

ROBOTICS PROCESS AUTOMATION: OPTIMIZING TODAY'S BANKING WORKFORCE

The constant change of the technology landscape, whether it's personal technology or business technology, has caused an industry that has relied for decades on calculators and balance sheets to dive full-throttle into the digital age through the adoption of robotics process automation (RPA) and Artificial Intelligence (AI).

"Reliable technology is really the key to banking industry success," said Paul Pinto, Vice President of Banking, Financial Services & Insurance at Digital Intelligence Systems, LLC (DISYS). "The more automation and reliability banking can bring into the customer experience will define the industry's success for many years to come."

Although there is no official count, it is estimated there are more than 14,000 banks across the world. A little more than 8,000 of these banks and credit unions are said to reside in the United States and they represent approximately 7.2% or \$126 trillion of the US gross domestic product.¹

"The more automation and reliability banking can bring into the customer experience -- especially on mobile devices -- will define the industry's success for many years to come."

The banking system in the United States supports the world's largest economy with the greatest diversity in banking institutions and concentration of private credit in the world.

The financial industry is under pressure to make an institution's services available 24/7 as profit margins shrink and customer satisfaction waivers.

In 2015, a JD Power & Associates report stated ATM satisfaction among consumers declined from 2014 as mobile banking tools have increased. But customers are not entirely satisfied with the breadth of services offered to them on the mobile devices.

As customer expectations outpace technology improvements, the report states satisfaction with mobile banking and ATMs is dropping ... Customers expect to be able to perform more functions on the same device this year than they did last year and they "ease of use" is still king.

'Success will not be driven just by adding more bells and whistles,' the report states, "But by balancing functionality with ease of use and then clearly communicating features and benefits to the customers."²

Banking organizations are under pressure to find

ways to lower costs in order to improve profitability and position themselves for long-term growth. IT organizations within financial institutions are being tasked to re-evaluate processes and their operations as returns on outsourced call centers, back office operations and loan processing decline.

CIOs are looking for new ways to cut costs while positioning their organizations to improve service availability and enhance the customer experience.

The very real threat posed by Google and Apple who both have mobile pay systems presents an additional layer of urgency for financial institutions to accelerate innovation. These two tech giants already have untold amounts of customer data and are experts at manipulating the information to gain a stronger foothold. Some in the financial sector believe, if it doesn't make changes quickly, the IT giants will begin offering other kinds of financial transactions and accounts.³

To remain relevant, financial institutions must take advantage of the rapid-fire changes in technology emerging today. Otherwise, their competitive edge could dissolve as tech companies win the loyalty of the young.⁴

In this paper, we will take a top-level look at RPA and AI, discuss its data and the importance of streamlining RPA analytics processes. We will also explore the changes in the banking industry workforce as it applies to the implantation of RPA and how this, instead of a negative, is a chance for banking employees to get out from under the mundane and find more fulfilling roles within their organizations.

The financial industry is under pressure to make an institution's services available 24/7 as profit margins shrink and customer satisfaction waivers.

1 <http://selectusa.commerce.gov/industry-snapshots/financial-services-industry-united-states>

2 <http://www.jdpower.com/press-releases/2015-us-retail-banking-satisfaction-study>

3 <http://www.americanbanker.com/bankthink/how-artificial-intelligence-can-help-banks-beat-back-tech-firms-1074299-1.html>

4 <http://www.americanbanker.com/bankthink/how-artificial-intelligence-can-help-banks-beat-back-tech-firms-1074299-1.html>

“Success will not be driven just by adding more bells and whistles, but by balancing functionality with ease of use and then clearly communicating features and benefits to the customers.”

”

The History of RPA & Its Data & Analytics

Robotics Process Automation (RPA) is defined by the Institute for Robotic Process Automation as ‘the application of technology allowing employees in a company to configure computer software or a ‘robot’ to capture and interpret existing applications for processing a transaction, manipulating data, triggering responses and communicating with other digital systems.’⁵

The Institute continues by saying companies who use large-scale labor forces, such as banking and financial institutions, for exorbitant amounts of knowledge process work will benefit from RPA as it will boost their capabilities and save money and time with its software.

