

Cognizant

HPA

Robots-as-a-Service

Doug Riehl

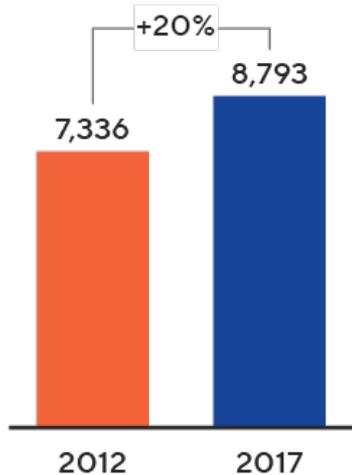
doug.riehl@cognizant.com | 201.218.8968

RPA, or Robotic Process Automation, is software that mimics the steps a human takes to complete rules-based, repetitive tasks. The robot carries out work with speed and precision, utilizing the same applications your employees use everyday.

Current state of the mortgage industry

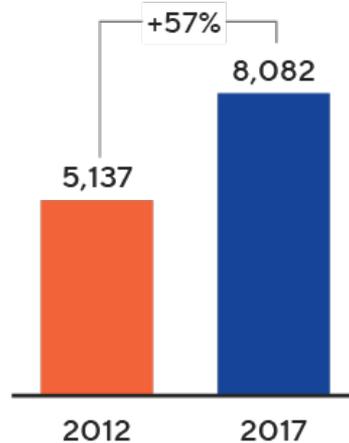
Production income has risen

Production revenue per loan (\$)



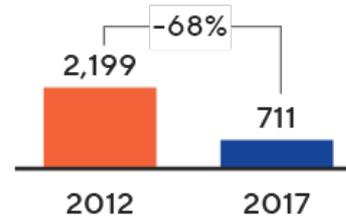
But production costs have risen faster

Production expense per loan (\$)



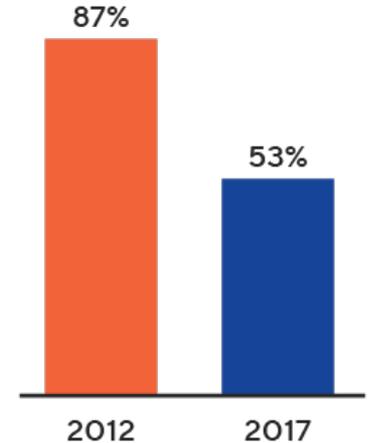
Which has driven down profitability

Net production income per loan (\$)



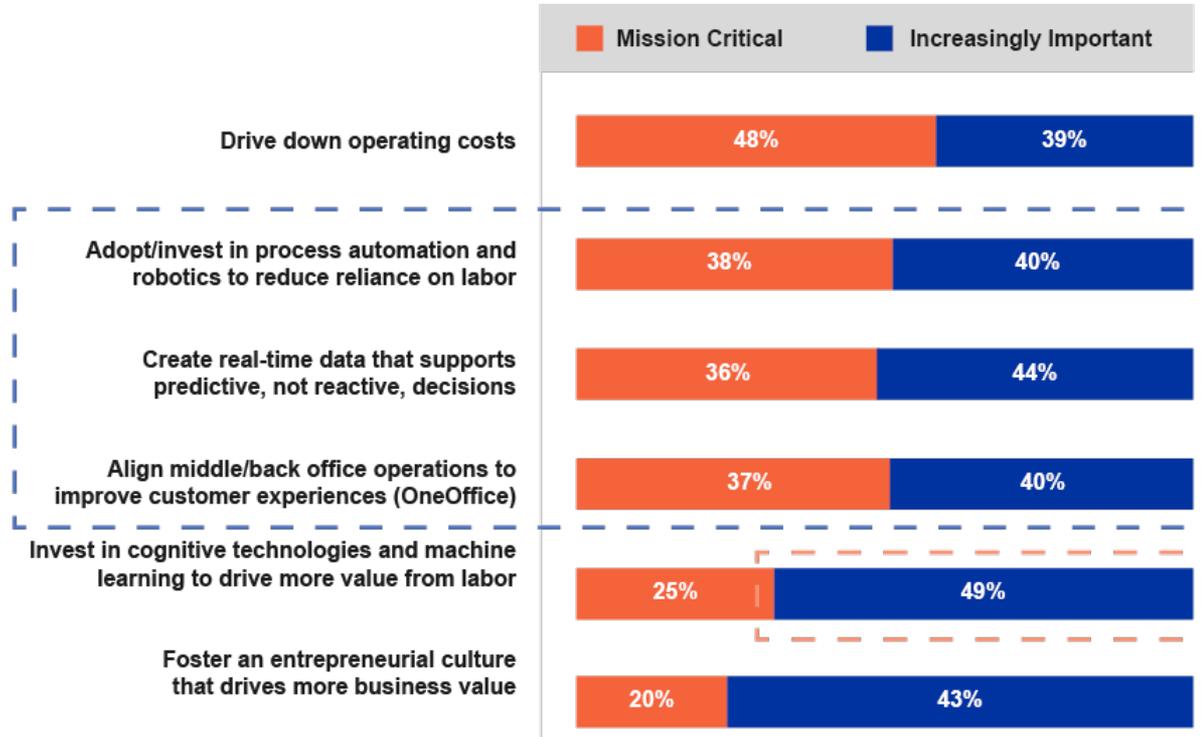
Meanwhile, the market is more fragmented

