RPA Overview

A high level overview of automation and a sample of the value it can create

Erick De La Fuente

Erickdlf@gmail.com

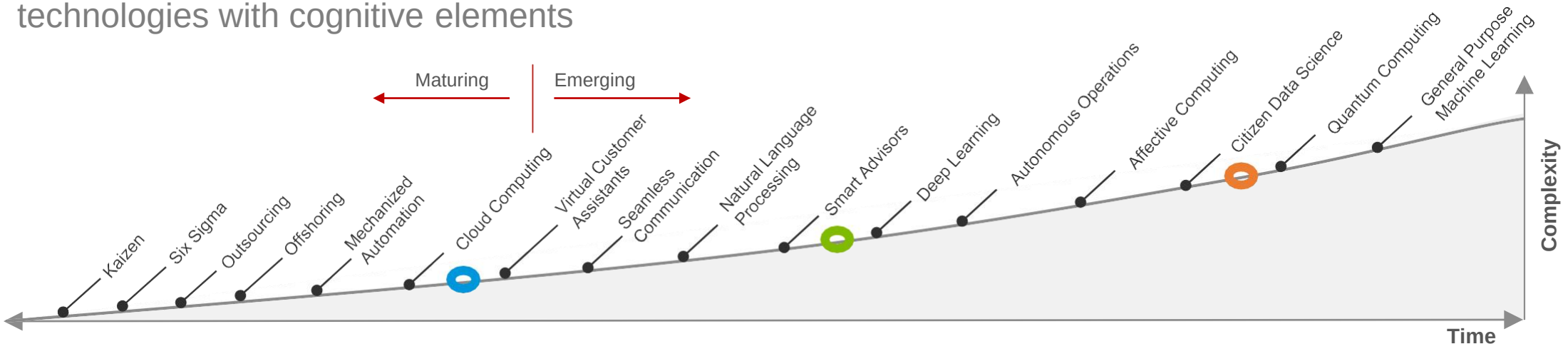
Table of Contents

SECTION	PAGE
Automation Background	3
Robotic Process Automation (RPA) Overview	4
How it works	5
Benefits	6-7
Cognitive Automation	8
Where to Apply	9-12
Sample Business Case	13
Summary	14

This presentation is based on many sources including presentations and whitepapers. It is not intended for distribution

Background

The Automation continuum ranges from strategies that improve parts of processes to sophisticated technologies with cognitive elements



Robotic Process Automation

Software used to capture and interpret existing applications for the purpose of automating transaction processing, data manipulation, and communication across multiple IT systems

- Screen scraping data collection
- Rules based business process management
- Tactical toolset to automate repetitive tasks
- Cheaper and faster step towards process efficiency

Intelligent Automation

Automate non routine tasks involving intuition, judgment, creativity, persuasion, or problem solving

- Data input and output in any format
- Pattern recognition within unstructured data
- Replication of judgment based tasks
- Basic learning capabilities for continuous improvement to quality and speed

Artificial Intelligence

"The theory and development of computer systems able to perform tasks that normally require human intelligence.

- Natural language recognition and processing
- Dealing with unstructured super data sets
- Hypothesis based predictive analysis
- Self-learning rules continuously rewritten to improve performance

This presentation is based on many sources including presentations and whitepapers. It is not intended for distribution

RPA Overview

Robotic Process Automation, or RPA, software provides advanced macro-like capabilities that can be deployed at an enterprise or business unit level

