With you today

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- 35+ years’ experience
- KPMG’s Power & Utility West Coast Leader
- Specializes in business transformation, process & operational excellence, Intelligent Automation, rate & regulatory

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- 18+ years’ experience in Power & Utilities
- Focus on grid modernization, financial process improvement, and regulatory compliance
- Leading finance transformation, customer service transformation, and utility strategy projects
Today’s Objectives

IA Foundational Education

Educate the group on:
• The definition of Intelligent Automation (IA)
• Benefits of automation
• Major technology players in the space

Application to Finance

• Review ways that IA can be successfully applied in Finance & Accounting (F&A)
• Discuss F&A case studies
• Discuss how to get started

25 minutes 25 minutes
Educate the group on:
• The definition of Intelligent Automation
• Benefits of automation
• Major technology players in the space

25 minutes
What is Intelligent Automation (IA)?

In simplest terms, Intelligent Automation (also known as Digital Labor or Robotics Process Automation) refers to the use of an algorithm to automate or digitally perform tasks that are normally performed by a human operator.

Once configured, these “Bots” execute a sequence of activities following a defined set of instructions and rules. More advanced IA tools include natural language and cognitive learning abilities.

Identifying IA Opportunities – Key Attributes

- Highly manual and repetitive
- Rule-based processes
- Processes with readable and structured data
- Mature and stable processes
- Lesser exceptions
- High Volumes
- Capacity Constraints
- System Maturity, handshakes and interfaces
- Business Criticality
- Capacity Constraints
- System Maturity, handshakes and interfaces
Intelligent Automation targets across enterprise business functions

**Human resources**
- Employee on-boarding and off-boarding
- Payroll
- Time recording and compliance
- Repeatable tasks in ERP
- Email notifications
- Populating/aggregating employee information

**Customer support**
- Virtual agents (chat bots)
- Call center “agent assist”
- Task execution

**Finance and accounting**
- Month-End reporting
- Invoice processing/exceptions
- AP/AR actions
- Close and reconcile sub-ledgers
- Asset depreciation and impairment
- Fixed asset reporting
- Financial forecasting
- Invoice validation and processing
- Tax filings

**Legal/compliance**
- Research/document review
- Document preparation
- Controls automation

**Sales and marketing**
- NLP enabled analytics
- Social media mining/monitoring
- Predicting high value sales leads
- Manual CRM updates
- Virtual sales agents

**Supply chain**
- Order flow through
- Inventory Mgmt.
- Exceptions/fallout

**Procurement**
- Process Purchase Order
- Spend Analysis & Report.
- SLA Reporting
- Employee T&E Setup
Intelligent Automation’s impact across functions

<table>
<thead>
<tr>
<th>Typical processes that are outsourced (in order of actual $ spend savings potential)</th>
<th>Typical range of Gross Savings* of In-Scope Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology</td>
<td>![Graph showing savings range from 0% to 50%]</td>
</tr>
<tr>
<td>Real Estate &amp; Facilities Mgmt.</td>
<td>![Graph showing savings range from 0% to 50%]</td>
</tr>
<tr>
<td>Customer Sales &amp; Support</td>
<td>![Graph showing savings range from 0% to 50%]</td>
</tr>
<tr>
<td>Finance &amp; Accounting</td>
<td>![Graph showing savings range from 0% to 50%]</td>
</tr>
<tr>
<td>Human Resources</td>
<td>![Graph showing savings range from 0% to 50%]</td>
</tr>
<tr>
<td>Procurement</td>
<td>![Graph showing savings range from 0% to 50%]</td>
</tr>
<tr>
<td>Legal</td>
<td>![Graph showing savings range from 0% to 50%]</td>
</tr>
<tr>
<td>Master Data Management</td>
<td>![Graph showing savings range from 0% to 50%]</td>
</tr>
</tbody>
</table>

*Gross Savings exclude one-time transition costs or governance costs; some savings may be mutually exclusive; savings do not include cost to achieve
## Benefits of Intelligent Automation

