Transforming the HR Function Through Robotic Process Automation

Over the next four years, the robotic process automation (RPA) market is expected to grow to about $200 billion, with the vast majority of Fortune 1000 companies adopting it. This article shows how, by beginning a journey now to transform the human resources (HR) function through RPA, employers can be in position to lead the disruption and not be compelled to react to it. The goal of RPA is not to reduce head count. Instead, it is to eliminate the manual tasks employees don’t enjoy now and to allow employees—and the organization as a whole—to focus on improving client service and employee satisfaction.

by Dimitris Papageorgiou | EY

Since the beginning of time, humans have opted for innovation and improvement versus the status quo. Progress was slow until the Industrial Revolution and the first attempts at automation, when each industry breakthrough was adopted by others. Innovation, though, is not manufactured. It strikes in places least expected and is prompted by seemingly unrelated actions. Let us not forget the individual transportation leap forward through Ford’s vehicle assembly-line marvel and the introduction of the Model T, which was inspired by Chicago’s 19th century pork slaughterhouses. In Homer’s words, “Inspiration is a muse, and innovation seeds can often be found in the most unexpected places.”

Fast forward to 2018. We are now faced with an information technology (IT) digital renaissance fueled by artificial intelligence (AI), machine learning, chatbots and robotic process automation (RPA). The pace, volume and variety of innovation available to enterprises across the globe are forever changing the way we work and interact professionally with each other. But these changes have not fully made their way into the human resources (HR) function, and specifically the benefits function, to the extent that they could.

HR is presented with a once-in-a-lifetime opportunity to be strategic, integrating the business digitization process while assisting the workforce in transitioning to a value- and purpose-based employment, rather than the task- and skill-based employment of the past.

The HR department has undergone a tremendous transactional evolution in the last 20 years, with the introduction
of shared services, cloud technologies, business process outsourcing, analytics and data warehousing. Stepping back to look at the time line of this evolution, it appears that all these innovations were precursors to automation and AI in the workplace. Consider that a majority of HR operations time is spent on repetitive tasks. And while there is a huge opportunity for automation in HR, it is about more than just cost reduction and improved efficiencies. Automation can facilitate a refocus from largely tactical work to work that can be primarily strategic in nature.

Before discussing their applications in HR and payroll, let us first define what we mean by RPA and AI. RPA does not exclude people. A robot is a systemic automation of a repetitive transactional activity that used to be done manually. As most of us know, HR processes and relevant regulatory requirements change frequently. Regardless of how complete and efficient a robot could be today, it would always be updated, maintained and monitored by the actions of an operator. This is particularly true in HR, where subjectivity is omnipresent and, therefore, rule-based automation would be hard to accomplish. As mentioned above, transactional is a key word for what can be automated. Imagine an organization that hires and onboards 1,000 people monthly in the United States. Multiple forms would have to be completed (W-4, I-9, state withholding certificates), activities concluded (offer letters, e-verify, background screenings, drug tests, trainings) and provisions granted (access to locations and domains, software and hardware). The effort has certainly been streamlined in recent years with technology and service delivery advances, and costs have been reduced via wage arbitrage and process efficiency. Nonetheless, there are still manual activities taking place—primarily the processes that transfer data from third-party vendors to the organization—that expose an organization to potential omissions, errors and inconsistencies. That is exactly what RPA can supplement, further reducing cost while improving quality.

Despite the futuristic image of AI, it has been around for a while. We are all accustomed to our global positioning system (GPS) recalculating a route because traffic was detected ahead, and our self-controlled vacuum continuously learns our house layout to increase efficiency and account for changes. We are also subjected to AI sometimes when applying for a credit card, a mortgage or car insurance, where factors and data points seemingly unrelated are aggregated and processed—in some cases, in 30 seconds or less—to reach a decision.

HR will benefit from the inclusion of RPA and AI in areas such as recruiting, learning and development, payroll (which may reside in finance but is connected to HR for inputs), scheduling, talent management and benefits. By evaluating the functional activities in HR and comparing them with RPA and AI capabilities, it’s possible to estimate that a large portion of the existing transactional HR workload can be automated.

**How Will RPA Work in HR?**

The term RPA is often used as a catchall term for RPA, AI, machine learning and chatbots, but let’s look at each evolving area and its benefits distinctly.

