INTELLIGENT AUTOMATION
for HUMAN RESOURCES

AN E-BOOK FROM IQPC'S IA WEEK SERIES

THE HUMANITY OF INTELLIGENT AUTOMATION

HOW INTEGRATING INTELLIGENT
AUTOMATION WITH HUMAN RESOURCES
LEADS TO PROCESS IMPROVEMENT,
COGNITIVE TRANSFORMATION,
AND BUSINESS OPTIMIZATION

The Florida Hotel and Conference Center

October 21-23rd, 2019

Orlando, FL

INTELLIGENT AUTOMATION
for HUMAN RESOURCES

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A GUIDE TO ROBOTIC PROCESS AUTOMATION (RPA)

SOFTWARE ROBOTS ARE ON THE RISE: HERE IS YOUR COMPLETE GUIDE TO ROBOTICS PROCESS AUTOMATION

ADAM MUSPRATT, CONTENT PRODUCER IQPC DIGITAL

What is RPA (Robotic process automation)?

There is a reason why RPA is receiving a lot of attention lately. It is highly versatile and can be used in virtually every industry to streamline enterprise processes and reduce cost. From automatic payment facilitation to customer onboarding, and generating mass emails and data entry. RPA can do it all.

Businesses are starting to realise the potential of RPA. According to Forrester, the RPA market will grow substantially in the coming years – from $250 million in 2016 to $2.9 billion by 2021.

But what *is* RPA?

Robotic Process Automation (RPA) is a software-based technology utilising software robots to emulate human execution of a business process. This means that it performs the task on a computer, uses the same interface a human worker would, clicks, types, opens applications uses keyboard shortcuts and more.
It is predominantly used to automate business processes and tasks, resulting in reductions in spending and giving businesses of all size a competitive edge.

But how does it work? And why is it such a disruptive force? There are three core benefits

Automatable work - One of the predominant draws of RPA is that it enables automatable work – relieving human workers from repetitive clerical processes that often eat up a large portion of the working day, such as data entry and data manipulation. As a result, RPA can let human workers focus on complex value-adding tasks that elevate a business.

Reduction in human error and costs - Foibles that human workers are prone to - particularly during long repetitive tasks- caused by tiredness and boredom are completely mitigated with RPA. This results in work that is more

accurate, timely and consistent, ensuring that time and money isn't lost correcting old work or creating duplicates.

It works on existing IT infrastructure and is non-invasive - RPA works alongside existing IT infrastructure; it just needs to be trained on how to use it. This is a major benefit for organisations using legacy systems. RPA interfaces with front-end infrastructure and uses the same graphic user interface (GUI) that human workers would use to complete a task, ensuring that the IT landscape doesn't have to be changed to accommodate RPA – keeping costs to a minimum.

In a nutshell, RPA is the application of software as a virtual workforce. It is governed by set rules and business logic set by the RPA developers. It can perform complex tasks just as a human worker would, emulating interaction within a GUI, giving developers the opportunity to create a workforce that mimics the same manual path that a human would take at a fraction of the cost.

- To assign a task to a software robot, RPA products mostly use a drag-and-drop interface and visual workflows as opposed to code, making RPA comparatively easier to use.

- Depending on task complexity, RPA can be deployed quickly.

While RPA holds many advantages over traditional automation, it doesn't mean that traditional automation is obsolete. For one thing, traditional automation is far better at moving massive amounts of data because it isn't limited by the speed of the GUI – as would be the case for an RPA product.

The technology is here to stay and we'll likely see more and more companies incorporating RPA into their work processes. Going into 2019 and beyond, RPA will be a critical component of the enterprise toolkit. The benefits are too numerous, with speed, accuracy, efficiency and reliability and cost savings on offer.

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How does an RPA Robot work?

Automation technology has been a staple of business for the last decade, but in recent years, RPA technology has reached an impressive level of sophistication while retaining ease-of-use.