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Details</th>
</tr>
</thead>
</table>
| Privacy and compliance                        | Limits human exposure to sensitive corporate data  
Reduce human error in compliance tasks  
Increase security and governance tasks without adding new human labor |
| Quality and accuracy                          | Reduce quality issues associated with manual data entry  
Deploy new “no-labor” data integrity routines  
Reduce the need for re-work |
| Process improvement and efficiency            | Leverage digitized process data to increase visibility and continuous improvement  
Enable resources to focus on higher value-added activities  
Lower the cost and risk associated with employee turnover |
| Speed                                         | Can perform tasks 365 days a year at 24/7 availability  
Accelerate completion rates of certain tasks, compared to human labor  
Rapidly scale up/scale down for changes in transaction volumes |
| Cost reduction                                | Enables opportunity to better manage labor costs  
Decouples correlation between labor and revenue growth  
Reduce need for seasonal labor force (during busy seasons etc.) |
Many utilities are already making investments in Intelligent Automation to drive growth and enhance operations.

### Increasing Safety

Unmanned aerial and robotic solutions are being deployed for utility T&D inspection and maintenance, helping utilities improve reliability and meet compliance regulations.

Increased investment in automated SCADA and MCC information allows real-time monitoring of critical assets during emergency situations.

Source:
1) http://tdworld.com/field-applications/drones-help-utilities-meet-osha-rules

### Improving Reliability

Self-healing grids detect unreported outages triggering automatic rerouting of power to affected customers, often before the customers recognize the disruption.

Investing in the automation of regular monitoring activities increases the speed of work and captures institutional knowledge from the aging workforce.

Source:
1) https://www.usea.org/sites/default/files/event-file/497/3_Smart_Grid_Blue.pdf

### Improving Operational Efficiency

Automated work orders for field crews increase the transparency of information, reduce redundant data entry and improve accuracy of reporting; all while increasing their efficiency.

Asset management systems drive down unnecessary downtime and replacement costs for fixed assets by tracking the lifecycle of each asset’s maintenance and remaining expected useful life.

Source:
1) http://www.cleveest.com/solutions/mwfm
Multiple vendor options exist for the technology capabilities

<table>
<thead>
<tr>
<th>Technology Type</th>
<th>Key Players</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>Automation Anywhere, Blue Prism, NICE, Pega, Redwood, UiPath, WorkFusion</td>
</tr>
<tr>
<td>Document Imaging &amp; Indexing</td>
<td>Nuance, Xerox, Kofax from Lexmark</td>
</tr>
<tr>
<td>iBPMS</td>
<td>Pega, Appian, IBM, Tibco, Isys, Papyrus</td>
</tr>
<tr>
<td>Machine Learning</td>
<td>VPI, Microsoft Azure Machine Learning, TensorFlow, Spark, mllearn</td>
</tr>
<tr>
<td>Domain Specific Cognitive</td>
<td>Brainspace, Equivio, ReCommind, Arria</td>
</tr>
<tr>
<td>Cognitive Platforms</td>
<td>IBM Watson, Wolfram Alpha, IpSoft Amelia</td>
</tr>
<tr>
<td>Use-case specific FinTech</td>
<td>Ancoa, Twilio, Voitrax, Bloomberg Vault</td>
</tr>
</tbody>
</table>
Knowledge Application: Question

Q. Which areas within Finance do you think have the greatest potential for improvement through Intelligent Automation?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General Ledger Close</td>
</tr>
<tr>
<td>2</td>
<td>Month End Reporting</td>
</tr>
<tr>
<td>3</td>
<td>Performance Reporting</td>
</tr>
<tr>
<td>4</td>
<td>Managing the Record-to-Report Process</td>
</tr>
</tbody>
</table>
Knowledge Application: Answer

Key Automation Opportunities highlighted below are based on the Level 2 processes with the highest potential % reduction in FTEs. These opportunities may provide significant cost savings opportunities for the finance organization. The details for these opportunities can be provided.