- **RPA:** This could handle up to 60% of an organization’s process activities, including data capture, learning and development administration, position management, travel and expense management, employee master data, onboarding, time record validation, user credential creation and access termination, employee benefit invoice recognition, and payroll batch import and validation.

- **AI:** This is the development of computer systems that can perform tasks normally requiring human intelligence such as visual perception, speech recognition, decision making and translation between languages. Systems include scheduling assistants, decision-making systems like super computers, recruitment platforms, customer service platforms, logistics booking and expense management.

- **Machine learning:** This area of AI enables computers to teach themselves based on rules or pattern recognition. It is not currently utilized to a large degree in HR processes, but it can be used in the future to improve human decisions, helping to eliminate discrimination and bias.

- **Chatbots:** These are conversational solutions that use chat, messaging or other natural language interfaces to
interact with people, brands or services. Consumers and brands can connect directly through one-to-one conversations in whichever channel the consumer prefers. For HR customer service, conversational solutions can improve the employee experience surrounding benefits plans, billing payment and internal services such as updating benefits plans, modifying time sheets or posting positions.

Using these technologies on an à la carte basis instead of a full integration of all four technologies would result in limited scope of work and not achieving the full benefits.

What Have We Learned So Far?

Bots operate significantly faster than people do and can work 24/7, so one bot is often equivalent to nine full-time equivalents if the tasks are structured properly and there is enough volume to keep the process going around the clock. Market feedback is also affirming that RPA software is highly stable, warranting its use in mission-critical functions for some of the world’s highest profile companies.

Before beginning pilot projects, leading organizations are thinking “big picture” about how RPA can affect their people, policies and processes. Planning ahead to upgrade employee skills and roles and updating policies and processes to encourage RPA usage are critical success factors in RPA launches. That’s why it is essential to involve HR in the enterprisewide strategic planning of these systems.

While RPA is undoubtedly replacing work now being performed by people, it turns out that the biggest benefit of RPA deployments so far is that it frees up humans to engage in higher value-added activities requiring discretionary judgment and building relationships. In other words, it is allowing people to perform activities that are less mundane and robotic in nature. Nowhere can this benefit be greater than in the HR function itself.

**So What Can This Mean for Benefits Administration?**

The use of RPA allows HR departments to focus on allowing employee-facing roles to be more engaging and transformative. Analyzing tasks that are employee-focused and developing a model for how bots can help support the benefits role will help create a better employee experience. The more HR can focus on engaging employees and refining/rebuilding processes rather than doing repetitive tasks themselves, the greater the potential for employee happiness and the more transformative role the HR department can take on. By developing tools that are digitally accessible, organizations can alleviate the need for call centers or manual transactions that can be serviced through automated workflows, chatbots and other forms of digital innovation. This enables individuals within HR to spend more time on people matters, which include following up with candidates in person, allowing for more time to get on the phone to speak directly with employees and being more empathetic to resolve issues.

On a higher, more strategic level, it allows HR to work with the senior leadership team to help identify future talent needs that will support the evolving business strategy, as well as identify those individuals who will be the future leaders of the organization. Also, by putting the policies and procedures in place to create a high-performing, innovative and inclusive corporate culture, HR can harness the uniquely human attributes of the workforce.

When identifying the right pilot processes, HR departments should consider the processes and tasks that are the most error-prone and time-consuming. But the work shouldn’t stop there. They should be disciplined in developing criteria that include not only these metrics but also send a message to employees that RPA does not just speed things up—It fundamentally changes the nature of people’s roles away from transaction processing to being uniquely human.

The key is to tie an RPA program to strategic goal planning and not just to technology improvement initiatives. This may sound counterintuitive, but before identifying pilots and planning an RPA program, a working knowledge should be developed among key leaders to embed HR RPA programs in strategic planning initiatives and overall RPA processes. Employers should apply the mindset that routine tasks should be managed by bots, which can be thought of as virtual employees. Once they have done that, they should bring in IT to help with governance and support while letting HR drive application and design.
What Could Innovation and Emerging Technologies Mean for HR?

Simplified and well-controlled processes enable a seamless integration across all HR functions, resulting in cost efficiencies, limited time delays and reduced employee data losses. HR and personnel costs are the largest expense category in most companies. Automation allows for more transparency and predictability in these costs. Accuracy is vital not only from a financial perspective but also from a risk perspective. Better data integrity improves forecasting and reporting processes and ultimately provides flexibility to produce more standardized yet customizable reports with a myriad of applications. The end result is a more strategic utilization of the workforce with resources being focused on the more strategic, value-added activities.