Market share for Top 20 Originators (%)



Source: Boston Consulting Group white paper "How digital mortgage solutions can help win the war against margin compression", January 2019

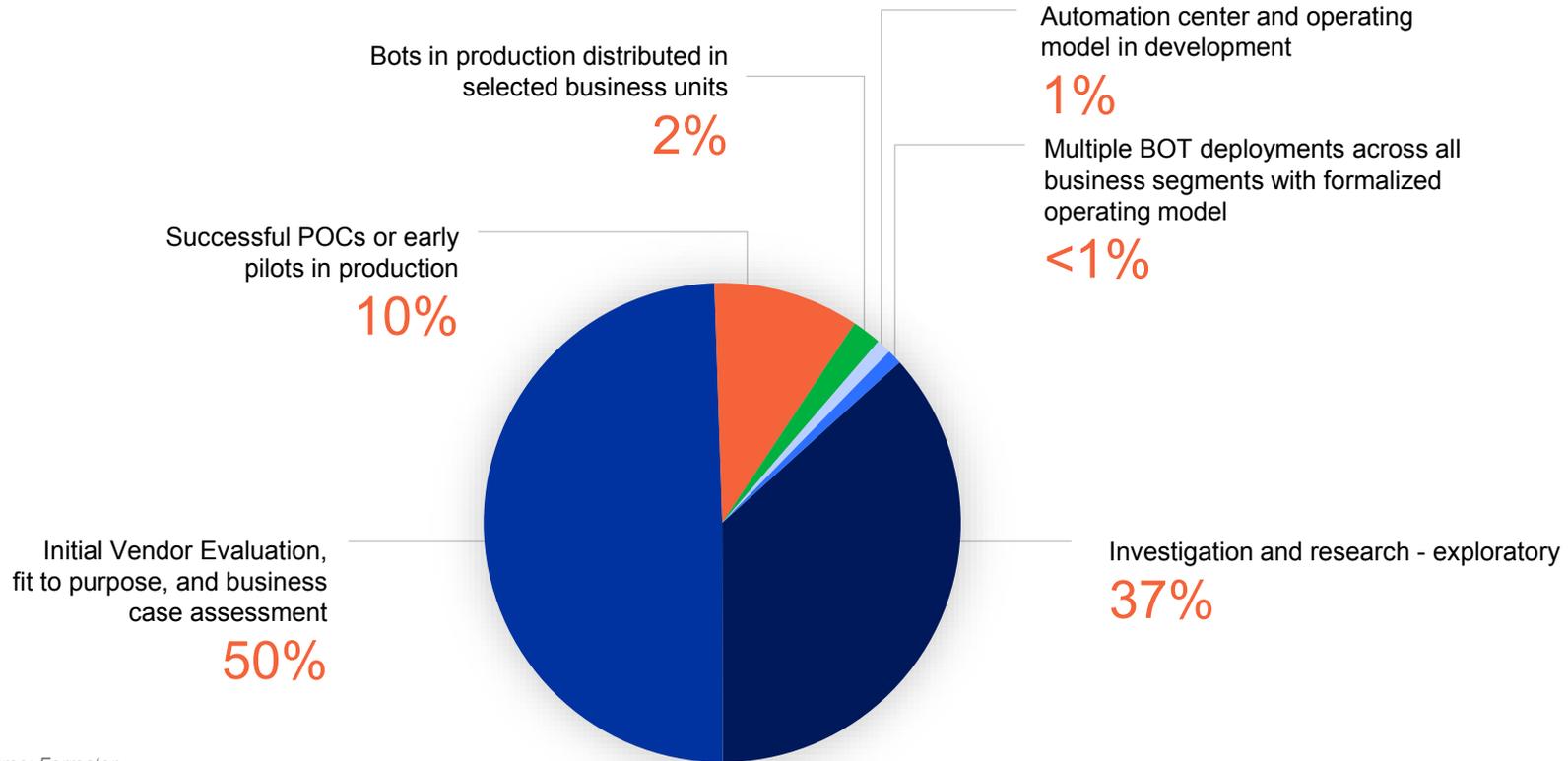
Current drivers for RPA initiatives



Source: HFS Research in Conjunction with KPMG, "State of Operations and Outsourcing 2018", April 2018

Sample: Global 2000 Enterprise Buyers = 381

Current state of RPA implementations



Source: Forrester

Challenges in traditional RPA adoption

Pace of Change

Most companies are experiencing a typical two-year journey to make any real progress with automation.

Skilled People

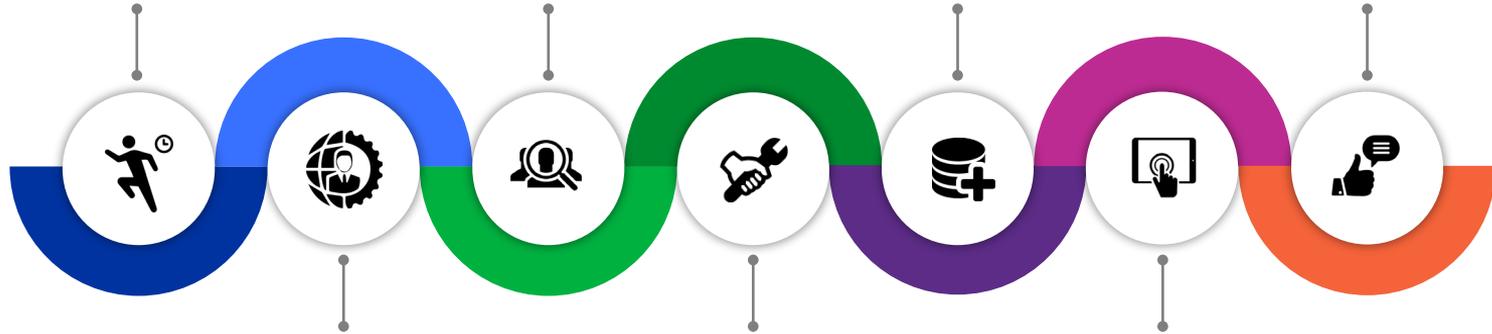
Limited availability of skilled resources – domain + technology against the market demand.

Governance

Poor operating model of governance in managing and mitigating risks.

Data Intake

Many companies are inundated by the challenges of getting started that they overlook data architecture, intake, and coding.



Industry Expertise

As automation program evolves, the path for what should be automated becomes less clear and more industry specific.

Digital Workforce

Many companies don't plan for the maintenance resources required when automation breaks or underlying systems change.

Technology Overload

One especially large obstacle is the number of automation vendors and the larger-than-life claims some make.

Total cost of ownership

Licensed RPA software

Cost of Technology

One-time

- RPA vendor licensing
- RPA vendor training
- Infrastructure setup
- Third-party integrations
- Proof of Concept

Ongoing

- Annual RPA license(s) renewal
- Annual maintenance renewal
- Annual third-party integration license fees
- Infrastructure maintenance
- Vendor management
- SLAs

Cost of Support

One-time: Establish a CoE

- Hire/reallocate analysts and programmers to plan, design, build, deploy the program
- Secure IT support for infrastructure/deployment

Ongoing

- Annual overhead for support personnel
- Ongoing training
- Continuous process optimization
- Continuous expansion of automation program

Robots-as-a-Service

Cost of Technology

One-time

- Infrastructure setup
 - On-premises VMs
 - Cloud (Azure, AWS, etc)

Ongoing

- Infrastructure maintenance
 - Scale VMs with program

Cost of Support

One-time & Ongoing

- SME to explain process to automation specialist

HfS Research estimates licensing costs to represent only 25-30% of RPA's total cost of ownership. The remaining 70-75% represents the ongoing cost of support personnel.

