Making Work Human: 5 Challenges

March 2019

AUTOMATION ANYWHERE
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WELCOME TO MAKING WORK HUMAN: 5 CHALLENGES

The advent of artificial intelligence (AI) has shown incredible promise across a wide range of industries. But the benefits of automation have mostly occurred through Robotic Process Automation (RPA), which automates repetitive, mundane tasks – liberating workers to focus on higher-level business initiatives that only humans are capable of providing. After successful trials in most of the world's largest organizations, automation and AI are poised to transform the global workplace. Making Work Human: 5 Challenges, commissioned by Automation Anywhere, seeks to uncover the main obstacles that organizations must now overcome in order to scale automation and AI, and recognize the true potential of these ground-breaking technologies.

In 2018, a team of researchers led by Dr Chris Brauer, Director of Innovation in the Institute of Management Studies (IMS) at Goldsmiths, University of London, set out to explore whether automation could make work more 'human'. Amid the raging debate on the jobs impact of automation, the academic team, supported by Automation Anywhere, investigated the real-life impact of automation on work. The resultant Augmented Human Enterprise study into the performance dynamics of people and automation technology, found that augmented workplaces score 33% higher on factors deemed to make a workplace more 'human'.

Automation can make work more human by allowing people to transfer simpler tasks and processes to machines, which frees up resources – time, money, effort, brainpower – to be reinvested in the human workforce, through skill development, learning new things, being creative, solving complex problems, spending more time interacting with customers and developing the business. All of this was found to positively contribute to greater job engagement and a healthier work-life balance.

The research found that the most successful organizations bring their people with them on the augmentation journey. These organizations simultaneously optimize and gain efficiency through investments in artificial intelligence (AI) and robotic process automation (RPA) technologies, while making work human for their people through progressive strategies around employee engagement, ethics, mindset, and learning. According to the report, augmented companies enjoy 28% better performance levels compared to their competition.

But these were the best-case scenarios – the idealized opportunity for automation and AI in the workplace based on those firms 'getting it right'. However, even for these companies, blazing a trail in this new technological sphere, the path was beset with pitfalls. What can we learn from those early adopters? What challenges did they face in building successful trials and proven use cases for RPA or AI? And as they now move to scaling the technology across the organization, what obstacles will they need to clear to recognize its full potential?

And be in no doubt that the potential exists. The advent of artificial intelligence (AI) has shown incredible promise in a wide range of industries, including medicine (AI diagnostic tools and robot-assisted surgery), finance (trend forecasting and accounting), customer service (chatbots and product recommendation engines), and transportation (self-driving cars, advanced safety features).

To date, however, the benefits of automation have mostly occurred through RPA, which is focused on "removing repetitive tasks from humans and allowing employees to focus on their 'human strengths', including emotional intelligence, reasoning, judgment [and] creativity"[1]. When properly implemented, RPA has resulted in "both significantly better ROI and operational efficiencies, but also marked improvement in strategic areas such as customer experience"[2].

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> We commissioned this research to gain a deeper understanding of the practical considerations in scaling automation and AI – for our customers, for our partners, and for ourselves. It was crucial we included the voice of workers in the research – employees around the world, who will be the most impacted by the new technology, but also have the most to gain by its presence. From skills to diversity to authenticity, it's important that as a sector, we continue to question and debate these challenging issues, to promote the responsible and ethical development of automation."
>
> Mihir Shukla, CEO and Co-Founder of Automation Anywhere

RPA is rapidly driving automation capability way ahead of traditional IT, as it operates across multiple systems, extracting information from one program and applying it to another. This gives it the potential to adapt quickly to changing circumstance and learn accordingly. The ability to deliver results with high precision has made the technology increasingly popular among both multinational[3] organizations and small- and medium-sized enterprises[4], with 92% of European firms expected to adopt some form of RPA by 2020[5]. Perhaps not surprising, then, that a sector valued at $357.5 million in 2017 hit $1.7 billion[6] in 2018, and analysts estimate the global RPA sector to reach $8.6 billion by 2023[7].