Over the next four years, the RPA market is expected to grow to about $200 billion, with the vast majority of Fortune 1000 companies adopting it. Forecasts also predict a reduction in routine jobs and an increase in nonroutine jobs. While the forecast numbers vary significantly, they all point to emerging automation technologies as being very disruptive to the way companies operate today. But the goal is not to reduce headcount. The goal is to eliminate the manual tasks employees don’t enjoy now and allow employees, and the organization as a whole, to focus on improving client service and employee satisfaction. This will translate into higher retention levels and shared principles and purpose. And, as we know, improved retention—particularly among high performers—will improve efficiencies and increase profitability. By beginning the RPA journey now, HR departments can be in a position to lead the disruption and will not be compelled to react to it.

The future is here, and the need for talent with RPA and AI skill sets is increasingly becoming a concern, particularly for HR departments. Nanodegrees in machine learning and AI are the topics of discussion in Silicon Valley, and it will not be long before the topic is a popular one around the watercooler. The opportunity is ahead of us and, if it is properly and thoughtfully handled, we can generate a bigger disruption than the Industrial Revolution. We just have to make sure that we keep the “human” in mind while optimizing resources.

The views expressed are those of the author and do not necessarily represent the views of Ernst & Young LLP or any other member firm of the global Ernst & Young organization.

Dimitris Papageorgiou leads intelligent automation services for human resources (HR) and payroll in People Advisory Services at EY for the Americas, drawing on his expertise in HR transformation, global shared services strategy and HR systems implementation. He is a global business services technologist with a lengthy background in managerial and executive positions within large organizations (20,000+ employees) in the U.S. and abroad. He holds a B.A. degree in business administration, finance and investments from Baruch College and an M.S. degree in international transportation management from the State University of New York Maritime College.

International Society of Certified Employee Benefit Specialists

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Innovations in Technology

Provider Network Optimization: The Next Frontier in Employer-Sponsored Health Care

Roughly half the U.S. population is covered under health plans sponsored by large employers. That puts these organizations in a powerful position to demand increased consistency and value from the health care system, starting with their local markets. Through provider network optimization, employers finally have a practical approach to understanding their local health care ecosystems and engaging in strategies that drive their employees to lower cost providers that truly deliver quality care. Through this new level of transparency and insight, proactive employers are empowered to make intelligent decisions on how to guide their people to the best quality care at competitively priced facilities.

by Michael Murphy | Aon and Todor Penev | Aon

Innovative new benefits, like pet insurance, adoption coverage and volunteer time off, have garnered attention as employers seek creative ways to reward and retain valued employees. Yet it’s one of the oldest benefits that is consistently responsible for keeping benefits managers awake at night: health care. Rapidly increasing health care costs, continually evolving delivery system models and an uncertain health care landscape have kept the challenges associated with employer-sponsored health care squarely at the forefront of their minds.

Employers have spent the last four decades trying to contain the cost of the health coverage they provide to employees. Along the way, they have seemingly exhausted every possible avenue for paring back costs—or at least putting the brakes on the constant escalations. From health maintenance organizations (HMOs) and preferred provider organizations (PPOs) to consumer-directed health plans (CDHPs), health savings accounts (HSAs) and private exchanges, employers have embraced one strategy after another in the hopes of reining in health care costs.

While each approach brought its own set of advantages, none has emerged as the standalone, single-bullet solution employers have long been seeking. Even for benefit programs that have been successful at taming utilization in recent years, costs have continued marching forward due to medical and pharmacy unit cost increases.

Unfortunately, employers don’t enjoy the same luxury as Medicare which, as the biggest payer in the market, has the power to dictate how much it will pay for specific procedures year over year. In the 1990s and 2000s, employers paid an average
of 20-30% more than Medicare for any given medical expense. Since 2010, this gap has been rapidly expanding, and the unit cost premium employers pay over government programs for the same services is set to exceed 75% in this decade.1

Most organizations have contracted with their carriers for network-negotiated rates focusing on average network costs and discounts. However, that strategy has had limited success in controlling cost because carriers have been more focused on getting every provider into the network rather than negotiating the deepest discounts. Meanwhile, concentrated provider systems have shown significant local negotiating power, and carriers have faced tough choices when building their network panels.