RPA is no a longer a tool that is solely used to facilitate the automation of simple and repetitive IT tasks. RPA is maturing, and with the convergence of other technologies – such as artificial intelligence and machine learning (ML) – we are beginning to explore new possibilities?
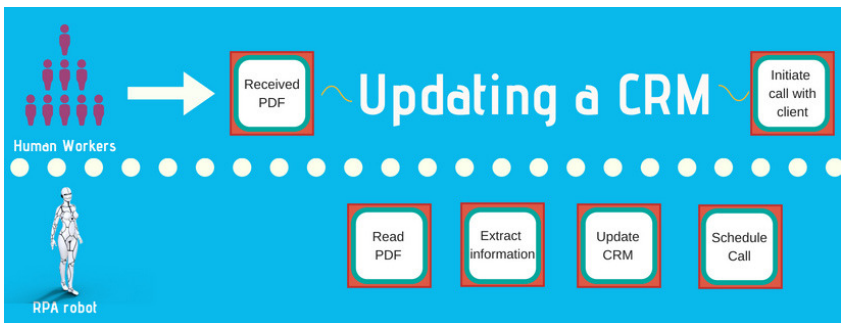
Unlike other forms of automation, RPA has the intelligence to decide if a process should occur. It can analyse data presented to it and make a decision based on the logic parameters set in place by the developer. In comparison to other forms of automation, RPA does not require system integration.

RPA is a broad field and there are a wide array of technologies in the market that greatly differ from one another. However, most RPA products will comprise of RPA developer tools, a controller and the robot itself.

Here is a rundown of the core RPA tools

- **RPA developer tools** – RPA developer tools give you the ability to create and run automated tasks. Developer tools can vary from product to product, and often come in the form of easy to use drag-and-drop interfaces as opposed to traditional code-based environments. As such, RPA is suited for non-developers.

- **Recording tools** – In addition to drag-and-drop workflows, many RPA products offer the ability for human workers to record a process which can be translated into a workflow for the software robot to follow.

- **The robot –** The capabilities of software robots vary from product to product, but many of them utilise aspects associated with horizontal or converging technologies such as optical character recognition (OCR), intelligent character recognition (ICR) screen scraping and artificial intelligence

----- **OCR**- Optical character recognition gives software robots the ability identify the type of document, classify it, recognize characters in the document, and perform an action based on the data. OCR is typically for structured documents that have identifiable templates, such as banking statements and invoices.

----- **Screen scraping** - screen scraping entails the extraction of information from websites. It involves processing the HTML of a webpage and converting it into another format. This enables an RPA application to understand the contents of pages - an , in turn, interact with it.

-----Artificial intelligence - Artificial intelligence or cognitive intelligence is a common feature of RPA products. This can entail machine learning that helps the software robot improve decision making over time.

What are the different types of RPA?

RPA is versatile and flexible enough to be used in business of all sizes, from start-ups to enterprise organizations. Here is a rundown of the different types of RPA available in the market.

- **Programmable bots** - A programmable robot is defined by set rules and instructions. Parameters need to be defined by programmers before the bot can get to work. Ultimately, this involves mapping out a process – step-by-step – which can be very time consuming for more complex tasks

- **Intelligent bots –** Bots with artificial intelligence can analyse data – both historical and current – to learn how employees perform a process. The robot will follow your clicks, mouse movements and actions. After a period of time when enough data has been analysed the bot will have enough data to complete the process itself. Intelligent and self-learning bots are better suited to perform processes involving unstructured data and processes that involve fluctuating parameters.

What are the benefits of RPA?

RPA isn't just great at filling in for repetitive and laborious tasks and manipulating data – there is a range of advantages that your organization can benefit from

- **Flexibility** –RPA is applicable across all industries and organizations, from private enterprise to small startups. It is easily scalable – and can take on any task that has a rule-based element and can be defined by repeatable action.

- **Easy to use –** When deployed smartly and correctly, RPA can lead to significant productivity enhancement. RPA products often come with a drag and drop GUI meaning that employees will not need additional training in coding or other complex fields. In addition, business often finds that they are able to train a software robot to perform a process faster than a new starter

As a result of incorporating RPA into business processes, organizations often find that processes themselves are streamlined. This occurs due to the way RPA works. It is governed by clear rules and procedures – and as a by-product of RPA, you may discover ways of reducing inefficiency by scrapping pointless processes or making existing processes clearer.