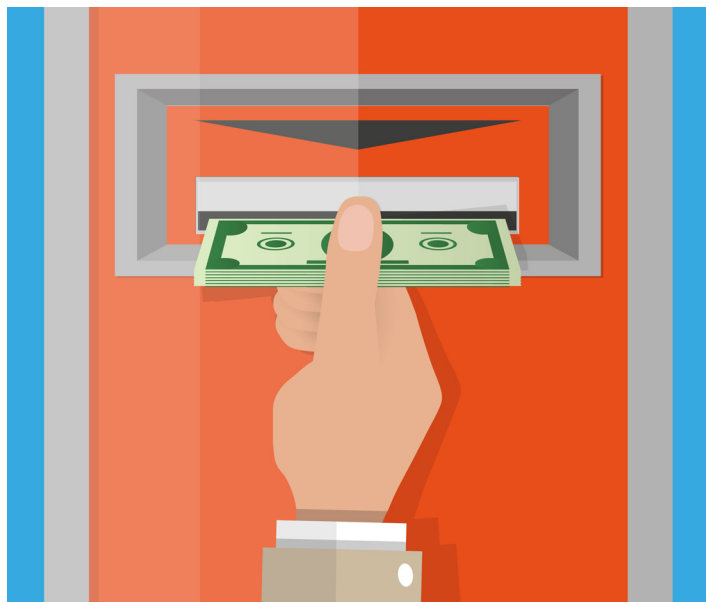
The premise behind robotics automation is that it gives any work process that is definable, repeatable, and rules-based the ability to map out a business process and assign a software robot to manage the execution of that process, just as a human would. RPA technology is not a part of a company’s information technology infrastructure, but rather sits on top of it.⁶

According to the Robotics Process Automation Handbook, this allows a company to implement the technology quickly and efficiently without altering existing infrastructure and systems.

Just as robots have and continue to revolutionize the manufacturing industry by creating higher production rates and improved quality, RPA is overhauling the way we think about administrative business processes, support processes, workflow processes, remote infrastructure and back-office work.

“During the early 1990s, AI was taking over many industries especially manufacturing,” said Dave Sufrinko, Director of DISYS’ Testing Practice. “But its implementation within the financial sector repeatedly fell short because of the technology costs and implementation problems.”

One of the debates surrounding RPA revolves around the question of whether this technology is truly revolutionary or simply the product of the evolution of other similar technologies. Many technologies, including artificial intelligence, expert systems, and other methods of process automation have served as predecessors to RPA. That being said, RPA takes artificial intelligence and expert systems to an elevated level. Among leaders in the automation industry, robotic process automation is perceived as offering unique capabilities and advantages over previous technologies such as artificial intelligence which largely fell flat in the financial industry during the 1990s.⁷



5 <http://www.irpanetwork.com/what-is-robotic-process-automation/>

6 <http://www.irpanetwork.com/wp-content/uploads/2015/05/Robotic-Process-Automation-June2015.pdf>

7 <http://www.irpanetwork.com/wp-content/uploads/2015/05/Robotic-Process-Automation-June2015.pdf>

"With today's AI solutions, this data can be mined in such a way that it is useful and applicable to the daily processes within financial institutions."

Experts agree the financial sector is at a crossroads: It is now required to take a look at RPA technology and what it wants it to accomplish in the short and long term.

In recent years, several things have changed as the cost of computing has declined and the power of it has improved tremendously.⁸ AI applications, which tend to produce astronomical amounts of data that requires storage, were not scalable to the past years – but currently the use of AI is more practical and its data more manageable due to big data and cloud solutions.

"The fact AI produces so much data that could not be mined properly, previously made implementing it a daunting task," said Ray Goodwin, Testing and Automation Expert at DISYS. "But with today's AI solutions, data can be mined in such a way that it is useful and applicable to the daily processes within financial institutions."

