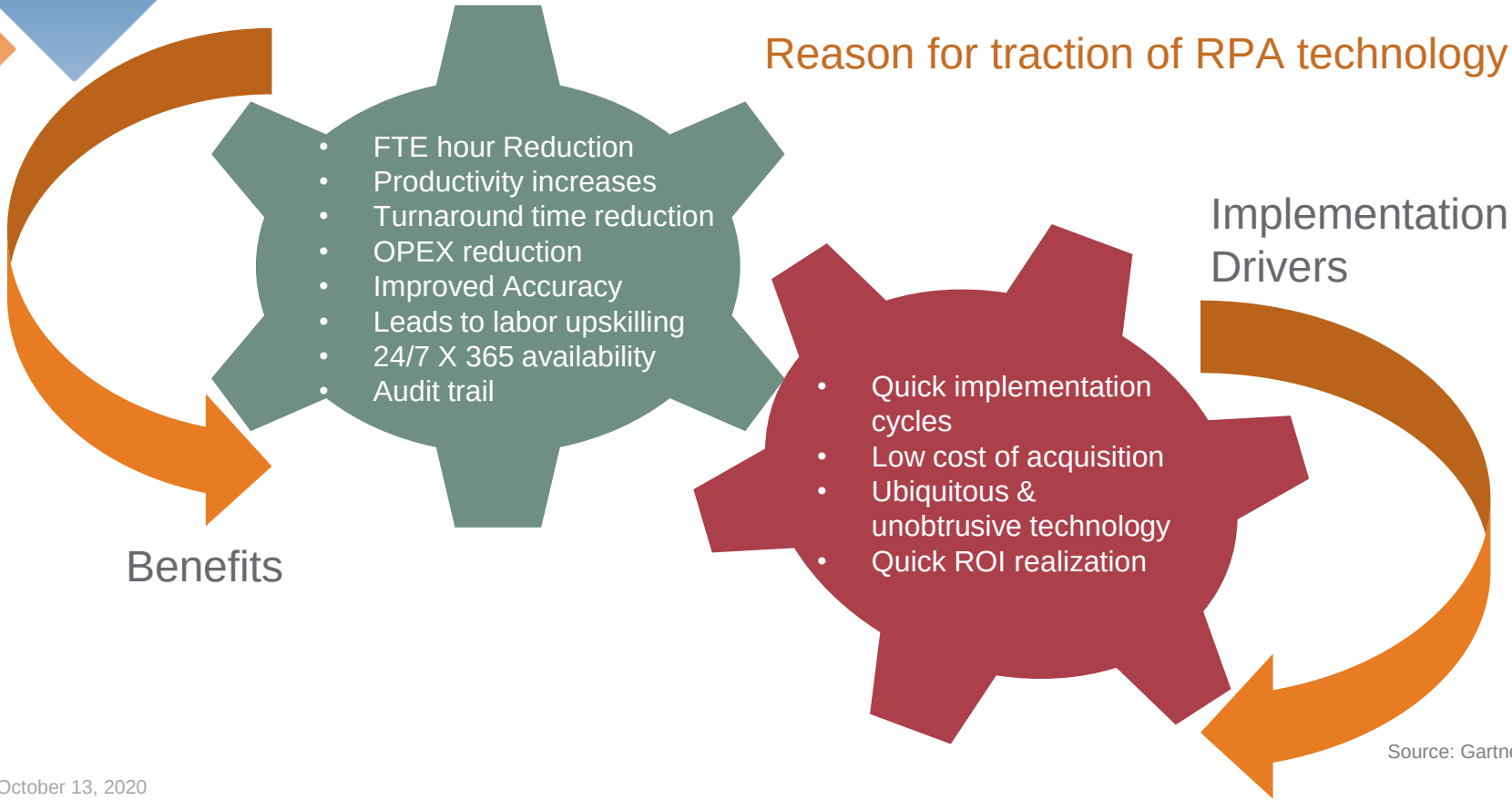
Robotic Process Automation (RPA)?