- **Accurate** –It doesn't matter how lugubrious a process is, a robot will follow the rules (without complaining) ensuring that you get 100% accurate and reliable results. RPA can offer greater levels of precision and accuracy in comparison to human counterparts. RPA is especially useful in roles that are prone to human error or roles that are difficult, repetitive and long-winded. A robot will be able to perform data entry at all hours of the day – and provided there are no programming errors, the robot will not make the kinds of mistakes that humans make.
- **Improve human productivity** – RPA can be an avenue to improved worker efficiency. It achieves this by allowing the worker to focus on value-adding tasks that require complex human thought and benefit the organization.
- **Tighter cyber security** -. Despite improvements in cyber security awareness over the last few years, human error is still the weak link in companies' cyber defense. Robots will not fall for common cyber-related attacks such as spear phishing, and social engineering.

What are the challenges of RPA?

Even though RPA is becoming one of the important business technologies, there are some factors to think about that warrants discussion about the future of the technology.

- **How will RPA affect jobs?**
  One of the major discussions in the technology world at the moment is how human jobs will be affected by RPA. Critics argue that the widespread elimination of jobs will occur and that working environments will be turned on their head.

  There is no denying that some jobs will be replaced by RPA – the most likely candidate being data entry keyers. However, this would be ignoring the wider picture as there are a wide array of job roles that may emerge as a result of RPA. Historically, new technology has almost always resulted in the creation of more jobs, and the widespread incorporation of RPA will be no different. For example, RPA engineering and RPA developers are roles that wouldn't exist without the technology.

  RPA won't just create new jobs. It also has the ability to enhance current jobs, by providing human workers with the necessary tools to focus on high-value tasks.

- **Is RPA expensive?**
  RPA is often cheaper to compliment than traditional automation thanks to its ability to work alongside IT infrastructure that is already in place. With RPA, business leaders won't have to endure headaches thinking about the costs of infrastructure remodelling, outsourcing or offshore/onshore manual processing.

- **Is RPA a cyber security risk?**

  We touched upon the benefits that RPA can bring to cyber security, but what about the risks? Like many new technologies, the potential downsides often get overlooked in comparison to the excitement generated by the benefits. Like many technologies, the misuse of data – the kind of sensitive data software robots are privy to – is a major security concern.

Issues may come in the form of rouge developers who programmed software robots maliciously, malware, Trojans, and hackers.

Diligent companies will incorporate additional cyber security measures, which may **entail data encryption and role-based access to confidential data.**

How to use RPA for your business?

Businesses can leverage RPA in a multitude of different ways. Flexible and easy to implement, some business may find that they use it in a way that is unique to their organization. Determining what processes should be automated is a key strategic point. There is no point in automating a process just for the sake of it.

While RPA is great at driving operational excellence, some processes are more viable for automation than others. It is always a good practice to roll out RPA slowly to mitigate teething issues that often come with technology implementation. The most viable candidates for automation tend to be processes that are simple, repetitive and easy to define. These processes will likely be rule-based and comprised of easily definable structured data.

Questions to ask yourself before automating a process

- **Can employee time be better spent elsewhere?** - If the process is heavily dependent on employee involvement and revolves around standardized data that is highly definable and consistent – and often impacted only by quantity – it can be a suitable candidate for RPA giving employees more freedom to spend on more meaningful activities.

- **Are processes being delayed by opening and closing times?** – If you routinely find that your company has outstanding processes by the end of the day that aren't actioned until the morning, consider an RPA solution. Robotic workers stay on the job 24/7, making them great for high volume and lengthy tasks.

- **Is the process being outsourced? –** If a repetitive process is being outsourced, it can almost certainly be automated – often at a fraction of the price.