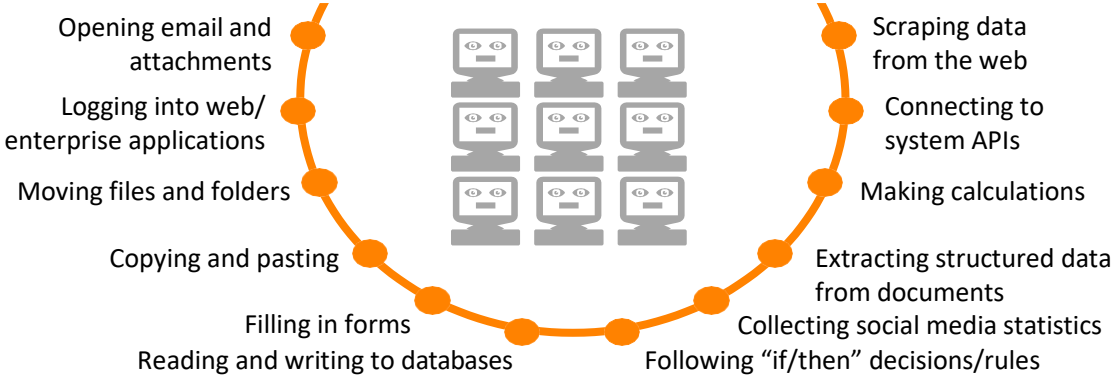
RPA is…

- Computer-coded software
- Programs that replace humans performing repetitive rules-based tasks
- Cross-functional and cross-application macros

RPA is not…

- Walking, talking auto-bots
- Physically existing machines processing paper
- Artificial intelligence or voice recognition and reply software

What it can do



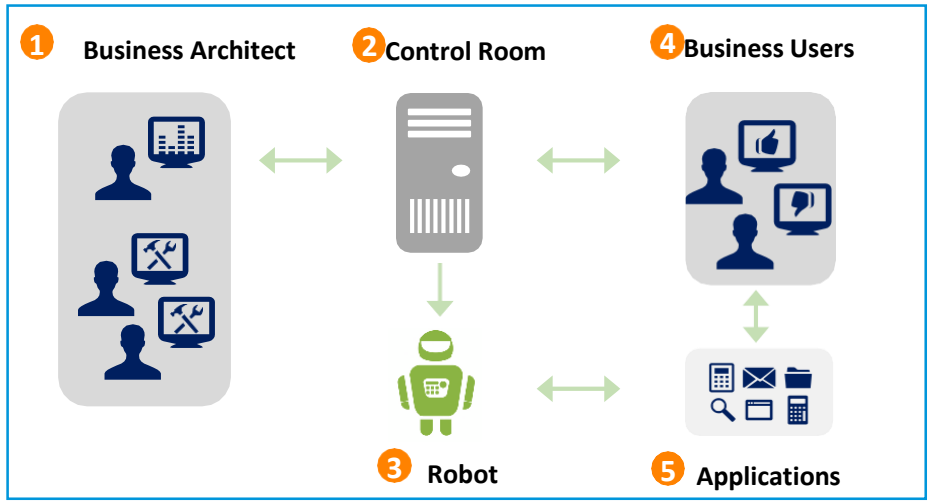
This presentation is based on many sources including presentations and whitepapers. It is not intended for distribution

How RPA Works

RPA can easily be deployed and managed from a central controller to interact with a wide range of business applications

1. **Business Architects** specify the detailed instructions for robots to perform and "publish" them to the robot controller repository
2. The **Control Room** is used to assign jobs to robots and to monitor their activities
3. Each **Robot** is located on an organization environment – which may be virtualized or physical (i.e., desktop computer) – where it interacts directly with business applications
4. **Business Users** review and resolve any exceptions or escalations
5. Robots are capable of interacting with a wide range of **Applications**

ILLUSTRATIVE



Key Functions Replaced by Bots

Routine Keystroke Operations	Application Interface	Manual Data Collection & Manipulation
• Opening emails and attachments • Moving files and folders • Following "if/then" decisions and rules • Copying and pasting data • Populating standard forms	• Logging into web/enterprise applications • Connecting to system APIs • Extracting structured data from documents • Collecting social media statistics • Reading and writing to databases	• Scraping data from the web • Merging data from multiple places • Extracting and reformatting data into reports or dashboards • Conducting data calculations

This presentation is based on many sources including presentations and whitepapers. It is not intended for distribution

Benefits of RPA

Benefits of implementing RPA in both core operations and support functions can drive revenue increase, cost reduction, or cost avoidance

Representative Benefits of Automation for Various Process Types*

High Volume Transactional Processes

- Reduces the average time and associated costs to execute transactional processes by **60% to 80% on average**
- Enables process to be executed approximately **15 times faster** than a human and can operate **24x7** leading to high-throughput

