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Put On Your Auditor Hat:

Identifying Risks and Considerations for Bots in the Finance Function

Presentation at AGA Dallas Chapter's 2020 Virtual Spring PDT

May 14, 2020

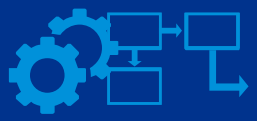
We stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one another. In its scale, scope, and complexity, the transformation will be unlike anything humankind has experienced before.

We do not yet know just how it will unfold, but one thing is clear: the response to it must be integrated and comprehensive, involving all stakeholders of the global polity, from the public and private sectors to academia and civil society".

Klaus Schwab
Founder and Executive Chairman,
World Economic Forum Geneva

A new era of jobs

Advancements and adoption of cloud computing



The digitization of massive amounts of data

Advancements in analytics

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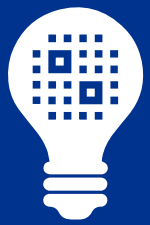
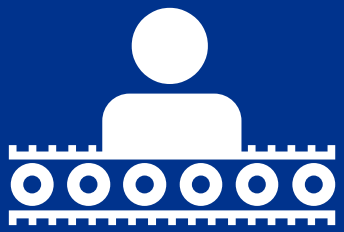
Intelligent Automation encompasses many kinds of technologies that can observe, learn, and adapt to accomplish objectives – just like a human.



Basic Process Automation

Supervised or rules-based processing: Capable of recognizing complex patterns from disparate sources of data and forming probabilistic insights



Augmentation

Processing of unstructured data and base knowledge: Software that can work alongside humans to learn patterns and augment human expertise

Cognitive Automation

When combined with physical robots or software "automations," full automation of complex tasks that typically involve human judgment is possible

Common Questions

How do I go about a large scale transformation?

Which emerging technologies should I make investments in?

How and when should we modernize our finance technology platform?

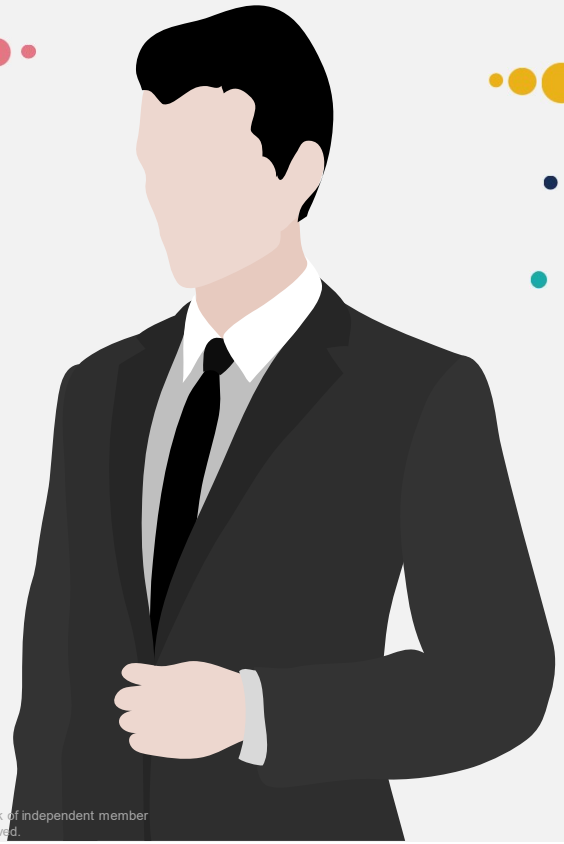
What are we doing today that we could transform tomorrow through technology?

How does our finance and technology strategy fit our mission objectives?