What is Robotic Process Automation (RPA)?



Why is RPA such a hot topic?

Reason for traction of RPA technology



Source: Gartner

Polling Question #1

How far are along is your organization with RPA?

A. My organization is evaluating but not sure the best way to use

B. My company has begun implementing in a few areas but not sure how to scale

C. My company has adopted RPA across multiple parts of the organization

D. There are no humans left – only us robots

Where are organizations using RPA?

A wide variety of industries & business functions are recognizing a better understanding of RPA technology and its benefits:

Sales

- Account Services
- Order Processing
- Issues Tracking
- Credits / Refunds

Procurement

- Vendor Management
- Purchase Order Processing
- Invoice Processing
- Inventory Management

Accounting & Finance

- AP / AR
- Journal Entries
- Account Recons
- General Ledger

IT

- Account Activation
- Software Push / Installation
- Cyber Threat Assessment
- Data Extraction & Management

HR / Payroll

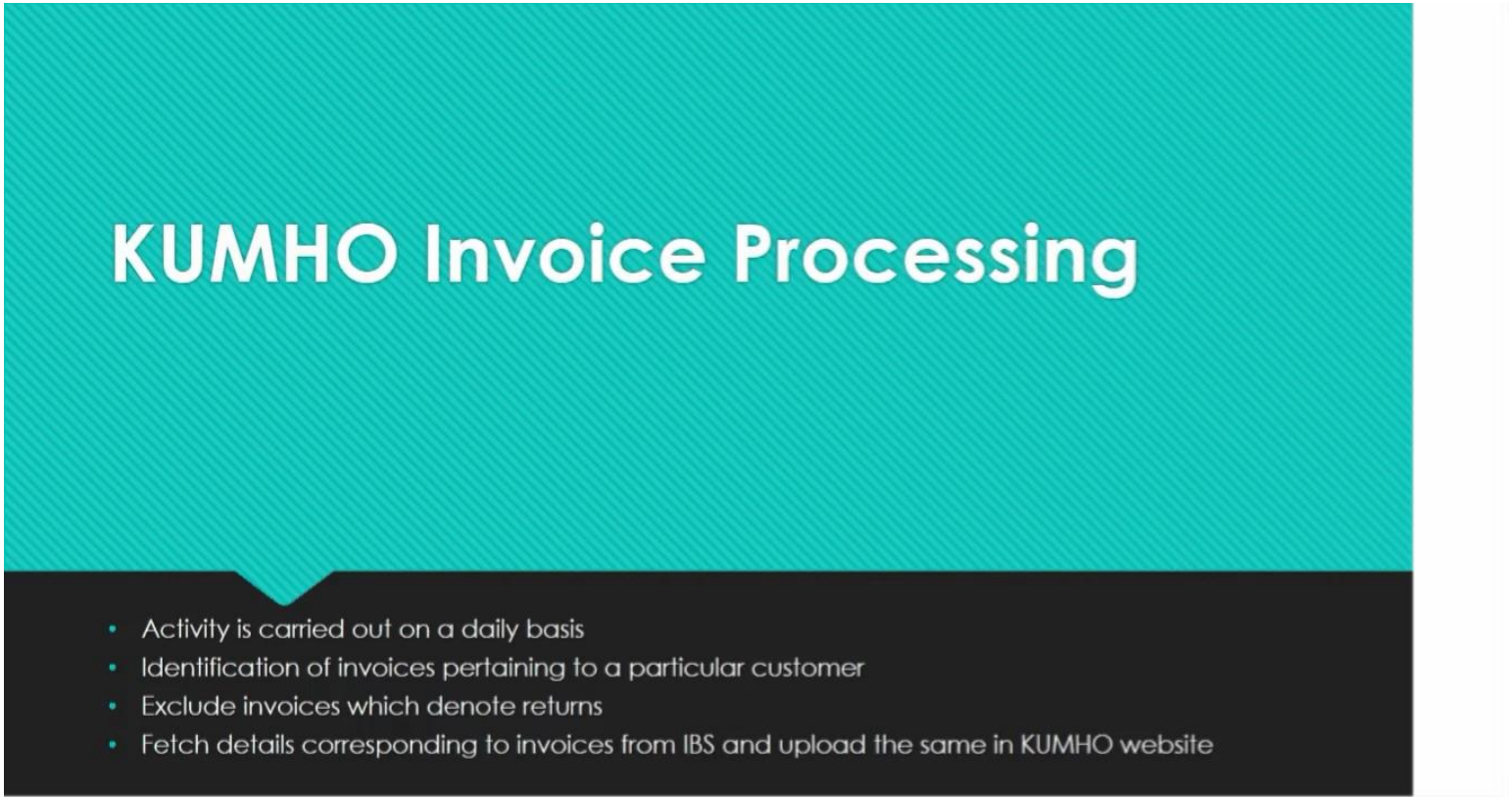
- On-boarding / Terminations
- Payroll Processing
- Timekeeping Reviews
- Resume Screening