93% of organizations say they are not fully prepared to handle the issues arising out of their automation journey.

- Forrester

HPA provides fully-managed RPA services with outcome-based pricing to give enterprises flexibility in automating manual, repetitive processes. We handle the documentation, development, deployment, and maintenance of process automation on our clients' behalf.

650+

workflows
in production

2,200+

robots
working daily

90+

satisfied
clients

8

industries

100+

applications
automated

Why HPA?

Fully-managed RPA services

Our automation specialists document, develop, deploy, and fully maintain your robotic workforce on your behalf.

Higher quality & compliance

Our robots execute tasks with efficiency and precision, delivering outcomes to specification. Audit logs are provided to clients daily.

Instant scalability

With unlimited, always-on robots, your workforce can scale up or down at any time to handle volume fluctuations.



Quicker time-to-value

Our deep expertise in automation allows us to accelerate development and deployment of your automated business processes.

Change control & governance

Your digital workforce is monitored by our sophisticated robot manager as well as a support team, ready to resolve errors, should they occur.

Flexible, transparent pricing

There are no complicated licensing requirements or hidden fees.

Fully-managed RPA Services

We work with your SMEs to identify ideal processes.

Each documented process is validated for accuracy.

Each automated process workflow is rigorously tested.

Robots are always on and instantly scale to the volume of work.

HPA continues to help guide you in building your program.

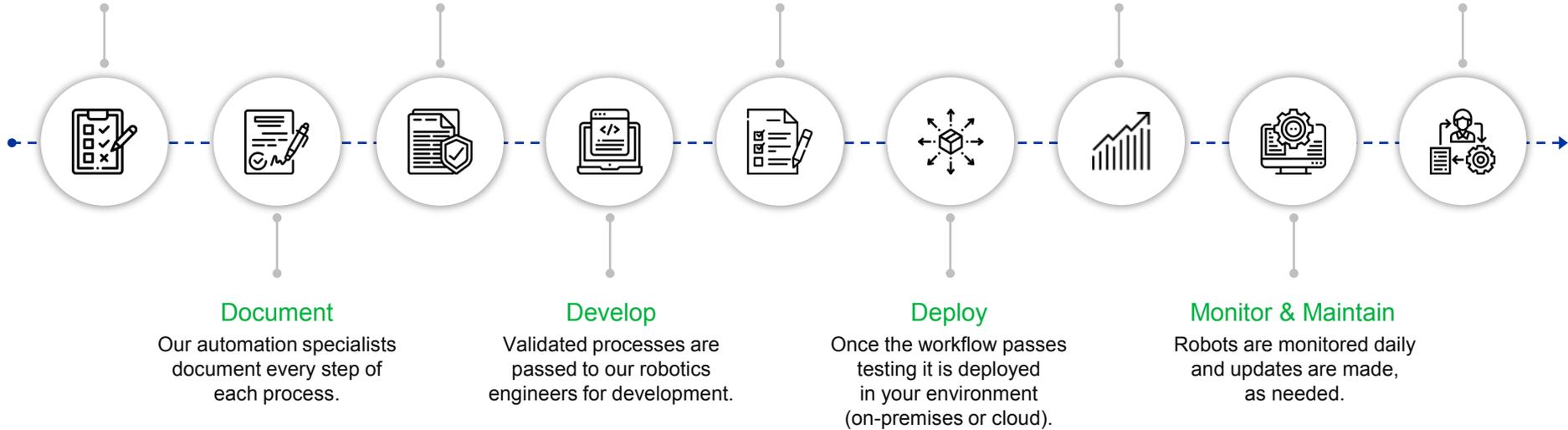
Evaluate/Assess

Validate

Test

Scale

Govern



**in-depth consultative assessment available; see appendix*

Our technology

Our proprietary technology is comprised of three main components:



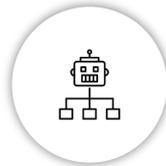
Capture

The documentation process starts in a WYSIWYG interface that instructs robots on the operating procedures and code to complete their work. These procedures output in an easy-to-read, plain English format that can be understood by process owners and developers alike. The code structure of our automated workflows mimics the operating procedures, minimizing disconnects between business and IT.