✓ **Revenue Increase**

✓ **Cost Reduction**

High Risk Processes with Multiple Hand-Offs

- Eliminates need for manual intervention and reduces the number of total employees needed to execute tasks by **20% to 60%**
- Increases compliance by reducing errors and the amount of time spent on rework and review by **70% to 99%**

✓ **Cost Avoidance**

✓ **Cost Reduction**

Data Validation Processes

- Ensured consistency and accuracy of data in reporting by eliminating manual errors by **80% to 99%**
- Provides ability to shift FTE (full time equivalent) focus from report generation to analysis by **30% to 60%**

✓ **Revenue Increase**

✓ **Cost Avoidance**

Dependent or Linked Processes

- Decreases processing time by **up to 300%** by enabling processes to be executed outside of standard business hours (i.e. overnight and weekends)
- Enables organizations to build automated system connections / interfaces without investment in IT architecture by **20% to 50%**

✓ **Revenue Increase**

✓ **Cost Avoidance**

**Range estimates are representative samples of the value creation and cost savings found other RPA projects (via whitepapers)*

This presentation is based on many sources including presentations and whitepapers. It is not intended for distribution

Additional Benefits

Executives want to automate processes to free up resources for critical initiatives, rapidly streamline processes and drive competitive advantages

Why should you adopt RPA?

Efficiency & Quality

- Robots perform tasks with a **high degree of accuracy** and operate 24x7 leading to **high-throughput**
- RPA **streamlines, standardizes and optimizes the finance processes**, improving quality and reducing costs

Scalability & Expertise

- A process can be **automated within weeks**, reducing reliance on hiring to handle workload spikes
- Process automation helps **engage talent** by freeing up capacity **to develop new competencies and build expertise**

Insource & Control

- RPA opens new doors for insourcing by enabling in-house service capabilities and an option to retain all cost savings
- Automation provides **greater control over** processes that support **service delivery model**

Governance & Compliance

- Robotic platforms are **secure, audited and managed** within an IT corridor of governance
- Process automation enables **improved quality/ consistency of data**, that can **result in better analytics, insights and increased revenue**

Competitive Advantages

- RPA has a **short payback period** since robots drive existing applications **with low integration costs**
- RPA provides **high potential ROI** which can be leveraged to drive critical initiatives

Beyond cost efficiency, RPA may bring a multitude of benefits to your organization

This presentation is based on many sources including presentations and whitepapers. It is not intended for distribution

Beyond Simple Automation

Combined with AI technologies like speech recognition and natural language processing, suddenly RPA is automating perceptual and judgment based tasks once reserved for humans

Robotic Process Automation + **Artificial Intelligence Capabilities** = **Cognitive Automation**

By using specific AI techniques that mimic that way the human brain works—to assist humans in making decisions, completing tasks, or meeting goals ***cognitive automation refers to AI techniques applied to automating specific business processes.***

Unlike other types of AI, such as machine learning, or deep learning, cognitive automation solutions imitate the way humans think. This means using technologies such as natural language processing, image processing, pattern recognition, and—most importantly—contextual analyses to make more intuitive leaps, perceptions, and judgments

This presentation is based on many sources including presentations and whitepapers. It is not intended for distribution

Where To Apply RPA

Some situations and processes are ideal for robotics and there are easily identifiable

Ideal Situations for RPA

High volume, repetitive work:
- This solution is most impactful in high volume settings, which are more repetitive
- Greatest pay-off will come when the solutions are running at high utilization

New Business Process Management Suites (BPMS) or contemporary workflow tools are not present:
- Organizations with processes that must leverage many existing IT systems (or modules) in the absence of contemporary BPMS or workflow solutions can benefit substantially

Organization's processes primarily scale up by adding more labor:
- Processes with volume increases accompanied by workforce surges
- Environments with high steady state workload with unaddressed volume

Significant budget limitations constrain major system modernizations:
- In the absence of large funding for major new IT systems, RPA provides a means to boost performance on existing IT systems and processes

Organizations make decisions with limited or incomplete data:
- RPA provides multiple paths to connect disparate systems in order to consolidate data needed to inform and drive strategic decision making

