Intelligent Automation (IA)

Internal Audit's Role in Scaling Automation Across the Enterprise

Executive overview | Sep 2019

Presenters

Jimmy Marquis
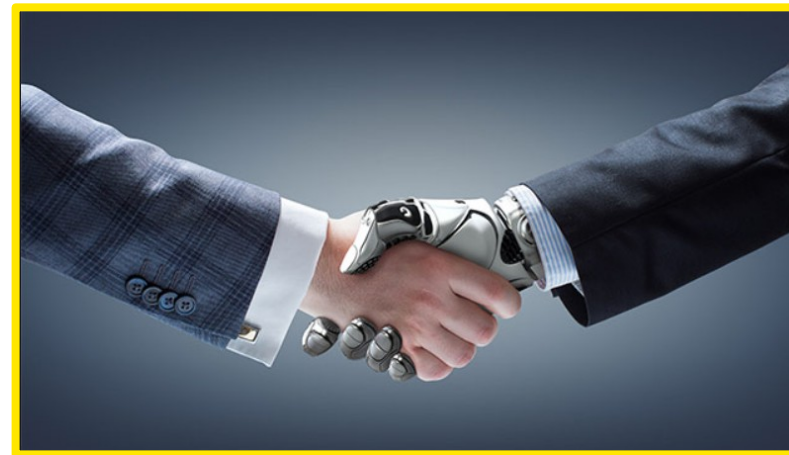*EY Senior Manager, Intelligent Automation*

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Building a better
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Discussion topics

1 Intelligent Automation Market Update

2 The Intelligent Automation Operating Model

3 Intelligent Automation at Chick-fil-A

4 Internal Audit and Intelligent Automation

5 Question and Answer

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Intelligent Automation (IA) — Market Update

Organizations are "learning" and capturing quick wins with RPA, creating a "new normal" of efficiency and effectiveness, but AI and Human/Machine collaboration will fundamentally reinvent industries, generating entirely new opportunities and business models
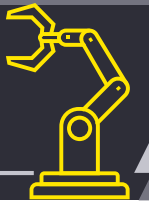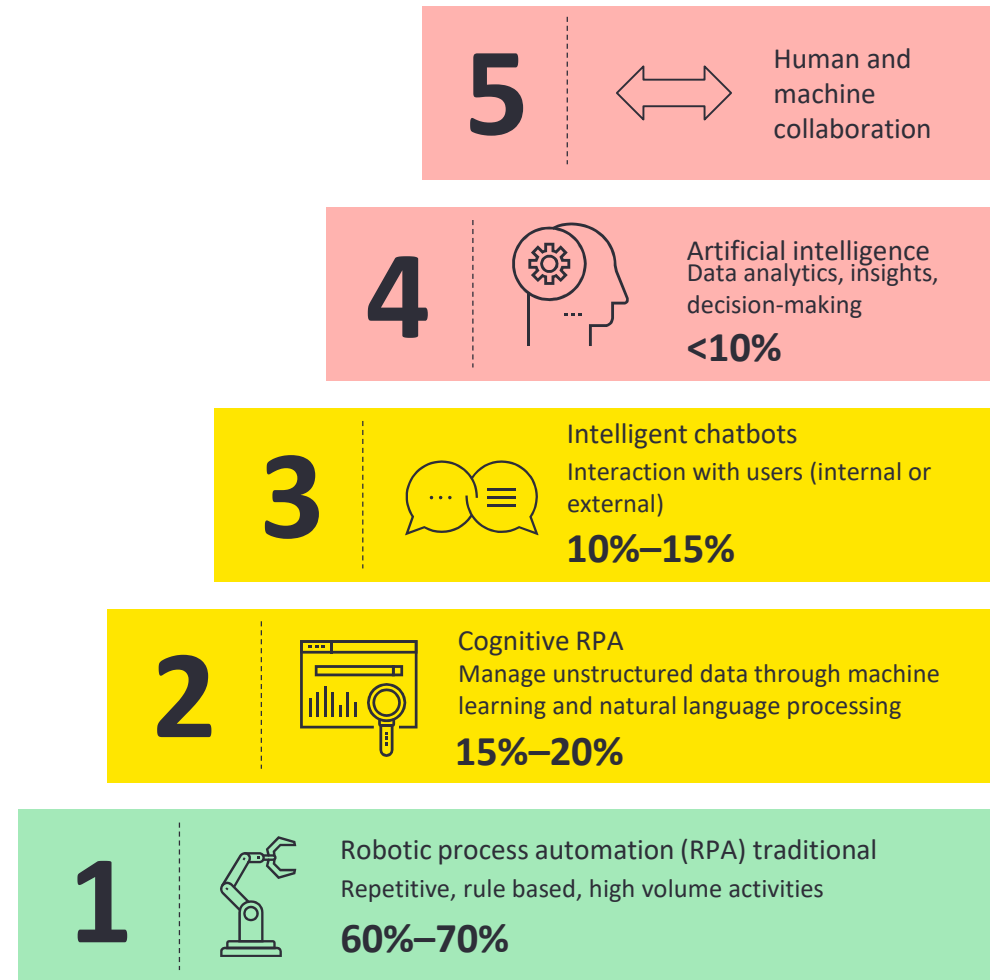
The IA journey