AppRepo

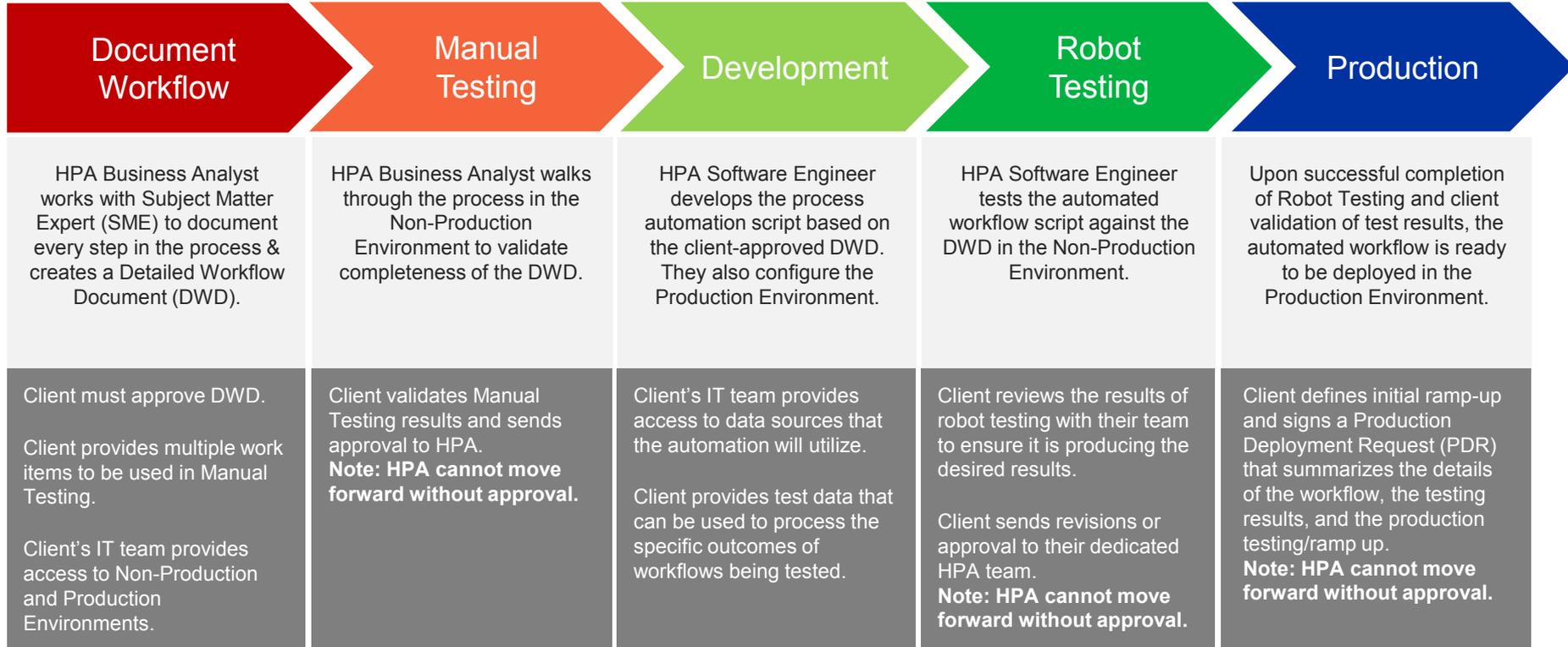
Our RPA technology is powered by an extensive application repository (AppRepo) that enables faster time-to-value and automation of complex grids and other custom controls not automatable with other RPA tools. Our AppRepo covers hundreds of applications and versions to maximize the scale, consistency, and maintainability of our automation capabilities.



Global Manager and Robots

The Global Manager, aka “the boss bot”, organizes and instructs robots on what work to perform and when, based on priorities. The Global Manager validates robot work at every step and monitors each process for unexpected outcomes, which it reports to our Production Support team. Robots also send diagnostic reports and extensive audit logs for every work item processed.