Process Characteristics

- Rules-based, repetitive and electronic interfaces
- Prone to human error
- Mid to high volume
- Seasonal or with unpredictable peaks & troughs
- Requiring out of office hours support
- Lacking the business case for wider ERP system change or technical development
- An existing process solution is not already in-progress or in preparation for launch

This presentation is based on many sources including presentations and whitepapers. It is not intended for distribution

Where To Apply RPA – Finance Example

RPA has applications across Finance process areas offering 10-30% potential FTE (full time equivalent) benefits

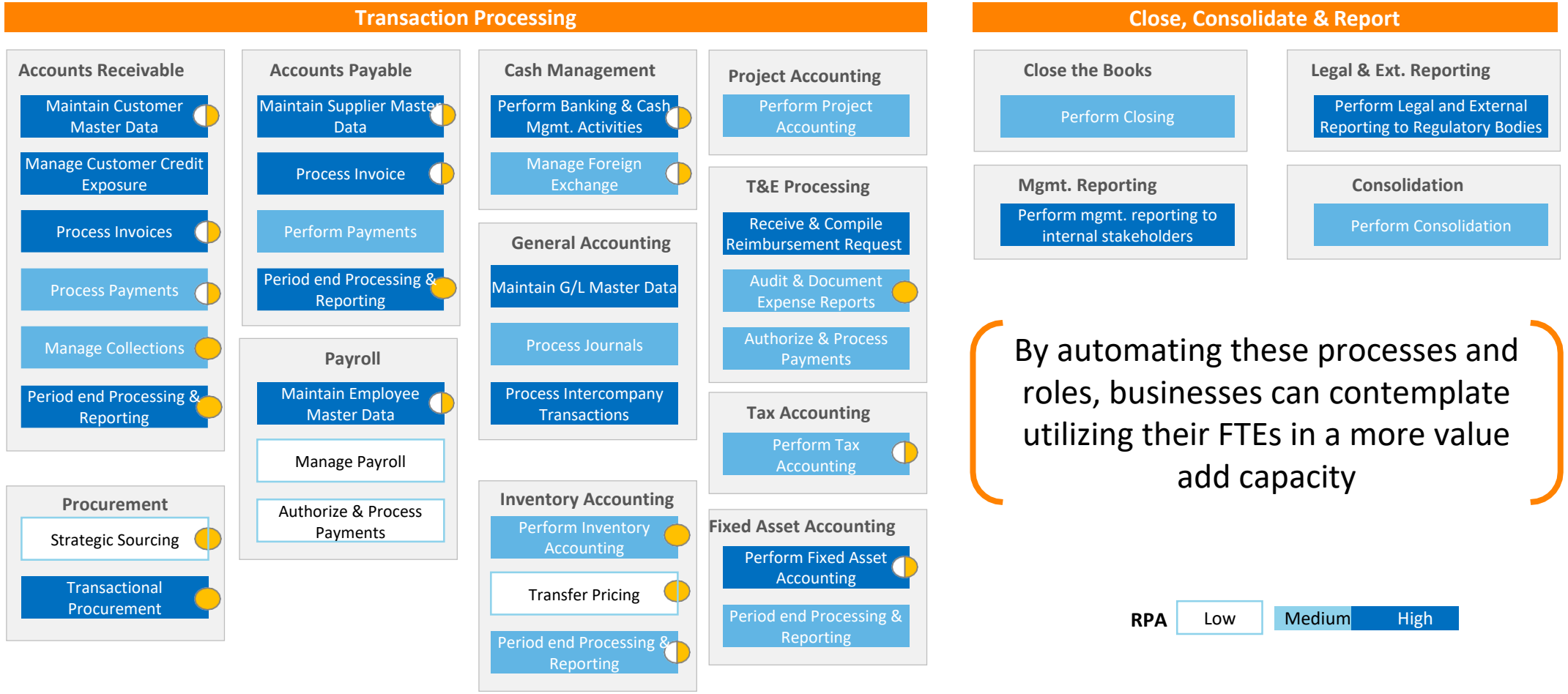
Finance Process Areas

	Balance Sheet Analysis, Reviews, & Reconciliations	Controllership Support - Planning & Forecasting	Month-end Process, Analysis & Reviews	Regulatory & Statutory Reporting	Total Potential Scope
Indicative Example Robotic Opportunities	▪ Analyse and identify accounts / provisions on B/S for further investigation ▪ Interrogate identified accounts and comment on trends / abnormalities	▪ Identify unusual performance, forecast and budget values ▪ Generate automatic reports and 'natural' language' commentary ▪ Co-ordinate budget and forecast submissions	▪ Gather and calculate sub-leger and non-financial information ▪ Track and manage entity and section submissions ▪ P&L draft creation and production with 'natural language' commentary	▪ Collate static data for submissions to regulator ▪ Coordinate financial statements and populate draft statements ▪ Perform review of regulatory or statutory data and identify anomalies and errors	
Potential FTE Benefits	**10-40%**	**10-20%**	**15-30%**	**10-30%**	**10-30% of Finance FTEs**
Applicable Robotics "Skills"	▪ Validate & Analyze ▪ Calculate, Decide, Produce	▪ Validate & Analyze ▪ Orchestrate & manage ▪ Report	▪ Gather & collate ▪ Calculate, decide & produce ▪ Orchestrate & manage	▪ Gather & collate ▪ Calculate, decide & produce ▪ Report	

This presentation is based on many sources including presentations and whitepapers. It is not intended for distribution

Finance Processes Automation Heat Map (1 of 2)

Transactional processing and reporting processes are ideal for automation since they tend to be repeatable and rules-based



By automating these processes and roles, businesses can contemplate utilizing their FTEs in a more value add capacity

RPA Low | Medium | High

Cognitive Significant | Moderate

Cognitive suitability assessment is based on 5 evaluation criteria – data intensive, complex, judgement based, data velocity and multiple data sources