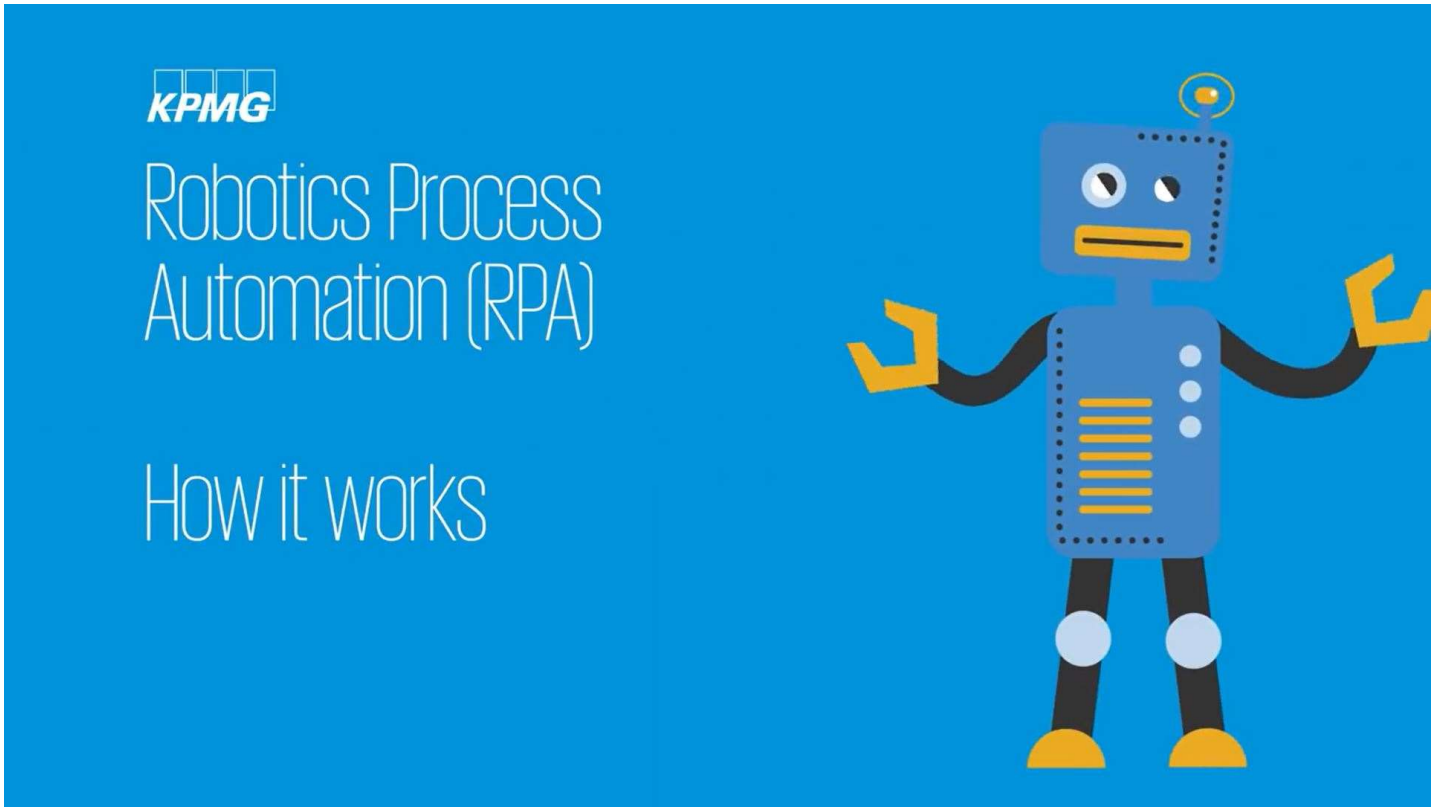
What are the benefits of a technology transformation?

How and when do we take advantage of disruptive technologies?

What have other organizations done in the technology space that are similar to my situation?



What does a fin-bot look like? (Video 1)



https://www.youtube.com/watch?v=xW95yb6J1eU

Intelligent automation in core processes

Core process areas are good to start with and can open the door to Intelligent Automation as well as opening the gateway to widespread cognitive applications.

Business Functions

Human resources

- Employee on-boarding and off-boarding
- Payroll
- Time recording and compliance
- Email notifications
- Populating/ aggregating employee information

Customer engagement

- Manual CRM updates
- Application Entry
- Natural language processing enabled analytics
- Social media mining / monitoring
- Predicting high priority incidents

Customer support

- Virtual agents (chat automations)
- Call center “agent assist”
- Task execution

Finance & Accounting

- Record to Report
- Plan to Perform
- Procure to Pay
- Acquire to Retire
- Invoice processing/exceptions
- AP/AR actions
- Reporting
- Auditing & Filings

