Automating Financial Processes through Robotics Process Automation (RPA)
Karen Chirico, Sr. Director IT Honeywell
Session ID #82359
About the Speakers

Karen Chirico

- Sr. Director IT, Honeywell
- Been with Honeywell for 15 years [short background. Leads IT team supporting all finance applications globally.
- Recently climbed the Harbor Bridge in Sydney, Australia
Key Outcomes/ Objectives

• What Is RPA?
• Pilot Approach
• Components RPA Pilot
• RPA COE and Governance
• RPA Outcomes
• RPA Myths and Facts
• Key Points to Take Home
• Questions
What is Robotics Process Automation (RPA)?

"RPA is a concept that runs unattended by people working like a virtual employee which sits on top of legacy applications performing laborious and repetitive tasks reliably at the UI level."

1. Automated solution can work 24/7
2. Double-digit reduction in error rates
3. Robots work with existing IT landscape
4. Robots can be trained by business users
5. Increase in Productivity
6. Opportunities for skill expansion

"Workforce increases focus on results, analytics and relationships"
1. Core platform automation
   • IT owned and operated systems

2. Business process Automation
   • “End-to-End” management for processes to increase efficiency and reduce cost

3. Robotics Process Automation (RPA)
   • Business user friendly, “IT lightweight” with a focus on the domain or process knowledge. The threshold for process automation is substantially lowered (e.g., process taking 30 minutes can be considered for automation using RPA)
   • Previously uneconomic processes can now be considered for RPA
Robotics Process Automation - Pilot Approach

<table>
<thead>
<tr>
<th>RPA PILOT APPROACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>❑ Identify Uses Cases</td>
</tr>
<tr>
<td>❑ Design and Configure automation through RPA.</td>
</tr>
<tr>
<td>❑ Test and Implement Pilot processes.</td>
</tr>
<tr>
<td>❑ Evaluate outcomes.</td>
</tr>
<tr>
<td>❑ Design the RPA COE Service Model</td>
</tr>
<tr>
<td>❑ Governance Model.</td>
</tr>
<tr>
<td>❑ Organizational Operating Model.</td>
</tr>
<tr>
<td>❑ Identification and prioritization.</td>
</tr>
<tr>
<td>❑ Playbook methodology.</td>
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<tr>
<td>❑ Communication Strategy.</td>
</tr>
<tr>
<td>❑ Roadmap for RPA</td>
</tr>
<tr>
<td>❑ Determine Wave 2 opportunities</td>
</tr>
<tr>
<td>❑ Develop roadmap and pipeline</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PILOT USE CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SPRINT 1</strong></td>
</tr>
<tr>
<td>1) FP&amp;A Report Generation</td>
</tr>
<tr>
<td>2) Freight Invoice Verification</td>
</tr>
<tr>
<td>3) Gold Paks Process Automation</td>
</tr>
<tr>
<td>4) HR &amp; Payroll</td>
</tr>
<tr>
<td><strong>SPRINT 2</strong></td>
</tr>
<tr>
<td>5) Intercompany Goods in Transit</td>
</tr>
<tr>
<td>6) Cash Application</td>
</tr>
<tr>
<td>7) Vendor Master Maintenance</td>
</tr>
<tr>
<td>8) Bravo Awards</td>
</tr>
</tbody>
</table>
## Pilot Process – FP&A HOS Gold Pack