Granted, employers have traditionally aimed to have the most comprehensive network possible, giving employees access to every hospital, doctor, surgeon and outpatient clinic and minimizing out-of-network utilization. While this approach empowers employees to play a more active role in their own health care, plan members have struggled to navigate the wide universe of care options and directories of providers. More proactive employers have provided white-glove, personalized navigation assistance, since the vast majority of individuals simply don’t have the inclination to make key provider selection decisions on their own.

To help workers control their out-of-pocket costs, some organizations have given them access to online tools that compare costs for medical services based on ZIP code. Such tools can be quite eye-opening in the significant variations in cost they reveal. For example, the health care transparency company Amino found a huge variation between the average cost of an abdominal magnetic resonance imaging (MRI) at a hospital ($1,751) versus a freestanding imaging center ($680). Capturing a broader basket of hospital procedures, a recently published RAND academic analysis on hospital price variation in Indiana revealed a greater-than-300% variance between the lowest cost and highest cost facilities for a standardized set of hospital procedures within the same market.2

While these price disparities provide eye-opening information, they provide little in the way of context. An employee may be intrigued to learn that the surgery center ten miles away charges thousands less than the hospital around the corner for the same surgery, but they are left wondering how the two facilities compare in terms of quality and outcomes. And since the employer is often the one paying the bill, many employees pay little attention to differences in price when it comes to expensive procedures that would almost certainly exceed their individual out-of-pocket plan limits.

Once heralded as a breakthrough that would enable organizations to get health care costs under control, many price comparison tools have struggled to get traction on price alone and, to better assist employees, have more recently introduced quality and provider characteristics to their engines. Yet most plan members still rely on personal recommendations and local name recognition when selecting providers. On the surface, reputation may seem like a reasonable gauge by which to make such a decision, but an objective look at outcomes often reveals that reputation doesn’t always translate into superior results.

When it comes to health care, some names carry more weight than the rest: Johns Hopkins, New York University (NYU) Langone, Cedars-Sinai, the Mayo Clinic and others consistently rank near the top on lists like that produced by U.S. News and World Report. The very mention of these facilities conjures feelings of respect and trust—and deservedly so. (See figure.) Yet not all procedures require world-class academic medical care and, while one hospital may be nationally renowned for complex cardiac care, a facility down the street may consistently produce better outcomes for more routine orthopedic procedures—often at a fraction of the cost, because they aren’t charging “brand name” prices. In those instances, patients would do far better to schedule their procedure at the lesser known facility. Not only are they more likely to realize a successful outcome, but the cost savings for themselves and their plan can be substantial.

**Beyond All-Inclusive Networks**

Increasingly, employers are recognizing the value of marrying price data with outcome metrics to paint a more comprehensive picture of a given facility or provider. This transparency is key to driving better outcomes at lower costs by directing employees to a select network of providers and facilities with a proven track record of delivering quality care without the sticker shock. Not since the days of the HMO...
have employers considered what could be gained by par-
ing back their networks, perhaps contracting with just one
hospital system, rather than three. As the trend moves away
from broad access, employers are beginning to recognize the
potential to achieve better outcomes at lower cost by intel-
ligently narrowing the network.

In recent years, a number of large employers have begun
adopting targeted narrow network or centers of excellence
approaches built around identifying high-performing, low-
cost providers and channeling employees to those facilities
with a proven track record of delivering quality care without
the sticker-shock price. Most traditional health plans have
begun promoting their own narrow network or preferred
provider arrangements as they move away from trying to be
all-inclusive and attempt to be choosier about the hospitals
to which they steer patients. Likewise, a handful of emerg-
ing health plans and third-party administrators are building
solutions predicated on a more narrow definition of available
providers. Some plans claim that steering to specific hospital
systems will save members 10% or 20% through better care
coordination or cost, but employers have limited means of
validating and benchmarking these claims using traditional
metrics such as access, disruption and discounts.

Increasingly, proactive employers are recognizing the need
for objective, independent data on episode cost and quality
to evaluate vendors and provider claims. To date, however,
very few sources have been available that are reliably objec-
tive and fact-based. Access to provider-specific cost data has
been rare due to the complexity and high degree of secrecy
surrounding network contracts. Even employers that have
invested significant effort in data aggregation or participa-
tion in local all-payer data initiatives have found it difficult
and time-consuming to analyze provider cost data. On the
quality front, many popular sources rely on self-reported or
patient-submitted survey data grounded in opinion rather
than data based on facts, clinical outcomes and safety. What’s
more, quality rankings are often influenced by factors that
are unrelated to medical outcomes, such as the appearances
of buildings, parking availability and food options.