<table>
<thead>
<tr>
<th>ID</th>
<th>Process area</th>
<th>Process</th>
<th>% Reduction in FTEs*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Record to Report</td>
<td>Month End Reporting</td>
<td>50%</td>
</tr>
<tr>
<td>2</td>
<td>Record to Report</td>
<td>Manage Process</td>
<td>40%</td>
</tr>
<tr>
<td>3</td>
<td>Record to Report</td>
<td>General Ledger Close</td>
<td>50%</td>
</tr>
<tr>
<td>4</td>
<td>Plan to Perform</td>
<td>Performance Reporting</td>
<td>37%</td>
</tr>
<tr>
<td>5</td>
<td>Source to Pay</td>
<td>Requisition &amp; Procurement</td>
<td>16%</td>
</tr>
<tr>
<td>6</td>
<td>Source to Pay</td>
<td>Purchasing</td>
<td>16%</td>
</tr>
<tr>
<td>7</td>
<td>Source to Pay</td>
<td>Supplier Management</td>
<td>26%</td>
</tr>
<tr>
<td>8</td>
<td>Source to Pay</td>
<td>Receiving &amp; Storage</td>
<td>55%</td>
</tr>
</tbody>
</table>

*FTE Estimates are based on percentage of activity that can be automated and cost benchmarks for organizations with market cap in excess of $20 billion. The key automation opportunities are for discussion purposes. Actual FTE values will vary by organization dependent on company’s operational size, complexity, current resourcing mix, level of outsourcing, and technology enhancements. KPMG can assist companies with identifying specific opportunity estimates.
Application to Finance

- Review ways that IA can be successfully applied in Finance & Accounting (F&A)
- Discuss F&A case studies
- Discuss how to get started

25 minutes
Potential Impact to a Finance Organization

### Business Outcome

<table>
<thead>
<tr>
<th>Business Outcome</th>
<th>Enabled by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficient Processes</td>
<td>Use of Intelligent Automation to automate back office transaction processing (e.g., billing, collections, manual JEs, etc.)</td>
</tr>
<tr>
<td>More timely and effective decision making</td>
<td>Higher data quality and accuracy through elimination of human error and manual data entry</td>
</tr>
<tr>
<td>Data-driven business decisions</td>
<td>Finance resources have more bandwidth to focus on value-added activities such as data and analytics, rather than data manipulation and manual re-work</td>
</tr>
<tr>
<td>Lower cost to serve</td>
<td>“Smoothing” of spikes in resourcing needs during key times (i.e. quarterly close) as robots can operate 24 hours / day as opposed to humans</td>
</tr>
</tbody>
</table>

### Impact

<table>
<thead>
<tr>
<th>Impact</th>
<th>Typical range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Cost Takeout</td>
<td>0% - 80%</td>
</tr>
<tr>
<td>Cost to Achieve</td>
<td>$500K - $4.5M</td>
</tr>
<tr>
<td>Return on Investment</td>
<td>3X - 24X</td>
</tr>
<tr>
<td>Payback Period</td>
<td>3M - 24M</td>
</tr>
<tr>
<td>Reduction in call volume</td>
<td>3% - 24%</td>
</tr>
</tbody>
</table>
## Identifying Potential Processes for Automation

When identifying processes for automation, they can consider them in terms of:

| End to end process | • Automate end to end process via RPA  
<table>
<thead>
<tr>
<th></th>
<th>• Ideally suited for processes that do not require any human decision from start to the end</th>
</tr>
</thead>
</table>
| Bits and pieces   | • Processes can be automated in ‘bits and pieces’  
|                   | • Parts of the processes can be automated delivering the output to a human processor for further action (typically requiring human judgement) |
| Cost avoidance    | • Processes that can result in significant opportunity cost due to variety of factors including increase in expected volumes, regulatory penalties, other business dependencies, customer dissatisfaction, etc. |
| Process improvement | • Minor re-engineering is required to automate the existing process. E.g. standardize email via templates to enable bot to auto process transaction |
End to End: Manual Journal Entries

Journal entries requiring manual entry or intervention on a monthly basis in preparation for month end close

- Rules based, repetitive and electronic interfaces
- Prone to human error
- Mid to high volume
- Routine process
- Structured data

**BEFORE**
- Email ITF to confirm all JEs posted for current period
- Obtain ITF email confirmation
- Execute SP60 report and export into Excel
- Update translation template
- If all data is accurate, copy and paste JE template
- Load data into SAP
- Confirm data loaded accurately
- Attach file to SAP JE
- If data is not accurate, re-run translation to correct exceptions
- Send confirmation email to ITF