The ability to transform data into language turns what machines only previously understood into information that banking leadership can easily

understand. The financial sector now has access to years of data related to sales, products, divisions and branch activities as well as customer opinions which improves leadership's ability to make informed decisions.⁹

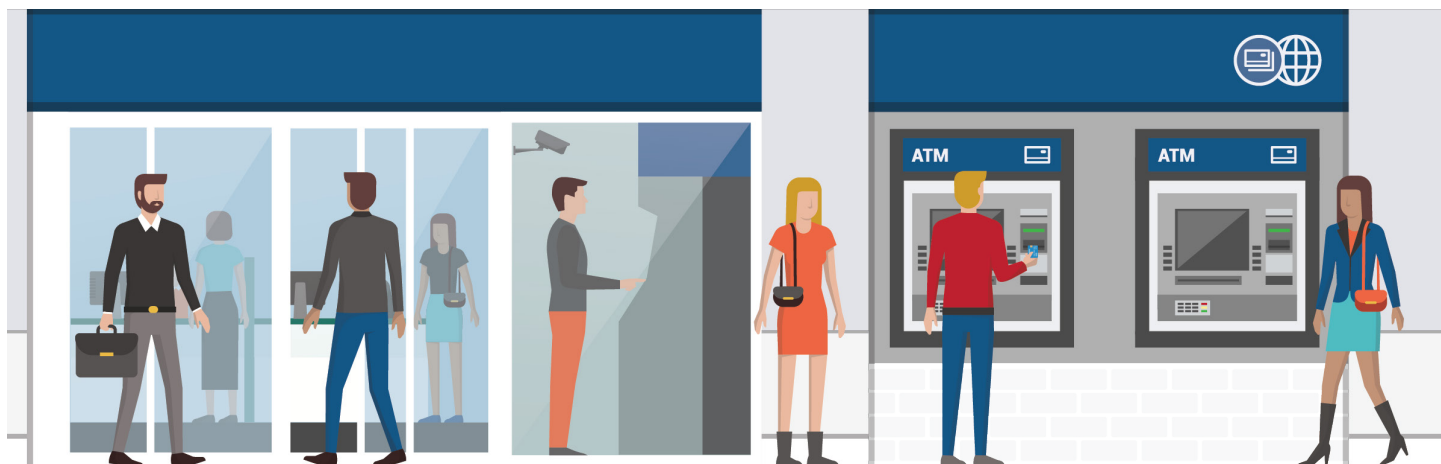
RPA is a game-changer since it allows organizations to continually monitor business or IT processes and the behavior of personnel and software applications as part of those processes. That monitoring of patterns and events is performed by virtual engineers (robots) that can actually learn by observing process-based activities undertaken by human engineers.

The subsequent knowledge gathered through machine observation can then be incorporated into future computer inferences made during operations. Not only can RPA be used to identify an anomaly, thereby turning human workers into problem solvers, it can also initiate a set of action items to respond to the occurrence.¹⁰

In the wealth advisory space, for instance, advisors can access on demand, up-to-date tailored performance summaries for their clients, giving them knowledge they need to make better investment recommendations.¹¹

This understanding of the data AI technology mines through big data analytics and its accurate and valuable interpretation is what experts say is the key to AI's runaway success within the financial sector.

"Using statistical analysis or machine learning, data can now be used to discover relationships between



8 <http://fsroundtable.org/cto-corner-artificial-intelligence-use-in-financial-services/>

9 <http://resources.narrativescience.com/h/i/83029170-the-next-frontier-in-banking-big-data-and-artificial-intelligence>

10 <http://www.irpanetwork.com/wp-content/uploads/2015/05/Robotic-Process-Automation-June2015.pdf>

11 <http://resources.narrativescience.com/h/i/83029170-the-next-frontier-in-banking-big-data-and-artificial-intelligence>

separate data points such as customer engagement, churn, transactions, sales and success likelihood,” said Paul Francis, Director of DISYS’ Business Intelligence Practice.

Artificial Intelligence can then transform the discoveries of those correlations into actual explanations of identified relationships.¹²

“While some have expressed concerns robots are taking over jobs, what many fail to realize is the booming robotics industry is poised to open up a myriad of new positions.”