**Overview of the HBS Gold Pack Process**

<table>
<thead>
<tr>
<th>1.1 Data Extraction</th>
<th>1.2 Data Consolidation</th>
<th>1.3 Data Blending (Alteryx)</th>
<th>1.4 Upload to Tableau + One View</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Connect to the HFM &amp; CPSREPT database to extract the data.</td>
<td>• Run the consolidation Macro to consolidate the HFM &amp; CPSREPT data.</td>
<td>• Run 7 Alteryx workflows.</td>
<td>• Open Tableau application to upload the file.</td>
</tr>
<tr>
<td>• Extract P&amp;L data from HFM &amp; CPSREPT.</td>
<td>• Update around 70+ formulas in the consolidated file.</td>
<td>• Alteryx Workflows Details</td>
<td>• Upload the file in the Tableau.</td>
</tr>
<tr>
<td>• Extract Function data from HFM &amp; CPSREPT.</td>
<td>• Modify the HR data which comes through an email.</td>
<td>• Input Creation - 5 STEPS</td>
<td>• Copy the URL and past in the One View.</td>
</tr>
<tr>
<td>• Extract data for 200 odd templates.</td>
<td>• Append the HR data into the consolidate the file.</td>
<td>• AMER - 72 STEPS</td>
<td></td>
</tr>
<tr>
<td>• Extract the data region wise for all the template (10 hours to extract the data)</td>
<td>• Note : File size 500+ MB which contain 3 lakhs+ rows &amp; 450+ columns.</td>
<td>• WW New - 47 STEPS</td>
<td></td>
</tr>
<tr>
<td>• Check if any changes in region/district hierarchy in 200 files and accordingly add/delete rows.</td>
<td></td>
<td>• APAC - 46 STEPS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• HGR - 47 STEPS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Europe - 35 STEPS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Final Consolidation - 21 STEPS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Alteryx will remove all the blank rows, edit the dates, modify region etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Export into XLSX, CSV and Tableau formats</td>
<td></td>
</tr>
</tbody>
</table>

**Proposed Automation**

- Automate Data Extraction and replace MACRO
- Automate Data Consolidation of the 3 files (HFM, CPSREPT and 3rd file)
- Automate the Alteryx workflow AS-IS (Not replacing Alteryx or Alteryx functionality with RPA/EXCEL)
- See Next Slide for details
- Automate final upload to Tableau and One View

**Proposed Timeline**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build</td>
<td>3.5</td>
</tr>
<tr>
<td>Test</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>4.5</td>
</tr>
</tbody>
</table>

*Honeywell Internal*
## Freight Verification Process

### Action/Process Steps

<table>
<thead>
<tr>
<th>Action/Process Steps</th>
<th>Time Taken (Min.)</th>
<th>ASIS</th>
<th>TOBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Login to FVR Tool</td>
<td>5.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Import invoice</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upload invoice</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invoice Verification</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process Invoice</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generate/Export Report</td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manually format report</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Go to Dashboard</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approval</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Batch Creation</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ASIS - Total Time Taken

24.5 minutes

### TOBE Time Taken by "Human"

11 minutes

### TOBE Time Taken by "BOT"

3 minutes

### TOBE - Total Time Taken

14 minutes

### Time Saved by "BOT"

10.5 minutes

### POC - Productivity %

43%

50,000 invoices/month * 10.5 minutes saved = 8,750 hours saved/month
3 elements of Designing the RPA CoE

Designing the RPA CoE Service Model to institutionalize automation capability and sustain value

- **Design Operating Model**
  - Design the initial target operating model
  - Define the operating model across constructs including Organisation Design, People, Process, Policies, Resources
  - Design the CoE organisation and interactions

- **Stand-up the CoE**
  - Identify the team
  - Conduct boot-camp
  - Shadow Consultants on Pilot initially
  - Training and Certification

- **Develop Methodology**
  - Develop toolkit and methodology for CoE execution
  - Identify elements for the framework

“Federated COE Model Between Functions & IT”
RPA CoE Structure

Support Focals*
- GPOs
- PMO
- Procurement
- Information Security
- Audit and Compliance
- BCP/DR Focal
- AA Product Manager
- Recruitment Focal

Current CoE member functions:
- Finance
- HR
- IT

Functions looking at induction:
- Tax
- Legal
- Others

RPA CoE Structure Diagram:
- Finance Functional Teams
- HR Functional Teams
- IT Functional Teams
- Finance RPA CoE team
- HR RPA CoE team
- IT RPA CoE team

HON RPA Champions
- Finance Champion(s)
- HR Champion(s)
- IT Champion(s)

HON RPA Council
Finance, HR, IT and Other Functions’ Sponsors

IT Enablement
- IT AA platform owner [app + infra] and AA Tech focal*
- Enterprise QA leader and focal*
- IT Functional RPA BP*

*Part time roles shared across various RPA CoEs

RPA Council supports new function induction into RPA the CoE model through induction process focused on:
- Functional fitment assessment
- Process assessment
- Business case development
How to Identify the Process?

