RPA Best Practices in Financial Services
Discussion Topics

1. Technology Drivers Today
2. Business Imperatives
3. Key Differences Among Vendors
4. Best Practices around implementation
5. Sample Processes
6. RPA
7. RPA CoE
8. Case Studies
9. Closing Thoughts
Global IT Consulting & Outsourcing Provider

**Virtusa Snapshot**

- US Based (Nasdaq: VRTU)
- + $500M Revenue, 7 year CAGR of 23%
- +10,000 Employees Worldwide
- Global Industries: BFS, Insurance, Healthcare, Media, Telco
- 120+ Clients
- Announced $350M Acquisition of Polaris Consulting Group
Key Trends Impacting Financial Services Firms

Transforming Technology Trends

- Robotic Process Automation (RPA)
- Internet of Things (IoT)
- Big Data
- Gamification
- AI and Digital Assistants
- Omni Channel
- Block Chain
These Trends are driving four key business imperatives

- **Improve customer experience**: cross channel and always available
- **Optimize business processes and cost**: improve productivity & enhanced employee performance
- **Create new revenue streams**: next-gen services, leveraging intelligence of connected ecosystem
- **Better Address Regulatory**: prevent business issues through real-time insights
“110-140 million FTE’s could be replaced by automation tools and software by 2020” - Mckinsey

Robotic Process Automation
How is RPA defined?

• RPA refers to automation which interacts with a computer-centric process through the UI of the software which supports that process and RPA is a subset of Business Process Service Delivery Automation (BPSDA)

• Many technologies including artificial intelligence (AI), expert systems and other processes of automation have served predecessors to RPA but RPA takes AI and expert systems to an elevated level

• RPA is the use of computer to create a “virtualized FTE or robot” to manipulate existing application software in the same way that a person today processes a transaction or completes a process
Leading IT robotic automation RPA vendors
RPA versus Traditional Re-engineering and BPM projects

<table>
<thead>
<tr>
<th>Aspect</th>
<th>RPA</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Approach</td>
<td>Focuses on replacement of FTEs with a “virtualworker”; cost reduction, quality improvement and more productivity</td>
<td>Re-engineering of the underlying process to drive efficiency and create a more consistent customer experience.</td>
</tr>
<tr>
<td>Technology approach</td>
<td>To automate processes without changing, replacing, compromising or adding maintenance overhead onto existing applications</td>
<td>Build new application to replace existing; begin with requirements definition leading to design/development/testing</td>
</tr>
<tr>
<td>Process Approach</td>
<td>Leave processes as it</td>
<td>Transform and re-engineer processes</td>
</tr>
<tr>
<td>Flexibility</td>
<td>With machine learning can adjust</td>
<td>If not defined, then will not be able to support</td>
</tr>
<tr>
<td>Time to market</td>
<td>Development and Testing requirements are on very low end</td>
<td>Typically large scale efforts and become capital expense efforts</td>
</tr>
</tbody>
</table>
RPA – how do we get started

Unemployed Robot
Need Job
Experience with Good References
<table>
<thead>
<tr>
<th>Assessing Robotic Process Automation</th>
<th>Establish CoE</th>
<th>Establish Scale</th>
<th>Embed RPA into Normal Day to Day</th>
</tr>
</thead>
</table>
| • Gain Understanding of RPA technology, benefits, shortcomings  
• Evaluate Product Vendors  
• Gain high level business support  
• Identify opportunities and conduct several POC | • Setup a CoE function for at least one LOB  
• Provide consulting services to help LOB understand RPA, benefits case and support deployments  
• Establish dev environments and processes | • Expand CoE to support company wide  
• Develop Training programs to help business deploy rapidly  
• Create integration frameworks and management dashboards  
• Standardize security and release governance models | • RPA becomes part of the operational and technology fabric in the company  
• RPA becomes core to any new product development or project  
• Virtual workforce becomes part any of annual planning activity |
GETTING STARTED – HOW TO IDENTIFY OPPORTUNITIES

Suitability Analysis
• Functions / processes viable for RPA
• Potential savings on migration

Benefits Analysis
• Quantitative – ROI, ongoing, initial costs
• Qualitative Reduced error, faster processing, etc.