Compliance

- Research / document review
- Document preparation
- Controls automation

Supply Chain/Procurement

- Contract management
- Inventory management
- Exceptions / fallout

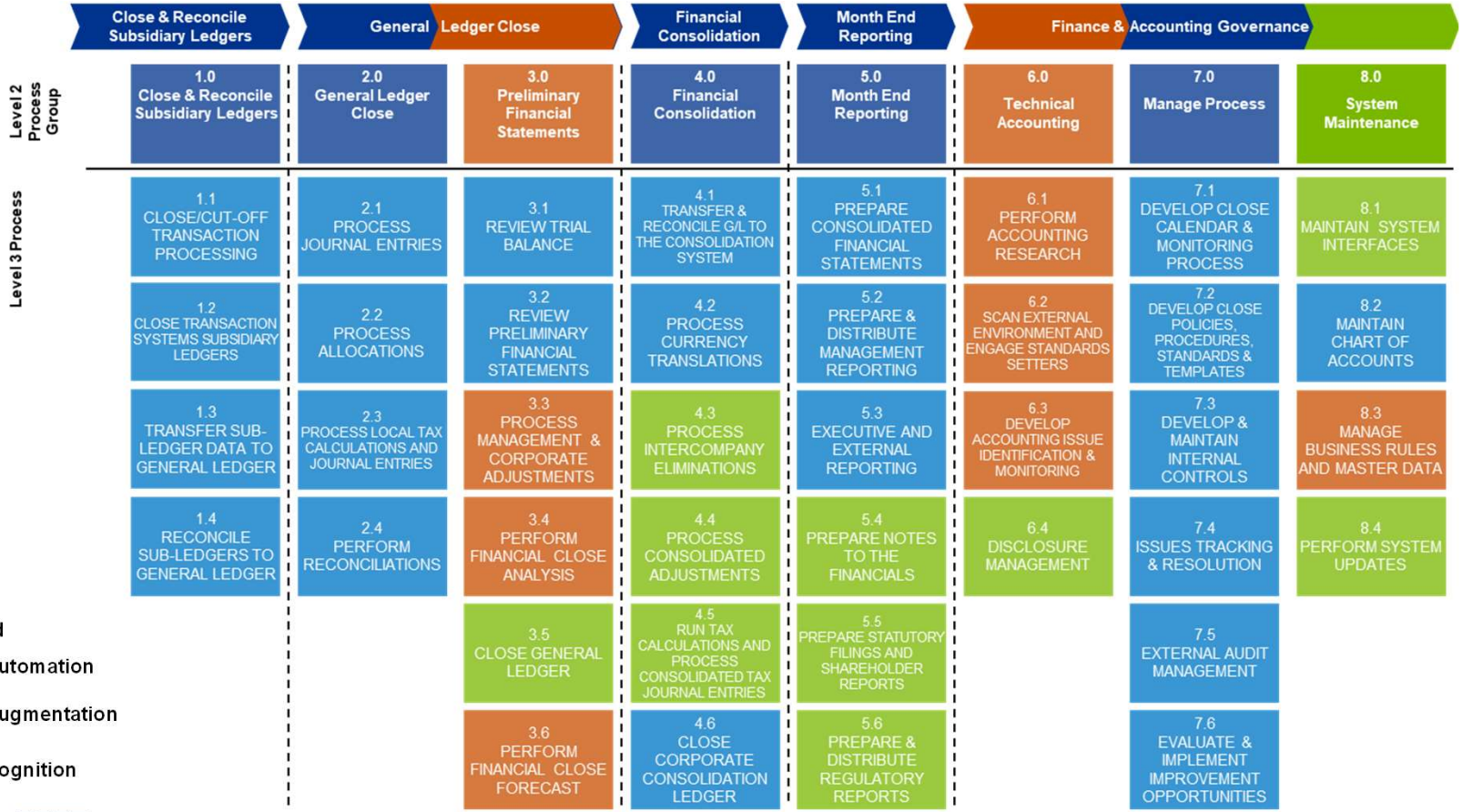
Risk Management

- Interfaces to 3rd party sources
- Interfaces to internal systems
- Data quality improvements

Information Technology

- Implementation of system changes
- Automate Dashboards and metrics reporting
- Automate IT GRC controls execution / validation
- Deployments of system patches
- Incident management and response
- Communicate between system interfaces
- HW/SW requests/fulfillment
- Automated backups, archives and upgrades
- UAM and IAM requests / reviews and removal

Financial Management Heat Map



Where are fin-bots in use?

Defense Logistics Agency:

Planned to have deployed 75 bots by the end of FY 2019

Centers for Medicare and Medicaid Services:

Bot: One record in one minute with 95% accuracy

Legacy Process: One record in 65 minutes and less accurate

National Aeronautics and Space Administration:

Four bots deployed over funds distribution, invoicing, procurement requests, and human resources

Department of Housing and Urban Development:

Identified 50,000 to 60,000 work hours that will be converted to RPA

General Services Administration:

Used bots to reduce more than 13,000 hours of unnecessary or duplicative work

Bureau of the Fiscal Service:

One bot eliminated the need to process 300-plus reports in Excel

Key Criteria for Identifying RPA Opportunities

When determining automation suitability, the following criteria should be considered:

Robotic Process Automation Opportunities	
#	**Question / Criteria**
1	Is the process/task highly manual and repetitive?
2	Is the process/task prone to errors or re-work?
3	Does the process/task require "stare and compare" activities with multiple systems?
4	Does the process/task require "copy and paste" activities between multiple systems?
5	Does the process/task require "swivel-chair" navigation of multiple screens? (e.g., using several different systems to complete the process)
6	Does the process/task require searching, collating, researching and/or updating information?
7	Can the process/task be disaggregated into unambiguous rules?
8	Is the technology/application environment relatively stable for the process in question?
9	Does the process involve judgment based decisions?
10	Is there extensive internal company knowledge needed to process the transaction?

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What activities are better candidates for basic automation?

Inputs files are natively digital, e.g. structured data csv files, excel files in defined formats, system generated PDFs

Input file are self-contained, i.e. they don't access to another systems or files

There are clearly defined business rules with limited or no exceptions.

Required outputs are clearly defined with respect to content, e.g. a list or table

Required outputs are flexible with respect to format

Automation would result in significant time savings, i.e. 100's vs. 10's of hours

Bear in mind that there may be multiple tasks that are substantially the same and could be automated as a group, e.g. the same system access test is performed for ten separate systems

What activities are not ideal candidates for basic automation?