Internal Audit

- Internal Control Testing
- Fraud Auditing
- Continuous Monitoring
- Risk Assessment
- Audit Sampling

Robotic Process Automation (RPA): Our Journey to Practical Application

KUMHO Invoice Processing - DEMO



What we did to get started

- Established a strong Business / IT partnership
- The first year - learn , learn, learn
- Established a network who had “been there, done that”
- Defined a method to evaluate potential projects
- Gathered a backlog of use cases – stable, repeatable, high volume
- Selected our RPA technology
- Selectively leveraged outsourced technical resources

Case Study – Incentive Calculation (Retail Sector)

Background

A prominent retail chain was concerned about the accuracy, number of resources and time taken to calculate payout of sales incentives.

The sales incentive had to be calculated based on various parameters and indices specific to the type of appliances, store type, region, etc. An efficient solution was required as this is a rule-based, high volume and repetitive task.

Challenge

- Growing pressure for operational effectiveness and efficiency due to the volume and calculation involved in sales data
- Significant human effort spent on a voluminous and repetitive task
- Integrating catalogue of products from different categories to calculate accurate monthly incentive for employees
- Huge dependency on the staff due to the complexity of business rules and calculation steps
- High volume of transactions hampering the accuracy of final output
- Strict turn around time
- Extremely complex & calculation heavy

Solutioning

- Installation of a software bot where all the rules relating to the incentive calculation was programmed
- Specific input formats were standardized

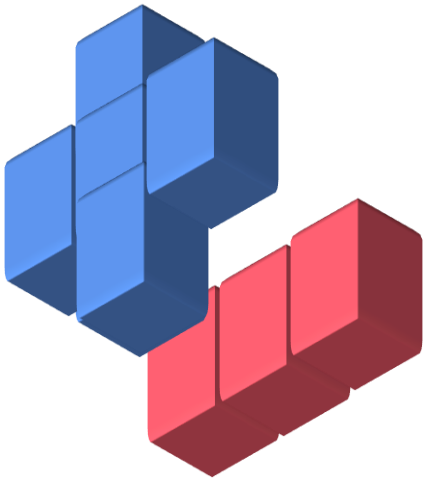
Results

- **Significant time-saving** in incentive calculation, improved Turn Around Time (TAT)
- **Improved quality, consistency, and reduced risk**; improved exception management with audit trail
- **Improved capability** of handling volume peaks without affecting accuracy
- **Significant reduction in error rate** – the accuracy of calculation is at 100%
- An estimated **effort saving** is 80% (the TAT has gone from 3 days to ½ day)
- **Eliminated the dependency** on resources and the corresponding delays

RPA – What works and what does not

Favorable for RPA

- ✓ Rule based
- ✓ Structured data
- ✓ Standardized
- ✓ Stable over time
- ✓ Prone to manual errors/ oversights
- ✓ Centralized
- ✓ Continuous input