Roadmap & Prioritization
• Business priority
• Quick-wins
• POC
• Robotics COE
• Training
• Technology Plan

Cross-business assessment framework to evaluate RPA applicability
Analysis – Suitability & Potential Saving

- HC = Headcount

### Suitability

- **Most suitable:** Low complexity / volatility and big headcount
- **Suitable:** low headcount / low complexity
- **Potentially suitable:** High complexity with a high headcount
- **Not suitable:** High complexity and low headcount

### Saving Potential

- **HC Saving:** Complexity factor * HC
- **Support team:** Volatility factor * HC
- **Total HC Saving:** HC saving – support team

**Additional factors**

- Robots work 24 hours/day without breaks
- Robots work faster than humans (2-3 times)
## ROI (Return on Investment)

### COSTS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>FEES ($ USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robot Licenses</td>
<td>$xxxxx FIXED FEE</td>
</tr>
<tr>
<td></td>
<td>Annual licenses for robots. Robot can work on any process.</td>
</tr>
<tr>
<td>Robot Training</td>
<td>$xx T&amp;M ESTIMATE</td>
</tr>
<tr>
<td></td>
<td>Training the robot on the operational tasks</td>
</tr>
<tr>
<td>Ongoing Training /Support</td>
<td>$xx T&amp;M ESTIMATE</td>
</tr>
<tr>
<td></td>
<td>Training robot for process changes and support</td>
</tr>
</tbody>
</table>

### SAVINGS (Direct/Indirect)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>FEES ($ USD)</th>
</tr>
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<tr>
<td>Operations staff</td>
<td>$xxxxx</td>
</tr>
<tr>
<td></td>
<td>Staff members replaced by the robot or tasks taken up; eliminate attrition and training costs</td>
</tr>
<tr>
<td>Errors</td>
<td>$xx ESTIMATE</td>
</tr>
<tr>
<td></td>
<td>Reduced errors and cost or rework</td>
</tr>
<tr>
<td>Time to Market</td>
<td>($xxx) ESTIMATE</td>
</tr>
<tr>
<td></td>
<td>Speed of robot reducing in faster time to market and earlier revenue recognition</td>
</tr>
</tbody>
</table>

**Annual ROI** = \[
\frac{[\text{Gain from investment} - \text{cost from investment}]}{\text{Cost from investment}}\]
RPA Center of Excellence

- Experienced Team
- Ability to Scale (Partners)
- Management
- Training Academy
- Advocates

People

- Process Definition
- Architecture Guidelines
- Templates & Checklists
- Best Practices

Process

- Process Alignment
- Collaboration
- Metrics & Measurement
- Track Benefits

Governance

- Tools Expertise
- Dev Environment
- Integration Platform

Tools/Technology

Define, Evaluate, Innovate, Monitor and Improve Automation Functions
Key CoE Tasks

**Define:**
- Governance Framework for evaluating proposed processes
- Process Definition and Alignment
- Management Metrics and Dashboard
- Communications Plan

**Evaluate, Review and Approve:**
- Research (PoCs) & Recommend Tools and Automation Solutions
- Identify Implementation Partners
- Enterprise level Automation Solution Architecture and Integration Approach
- Security Model
- Automation Orchestration and Management Platform & Svc Portfolio

**Implement /Innovate**
- Maintaining Automation Framework.
- Build Reference Robots and other shell
- Identify Reuse Opportunities
- Internal Utilities to improve Automation Delivery, Deployment, Testing, Maintenance

**Support, Consult, Educate:**
- Provide Expertise, Documentation and ongoing training
- Evaluate and Recommend latest Automation trends and Technology
- Support Change Management
- Focus on Skills and Competencies
Sample Automation Architecture

Existing Ops Team

Virtual Robot Workforce

RPA Server

RPA Database

Desktop

App 1

App 2

App 3

App 4

App 5

Core Enterprise Banking Applications
Global Bank Corporate Account Opening – Africa

Customer Requests Account → Documents Verified → Base Account Opened in Account System → Additional Account Information

Account Completed → Manual Verification of Process → Additional Information Added → Currency A/C Opened in Payment System

Notification Sent to Customer
# Large Global Bank POC Approach – Finance & Operations

## Balance Sheet Report Preparation

### Customer Balance Sheet Report
- Balances grouped on the basis of products offered to various customer segments and performance of various segments