- **Have you completed an RPA pilot? –** Once your business becomes familiar with RPA and the different ways in which it can be leveraged – and its limits – the automation of more complex processes can be considered, such as the automation and data that is unstructured and non-standardized.

- **Is the process prone to error, rule-based, repetitive or time-sensitive?** – Processes that fall into this category are often not critical enough to incorporate automation through core systems - a practice that can an be costly to implement. RPA tools offer a quick and inexpensive alternative, giving business leaders the opportunity to promote efficiency without changing any core systems.
- **RPA certification** - Consider RPA training for your organisation. There are a wide array of companies that offer online and offline training sessions from experts in the field, giving your organisation a deeper insight into RPA implementation specifically for your business.

The most common RPA uses are different sectors.

RPA can be feasibly applied to a range of different business processes. From banking to manufacturing, here are some examples of how different industries are utilizing RPA to improve their efficiency.

General

- **Data entry** - This is one of the most common uses for RPA. It can make short work of routine clerical tasks in a fraction of the time it takes a human and is able to input data faster and more reliably than a human can.

- **RPA extractor** – RPA can utilise optical recognition technology to scan and understand data in any format and extract relevant data into another system. For example, it has the ability to pull data from a PDF and key the relevant data into another file format.

- **Automating tasks that require no decision making** – A business process may involve multiple steps that do not need complex human thought. RPA can automate these processes to save significant time. Generation of mass emails – RPA can be used to generate mass emails via available data from multiple systems.

Banking

- **Card processing** – The banking sector is always on the looking for cost reduction strategies. One major way that banks are using RPA is card processing. In the past, it could take the human worker weeks to gather documents, make credit checks, perform a background check and ultimately make a decision. RPA has streamlined the process and it now takes a matter of days

Financial Services

- **Investment portfolios** – RPA can be used to manage investment portfolios. Today, software robots are giving clients real time intelligence and advice about current market conditions.

Human Resources

- **Payroll –** Payroll involves huge sums of data, is highly repetitive and requires to be sent out in a timely fashion, making it perfectly suited for RPA.

What will the future of RPA look like?

More and more companies are planning to implement RPA going into 2019. As it becomes more widespread the uses for RPA will become more varied as well. In the future, We are already seeing signs that RPA is being used beyond data input. It can be used for other time-consuming processes such as email recognition and file conversion.RPA will incorporate machine learning and cognitive algorithms to apply increasingly accurate judgement and learn how to perform processes at a faster rate. It will also likely reduce outsourcing as RPA becomes a cheaper solution.

HR

IN THE AGE OF

AI

EVERY COMPANY IS A TECHNOLOGY COMPANY

HR Exchange
NETWORK

FORWARD:

Once a fantasy of the future, AI is quickly becoming a daily part of work. Companies like Microsoft, Facebook, Alphabet's Google, Amazon and Elon Musk's OpenAI are recruiting the most talented AI researchers while pouring tens of millions of dollars into research and development. And, now, many of these same companies are deploying AI to build tech for Human Resources that promises to change the way we hire, recruit, develop and engage employees.

Last year, Microsoft acquired LinkedIn for $26.2 billion. That same year, Facebook launched the collaborative platform Workplace. Only ten months since its launch, Workplace is already in use at over 16,000 businesses, including major players like Starbucks and the Royal Bank of Scotland.

The recently launched Google for Jobs uses machine learning-trained algorithms to sort and organize job listings from popular employment sites. More recently, Google released Hire, which is an applicant tracking system that integrates seamlessly with their G Suite. Reports that Amazon is interested in acquiring Slack means one more major player, and AI developer, will soon be powering the HR technology business.

> "Artificial Intelligence is a computer science that uses machine-learning algorithms designed to mimic human cognitive functions."

Artificial Intelligence is a computer science that uses machine-learning algorithms designed to mimic human cognitive functions. Essentially, developers of the technology endeavor to make interactions with a machine similar to interactions with a human by allowing them to sense, comprehend, act and learn.