But as Theodore Roosevelt is quoted as saying: "Nothing in the world is worth having or worth doing unless it means effort, pain, difficulty." This next phase of our research, commissioned by Automation Anywhere, and again led by Dr Brauer and Dr Jennifer Barth, seeks to **identify the challenges to making work human through automation and AI**. We set out to identify the primary challenges and opportunities organizations face in pursuing this goal both in relation to performance and to making work more human. In particular, how do you scale your technological automation while simultaneously conscientiously augmenting your organization?

Much of the previous research isolates the various dimensions – ROI is separate from the engagement of workers, for example. This new research suggests that it is the integrated approach of thinking holistically about the technological change – as organizational change – that allows the organization to achieve its full potential performance.

To augment is a continuous journey. We have identified 5 distinct challenges relating to: Technology, Skills, Diversity, Authenticity and Resilience. But there is a relationship among these challenges that must come together. Like all great tech developments in history, addressing these 5 challenges allows for the balance required for the successful integration of augmentation into our lives.

In these pages, we treat each of these challenges in turn, exploring the obstacles that must be overcome, and the actions that your organization can take today to achieve augmentation in a scalable way. We'll hear along the way from buyers and early-adopters of RPA that have faced down these challenges, as well as renowned global subject matter experts, while leaning on the latest published literature on the topic. But, perhaps most importantly, we'll also hear from workers – employees around the world, who will be the most impacted by the new technology, but also have the most to gain from its presence.

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CHALLENGE 1: TECHNOLOGY

Automation is poised to hit the mainstream, but many businesses are still experimenting. According to a recent European study, only 58% of companies in that region are in the intermediate or advanced phases of their RPA integration. But by 2020 that is expected to increase by 16%, as more companies continue to scale up to enterprise-level implementation of their RPA journey[1].

When it comes to AI, meanwhile, the promise is big, but the uptake remains small. PwC's 2019 Annual Global CEO survey found that 63% of CEOs surveyed globally said AI will have a larger impact than the internet revolution on their business, but only 3% have implemented it at "fundamentally operational" scale across their company[2].

"Clearly there's lots of proofs-of-concept happening at a very low level," explains Rob McCargow, Director of Artificial Intelligence, PwC UK, "but it's not really reaching industrial scale yet."

The challenge to scaling automation or AI across an organization is not the difficulty of bringing in the technology itself, it's thinking more holistically about the organization as a culture that needs to adapt and support changes to its working environment.

> If you approach augmentation from a technology perspective you could end up automating a part of what you are currently doing, but still not end up with the most optimal result – you have to look at the end-to-end process alongside the people."
>
> Sultan Mahmood, Intelligent EMEA Automation Leader, PwC (SME)

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The challenge of scalability requires that you build a culture that can evolve as the technology evolves.

Our research indicates three important facets to this challenge:

1. AN AUGMENTATION-READY CULTURE AND WORKFORCE

Just 38% of workers we surveyed currently use automation technology to perform some of the tasks in their role. Importantly, workers across all regions believe that opportunities to work with AI and automation technologies such as RPA will increase their productivity (see **Table 1** below).

But to what extent are businesses readying their employees for this opportunity? "Very few companies are embarking on an upskilling program alongside an automation program in a scalable way," reports Sultan Mahmood, Intelligent Automation Leader, PwC. "We are still seeing automation projects being led by departments or functional areas in a way which is not connected with the rest of the enterprise."

When it comes to harnessing the more complex potential of AI, skills shortages are also a limiting factor. In the UK, for instance, companies note that highly skilled AI professionals - with advanced degrees in the subject - are hard to find and expensive to hire, driving up the cost of adoption and slowing technological advancement, even for companies ready to make the leap[3].

2. STRATEGIC THINKING ABOUT THE BUSINESS CASE AND BOARD LEVEL BUY IN

A lot of automation projects start as a centrally-led initiative for a particular use case, deliver that, and struggle to scale up.