This presentation is based on many sources including Ps resentations and whitepapers. It is not intended for distribution

Finance Processes Automation Heat Map (2 of 2)

Decision support activities that are standard and repetitive in nature can also be in scope for automation

Strategy & Execution

Risk Assessment
- Lead Corporate Strategy Formulation
- Develop Strategic Plans
- Gain Approval for Strategic Plans

Strategy Execution
- Review Strategic and Business Plan Targets
- Identify and Define Drivers of Value and KPIs
- Establish Key Performance Targets

Regulation, Governance & Controls

Stakeholder Mgmt.
- Manage Financial Institutions, Debt Holders & Credit Rating Agencies Relationships and Expectations
- Manage Regulatory Compliance Bodies and Audit Stakeholders Relations & Expectations
- Manage other Stakeholders Relations & Expectations

Monitoring & Assurance
- Perform Internal Audit
- Support External Audit

Sustained Compliance
- Develop and Maintain Policies and Procedures
- Report Audit Findings
- Lead the Compliance and Sign-off Process on Disclosures

Governance
- Perform Corp. Gov. Jointly with the BoD and CEO

Risk & Capital

Risk Assessment
- Define and Review Risk Environment
- Identify Risks Causal Relationship and Consequences
- Evaluate and Prioritize Risks

Working Capital Opt.
- Formulate and Review Treasury Strategy and Tactics
- Forecast Cash Requirements
- Manage Investment/Credit Exposure Levels

Internal Control & Risk Mgmt.
- Maintain and Review Risk Management Strategies and Guidelines
- Execute Risk Strategies

Long-Term Capital Opt.
- Identify and Review Optimal Capital Strategy
- Manage Dividend Policies
- Monitor Capital Structure

Risk Monitoring & Assurance
- Measure and Report Effectiveness of Risk Management Strategies
- Assess and Report to Board or Audit Committee Internal and Disclosures Controls Effectiveness

Investment Mgmt.
- Determine Capital Requirements
- Determine Capital Requirements for M&A Activities
- Secure Funding Instruments

Performance & Decisions

Budgeting
- Develop Operational Budgetary Business Plans
- Develop Capital Budgetary Business Plans
- Portfolio Review
- Gain Approval for Budgetary Business Plans

Forecasting
- Develop Rolling Forecast
- Collect and Consolidate Forecasts
- Review and Approve Forecasts

Cost Management
- Perform Overhead Allocations
- Support Product Costing

Business Fin. Analysis
- Assess and Support Performance
- Provide Support to Mgmt. for Imp. of Business Perf.