For HR departments, AI can reduce – or remove – repetitive, time-intensive manual tasks. AI, and the data it captures and interprets, can help shift HR from an afterthought to a partner in its organization's growth. It moves decision making from an intuitive, gut-level process to one using predictive analytics based on vast troves of data. Machines can become the biggest advocate for an organization's human capital, or at least the best option for making decisions that affect human capital.

There are concerns, of course, and invoking the precautionary principle is justified. All that buzzes is not necessarily best. For instance, the threat of machines passing judgement on humans, violating privacy or eliminating jobs is not an attractive proposition to most people. Depending on the poll you choose, however, you'll find that varied percentages of a majority in Generations X, Y and Z are comfortable with the AI in their lives. The shift has begun.

As artificial intelligence continues to be adopted in commercial environments, expectations of the intelligent systems we interact with daily will change. Or, evolve. The HR community is no different. In this report, we look at where AI is making an impact now and what to expect in the near future.

TRENDING UP:

In a study conducted by Northstar Research Partners, 61% of respondents said that society overall will become better by increased automation and AI. Only 22% disagreed. And, while just 36% said AI has a significant impact on their daily lives right now, 92% expect that to be the case by 2027.

One of the most discussed, and often debated, trends in Human Resources circles is why, when and how to use Artificial Intelligence. Its importance and influence are undeniable in both our personal and professional lives. Siri, Alexa and Google use AI. Facebook and Netflix use AI. GPS apps that apply real-time traffic conditions to predict the fastest route, credit card fraud monitoring, and your email client's spam filter are using AI.

The age of AI has arrived, and more HR departments are adopting the technology.

The IBM Institute for Business Value surveyed nearly 400 chief human resource officers and found that half recognize the power of cognitive computing to transform key areas of HR, such as talent acquisition and development.

For HR professionals, this is an exciting time. Chatbots, or computer algorithms designed to simulate human conversations, are recruiting employees, answering general HR questions and personalizing learning experiences. The massive amounts of data being collected can be quickly, efficiently and accurately translated into actionable analytics. The meeting of big data and AI could be the tipping point for HR – the point where the benefits clearly outweigh the concerns.

So, how are HR departments implementing AI?

INTERVIEWING

IBM, GE and Hilton Worldwide are among the growing number of companies using algorithms to screen, test and hire new talent. They're using machines to scan work samples, review social media posts, and even analyze faces.

Unilever has been hiring all of its entry-level employees using AI for more than a year. Candidates played neuroscience-based games to measure inherent traits, and then had recorded interviews analyzed by Artificial Intelligence. AI can evaluate candidates using thousands of data points from video interviews, including intonation, word choice and facial movements.

Mike Clementi, Unilever's VP of Human Resources for North America, told Business Insider that he was overjoyed with the results and already testing ways the process could be used as a supplement for mid-career hires or lateral internal changes.

ONBOARDING AND BOTS

While nothing will replace a human touch with onboarding, AI can enhance the onboarding experience by employing chatbots to quickly answer questions or direct new employees to the right information. Responsiveness helps build a relationship of trust, and that may just keep a new employee on board longer.

AI can also automate the tedious portions of the onboarding experience by collecting I-9s, W-4s, employment agreements and work eligibility information from new hires.

TRAINING

AI can host, verify and track training and development. AI learning offers a self-driven approach at the employee's level and on their timetable. Employees can learn on the go with 24/7 mobile access, and employers can monitor their progress. Training can also be customized and adjusted in real time based on data collected as employees interact with the technology.

COMPLIANCE, PAY AND BENEFITS

AI can help keep companies informed and compliant with performance evaluations, leave requests, benefits and more. HR professionals can automatically sync personnel changes to their payroll systems without performing manual data entry.

PITFALLS:

While the potential applications for AI in Human Resources are exciting, it remains a work in progress. The same technology that promises to make managers better informed and more effective also moves them into uncharted territory.

AI can overcome human prejudices, but it may develop its own biases based on favorable traits or conditions it previously encountered. These systems are fairly new, and we simply can't know yet if the decisions they make are better or worse than those of human managers. That's a concern when inaccuracy in an AI report – painting someone as a poor performer, for example – might set back an employee's career.