As Sultan Mahmood explains: "Automation and AI initiatives should not be thought of as just a technology play and therefore to get the best results you have to understand the connections between people, process, technology and digital workers. If you approach automation from a narrow perspective you might end up with a failed automation, or automate only a part of what you're currently doing. Therefore, you've got to look at the end to end customer journeys, current processes, human behaviour and deliver a process that is reengineered and optimized for the combination of human workers and digital workers."

Our research pointed to the importance of projects being driven at board level, but this often fails to be the case. "There can be a big disconnect between the board level executives who will say 'we need to deliver transformational change enabled by automation', however the project itself is being delivered or led at lower level without appropriate governance making it very difficult for the project to deliver transformational results" continues Sultan Mahmood.

As recently as 2017 a Deloitte survey of senior executives found that only 17% of them were familiar with both the concept of AI and its applications at their companies[4]. Overall, the 2018 Deloitte Global Human Capital Trends survey identified a current "readiness gap" between the 72% of respondents who now consider the technology important and the 31% who feel ready to adopt it[5].

Table 1: Employee productivity potential of AI and RPA

	NET AGREE					NET DISAGREE				
	ALL	UK	USA	Japan	India	ALL	UK	USA	Japan	India
My productivity would increase in the long run if my organization provided more opportunities to trail and error different types of AI/RPA in my work	57%	40%	67%	37%	87%	16%	25%	13%	24%	4%

3. HARNESSING THE TECHNOLOGY ITSELF, AND BUILDING ITS ETHICAL GOVERNANCE

Part of the challenge of scaling up is using automation to make sense of the vast and varied data now available to businesses. An insurance company RPA buyer described the challenge: "We're used to looking at a snapshot of a company's data every 12 months – so with new data and new information comes new challenges and the insurance industry has to move itself in order to be able to gain the value."

Commonly reported by buyers of automation technology was the challenge to build the right framework and relationship with the existing IT organization from the offset. "We had to help IT to understand that they can help the company a lot more [with automation technology] if they can do things quick, such as this [specific] implementation, and then you're able to scale up," said one buyer charged with championing automation in their business.

Understanding the capabilities and limitations of the chosen automation technology in working with existing IT systems is also a key factor – to be clear on what is and isn't possible. "There's lots of hype out there people are reading, but they basically want to see something up and running and working," says David Martin, Consultancy Director, Ether Solutions. "In our experience, most people don't even think about scaling until they've got at least a couple of projects underway. We're only just seeing that emerging now."

Finally, in the case of AI, businesses also need to be able to trust the technology in order to scale. This requires development of a new global governance framework, including consideration for the ethical use of AI, for any potential bias in datasets that can lead to discriminatory outcomes for customers, and for the evolving regulatory environment – all cited as challenges that organizations are grappling with.

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WHAT HAPPENS IF WE DO NOTHING?

Short term tech-focused vision will keep organizations stuck in small scale use-cases without looking at the big picture.

SO WHAT SHOULD WE DO RIGHT NOW?

ACTION 1: RUN IN PARALLEL

Start small and build a foundation

RPA runs on top of existing information systems, enabling lightweight implementation that almost immediately begins to achieve ROI without changing the IT backend. However, building a foundation for augmentation means thinking about the organization as a whole and then finding use cases to run the new systems at the same time as keeping the traditional methods in place.

When people begin to feel the efficiency of the augmentation, start to phase out the traditional approach. Once organizations have some success with RPA implementation they report "the pride of optimization" that permeates the team involved. Sort your business problems into three buckets: simple, more complex, and innovation focused – so you have a scalable plan. One buyer who was an early adopter said: "We are optimizing processes or parts of processes and not tasks."

Have each employee perform an audit of all the tasks and processes they perform in a normal workweek. Along with their direct manager and someone from your automation team (if you have one--you may want to involve your RPA vendor as well), review this list of tasks and processes and identify which are potentially candidates for RPA. This can range from simple, manual work to back-end and even front-end processes.