“Identify the process with high benefits & Build Future Heatmap”
RPA MOS

RPA Council – Monthly

- Leadership (Support expansion, alignment)
- Standardized Methodologies (Resources, playbook)
- Governance – (Providers, technology)
- Best Practice

Functional Champions - Twice-Monthly

- RPA Deployment
- Bot / License Coordination
- Driving Standards
- IT Collaboration

RPA COEs

- Identify Opportunities
- Configuring BOTs
- Bot Process Ownership
# Robotics Process Automation

## WHAT IS RPA

Technology that automates routine, manual tasks

- Manual, standard, repetitive tasks
- Alternative of major systems enhancement
- Fast to implement
- Works 24 x 7
- Faster and more accurate than people

### “fills the gaps” between existing systems

<table>
<thead>
<tr>
<th>HRA</th>
<th>Payrolls</th>
</tr>
</thead>
<tbody>
<tr>
<td>PeS</td>
<td></td>
</tr>
<tr>
<td>Cornerstone</td>
<td>Salesforce.com</td>
</tr>
</tbody>
</table>

## BUSINESS VALUE – HR AND FINANCE

High ROI

- ~6 to 8 Month Payback
- ~$7.6M Savings (2018-2019)

- Productivity
- Working Capital
- Compliance
- Operational Risk
- Speed
- Customer Experience
Robotics Process Automation - Finance

<table>
<thead>
<tr>
<th>2018 - 2019</th>
<th>AP Live Dashboard</th>
<th>Month End Journal Entry</th>
<th>Order Date Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bots</td>
<td>Self Service Module</td>
<td>Policy Adherence</td>
<td>Increased Coverage</td>
</tr>
<tr>
<td>~85</td>
<td>Single Source of Information</td>
<td>Faster Financial Postings</td>
<td>↑ 60% Accelerated Revenue</td>
</tr>
<tr>
<td>Processes</td>
<td>Accelerated Vendor Resolution</td>
<td>Less Errors</td>
<td>Business Insights</td>
</tr>
<tr>
<td>~350</td>
<td>Order Date Alignment</td>
<td>Business Insights</td>
<td></td>
</tr>
</tbody>
</table>

Payback  BOT Efficiency

~6 months  ~55%

Implement  Code Re-Use

~2-4 weeks  30%

Working Capital  Productivity  Compliance

- Data Download
- Data Enhancement
- Data Visualization
- Notifications
- Action / Decision

- JE Preparation
- JE Verification
- JE Load / Post
- Notification
- Review & Close

- Enters Order
- Check Order Availability
- No > Align Next Available Date
- Realign Order & Notify
- Order Notification

Honeywell Internal

~85  ~350

~6 months  ~55%

~2-4 weeks  30%

~85 processes

~350 processes

~6 months  ~55%

~2-4 weeks  30%

~85 bots

~350 processes

~6 months  ~55%

~2-4 weeks  30%

~85 bots

~350 processes

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~350 processes

~6 months  ~55%

~2-4 weeks  30%

~85 bots

~350 processes

~6 months  ~55%

~2-4 weeks  30%

~85 bots

~350 processes

~6 months  ~55%

~2-4 weeks  30%
Robotics Process Automation - HR

Assigns New Hire Training & Sets up System Access
Leans out 3 days queue-time to 20 min

- Watches for new hire
- Sends manager access request
- Mgr approves & EE takes training
- Sets up security
- Notifies new hire

Creates New Hire Record
100% manual to 60% no-touch

- Receives case in SFDC
- Logs in PeopleSoft
- Validates record
- Updates record
- Closes case

Identifies errors in requisitions
33% reduction in errors, eliminated re-work

- Analyzes requisitions
- Identifies compliance or workflow issues
- Emails recruiters
- Escalates & monitors
- Closes case after issue is corrected

Bots | Processes
--- | ---
~36 | ~100

Payback | BOT Efficiency
--- | ---
~7 months | ~64%

Implement | Code Re-Use
--- | ---
~4-6 weeks | 40%

Complexity – High

2018 - 2019

Honeywell Internal
Time and attendance

Check for Kronos Active Status – CORP, PMT New Hires, Transfers
Manual audit to Automated Audit