The inputs are images, e.g. scanned documents or pictures.

The amount of time saved is limited, i.e. less than 80 hours.

Performing the task requires access to systems outside of the provided data.

The output format constantly varies.

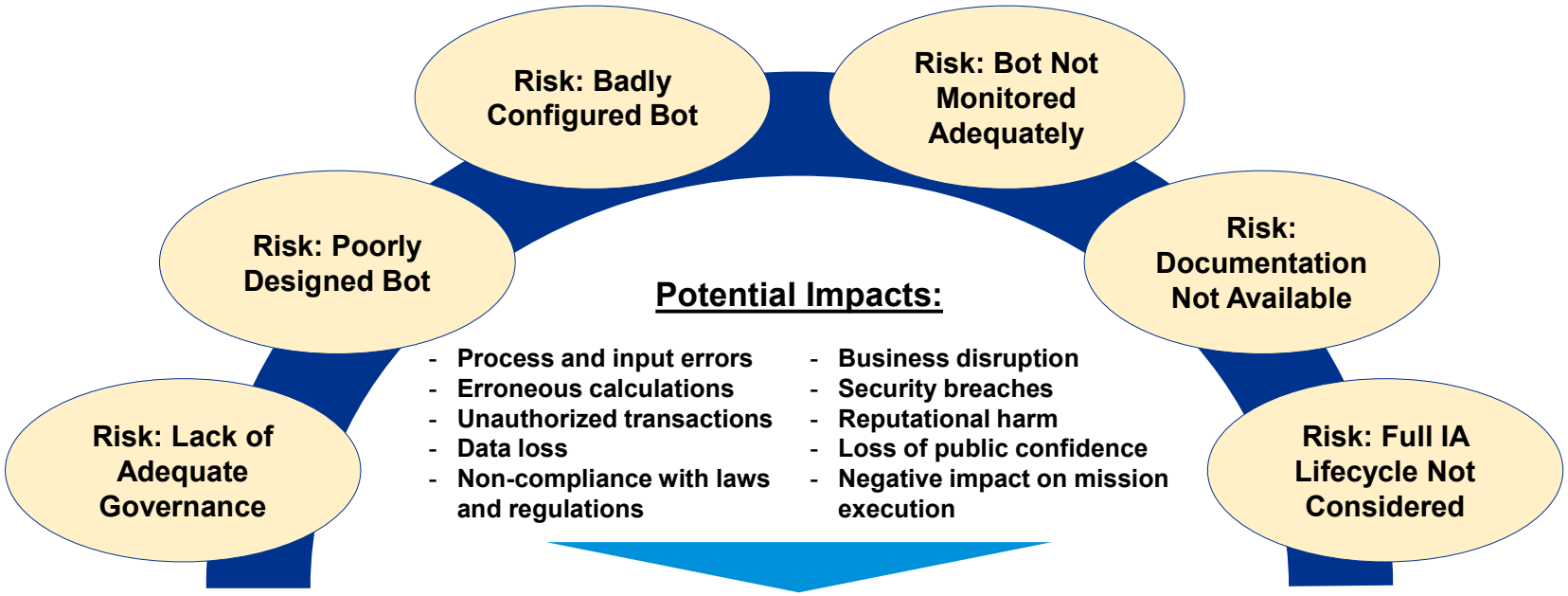
The location of inputs is variable or difficult to predict, i.e. non-specific language in a free-form e-mail, physical signatures, or non-standard contracts.

The business rules are complex, inconsistent, or require subject matter expertise.

The activity is evolving or unstable. New system implementations are on the horizon.

When adopting a fin-bot, it pays to get an auditor's input, and to understand the rationale of any auditor recommendations.