Revamp Your IT Organization

"IIt's funny, we've re-engineered every other corporate department, every other function over the years, except for IT" wrote journalist Dan Patterson in 2018[1]. Legacy systems, entrenched procedures, siloed information and communication systems – all these need to be reconsidered, rebuilt and optimized. Predictions suggest that 40% of companies will have automation centers in the near future[2]. Without solid IT practices, systems and policies in place now, you won't be able to make the leap.

Audit Your Data: Better Data = Better Solutions

If your data isn't sound or comprehensive, your AI simply won't work. Are your datasets sufficient? Relevant? Do you have data access policies in place? How are you protecting customer information (and your liability)?

ACTION 2: ACT LIKE A START-UP

Start-ups serve to test a new idea and find out if it can create and deliver the value its founding entrepreneurs conceived. This involves a lot of fast learning on the fly, a good approach for moving into uncharted territory. By creating a small internal start-up, this new unit is unburdened from the procedures and risk-checking that comes with formal oversight, and free to dedicate its focus on the experimentation needed to test the new idea. "We acted like a startup – so it was quite fun, and it was quite inspiring to work as one of the early adopters of RPA," reported one buyer.

Get lean - consider implementing lean management within your RPA or AI team. "The most successful way to build lasting automation capabilities is through a learn-by-doing approach that combines coaching, on-the-job training, and knowledge sharing. To capture value at enterprise scale, organizations need people with deep skills in process automation, process redesign, and lean principles as well as domain expertise. Technology skills alone will not be sufficient," advises one experienced RPA buyer.

CHALLENGE 2: SKILLS

Current thinking suggests that automation will likely replace 58% of work activities and 30% of tasks, but only 5% of jobs in their entirety[1]. The workforce of the future will increasingly work with automation, rather than be replaced by it. As more jobs become supported by automation, the culture of the organization will need to change. We need to start thinking now about implications for hiring, reskilling, upskilling, lifelong learning, and reorganizing the way we think about jobs.

A new vision is emerging, one in which computer networking and automation and AI technology create a connected and blended workforce, a functional ecosystem which frees up human workers to concentrate on creativity, strategy and communication. Concerns in this area stem largely from a growing disconnect between the types of skills workers currently maintain and the broader, more empathic skills they will need in order to flourish in the coming years. How to integrate emerging technologies with an existing workforce is a challenge that must be solved. Automation and AI not only stands to change how individuals perform their jobs, but will transform the behavior of the organization as a whole.

> If people know this tech through fear then it becomes a real threat to them, but most people start to realize actually it automates some of their activity, not all of their activity."
>
> David Martin, Consultancy Director, Ether Solutions

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The challenge of augmentation is to optimize human skills in collaboration with automation technologies

Automation and AI impact the workplace in two fundamental ways. First, they alter the way we work, alleviating or replacing many repetitive tasks and allowing us to concentrate on more human pursuits. Second, they directly impact the HR process, changing the way people are hired, engaged within the company and managed. Within the existing workforce, upskilling and skills transfer will become paramount to remain relevant as these technologies begin to scale.

The World Economic Forum believes new technology will create twice as many job opportunities as are lost. However, the new jobs are likely to require very different skills and we're likely to see a time lag between the new jobs being created and the old jobs being lost. In their 2018 report, Will robots really steal our jobs?, PwC predicts: "By the mid-2030s, up to 30% of jobs could be automatable" while simultaneously there will be growth in so-called "low automatability" sectors such as human health, social work and education as these jobs require social skills, empathy and creativity, which are far more difficult to directly replace by a machine[2]. However, this will require a commitment from organizations to "demonstrate that there's access to training and development to give people the ability to be prepared and 'future-proofed' against change," said Rob McCargow.