Greater reassurance around security will also be vital for consumers to fully embrace the rapid rise of AI and allow machines to play an even greater role in their lives. On the other hand, the potential of AI in providing better security is exciting, which highlights the dilemma.

Finally, while automation through AI is making jobs easier, it doesn't mean that HR professionals need to be concerned about job security. With automation, there is always a concern about losing jobs. AI can solve many problems for HR professionals, but there will always be a need for the human touch. While AI assists with the more laborious tasks, people can focus on the overall candidate and employee experiences.

CONCLUSION:

When reports surfaced about Facebook's AI creating its own language that researchers couldn't understand, fear of machines taking over the planet also surfaced. Not being able to understand what an AI was saying led to worries about similar systems becoming sentient or making decisions without being held accountable. It was sci-fi nightmare fuel. But, the machines aren't taking over yet. For now, at least, they are still willing and able to help.

The gap between companies that embrace automation and those that don't will become even wider as Artificial Intelligence is more commonly adopted. AI is becoming a staple of operations at most large corporations, and now it is beginning to reach even small businesses. This, along with new and emerging technologies, will significantly impact the future of businesses of all sizes, and HR needs to move as fast as other departments to embrace the future and adopt the tech.

The time is rapidly approaching when we consider it unthinkable not to use AI to transform recruiting, HR service centers, and learning and development. HR departments need to learn about and then harness new technologies to help their companies build a competitive advantage. CHROs need to use AI and data to gain key insights that make their departments strategic partners to their CEOs.

Given the pace of AI development, it is reasonable to expect AI devices will soon interact with humans more naturally. And, humans are HR's business. Align the application of technology to company core values and ethical principles and it will benefit customers, employees, the organization and society.

ABOUT THIS REPORT:

This report draws upon both qualitative and quantitative data from reports, surveys, third-party resources, interviews with subject matter experts, and HR Exchange Network proprietary data.

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AI will make HR more Human, Strategic and Innovated

Alberto Loyola, Founder/Managing Director of Ignite Organizations

Artificial intelligence (AI) is a source of both huge excitement and fear across the HR function. What are the real opportunities and challenges for HR? Drawing on a framework analysis of how AI will impact HR, I identify the most valuable win-to-win value proposition where machines and HR team-collaborations work together to deliver a brand-new HR approach to the market.

We have all witnessed the evolution of the HR function, moving from a traditional department that hires, fires and manages benefits, to having the opportunity to be a "business partner" to support business transformation. Fortune 500 organizations have developed advanced HR practices that leverage strategy and operating models using talent, culture and leadership capabilities. However, technology disruption is challenging HR to design a strategy that delivers a different value proposition, one that includes AI, and to better serves employees and customers delivering value to shareholders.

Digital transformation to empower HR

According to IBM's 2017 survey of 6,000 executives, *"Extending expertise: How cognitive computing is transforming HR and the employee experience"*, 50% of HR executives recognize that cognitive computing has the power to transform key dimensions of HR. And 54% of HR executives believe that cognitive computing will affect key roles in the HR organization.

The message is clear: CHROs and CEOs recognize the value proposition that cognitive solutions bring to HR and believe its unique advantage can address the new talent and workplace imperatives; however, most are uncertain how and where to start.

There are three areas in which the HR function is starting to leverage the power of cognitive computing: talent acquisition, talent development and HR operations. Let review some detail:

Talent acquisition: AI is already enhancing talent acquisition, giving support in resume screening, candidate sourcing, ATS mining, while reducing unconscious bias in the selection process. Chatbots are interacting with candidates, answering FAQs about the position, asking screening questions about qualifications, interviewing and scheduling pre-interviews via email, text message and social media.

Mya has the ability to automate candidate sourcing using AI. The technology engages with passive candidates from both internal and external sources, and through conversation is able to match them to relevant job opportunities or schedule them onto the calendar for an interview.