Think of it this way: When financial institutions release AI software into systems to automate business processes, that robot can in essence, bring back identifiable information on how a process performed. When an entire ‘army’ of RPAs are deployed, it adds up to a significant amount of data – known as big data.

“When information, brought back in the form of big data, is processed and analyzed, it puts the finance industry in a position to discover bottlenecks and optimize processes,” said Paul Francis.

Enter, analytics. Mounds of data used to mean nothing to the naked eye and systems could not comprehend or break the data down. But now, the use of big data analytics through proper RPA installations can pinpoint actionable tasks for improvement and optimization.

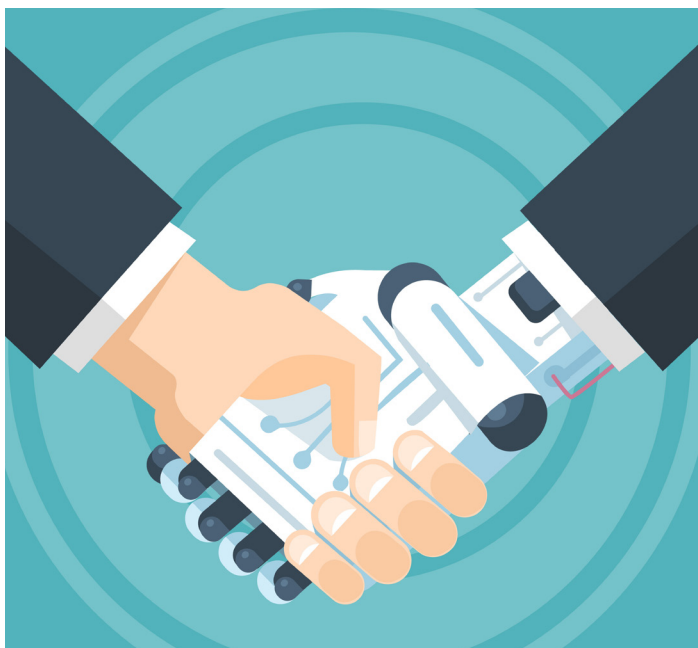
Turning large amounts of raw data into understandable patterns for institution decision-making is where the true beauty of RPA is discovered.

RPA & THE BANKING WORKFORCE

In a recent article in InfoWorld,¹³ which compares the RPA revolution to the earlier workforce upheaval of

outsourcing, the author states RPA stirs passions at organizations that deploy technology with its potential to slash jobs, shake up the relevant skills mix and if implemented strategically, stave off the specter of outsourcing.¹⁴

But other key experts point out RPA in the banking industry will really only take away the lower-level positions including data entry, rekeying, assembling and formatting tasks and allows institutions to re-task their talent in other more important areas, offering further advancement and job satisfaction.



An article in Tech Pro Essentials validates the theory that the re-tasking of employees in more prominent roles is a prime benefit of RPA implementation.

“While some have expressed concerns robots are taking over jobs, what many fail to realize is the booming robotics industry is poised to open up a myriad of new positions,” the article states. “Historically, technology advancements have meant certain careers become obsolete ... (RPA) can create new work related to (customer service) and operations – far outweighing the number of jobs lost.”¹⁵

12 <http://resources.narrativescience.com/h/i/83029170-the-next-frontier-in-banking-big-data-and-artificial-intelligence>

13 <http://www.infoworld.com/article/2898108/robotics/robotic-process-automation-new-it-job-killer.html>

14 <http://www.infoworld.com/article/2898108/robotics/robotic-process-automation-new-it-job-killer.html>

15 <http://techproessentials.com/robotic-process-automation-leading-toward-increased-efficiency-heightened-accuracy-and-happier-employees/>

Through the incorporation of AI in the banking workplace, experts predict there will not only be an output of new jobs, but more fulfilling jobs.

“Cutting costs through RPA also means higher-paying jobs in more professional positions,” said Al Barsoumian, Managing Director at DISYS. “RPA has been proven to lead to a happier workforce.”