- The automation market is estimated to be US$19b by 2020

- **While less than 5% of companies are at scale with RPA today, ~40% say they are moving to scale in the next 12 to 18 months**

  Everest Research, 2018

- **"Companies that have already invested in RPA tools plan to increase the number of bots deployed by more than 90% in the next 12 months"**
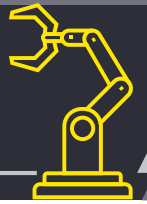
  Horses for Sources, 2018

- EY is recognizing the convergence of robotic process automation (RPA), analytics, machine learning (ML) and artificial intelligence (AI)
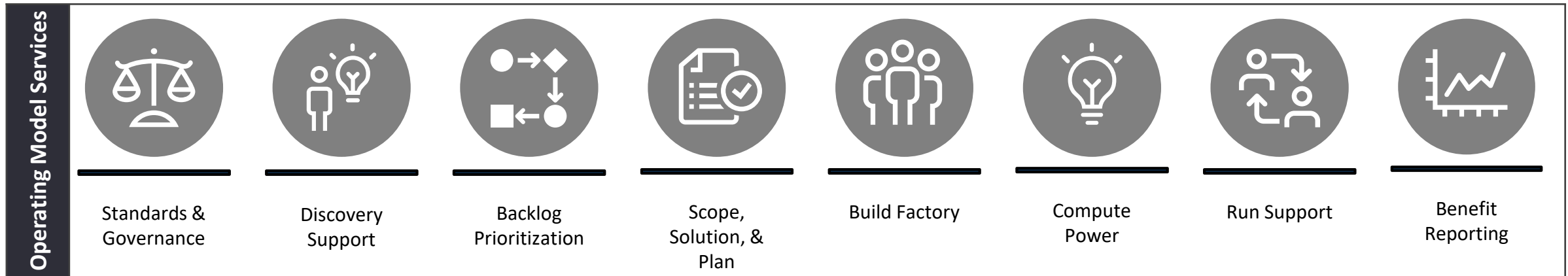
5 Human and machine collaboration

4 Artificial intelligence
Data analytics, insights, decision-making
<10%

3 Intelligent chatbots
Interaction with users (internal or external)
10%–15%

2 Cognitive RPA
Manage unstructured data through machine learning and natural language processing
15%–20%

1 Robotic process automation (RPA) traditional
Repetitive, rule based, high volume activities
60%–70%

Percentage of business processes impacted

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The Intelligent Automation Operating Model provides functions these services…

Operating Model Services

| Standards & Governance | Discovery Support | Backlog Prioritization | Scope, Solution, & Plan | Build Factory | Compute Power | Run Support | Benefit Reporting |