MyAlly automates the recruitment coordination process, candidate pipeline and evaluation (hiring manager feedback) to boost productivity, shorten time-to-hire, and make recruiting processes more candidate-friendly

Talent development: Harnessing revolution: Creating the future workplace, a 2017 Accenture research report, reveals that most workers (80%) believe that automation will provide them with more opportunities than challenges, and 95% believe they need new skills to stay relevant at work. AI leverages talent development providing cognitive insights to up-skill employees and can tailor recommendations for learning and career management. AI can help with class enrollment, training delivery, retention, follow-up and assessment.

- Mobile Coach offers automated conversations to transform training programs. It's a chatbot that holds conversations with users to reinforce training and to help you to stay connected to their progress. It's customized to fit each individual learning and training plan.
  Butterfly is your AI leadership coach and uses team feedback to help managers grow as leaders. The system collects employee feedback via 30-second pulse surveys. The data is captured in a way that helps managers improve their management skills and monitor the team's feedback in real time via an intuitive dashboard that follows, analyses and reveals macro-trends.

HR operations: Bobby Mukherjee, a Silicon Valley entrepreneur and CEO of Loka, is currently working on a chatbot called Jane, which is designed to help HR teams develop better forms of communication.

Through the use of AI, Jane can answer employee questions in real time on the Slack messaging platform. For example, if an employee wants to know the company's holidays, they can simply type in their question, send it to Jane, and receive an immediate response. Jane ultimately provides a solution for HR teams struggling with on-demand communication and employee engagement rates.

This example sets up the multiple ways that AI can provide support in HR transactional work related to holidays, policy interpretation, benefits, and general HR administrative activities. This allows HR teams to focus on processes or practices that generate more value to people and the organization as a whole. Lastly, AI for HR can be used for more than just answering questions via chatbots—chatbots can be used to gather employee data to make more informed decisions and create more efficient processes that provide clear insights into the business.

AI HR Framework

The message is clear, AI can help eliminate repetitive tasks, accelerate the search for talent, transform the employee experience and provide people-related data to support business growth and innovation. Machine learning and chatbots will simulate human behavior to redesign HR delivery models and value propositions. AI reacts faster in reviewing and processing data that might otherwise take many hours if performed by employees or be neglected entirely. Machines can provide services 24 hours a day, 7 days a week, making HR more agile while supporting talent acquisition and allowing HR business partners to speedup HR transactional work.

AI means making an investment and assessing team skills, job design, processes, and structure to design and implement an AI HR strategy. This process starts with an HR capability map assessment to identify which processes will need to be transformed or enhanced with AI.

Furthermore, this technology is expensive and may require the right partnerships to be created across your organization to convince your CEO and C-Suite executives to make an investment in HR instead of marketing (to improve customer relations) or operations (to improve operational excellence).

However, I think there is an opportunity within the HR profession to build the business case and assess what the impacts and potential efficiencies are, and therefore what the cost savings are, in the long run, and how they are linked to business strategy.

Bottom line is that HR will be augmented with AI technology that can deliver and enhance better candidate and employee experience. CHROs and senior HR leaders need to create an HR framework to consider all the aspects described above in order to develop an AI strategy for HR. That strategy should have a clear outcome: support innovation capabilities and use agile practices to reflect and support the new era of "speed" results and business models. Lastly, keep in mind that we are not replacing the human component in HR, HR is adapting to this fourth industrial revolution, where customers, clients, and candidates are connected with one click.

4 Companies Where Robots Created New Jobs

HR Exchange Network

From the moment automation became a real possibility workers were concerned their jobs would be on the line. Those feelings continue if you consider some of the recent polling data on the subject.

According to the Pew Research Company, Americans don't like the look of the future when it comes to robotics. They are growing more concerned with the elimination of jobs as more robotic workers are 'hired' so to speak.

Pew asked respondents if they were more worried or optimistic about potential automation developments. Those included:

- Future where robots and computers can do many human jobs
- Development of algorithms that can evaluate and hire job candidates
- Development of driverless vehicles
- Development of robot caregivers for older adults

Looking at their data, respondents were more worried than enthusiastic about the first two situations, but that's not the case for the third and fourth scenarios as seen in the Pew diagram seen below.