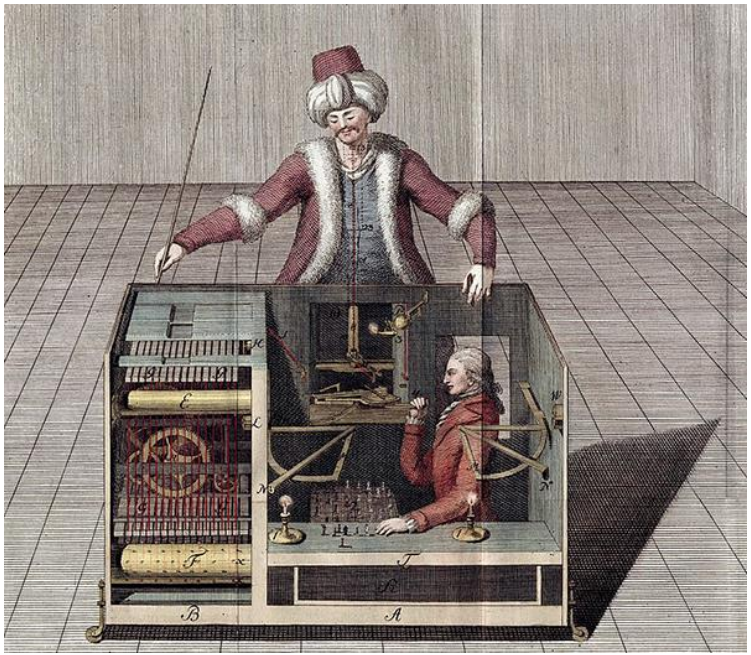
Unfavorable for RPA

- x Judgment based
- x Unstructured input
- x Many exceptions
- x Frequent changes
- x Rare errors/oversights
- x Decentralized
- x Periodic activity

Content Source: Capgemini Consulting-Robotic process automation (RPA) The next revolution of Corporate Functions

The First Artificial Intellgence?

- 18th Century, an unbeatable chess-playing machine call ‘The Turk’ toured Europe
- Defeating the likes of Ben Franklin and Napoleon Bonaparte
- A great feat of AI?



The difference between RPA and AI

	Ability to handle input data	Processing approach	Ability to learn	Context Awareness	Approach
Robotic Desktop Automation (RDA)	Structured only	Deterministic	No	Minimal	Minimal
Robotic Process Automation (RPA)	Structured and/or semi-structured	Deterministic	No	Minimal	Orchestrated process automation
Narrow Artificial Intelligence	All types of data including unstructured	Probabilistic	Yes, but limited to a particular area	Yes, but limited to a particular domain	Cognitive computing (machine learning, deep learning, and NLP)
General Artificial Intelligence	All types of data including unstructured	Probabilistic	Yes, across multiple areas	Yes, across multiple domains & similar to human brain	Not available

Maturity

Future tech

Human involvement

Intelligence

Automation maturity – the path to AI

Level 1

Ad Hoc

- Minimal automation
- Individual driven
- Typically scripts based
- Some tools adopted - no formal evaluation

Level 2

Opportunistic

- Automation to address specific areas
- Team or project driven
- Reactive in nature
- Platform & tools evaluated & adopted

Level 3

Systematic

- Automation targets defined with metrics
- Experts driven
- Proactive in nature
- Roadmap specified

Level 4

Institutionalized

- Roadmap in action - scaled across the organization
- Organization driven
- Automation realized with portfolio of platforms & tools
- Automation becomes a way of life

Level 5

Adaptive

- Automation becomes adaptive to the process being automated
- Self learning, self healing & auto-optimization methods in place
- Widespread use of Machine Learning and AI
- Automation inherently becomes smart