…to support the efficient and sustainable execution of the process lifecycle

Process Lifecycle

Identification & Prioritization → High Level Business Case → Detailed Scope & Plan → Benefits Realization Plan → **Build Decision** → Build, Test & Deploy → Run Support → Benefits Realization

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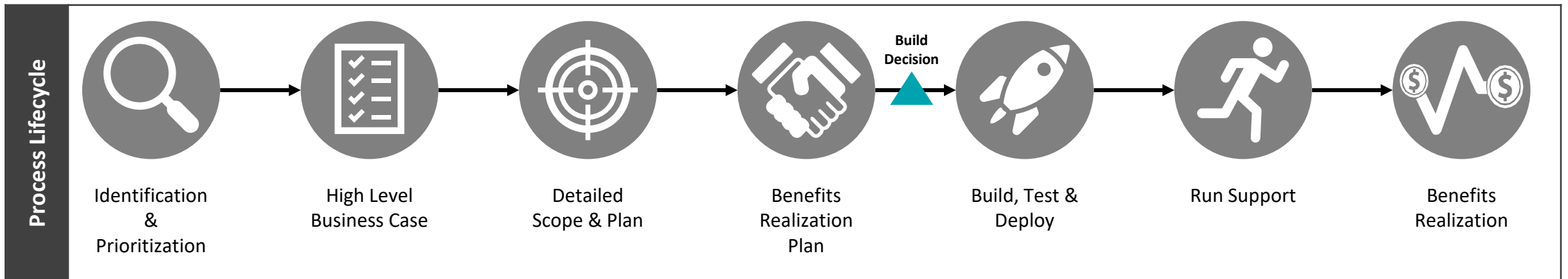
"We should be about more than just selling chicken. We should be part of our customers' lives and the communities in which we serve."- S. Truett Cathy

- Over 2,400 locations across 48 states and in Washington D.C.

- >$10B in sales in 2018

- Average sales per restaurant of $4.6M

- 3rd largest restaurant chain in the U.S.

- Ranked #1 in customer satisfaction by the American Customer Satisfaction index for the 5th year in a row

- Contributed $15.3M in scholarships to over 6,000 team members in 2019

Intelligent Automation Services – Internal Audit's Role
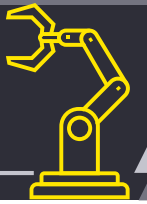
The Standards & Governance service establishes vision and strategy, key structure, and risk considerations for the use of appropriate IA:

Key Values of the Service

▶ Defines vision, purpose, targets and structure

▶ Lays the foundation for a successful IA program rollout

▶ Defines how change is managed across the organization

▶ Defines how talent is managed across the organization

▶ Defines how to drive alignment across the organization

▶ Ensures proper controls are in place for the identified risks of digital workers

Key Activities and Methodology

Guiding Principles
- Outlines six guiding principles to drive the use and oversight of IA with a consistent strategy

Charter
- Establishes the strategy and direction of the IA Operating Model to implement a consistent and sustainable IA capability across the firm

Governance Structure
- Establishes an organizational structure and Operating Model to govern and manage the use of IA appropriately

Organization Structure
- Describes the level of ownership between the program, CoE and BU's

- Describes how the type of organization structure will evolve as the organization scales

Tollgate Questions
- Asks a series of questions to determine if CFA is ready to scale

Policies & Standards Release Schedule
- Depicts how each policy should be refined at CFA

Risk Management Considerations
- Describes process, IT and operational risks

Talent Management
- Defines the roles to achieve optimal IA teams that can be modified or enhanced based on the program

- Identifies the skillsets required to execute and govern the IA services

- Outlines the career paths for IA program roles

Technology Lifecycle Plan
- Identifies capability gaps and timing requirements for adopting new IA technologies as the program scales

- Outlines CFA's innovation process

Solution Selection
- Selects and implements the correct solution for the environment
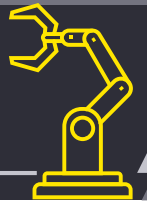
Funding Approach
- Determines mechanisms for cross-functional charges