Fin-Bots: Risks, Impacts, and Steps to Consider



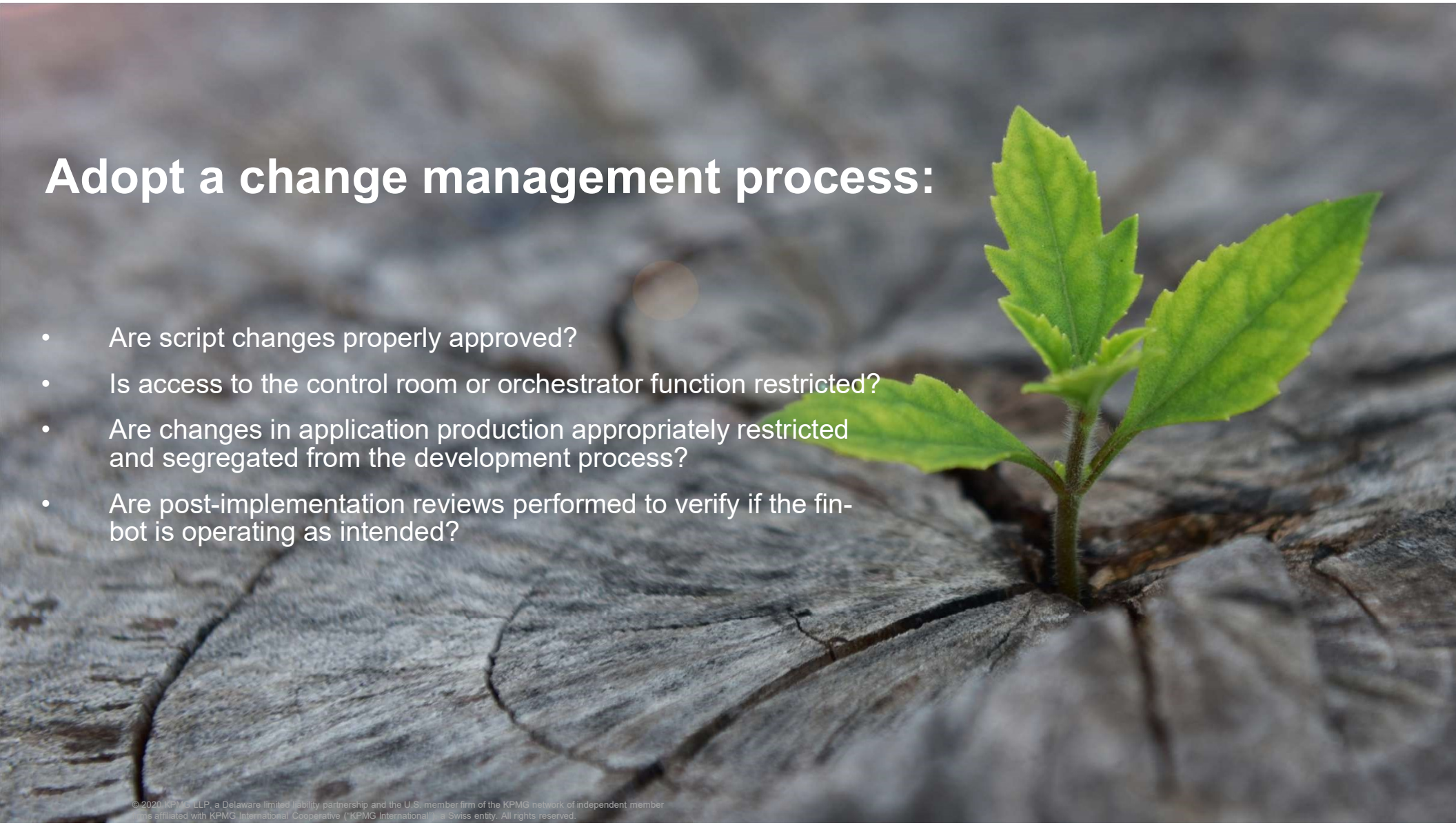
1. Address risk and governance upfront
2. Prioritze sound program development
3. Adopt a change management process
4. Control access to programs and data
5. Supervise and review bots
6. Reperformance by auditors and end-of-life for a bot

Address risk and governance up front:

- Are clear roles and responsibilities present?
- How strong is management's oversight?
- What automation policies and procedures are in place?
- Are the right stakeholders involved in the automation lifecycle?
- What risk assessment activities are in place?
- What key performance or risk indicators are used to monitor the fin-bots?