- PeS data received via email
- Compare to previous day file to identify New Hires, Transfers
- Check Active Status in Kronos
- Create Status Log of Active / Inactive New Hires / Transfers
- Create SFDC Case with Daily Status for team to action

Kronos Reporting (Missing Punches, Un-excused Absence, Over 40/80 hours, Zero Hours, Mngr Appr)
~3-6 notifications to 1 notification per supervisor

- Extract 6 CORP, 5 PMT Kronos reports
- Analyze reports to identify defaulter list
- Notify defaulter / supervisor (Eg: Missing Punch / Un-excused Absence)
- Archive reports in SharePoint for later reference

Efficiency  Quality
### Automation (RPA/ChatBOTs/Infrastructure) – IT

#### Benefits

- Enterprise Automation capability that supports automation efforts for the enterprise
- Enterprise Automation governance, architecture & solutioning
- Single, enterprise-wide support team
- Platform is being proved out through IT use cases
- End to End efficiency improvement (~20%) for functions leveraging Automation
- Zero Touch error resolution (~15%)
- ~500 production tickets reduced; ~75% greater productivity in INF patching and hardening
- Improve self-service and reduce wait time to resolve queries related to key operational systems

#### 2018 - 2019

<table>
<thead>
<tr>
<th>Bots</th>
<th>Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>~86</td>
<td>~110</td>
</tr>
<tr>
<td>28 - Live</td>
<td>50 - Live</td>
</tr>
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</table>

#### Table

<table>
<thead>
<tr>
<th>SAP Virtual Assistant (Companion Chat-BOT) ERP Companion Self-Service; Reduce Helpdesk tickets xSBG</th>
<th>Informatica - Data Scorecarding BOT/RPA</th>
<th>IValua Invoice Resolution – SAP/Dolphin RPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify User / Intent And Context</td>
<td>Execute Informatica Workflows per Legacy Application</td>
<td>Identify / Connect to SBG SAP Instance</td>
</tr>
<tr>
<td>Covers queries for all FAQ’s Across functions and SBG’S</td>
<td>Download multiple Workflow results</td>
<td>Perform Invoice Resolution</td>
</tr>
<tr>
<td>Lookup Answer / Open SNOW Request</td>
<td>Generate Data Scorecards</td>
<td>Update Dolphin Status</td>
</tr>
<tr>
<td>Provide Answer / Direct to KBA</td>
<td>Distribute Scorecard To deployment team</td>
<td>Update SAP Invoice</td>
</tr>
</tbody>
</table>

#### Diagram

- **Ask Question**
  - **Identify User / Intent And Context**
    - Covers queries for all FAQ’s Across functions and SBG’S
  - **Lookup Answer / Open SNOW Request**
  - **Provide Answer / Direct to KBA**

- **Data Scorecard Request**
  - **Execute Informatica Workflows per Legacy Application**
    - **Download multiple Workflow results**
  - **Generate Data Scorecards**
  - **Distribute Scorecard To deployment team**

- **Invoice Resolution Request**
  - **Identify / Connect to SBG SAP Instance**
    - **Perform Invoice Resolution**
  - **Update Dolphin Status**
  - **Update SAP Invoice**

#### Compliance
- Efficiency
- Speed
- Quality

#### 2018 - 2019

- **Bots:** ~86
- **Processes:** ~110
- **28 - Live**
- **50 - Live**

#### 2018 - 2019

- **Bots:** ~86
- **Processes:** ~110
- **28 - Live**
- **50 - Live**

#### 2018 - 2019

- **Bots:** ~86
- **Processes:** ~110
- **28 - Live**
- **50 - Live**
# Emerging Technology – HR and Finance