Implementation Cycle



Delivering production scale and cost control for a mortgage bank



Challenge

A leading regional mortgage lender wanted the ability to scale rapidly and maintain growth without increasing operations costs. Manual processes and volume fluctuations are common in the mortgage industry. Further, the technologies used to complete work are not well-integrated, resulting in longer turn-around times and a poor customer experience.



Solution

The loan setup function was a key pain point for the client. HPA's automation specialists identified and automated a total of 85% of loan setup tasks and 50% of 3rd party ordering tasks that were handled manually by FTEs including: property appraisal requests, fraud and AKA verifications, flood zone determination, as well as fee and point disclosures.



Outcome

- \$170/per loan cost savings on initial and servicing tasks alone
- 100% validated first-pass accuracy
- Over 94% labor savings, including 660 hours of manual disclosures processes per month
- Improved cycle time with 24/7 loan setup processing
- Instant scalability to meet demand without added cost

Reducing servicing time and cost for a national mortgage bank



Challenge

Over 18 months, the lender spent \$2.5 million unsuccessfully implementing a Pega Robotics solution. In addition to direct processing costs of \$700,000 annually, the work was cyclical and, during peak times, added substantial indirect costs estimated to be over \$800,000. Ultimately, these setbacks reduced their capacity to service loans quickly and within compliance.



Solution

HPA automated Hazard Policy Pages in Assurant and Memo Bills in CoreLogic, which were delivered within 2 months (with 2 months for testing and approval.) HPA's automation services allow for around-the-clock processing and free FTEs to perform work of a higher value to the business.



Outcome

- 89% in direct labor savings, 100% indirect savings within 4 months
- On-demand scaling of robotic solution with no added cost improves customer experience and adjusts to achieve full throughput during peak cycles
- Downstream speed and efficiency—Expedient processing of tens of thousands of items, resulting in immediate financial recovery

Current and Potential Robotics Capabilities: Originations

Lead Generation	Applications/Oriations	Processing	Underwriting	Close/ Fund	Post-closing
Load Setup	Complete Application	Loan Setup	Review Appraisal	Perform QC	Prepare for Investor
Create Campaign	Order Credit	Request Docs	Review Income	Prep Documents	Deliver to Investor
Acquire Talent	Identify Prospect	Verify Income	Review Assets	Final Disclosures	Review Conditions
Ensure Compliance	Advise Customer	Verify Assets	Review Employment	Send Loan Package	Review Trailing Docs
Send Campaign	Calculate Fees/Taxes	Verify Employment	Review Fraud	Consumer Signs	Identify Training
Create Interest	Run AUS	Verify Identity	Review Title	Documents	Clear Conditions
Lead Score	Customer Decision	Run Fraud	Review Flood	Documents Reviewed	Reconcile Payout
Assign Lead	Lock Request	Order MI	Review MI	File Reviewed	Reconcile Pr. Advice
Redistribute Lead	Initial Disclosures	Order Appraisal	Ensure Compliance	Fund Loan	Create Transfer
Track Lead	Intent to Proceed	Order Flood Certificate	Determine Eligibility	Warehouse Ad. Create	Secure Trailing
Mature Lead	Assign Processor	Order Title	Assign Conditions	Record Notes	Send Trailing
Convert Lead		Review Documents	Clear Conditions	Register MERS	Onboard Loans
		Change of Circumstance	Assign Closer	Onboard to MSP	Advances Claims
		Assign Underwriter			Bankruptcy/Foreclosure

Current and Potential Robotics Capabilities: Performing Servicing

Loan Boarding	Loan Administration	Escrow Admin	Customer Service	Inv. Accounting/ Reporting	Cash Management	Document Custodianship
Test File Analysis	Lockbox & Payment Processing	Escrow Setup	Customer Inquiry	Cash Collection Calculation	Treasury Cash Management-Adv.	Collateral Tracking
Data Mapping-Test File	Statements Processing	Escrow Analysis	Customer Complaints	Remittance Calculation	Manage Funding Lines	Collateral Safekeeping
Boarding File Mapping	ARM/ Servicing Updates	Escrow Statements	Statement/ Letter Processing	Advance Management	Recon & Reporting	Collateral Transfers
Loan to Servicing Platforms	Payoff Quote	Tax Admin & Payments		Investor Reporting for Cash/Remittance		Collateral Review
Post Boarding QC	Year-end Statements	Insurance Admin & Payments		Remittance Processing		Payoff & Lien Release
		PMI Admin & Cancellation		Recon Across Account, PI Custodial, Trust		
				TI Recon		