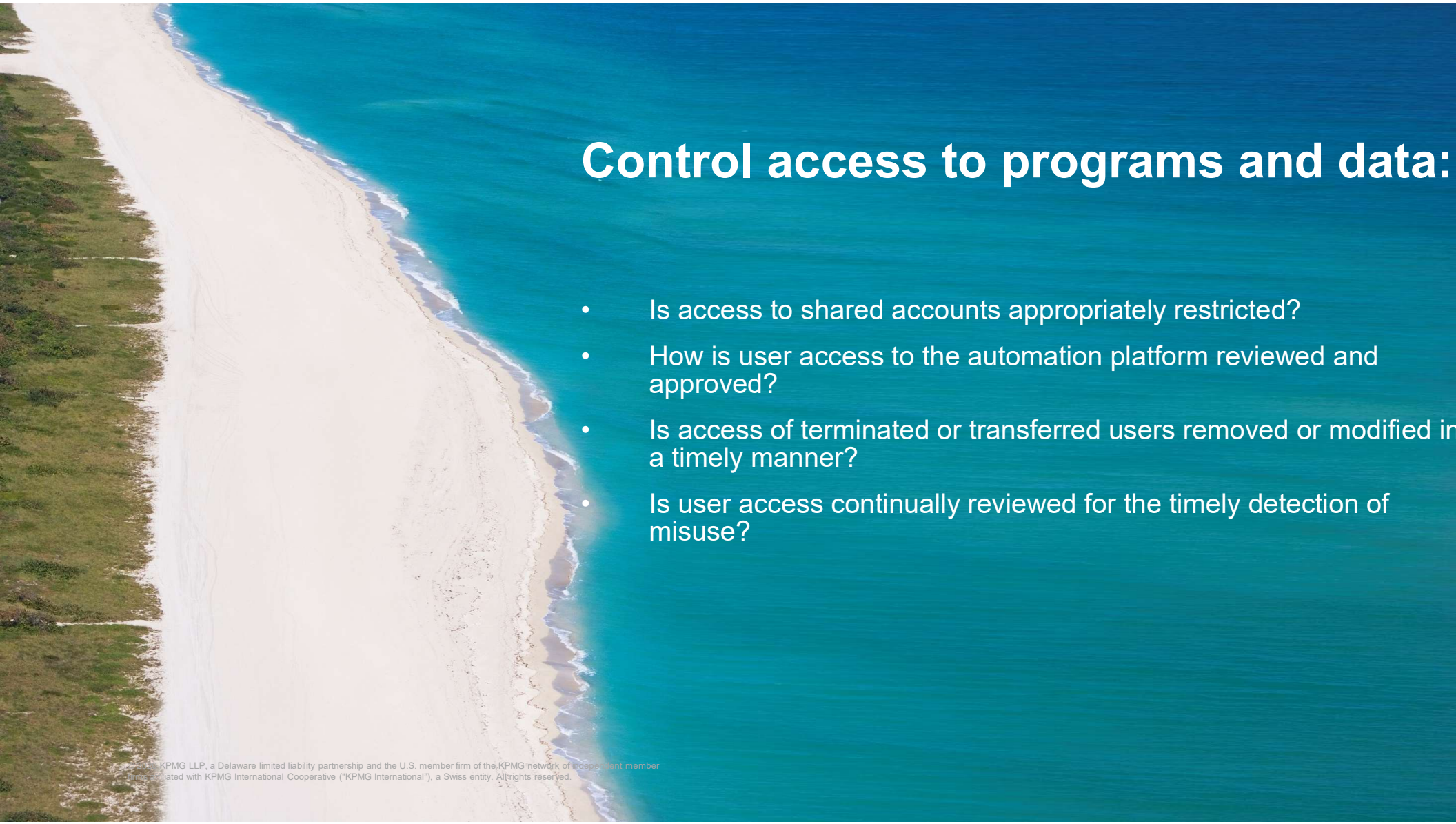
Prioritize sound program development:

- Is the platform subject to standard IT processes and policies?
- Does management have a formal system development lifecycle for the creation of fin-bots?
- How does the entity verify secure development and testing?
- Who has access to develop, build, and migrate bots into production?
- Who is responsible for evaluating and approving bots before they go live?
- Is there an official “authorization to operate” for each bot?



Adopt a change management process:

- Are script changes properly approved?
- Is access to the control room or orchestrator function restricted?
- Are changes in application production appropriately restricted and segregated from the development process?
- Are post-implementation reviews performed to verify if the fin-bot is operating as intended?