Internal Audit's Role

- Perform program risk assessment
- Establish program and lifecycle RACM
- Periodic program audits

The Discovery Support service establishes the method for identifying IA opportunities by defining the criteria to evaluate suitability for automation:

Key Values of the Service

▶ Defines how to identify automation opportunities

▶ Establishes consistency for how processes are submitted for automation

▶ Identifies and integrates other critical BU's across the organization

▶ Communicates baseline criteria for minimum candidates

▶ Establishes factors that are used in prioritization

▶ Establishes a consistent methodology

Key Activities and Methodology

Identification Suitability Criteria for IA

• Describes the minimum criteria in order for a candidate to be recognized as a suitable RPA opportunity such as deterministic, digitized and documented

Identification Ease of Implementation Drivers

• Defines the feasibility of implementing the automation such as rule based, level of standardization, data sources and data types

Identification Impact Drivers

• Drivers that take into consideration the benefit drivers of the automation such as time sensitivity, transaction volume and impact of quality
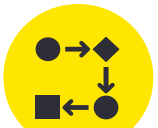
Internal Audit's Role

• Cross-functional visibility

• Process maturity guidance

• Advise on areas to explore

The Backlog Prioritization service establishes the method for prioritizing IA opportunities by defining the prioritization factors important to the organization:

Key Values of the Service

▶ Defines how to prioritize automation opportunities

▶ Defines how to assess value drivers and differentiate qualitative versus quantitative criteria

▶ Identifies and integrates other critical business units across the organization

▶ Establishes a scalable methodology

Key Activities and Methodology

Prioritization Methods

• Defines three ways for organizations to prioritize intelligent automation use cases

Value Drivers

• Captures both quantitative and qualitative benefits of automating use cases

Criteria

• Outlines qualitative criteria as the primary weighting and most likely will evolve to reflect changes in program objectives

Process Taxonomy

• Serves as a high-level, industry-neutral enterprise model that allows organizations to see their activities from a cross-industry process viewpoint
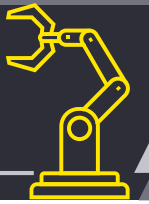
Qualitative

Internal Audit's Role

•In-flight initiative guidance

•Execute Use Case risk assessment

•Non-FTE savings input

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The Scope, Solution & Plan service establishes the necessary business and technical documentation associated with the automation build:

Key Values of the Service

▶ Defines the quantitative and qualitative values of automating the particular use case

▶ Defines detailed current and future state process flows

▶ Defines handoffs to deployment teams

▶ Identifies and integrates other critical business units across the organization

▶ Establishes a consistent methodology

▶ Defines a plan to realize benefits once the automation is live

Key Activities and Methodology

Baseline Metrics

- Outlines metrics within the Business Requirement Document that defines the timing, frequency, exception rate, and transaction volume for the process

Current State Flows

- Document current state process including exception paths and control points

- Process requirements to be included in the future state design with traceability through test plan

Solution Design Document

- Functional to-be design of the automated solution including logic paths, control points, and data flow mapping

Business Requirements Document

Internal Audit's Role

- Current state documentation / SOP creation

- Design of controls for to-be solution

- Create testing plan

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The Build Factory service establishes a set of actionable and methodical tasks and controls to build, test, and deploy IA processes through the process lifecycle:

Key Values of the Service

▶ Applies a consistent approach for a use case in development through hypercare

▶ Establishes Software Development Life Cycle (SLDC) processes, including a standard design review and checklist process

▶ Creates consistency within automation tools for future developments

▶ Maintains understanding of hand-offs and responsibilities between business, process, development, and maintenance teams

▶ Creates an understanding of workflow, capacity planning, and skills needed

▶ Provides a systematic approach to asset management

Key Activities and Methodology

Naming Conventions

• Establishes standard terms to name development components that increase readability and traceability

Development & Design Review Process

• Establishes SLDC processes for development and design

Data Management

• Ensures proper management of data to robots

Testing Framework

• Details the steps of testing including functional, user acceptance, regression, and quality

Release & Deployment Procedures

• Outlines procedures to follow for maintenance of robotic code and handling changes to production