Current and Potential Robotics Capabilities: Default Servicing

Delinquency	Collections	Loss Mitigation Review-Loan Mods	Liquidation	Foreclosure Support	Bankruptcy Support	REO Support	Claims Processing
Delinquency Analysis	Early-stage Collections	Loss Mitigation Solicitation	Optional Foreclosure	Pre-FCL Packet Creation	Bankruptcy Setup	Property Valuation	Research
Delinquency Reporting	Late-stage Collections	Loan Setup for Loan Modification	Short Sale Support	SCRA	Attorney Follow-up on Status	Preservation/ Inspection	Claim Filing
30/60/90 Day Tracking	Skip Tracing	Processing	Deed in Lieu	First Legal Action	PACER Updates	Assessing Sales Price	Liability Determination
Notice of Default	Charge-off	Trial Modification Approval		Assign of Mortgage & Doc Preparation	Proof of Claim Filing	Title Settlement Services	Audit
Credit Reports		Trial Modification Setup & Review		FCL Bid	Motion for Release		Disposition
		Final Modification Setup		FCL Sale, Payoff & Reinstatement	Dismissal/Discharge Support		
		Modification Audits & Reporting					

Per the Institute for Robotic Process Automation, out of every 100 steps, **a human is likely to make 10 errors,** even when carrying out redundant work.

RPA Effectiveness Test

Checklist for ideal automation candidates:

- Rules-based and repetitive?
- Accesses structured data?
- High volumes or fluctuations in volume?
- Utilizes a user interface?
- Performed by more than 1 FTE?
- Stable (not changing often)?
- Has business value?

Building the Business Case

The total value of automation goes well beyond financial impact. Consider these factors when determining ROI:

- Optimized operational costs
- Reduced cycle time
- Increased quality: rework, errors, variance
- Total flexibility: timeliness, scalability, seasonality
- Reduced penalties: payment interest, government
- Greater compliance: onshore, extremely detailed audit logs
- Better insights: real-time visibility into work and outcomes
- Improved customer experience

Homework:

Fill out the Automation Opportunity Matrix for your top priority processes.

FAQs

What is required from IT? Our bots are deployed in your environment, either on-premises to virtual machines or to your cloud environment (AWS, Azure, etc.) They require full access to any applications being utilized in the process being automated. Your IT team controls setup of VMs, VPN/Remote Desktop/SQL Server access, application credentialing, test cases, and audit log storage.

What is the recommended baseline for infrastructure? Aside from the specs below, certain needs dictate hardware requirements. For example, if you need the ability to run several complex, high-volume processes both simultaneously and instantaneously.

- **Global Manager hardware:** 8GB of memory, quad-core processor, 100GB of hard drive space on main drive, and access to network/hard drive storage for audit logs.
- **Robot hardware (per bot):** 4GB of memory, dual-core processor, 50GB of hard drive space on main drive, and access to network or hard drive storage for audit logs.
- **Software for GM & Robots:** Windows XP-10 or Windows Server 2005-2016, Microsoft .NET framework 4.5, Microsoft SQL Server 2005-2016 w/ full admin access

How secure is my data? Bots are deployed on the client side so your data remains securely within your environment at all times.

FAQs

Do you automate Citrix? A Citrix server only sends screenshots of the live application that runs on the Citrix server back to the client. As such, our robots cannot access the interactive elements that make up a user interface. While it is not impossible to automate Citrix, we have found that the workflows are significantly less stable.

What is your pricing model? Every engagement is different and depends on the scope of work. HPA evaluates every process in scope and creates a pricing proposal for every client.

Do you sell licenses? No, HPA is strictly sold as a service.

Do you manage 3rd party RPA software? No, HPA builds every client's automation initiative in-house using our proprietary RPA technology.

How is AI used? We utilize AI for path finding, string and pattern matching, packing, computer vision and graph interpretation, outlier detection, and anomalous notification.

Start your automation discovery.

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HPA is partnered with Ellie Mae® to support their mission to accelerate lenders' operational productivity and innovation, reduce lenders' security and risk management, and streamline overall user experience to achieve a true digital mortgage.

EllieMae® Technology Powering
the American Dream™