Source: Mindtree.com

Be careful of the pitfalls

Lack of Governance

Poor Data & Processes

Cyber Risk

Workforce Changes

Reputation/Brand
Fraud

Financial Reporting
Regulatory/Compliance

Financial/Operational Loss
Inefficiencies

Lack of governance

- Concern / Issue
  - Data governance / cybersecurity
    - Sensitive /critical data / PII
    - Denial of service
    - Privileged access abuse
    - Security vulnerabilities
  - Business interruption / resiliency
    - Failure of robots impacting critical business processes
  - Regulatory risk requirements
  - Third-party risk

Poor data & processes

- Concern / Issue
  - Potential adaptation / incorporation of broken processes or poor data
  - Potential errors in RPA algorithms
  - A robot may work 24/7 and much faster than its human equivalent. And, without someone checking its work – there could be significant damaging results

Cyber risks

- Concern / Issue
  - Excessive access rights vs least privilege
  - Exemption from standard security requirements
  - Bypassing segregation of duties controls
  - Storing access credentials within scripts
  - Exception handling used to introduce changes
  - Removing human judgment from the equation
  - Lack of clarity around who can update scripts
  - Injection of malicious code into scripts
  - Hijacking RPA interfaces with third-parties
  - Hijacking RPA system administration platform

Workforce changes

- Concern / Issue
  - Availability of key skills / upskilling the capabilities of the current team
  - Departure of key personnel and organizational knowledge exacerbated by RPA
  - Maximize the opportunity to leverage data and organizational knowledge
  - Shifts in labor force with 5 generations now simultaneously in the workforce
  - Reliance on contracted workers due to cost pressures and skill gaps

Polling Question #2

What do you anticipate will be your biggest challenge with RPA going forward?

A. Availability of skilled resources required to provide assurance

B. Changes to the overall cyber risk profile

C. Assessing the impact of RPA on current audit activities

D. Keeping pace with the speed of technological change

16 best practice for achieving successful RPA

1. Establish a governance framework for adoption of RPA and align to risk, compliance, and IT / security frameworks
2. Create a dedicated RPA team consisting of Business; IT; and Internal Audit
3. Develop an Enterprise Automation Roadmap
4. Focus on ROI (revenue generation)
5. Small pilot projects with period of testing, measuring stats, and processing metrics
6. Optimize processes prior to automating
7. Cleanup and reconcile data prior to automating

16 best practice for achieving successful RPA

8. Incorporate evaluation of robotics into backup/ disaster recovery and broader business continuity/resiliency concerns
9. Ensure RPA captures an audit trail of data and transactions
10. Determine appropriate access privileges assigned to each robot
11. Establish policies and procedures to manage changes in robot configuration
12. Create a communication/change management plan
13. Review and modify accounting policies and related documentation

16 best practice for achieving successful RPA

14. Identify ownership and accountability
15. Plan for disruption and turnover
16. Begin to think about the impact and opportunities for internal audit and incorporate into the design phase

Polling Question #3

Is the Internal Audit function with your organization being included in RPA discussions?

A. Yes

B. No

Independent Assessment:

Value added through independence & objectivity

Assurance

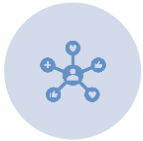
Include robotics in the risk assessment process and consider whether to include in the risk-based audit plan

Provide assurance that proper governance structures are established

Providing assurance on management of risks related to underlying algorithms and the data on which the algorithms are based

Assessing crisis management plans for the organization

Reviewing and auditing of third-party vendors/ partners



Coordinating with the IT Organization relative to information security; vulnerability assessments and attack & penetration testing

Independent Assessment:

Value added through independence & objectivity

Advisory

Advising/supporting RPA initiatives from the beginning by providing insight into compliance and regulatory requirements; processes & controls; best practices

Assisting with evaluation whether RPA activities are accomplishing their objectives (i.e., ROI)

Assisting in establishing RPA policies and procedures; project management standards

Assisting with process and controls improvement of existing RPA

Care should be taken not to accept responsibility for ownership or management of RPA risks

Q&A / Contact Information

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Thank You!