Hypercare Procedures

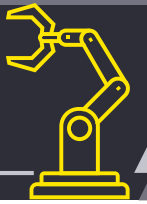• Procedures to be followed during the hypercare period of the process lifecycle

Internal Audit's Role

• SDLC oversight for the use case build

• Update process documentation for future state

• IA tollgate signoff

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The Compute Power service aligns automation needs to automation capabilities to ensure existing infrastructures and technology platforms are available to support Intelligent Automation:

Key Values of the Service

▶ Creates structure to align automation needs with automation capabilities

▶ Decreases risk and disorganization through password and credential management

▶ Benefits Security by having a framework in place for patching or servers, process or applications

▶ Provides required server management

▶ Provides standards regarding issues or upgrades with selected software providers

Key Activities and Methodology

Password and Credentials Management

• Establishes standards for continuous password and credential management within processes

Patching Framework

• Provides framework and processes for software, applications, and server patching

RPA Architecture & Infrastructure

• Outlines the approach, details and structure for RPA architecture and environments

Server Management Standards

• Establishes a method for capturing and tracking encountered and unresolved server issues

Vendor Interaction Model

• Establishes a method for monitoring and

controlling processes between the IA program and the automation vendor

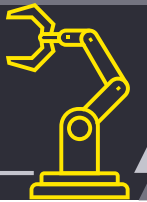**RPA Software Updates Standards**

• Establishes procedures around updates for selected RPA vendors

Internal Audit's Role

•Password and credential management

•Information Security guidance

•Server lifecycle audits

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The Run Support service establishes an actionable set of tasks to schedule IA processes in production, monitor performance, and manage encountered expectations:

Key Values of the Service

▶ Ensures the proper maintenance, monitoring and scheduling of automations in production

▶ Creates alignment on Service Level Agreements (SLA)

▶ Establishes an understanding of hand-offs and responsibilities

▶ Provides detailed recovery plans from issues and outages at a use case and platform level

▶ Captures robot performance and provides a visual through dashboards software providers

Key Activities and Methodology

Build to Run Transition Plan

- Defines appropriate handoff from build to run team

IA Asset Management Procedures

- Establishes procedures to manages and store robot credentials

Scheduling and Monitoring Procedures

- Establishes daily robot maintenance, monitoring and capacity planning, and retirement of assets

Process and Service Monitoring

- Defines the monitoring of ongoing business and IT processes for processes in production

Issue Management Procedures

- Establishes the baseline issues for the ongoing execution and monitoring of processes, including scheduling, monitoring, and issue handling

Run Support Master Reference Guide

- Tracks technicalities and key contacts for all deployed use cases

Routine, Enhancement, and Emergency Changes Procedures

- Defines guidelines in the event of a routine, enhancement or emergency change to a deployed use case

Operational Reporting Routines

- Establishes a consistent method for the monitoring and reporting of robot performance
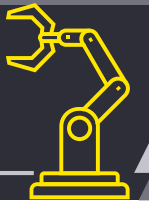
Retirement of Assets Procedures

- Provides key considerations in the event of retiring IA assets

Internal Audit's Role

- Performance and access audits
- Process change management communication
- Code migration guidance

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The Benefit Reporting service allows the CoE to periodically monitor and report benefits, visualize the benefits realized, and provide the opportunity to improve if reality is not meeting expectations:

Key Values of the Service

▶ Provides cadenced reporting and monitoring for robot benefits

▶ Captures benefits realized from robots and provides a visual through dashboards

▶ Captures annual benchmarking and feedback through surveys completed by Process Owners

Key Activities and Methodology

Benefit Reporting Routines

- Establishes a consistent method for benefits measurement, historical trending, and aggregate reporting in conjunction with business unit

Benefit Monitoring

- Monitors the process in production through a defined frequency at which benefits are evaluated and compared against the original business case.

Internal Audit's Role

- Create benefits assessment framework
- Risk and compliance benefits reporting
- Execute periodic benefit audits

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Q&A