**AFTER**
- Send confirmation email to ITF
- Obtain ITF email confirmation
- Execute SP60 report and export into Excel
- If data is accurate load into JE
- Load JE and process
- Confirm data is accurate, email ITF

Requisition of positive confirmation of JE posting
Analysis per profit center

End to End: Bits and pieces Cost avoidance Process improvement
Bits and Pieces: Revenue Reporting

Leveraging RPA for sections of Revenue Reporting process, where manual approval is still required, but certain steps have the ability to be automated

- Rules based, repetitive and electronic interfaces
- Prone to human error
- All aspects of reporting are completed manually and on a consistent basis to meet reporting requirements
- Structured data that allows for easy translation across multiple sources

**Before**

1. Obtain domestic report data
2. Obtain international report data
3. Update report template in Excel (data from Oracle)
4. Confirm and validate report data is accurate
5. Obtain approval
6. Send reports to various owners once approved
7. Obtain approval
8. Ensure reports are stored for audit
9. Store data in Workflow tool
10. Store data on shared drive

**After**

1. Pull data from shared drive
2. Update Excel
3. Confirm Report Accuracy
4. Confirm Journals posted
5. Update Excel and end file to preparer
6. Obtain approval

**Manual Process**

- Manual & Repetitive
- Rules Based

**Automated Process**

- No Human Judgement
- Structured Data

**End to end**

**Bits and pieces**

**Cost avoidance**

**Process improvement**
Cost Avoidance: Payroll

Daily and monthly payroll reporting can be automated to allow for quicker completion of payroll information without incurring additional time spent on activities.

**Before**
- Obtain bank ARP file document
- Obtain bank email documentation
- Consolidate data into single Excel file
- Obtain data from document repository
- Export data and compare data in Excel
- Verify exceptions
- Verify Payroll corrects exceptions

**After**
- Receive Bank File
- Combine data into Excel file
- Request repository data pull
- Obtain data from document repository
- Export data and compare data in Excel
- Receive repository data
- Compile exceptions
- Create Manual JE
- Upon approval post JE
- Verify exceptions
- Verify Payroll corrects exceptions

- Rules based, repetitive and electronic interfaces
- Prone to human error
- Reporting is required daily and monthly in a timely manner
- Data is structured and formatted consistently on a daily and monthly basis

**End to end**
- **Automated Process**

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Process Improvement: PO Payment

RPA is utilized to reduce cyclical time and improve validation checks for payments made against purchase orders with vendors and suppliers.

- Rules based, repetitive and electronic interfaces
- Prone to human error
- All aspects of purchase orders are formatted consistently, however invoicing method may determine if this is a high value use case
- If data from invoices is structured correctly, this will allow for easy translation of information

Before:
- Obtain fiscal PO box document
- Obtain invoices from various sources
- Scan into document repository
- Enter data into Oracle
- Perform two way match
- Send email back to requestor if exceptions
- Validate two way match

After:
- Pull PO document
- Obtain repository data
- Transform data
- Perform two way match
- Validate two match

- End to end
- Bits and pieces
- Cost avoidance
- Process improvement
Getting Started
How to begin the automation journey

1. Identify and prioritize Accounting automation opportunities
2. Develop a multifaceted strategy and road map for implementing automation in the Accounting organization
3. Select the right internal team, external partners and technology providers to execute the automation journey and road map
4. Establish a governance strategy to help oversee the Accounting automation program and ensure benefits expected are realized
5. Establish a change management strategy to ensure effectiveness of adoption of automation throughout Accounting
# Typical approach