### Financial Balance Sheet Report
- This is a Statement of Financial Position for a reporting date

## Sales Scorecard preparation

**Scorecard to evaluate the frontline performance with various KPI’s for arriving at incentives**
- Sales Acquisition Scorecard
- Individual sales frontline summary
- Team Leader roll up

**Sales Relationship Manager Scorecard:**
- Individual Relationship Manager Revenue and KPI Summary

## Global Finance Report preparation

**Monthly financial performance overview:**
- Group P&L Summary
- Balance sheet Summary including RWA
- Performance by Client, Product and by Geography
- Metrics including – Returns, Cohort analysis etc.
Client Onboarding with RPA – eliminates steps

Client Lifecycle Management – Automation and robotics

- Client
  - Start
  - Additional Services
  - Provide additional details
  - Off-Boarding

- RM/Front office
  - Request of new client/
  - Additional details requested
  - Approve ?

- Robotics/Autoamation
  - Client data check, Data entry
  - Risk Scoring
  - Additional Details ?
  - KYC, PEP, MIFID & FATCA summary view
  - Credit pre check, legal pre - checks
  - Account – Setup/ modifications

- Client Services
  - Review data entry
  - Review additional client details

- Due diligence
  - Compliance credit, Legal Reviews
  - Approve

Additional Details ?

Approve ?
Preparing for the Robot Revolution

*Opportunity is big – everyone will want one*

- Trade Finance Operations
- Account Opening
- Client Reporting
- Settlement Instructions
- Account Ownership Change
- Balance Sheet Reporting
- Loan Processing
- Account Closure
Preparing for the Robot Revolution

Or Maybe This one

Trade Finance Operations
Loan Processing
Account Closure
Balance Sheet Reporting
Account Opening
Client Reporting
Settlement Instructions
Account Ownership Change
Phase 1 – Execution Approach (Indicative)

Inputs from Stake Holders
- Identify Requirements for Automation Orchestration and Management Platform
- Identify the key layers/components of the Automation Platform
- Prioritize required Components
- Evaluate Third party Mgmt Solutions

Create & Design RPA Process List
- Design catalogue of automation API’s to interact with the components / layers.
- Design Components and size effort

Develop Robot Processes
- Build reference implementation for API with sample Robot code.
- Implement High Priority Components of the Automation Orchestration and Management Platform
- Integrate reference Automation Robots with Platform
- Implement Robots in Framework

Sprints (2 weeks per Sprint) Design & Develop

Deploy

1. Pick top 3-5 automation initiatives and evaluate.
2. Improve and deploy
3. Measure
4. Create jump start kit for new dev

Monitor
- Identify process changes
- Re-train Robot on changes
  - Use Predictive Analytics
  - Use Adaptive Analytics

Move to further Phases

Product Backlog with RPA Processes
Thank You
Thank You

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SVP Virtusa
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@Bobgraham87
### Phase 1 – Execution Approach *(Indicative)*

*Plan for future to avoid re-engineering later*

<table>
<thead>
<tr>
<th>Objective</th>
<th>RPA Approach</th>
<th>Mgmt. &amp; Analytics</th>
<th>Process Maturity</th>
<th>Tech Roadmap</th>
<th>Standardization &amp; reuse</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Level: Isolated robots typically</td>
<td>Replace FTE Individual Robots</td>
<td>Adhoc Monitoring</td>
<td>Automate Process as-is typically Assisted</td>
<td>Desktop/Citrix based use cases</td>
<td>Adhoc</td>
<td>Static Robots with Manual Changes</td>
</tr>
<tr>
<td>Organization level: Tethered Robots, centrally controlled</td>
<td>Augment Specialists Orchestrate d Robots</td>
<td>Systemic Data Collection</td>
<td>Parameterize Existing Processes</td>
<td>End to End Workflow based automation</td>
<td>Basic Program Reuse and sharing</td>
<td>Flexible &amp; Configurable Robots</td>
</tr>
<tr>
<td>Enterprise / Advance level: Intelligent Robots</td>
<td>Adaptive Learning</td>
<td>Robot Farms. Expand on demand</td>
<td>Real time monitoring with Dashboard</td>
<td>Configurable &amp; Reusable Processes</td>
<td>Integrated workflow based across systems</td>
<td>Up to date Catalogue of Services</td>
</tr>
</tbody>
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Data from Nasscom BPM Summit 2014: Keynote