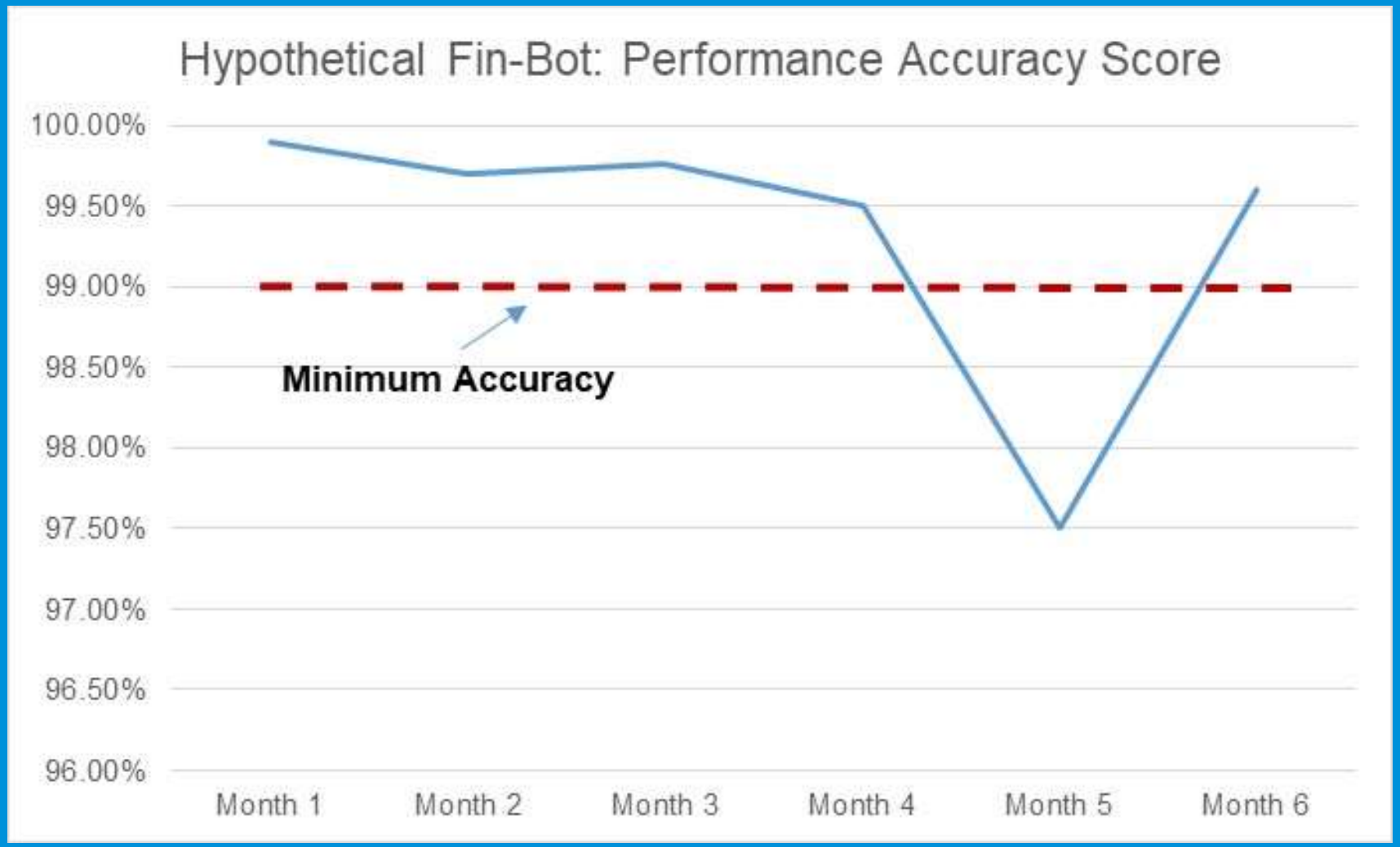


Control access to programs and data:

- Is access to shared accounts appropriately restricted?
- How is user access to the automation platform reviewed and approved?
- Is access of terminated or transferred users removed or modified in a timely manner?
- Is user access continually reviewed for the timely detection of misuse?

Supervise and review bots:

- Are all system application jobs (interfaces, batches, automated processing and data loads) monitored for exceptions?
- How are exceptions resolved?
- How is overall performance accuracy monitored?
- How does the organization respond to performance shortfalls?
- Are jobs not completed successfully communicated to stakeholders for follow up and resolution?
- Is logging enabled on the system?
- Is critical information backed up regularly and stored securely?
- Are business continuity plans in place?



Re-performance by auditors and end-of-life of a bot:

- Are data management and documentation warehousing for bots available for re-performance by the auditor?
- What is the expected lifecycle of bot development and deployment?
- What are end-of-life considerations for a bot?

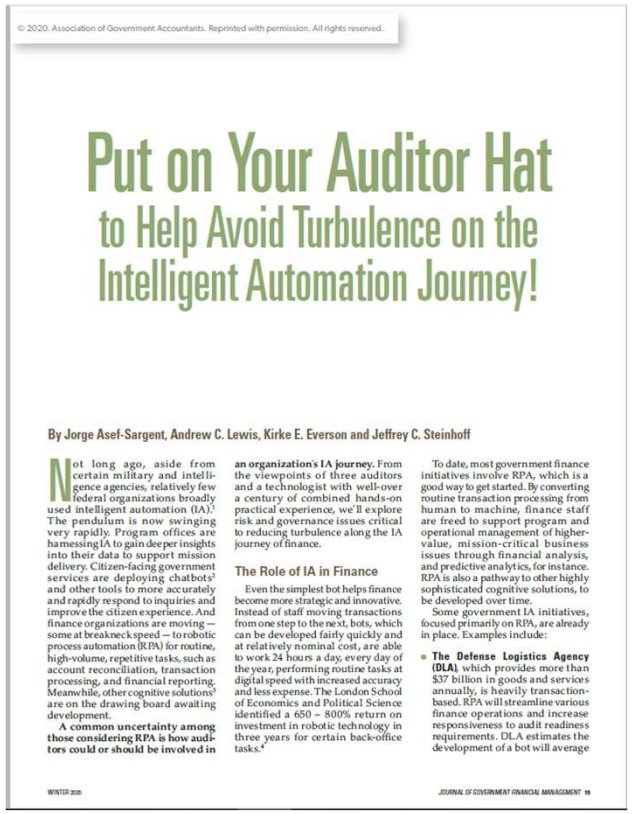
Many organizations take these steps to get started

"Size the Prize" – Evaluating processes by suitability for automation and effort to estimate overall benefit potential

Conduct a Proof-of-Concept – Demonstrating the technology effectiveness and validating performance

Define a Deployment Roadmap – Outlining steps to stand up an Intelligent Automation capability and begin to capture the benefits

Articles from KPMG's Government Institute



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Put on Your Auditor Hat

to Help Avoid Turbulence on the Intelligent Automation Journey!