<table>
<thead>
<tr>
<th>Thinking</th>
<th>Buzz Words</th>
<th>What are we Doing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding - Reasoning</td>
<td>Cognitive</td>
<td>Block Chain – Intercompany POC</td>
</tr>
<tr>
<td>Unsupervised - Self Teaching</td>
<td>Neural Network</td>
<td>Auto assign SFDC cases (Pilot)</td>
</tr>
<tr>
<td></td>
<td>Deep Learning</td>
<td>Machine Learning Search, Results</td>
</tr>
</tbody>
</table>

| Learning | | |
|----------| | |
| Understanding Sentiment & Emotion | Machine Learning | Prescriptive Retention Mitigations |
| Establish Patterns in Data | Big Data | |
| Recognize Images | Prescriptive Analytics | |
| | Machine Vision | |

| Conversing | | |
|------------| | |
| Mix Reality with Virtual World | Augmented Reality | T&E Chat Bot - Pilot |
| Speech to Text - Text to Speech | Natural Language Processing | Vendor Query Chatbot Alexa (POC) |
| Contextual - Natural - Translations | Conversational technology | Payroll Chatbot (Pilot) |
| | | Scorecard Auto Commentary |

| Automation | | |
|------------| | |
| Robotic Process Automation (RPA) | Robotics Processing | RPA - Procurement/Customer Service |
| | Visualization | Visual Scorecards – HR, Fin |
| | Personalization | Predictive Analytics - HR, Fin |

| Standard Data, Processes And Systems | | |
|-------------------------------------| | |
| HR, Fin | Personalized Self Service- HR, Fin |

Source: Gartner Top Trends, Cap-Gemeni Consulting, E&Y Innovation Lab, Delloite, Wired Guide to AI
RPA – MYTHS VS FACTS

01 - 40% Productivity Gain
- 20% Productivity is reasonable, Humans are required to work on Exceptions
- Faster Deployment can be achieved post RPA Stabilization

02 - Quick Deployment
- Change Management & Governance Critical Success Factor
- A Certain level of Coding Experience is Required to Work on RPA

03 - Function Led, IT Enabled
- Equal Stake by Function and By IT
- End to End Ownership & Transactional - Yes
- Multiple Handoffs - Will need Process Re-arrangement - Depends

04 - BOT Operations Business As Usual
- Change in Controls due to Robotics, SOD Issues
- BOT ID Ownerships
- End to End Ownership & Transactional - Yes
- Multiple Handoffs - Will need Process Re-arrangement - Depends

05 - Audit & Controls No Impact
- Change in Controls due to Robotics, SOD Issues
- BOT ID Ownerships
- End to End Ownership & Transactional - Yes
- Multiple Handoffs - Will need Process Re-arrangement - Depends

06 - No need of IT Knowledge for Development of BOTS
- Change in Controls due to Robotics, SOD Issues
- BOT ID Ownerships
- End to End Ownership & Transactional - Yes
- Multiple Handoffs - Will need Process Re-arrangement - Depends

07 - All Process Can be Automated
- Change in Controls due to Robotics, SOD Issues
- BOT ID Ownerships
- End to End Ownership & Transactional - Yes
- Multiple Handoffs - Will need Process Re-arrangement - Depends

08 - 3 Months ROI
- Average ROI is anywhere between 5 to 7 Months Timeframe
- Each Org & Implementation is Unique to the Company’s Policies and Infra

09 - Enough Case Studies to Learn from
- BOTs Takes the Same Time or More

10 - BOTs are Faster
- Each Org & Implementation is Unique to the Company’s Policies and Infra
- BOTs Takes the Same Time or More
Critical Success Factors

• Self Organized Teams
  – Helps in driving speed and scalability

• Driven by the business
  – Deep Domain Knowledge helps in efficient deployment

• Self funded
  – No Need for a Centralized Funding and driven by Business Case

• Standard Technology
  – RPA Council Driving Standards across deployment

• Leverage scale with Vendors
  – Centralized License Management
Key Take Homes

• RPA is a 24x7 Process
  – Increases productivity of work force.
  – Reduces manual tasks from employees.

• Significant reduction in error rates
  – Consistent reliable processes.

• Works with existing IT landscape
  Can be integrated into existing applications and processes.

• BOTS can be developed by business users
  – Puts automation capability in the hands of employees with deep business domain knowledge.

• BOTS must follow the same security and controls as human users
  – Ensures compliance and controls.

• Strong Governance process is required.
Take the Session Survey.

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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

http://info.asug.com/2019-ac-slides
Q&A

For questions after this session, contact us at karen.chirico@Honeywell.com
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