<table>
<thead>
<tr>
<th>Phase 1 (6 – 8 weeks)</th>
<th>Phase II (3 – 6 months)</th>
<th>Phase III (6 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opportunity Assessment</strong></td>
<td><strong>Pilot Implementation</strong></td>
<td><strong>Operational Model Setup</strong></td>
</tr>
<tr>
<td>— Conduct high level business process review, including business performance metrics</td>
<td>— Select automation opportunities for pilot implementation based benefits, value delivered, and complexity</td>
<td>— Design and build out automation Operational Model</td>
</tr>
<tr>
<td>— Develop high level business cases for automation opportunities</td>
<td>— Finalize design and requirements</td>
<td>— Define critical success factors for the program including adoption, training, and communications</td>
</tr>
<tr>
<td></td>
<td>— Demonstrate the pilot solutions</td>
<td>— Develop organizational change management plan</td>
</tr>
<tr>
<td></td>
<td>— Conduct user acceptance testing</td>
<td>— Roll out solutions to remaining operations areas</td>
</tr>
<tr>
<td></td>
<td>— Develop the Implementation roadmap</td>
<td>— Implement Digital Labor governance model</td>
</tr>
<tr>
<td></td>
<td></td>
<td>— Execute organizational change management plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>— Continuously monitor and adjust solutions for maximum efficiency and effectiveness</td>
</tr>
</tbody>
</table>
…each with a distinct role as it relates to the client and a different set of competencies

<table>
<thead>
<tr>
<th>Key Roles</th>
<th>Core Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business</strong></td>
<td>Develops and implements digital labor solutions under the guidance of the digital labor CoE.</td>
</tr>
<tr>
<td><strong>DL CoE</strong></td>
<td>Provides governance structure for building and expanding digital labor capabilities</td>
</tr>
<tr>
<td><strong>IT</strong></td>
<td>Supports the business. Transforms the IT service delivery model using automation.</td>
</tr>
</tbody>
</table>
As you begin this journey, it is important to properly align the organization around the change

To successfully incorporate automation within processes and teams, organizations must proactively address the impacts to their people and the overall organization in order to minimize business disruption and expedite the timing of benefits realization. The focus on each impact changes depending on where you are in your automation journey.

Unique Characteristics of Automation Implementations

Speed of Implementation
The rate of change is faster than traditional process and system implementations

Constant Change
Automation implementations will be iterative and constantly evolving to develop optimal workforce productivity and ROI

Organizational & People Impacts

Workforce Shaping
Adaptive workforce realignment for evolving automation needs

Culture Shift
Overcoming the fear factor

Leadership Vision
Agreeing on future state vision for the organization

Talent Management
Hiring, reskilling and exiting talent

Changing Behaviors
Adopting and adapting the new ways of working

Adaptive workforce realignment for evolving automation needs

Leadership Vision
Agreeing on future state vision for the organization

Talent Management
Hiring, reskilling and exiting talent

Changing Behaviors
Adopting and adapting the new ways of working
## Intelligent Automation Lessons Learned

<table>
<thead>
<tr>
<th>Think End-to-End Process</th>
<th>The application of a portfolio solution of robotics applications will best achieve maximum benefits and impact when considered across global end to end processes. This may need to transcend onshore / offshore / outsourced lines.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start with a Pilot</td>
<td>It is important to test out the tools/solutions through pilots in select areas to assess their effectiveness and fit within the organization before wider global roll-out, and confirm the integrity of risks and controls in a robotics environment.</td>
</tr>
<tr>
<td>Self-Funding Robotics Program</td>
<td>It is critical that investment in robotics is funded through productivity gain and headcount savings. Aside from maintaining momentum, a self-funding program will enable the organization to invest in higher-order, cognitive automation which can transform operations and change how the bank operates.</td>
</tr>
<tr>
<td>Rethinking Data</td>
<td>Investing in Intelligent Automation paves the way for rethinking your data management strategy, which in turn will facilitate the deployment of more advanced cognitive solutions in future.</td>
</tr>
<tr>
<td>Business led with IT partnership</td>
<td>Change management of processes needs to ideally reside with the business users. However, it is important to get IT engagement and support as early as possible to facilitate the integration of these solutions within existing technology state.</td>
</tr>
<tr>
<td>Center of Excellence (CoE)</td>
<td>Think upfront about the right operating model required to maintain your robotics estate. There are several options (CoE, managed service, etc) that can be considered to provide you with the right flexibility, responsiveness and scalability.</td>
</tr>
<tr>
<td>Talent Management &amp; Workforce Training</td>
<td>The introduction of robotics will require new skills and capabilities to be incorporated into your Operations function. Dependent on the scale of automation you may require new roles such as solution architects, data scientists and technology vendor managers.</td>
</tr>
</tbody>
</table>