More worry than optimism about potential developments in automation

% of U.S. adults who say they are enthusiastic or worried about ...
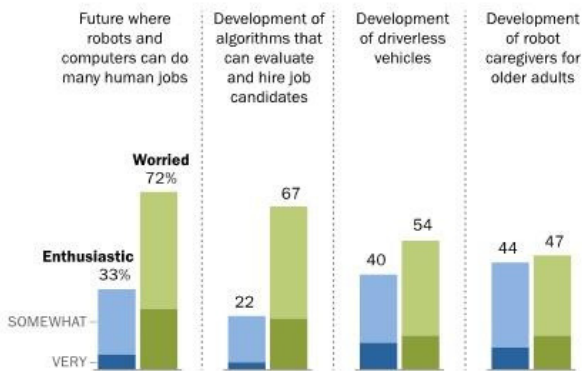
Note: Respondents who did not give an answer are not shown.
Source: Survey conducted May 1-15, 2017.
"Automation in Everyday Life"

PEW RESEARCH CENTER

Price Waterhouse Cooper says 38% of US jobs could be lost to automation by the early 2030s. The sectors most impacted: transportation and storage, manufacturing, and wholesale and resale. Health and social work sectors seem to be at a lower risk.

Not all studies, however, indicate dire news in automation.

The International Data Corporation, or IDC, reports spending on robotics will reach $135.4 billion by 2019. That's up a whopping $71 billion from just two years ago. $32 billion of that accounts for services in training, deployment, integration, and consulting. This translates to new jobs. To further drive this point home, in the United Kingdom automation has destroyed 800,000 lower-skilled service jobs over a 15 year period, but has created 3.5 million higher-skilled jobs in their place.

As noted previously, the question around automation has almost always been whether robots would be used to help workers or replace them. Today, the question is a bit more focused: in which industries will robots help both employer and employee?

According to the Wall Street Journal, the companies that can "assign repetitive, precise tasks to robots, freeing human workers to undertake creative, problem-solving duties that machines aren't very good at," will succeed in balancing the equation between man and machine. Furthermore, the article points out that manufacturing, the food service sector and service sectors will be best suited to accomplish this.

That number has risen to 10,000. The company says adding robots to do repetitive tasks has allowed human workers to heighten quality control inspections.

Robots, for instance, fit black, soundproofing rubber tubes to the inner rim of car doors. Humans do the final checks to make sure the tube was placed properly. Doing so has doubled annual car production at the plant.

3. Fiskars

In 2007, Fiskars employed 4,515 workers. That number has since risen to 8,560. Fiskars manufactures scissors. The company began using robots to increase its output at its Helsinki plant.

Originally, the plant forged steel blades by hand in 2,700-degree furnaces. Now, robots have taken over that task leaving humans to quality control and test the blades, specifically to make sure the blades make the right "snip" sound. If not, human workers can adjust the blades bit by bit, something the robots cannot do.

4. Electrolux

Electrolux increased its workforce by 2,000 between 2011 an 2017.

The company has automated production of washing machines and other devices. It has freed up technicians to spend more time on creative tasks that automation can't recreate. An Example would be designing and implementing changes to the factory floor and robot layout to increase efficiency. Electrolux has also tweaked its hiring and training practices to increase the number of employees able to successfully operate its robotic workforce.

When Robots Fail

While the above examples show ways in which automation has benefited a company, there are instances where automation has not been executed well.

Look no further than Tesla.

The company has been unable to balance its use of robotics at its Fremont, California plant. That's where the Model 3 car is produced. Tesla has automated welding, paint and body work processes, which is not unusual. What is unusual is the automation of final assembly work. Errors in that process have slowed down production of the car.

Elon Musk, Tesla's CEO, tweeted in response, "Yes, excessive automation at Tesla was a mistake... Humans are underrated."

FINAL THOUGHTS

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