RPA Low | Medium | High

Cognitive Significant | Moderate

Cognitive suitability assessment is based on 5 evaluation criteria – data intensive, complex, judgement based, data velocity and multiple data sources

This presentation is based on many sources including presentations and whitepapers. It is not intended for distribution

A Closer Look at the Numbers

Below is a sample business case showing the 5-year return of just one automated process (note that actual figures may vary based on process(es) selected and FTE need

Cost Summary	# or Salary/ Rate/hr	Year 1	Year 2	Year 3	Year 4	Year 5	Total Cash Outlay
Personnel Costs							
Embark							
Director	*250*	25,000	-	-	-	-	25,000
Manager	*225*	36,000	-	-	-	-	36,000
Senior	*200*	64,000	-	-	-	-	64,000
Consultant	*150*	48,000	-	-	-	-	48,000
Other Staff	*50*	40,000	124,800	124,800	124,800	124,800	539,200
Client Company							
Management Role($100k/yr)	*100,000*	20,000	10,000	10,000	10,000	10,000	60,000
Total Personnel Costs		233,000	134,800	134,800	134,800	134,800	**772,200**
Capital Costs							
UiPath							
Robot – back office/unattended	*5*	40,000	40,000	40,000	40,000	40,000	200,000
Robot – front office attended	*2*	2,400	2,400	2,400	2,400	2,400	12,000
Total Capital Costs		275,400	42,400	42,400	42,400	42,400	**212,000**
Cost Summary		**508,400**	**177,200**	**177,200**	**177,200**	**177,200**	**984,200**
Benefits Summary							
FTE Employment	*3.5*	297,500	297,500	297,500	297,500	297,500	1,487,500
FTE G&A	*3.5*	74,375	74,375	74,375	74,375	74,375	371,875
FTE Support Function	*3.5*	74,375	74,375	74,375	74,375	74,375	371,875
Benefit 4		-	-	-	-	-	-
Total Benefits		446,250	446,250	446,250	446,250	446,250	**2,231,250**
Benefit Summary		**446,250**	**446,250**	**446,250**	**446,250**	**446,250**	**2,231,250**
Value Created		**(62,150)**	**269,050**	**269,050**	**269,050**	**269,050**	**1,247,050**

Note that this is a sample of a proof of concept and actual results may vary

Personnel Costs include both the cost, by position, of each consultant as well as the cost for the time of the Company personnel needed for oversight, subject matter expertise, and/or governance

Capital Costs include the cost to utilize the software of the selected vendor and any other license fees for other tools/applications adopted for automation purposes

Benefits include 3 categories: FTE Employment (salaries, benefits, taxes, etc.), FTE G&A (office space, postage, supplies, etc.), and FTE Support (HR, Compliance, etc.).
Note that only tangible benefits are included in this summary but many intangible benefits exist (pre measurement)

Over a 5 year period, this company created ~$1.2M in value by automating just one process.

This presentation is based on many sources including presentations and whitepapers. It is not intended for distribution

Pulling It All Together

By utilizing RPA within your Company costs will be reduced, data will be more complete and accurate, processes more efficient, and additional value can be generated

What is RPA again?

- **System agnostic software** that provides advanced macro-like capabilities that can be deployed at an **enterprise or business unit level**
- From opening emails and attachments to populating transactional data to performing data calculations and reports, **RPA can take over all of the minutia**
- Combined with AI technologies, RPA can **evolve past transactional activities into contextual analyses**

What can RPA do for you?

- Reduces transactional processing time by **60-80% on average**
- Increases compliance by reducing errors and the amount of time spent on rework and review by **70% to 99%**
- Ensures consistency and accuracy of data in reporting by eliminating manual errors by **80% to 99%**
- Decreases processing time by **up to 300%** by enabling processes to be executed outside of standard business hours
- Enables organizations to build automated system connections / interfaces without investment in IT architecture by **20% to 50%**

This presentation is based on many sources including presentations and whitepapers. It is not intended for distribution