Through the delegation of tedious tasks, software robots free up human workers to focus on more creative, strategic and customer-facing roles – roles that are a better fit for people who are, by nature entrepreneurial and social.

“The person sitting behind a desk all day pouring over spreadsheets doesn’t have to do that anymore,” Barsoumian said. “An employee’s energies and talents can be redirected to benefit the company and the person’s career in an entirely different way.”

Entrepreneur magazine printed an opinion piece throwing darts into the theory that RPA was destroying the financial industry’s workforce.

What’s resulting with early adoption of (RPA) is there’s room for both robots and people – and the combination is enabling an unparalleled level of efficiency, customer service and innovation, it states.¹⁶

“It is important to understand that people are still involved in the process,” Pinto said. “People train process robots much like they do new employees – teaching them the ins and outs of the job. The difference is the process itself doesn’t take a person to trigger it and as long as those processes

are taught correctly, they are always performed without mistakes.”

Entrepreneur says: “Successful business leaders often say they are only as strong as their teams. When you begin to think of robots as teammates, you can understand them as players that can make companies and industries stronger. So when businesses gain competitive advantage by “staffing” with robots, you get higher salaries and a happier (human) workforce.”¹⁷



ABOUT DIGITAL INTELLIGENCE SYSTEMS, LLC (DISYS)

Digital Intelligence Systems, LLC (DISYS) is a global IT managed services and staffing firm with 33 offices worldwide specializing in Managed Staffing Services, Infrastructure Services, Application Development Services, Business Intelligence Services, Cloud Enablement Services and Enterprise Resource Planning. DISYS’ vision is to be a global business partner, delivering the highest quality and most consistent services at the best value to clients worldwide. For more information about DISYS, visit <http://disys.com>.

ABOUT DISYS’ BANKING, FINANCIAL SERVICES, AND INSURANCE OFFERINGS

DISYS’ Financial Services offering combines a proven automation and optimization approach with repeatable assets to offer increased business value to our partners. Our financial services clients have benefitted from our catalog of intellectual

Through the delegation of tedious tasks, software robots free up human workers to focus on more creative, strategic and customer-facing roles.

¹⁶ <http://www.entrepreneur.com/article/241658>

¹⁷ <http://www.entrepreneur.com/article/241658>

property and our experience gathered on previous engagements. This means we can not only apply lessons learned in other engagements to your project risk but we can more proactively recommend solutions that are the best mix of tools, methodology and team structure to accelerate productivity in your environment.

Financial institutions continue to partner with DISYS to solve critical infrastructure and compliance problems while reducing operating expenses – all amidst a rapidly-changing business landscape.

FOR OUR FINANCIAL SERVICES CLIENTS, DISYS IS SOLVING THE FOLLOWING INDUSTRY CONCERNS:

ACCESS TO NICHE TALENT

For our retail banking clients, DISYS' customized, repeatable training processes & co-owned training curricula are providing Pega Certified Systems Architects in high volume in response to rapidly-changing BPM needs. Our Pegasystems experts are available in our clients' most desired locations & are part of a robust development and retention program that includes partnerships with accredited universities & a formal mentoring program. Benefits include decreased ramp-up time & guaranteed exceptional performance.

OPERATIONAL EFFICIENCY

DISYS' infrastructure experts are deploying Server Virtualization solutions that are proven, repeatable and compliant with financial industry regulations. With low-risk cost models, robot-enabled ongoing support, and proven experience, we are migrating clients' servers 50% faster and at 30% cost savings over manual migration.

DATA TESTING INNOVATION

DISYS' testing delivery accelerators are automating up to 90% of client solutions and are repeatable across engagements– reducing costs and optimizing project scopes. Our technology innovation is helping clients increase delivery efficiency while reducing risk and enabling more flexible solutions.

INCREASING BUSINESS VALUE

DISYS has stewarded numerous clients through the transition from transactional resource management models to outcome-based, managed service solutions. DISYS' managed service approach is helping some of our largest clients mitigate project risk, increase productivity and reduce costs by up to 20%.