Fortunately, electronic record coding improvements, trans-
parency initiatives from the Centers for Medicare & Medicaid
Services (CMS) and emerging independent data sources have
made it possible to analyze and derive better insights from ag-
gregated administrative and transactional data. Further, CMS
leadership in payment reform has simplified many commer-
cial pricing arrangements, with contracts increasingly using
Medicare as a reference price, and considerably streamlined
the ability to compare providers on a consistent basis. As such,
local provider analyses that were traditionally the realm of
only the very largest and most sophisticated payers are now
possible even for medium-sized employers with an interest in
monitoring and understanding the medical provider ecosys-
tem where their dollars are going.

**From Insight to Action**

Organizations are working to gather independent provider
cost and quality data that can inform benefits strategies with an
unprecedented level of local market insight. As employers be-
gin to assess what such information could mean to their benefits
strategies, they are recognizing there is much to be gained from
the level of transparency provided though provider-level cost
and quality data. It can be used to gain a better understanding of
and make better decisions on best value providers; to structure
design, pricing, network and contracting strategies and naviga-
tion approaches to guide people to those providers; to review
recommendations made by carriers regarding high-performing
providers, systems and centers of excellence; and to measure the
impact of strategies implemented over time.

Proactive employers are utilizing a number of strategies
as they apply provider network optimization to regain con-
trol and positively impact employee health outcomes while
controlling costs. Through this new level of transparency and
insight, they are empowered to make intelligent decisions on
how to guide their people to the best quality care at competi-
tively priced facilities.

Increasingly, savvy employers are taking a proactive ap-
proach, providing navigation solutions—a concierge level of
call center support—where employees can turn to learn which
facility provides the best quality for their particular health is-
sue at the most reasonable price. Others are taking more of a
carrot-versus-stick approach, whereby they either exclude
the most expensive facilities from their network altogether or in-
centivize employees to utilize lower priced providers.

Some employers have established a preferred tier of pro-
innovations in technology

providers, comprised of those offering the highest quality at the lowest cost. The plan is then structured to reimburse more for tests, procedures and surgeries performed at these facilities. Some employers even waive the deductible for employees who agree to go to a lower priced facility.

In the near future, we expect employers to adopt and define their own standards for benchmark pricing and explore bundled contracts or reference-based pricing for key clinical tracks. Designed to incentivize employees to choose the high-value provider, reference-based pricing models include designation of a median price the plan is willing to pay for each procedure. If the employee goes to a higher priced provider, the employee must pay the difference. When it comes to certain highly expensive procedures, such as a course of chemotherapy, the employee stands to avoid potentially thousands of dollars of additional cost merely for going a little out of the way and obtaining treatment in a nearby town. The employer succeeds in paying what it has deemed a reasonable amount for the treatment, and the employee is still able to obtain the quality care he or she needs while managing to avoid excess out-of-pocket cost.

Granted, a single strategy will never fix all the inefficiencies and sources of price and quality variation in the U.S. health care system. Yet companies remain dedicated to providing employer-sponsored health coverage, arguably the most valued of all benefits. Roughly half the U.S. population is covered under health plans sponsored by large employers. That puts these organizations in a powerful position to demand increased consistency and value from the health care system, starting with their local markets. Through provider network optimization, employers finally have a practical approach to understanding their local health care ecosystems and engaging in strategies that drive their employees to lower cost providers that truly deliver quality care.

Endnotes

Authors

Michael Murphy is a senior vice president in health at Aon. He is responsible for developing partnerships that enhance Aon’s existing solutions or drive innovative, systemic solutions that enable employers to improve health and manage cost. He also leads consulting relationships with several large employer clients and manages Aon’s program for college graduates joining Aon’s Health Innovation team. Murphy received a bachelor’s degree in accounting from Lamar University and holds a general lines license for life, accident and health insurance in Massachusetts.

Todor Penev is a senior vice president and leader of actuarial innovation in health at Aon. His work focuses on building and piloting market-leading solutions and external partnerships in the health space, with a focus on financial, risk management and analytics capabilities. Penev has served as lead actuary for multiple Fortune 500 employers and is the principal architect of many of the core actuarial models and solutions used across Aon. He is a fellow of the Society of Actuaries and a member of the American Academy of Actuaries. He received a bachelor’s degree in economics from Davidson College.

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