By Jorge Asef-Sargent, Andrew C. Lewis, Kirke E. Everson and Jeffrey C. Steinhoff

Not long ago, aside from certain military and intelligence agencies, relatively few federal organizations broadly used intelligent automation (IA).[1] The pendulum is now swinging very rapidly. Program offices are harnessing IA to gain deeper insights into their data to support mission delivery. Citizen-facing government services are deploying chatbots[2] and other tools to more accurately and rapidly respond to inquiries and improve the citizen experience. And finance organizations are moving — some at breakneck speed — to robotic process automation (RPA) for routine, high-volume, repetitive tasks, such as account reconciliation, transaction processing, and financial reporting. Meanwhile, other cognitive solutions[3] are on the drawing board awaiting development.

A common uncertainty among those considering RPA is how auditors could or should be involved in an organization's IA journey. From the viewpoints of three auditors and a technologist with well-over a century of combined hands-on practical experience, we'll explore risk and governance issues critical to reducing turbulence along the IA journey of finance.

The Role of IA in Finance

Even the simplest bot helps finance become more strategic and innovative. Instead of staff moving transactions from one step to the next, bots, which can be developed fairly quickly and at relatively nominal cost, are able to work 24 hours a day, every day of the year, performing routine tasks at digital speed with increased accuracy and less expense. The London School of Economics and Political Science identified a 650 – 800% return on investment in robotic technology in three years for certain back-office tasks.[4]

To date, most government finance initiatives involve RPA, which is a good way to get started. By converting routine transaction processing from human to machine, finance staff are freed to support program and operational management of higher-value, mission-critical business issues through financial analysis, and predictive analytics, for instance. RPA is also a pathway to other highly sophisticated cognitive solutions, to be developed over time.

Some government IA initiatives, focused primarily on RPA, are already in place. Examples include:

- **The Defense Logistics Agency (DLA)**, which provides more than $37 billion in goods and services annually, is heavily transaction-based. RPA will streamline various finance operations and increase responsiveness to audit readiness requirements. DLA estimates the development of a bot will average

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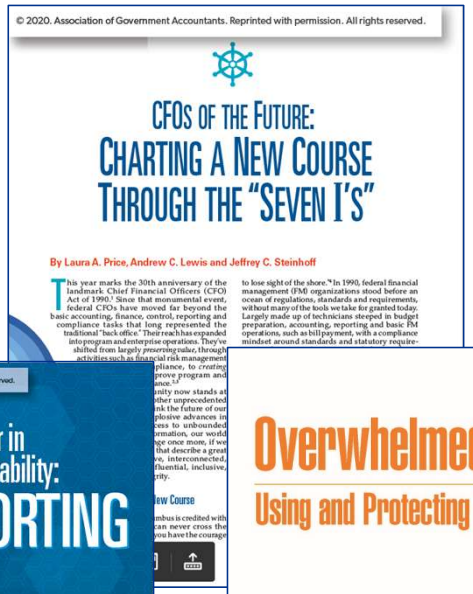
The March of the Robots

By Jeffrey C. Steinhoff, CGFM, CPA, CFE, CGMA; Andrew C. Lewis, CGFM, CPA, CIPP/G, PMP; and Kirke E. Everson, CGFM, CISSP, CISA, PMP, CRISC, CGEIT



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CFOs of the Future: Charting a New Course Through the "Seven I's"

By Laura A. Price, Andrew C. Lewis and Jeffrey C. Steinhoff

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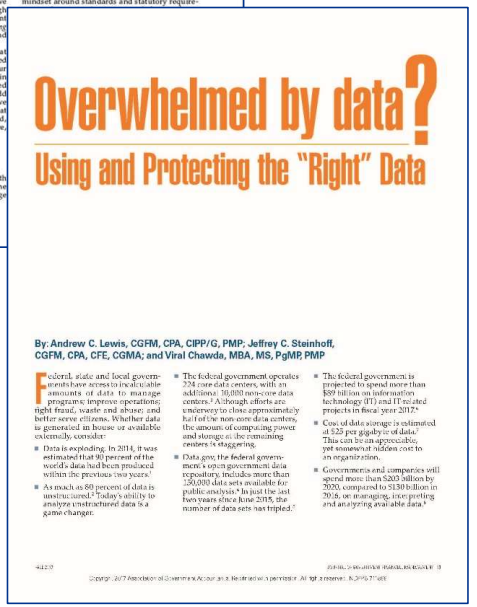
The Next Frontier in Government Accountability: IMPACT REPORTING



Overwhelmed by data?

Using and Protecting the "Right" Data

By: Andrew C. Lewis, CGFM, CPA, CIPP/G, PMP; Jeffrey C. Steinhoff, CGFM, CPA, CFE, CGMA; and Viral Chawda, MBA, MS, PgMP, PMP

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Thank you!

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