Rob continues: "By 2030, AI can add an additional $15.7 trillion to the global economy GDP... If you can then transform the approach that companies take to upskilling, to embedding lifelong learning, to thinking about changes in policy level by governments, to adaptation to the education system—we believe that you can net off the job automation with job creation. Therefore, there's a huge opportunity for companies and governments to build in their approach to lifelong learning."

The data we gathered among employees around the world shed an interesting worker perspective on the issue. Despite a pervasive narrative of job loss fears, workers themselves believe that they are more likely to work with automation and AI technologies than to be replaced by them. While this decreases slightly over time, this openness to working with technology provides an opportunity for decision makers to introduce or extend RPA and AI implementation. Workers also express high levels of curiosity as to how AI can help them do their job (see **Table 2** below).

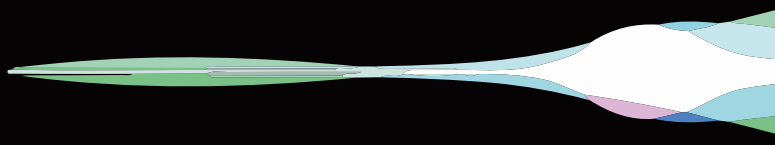

Table 2: Impact of automation and AI on the workforce

	NET AGREE				
	ALL	UK	USA	Japan	India
I currently see technology as something I work with, rather than something that will replace me as a worker	**72%**	**71%**	**82%**	**49%**	**88%**
In the short term (1-3 years), I see technology as something I work with, rather than something that will replace me as a worker	**70%**	**67%**	**77%**	**52%**	**82%**
In the long term (4-6 years), I see technology as something I work with, rather than something that will replace me as a worker	**65%**	**62%**	**73%**	**44%**	**79%**
I want to know more about how AI can help me do my job	**66%**	**45%**	**76%**	**52%**	**90%**

Asked what they would do with their extra time at work if some of their tasks were automated, 40% of employees said they would pursue opportunities to learn new skills and knowledge, followed closely (at 38%) by experimenting with new ideas and tools, indicating a desire to upskill or reskill and to work differently. Interestingly, taking the opportunity to be more creative ranked lower. At just 26%, it was the second lowest score across all respondents. Connect that to the fact that just 4% of work activities in the US economy currently require creativity at a median human level performance[1], the research suggests there may be better opportunities found in the 'top-up time' made available by automation in the near term, despite widespread debate on the opportunity for increased creativity.

But right here and now, greater transparency regarding the technology and what it can and can't do is clearly needed. One buyer describes the first impressions encountered when introducing RPA: "First of all...they thought RPA was something like a human bot who was walking through our offices and sits next to a plug in! I told them 'It's something different, it's software that works like an employee'... We had a lot of meetings with [employees] to tell them what RPA is and where RPA can help." As David Martin, Consultancy Director, Ether Solutions comments: "If people know this tech through fear then it becomes a real threat to them, but most people start to realize actually it automates some of their activity, not all of their activity."

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WHAT HAPPENS IF WE DO NOTHING?

By optimizing for immediate productivity gains without creating a culture of support and learning, organizations will see momentary increases in efficiency without long-term performance sustainability.

SO WHAT SHOULD WE DO RIGHT NOW?

ACTION 1: PROTECT PEOPLE, NOT JOBS

The nature of responsibility is changing. As the duty of certain tasks moves from the human to the automated system, it becomes the responsibility of the human to oversee the system. As algorithms are unable to conceptualize in a general context, human oversight remains critical. Empower employees to rewrite their job descriptions to reflect this new responsibility, and to decide how they will use any time freed by the absence of repetitive tasks. Place individual employees in the driver's seat as it becomes clear which skills will be needed to satisfy the responsibilities of their role in the future.

Support incumbent employees in acquiring skills that allow them to perform machine oversight, as every role becomes managerial to some extent. And when hiring, seek candidates with the skills needed to perform the duties of these evolved roles. The former can be achieved through transparency of intent and establishing an internal Center of Excellence (see below), the latter by rethinking hiring strategies. Rob McCargow comments: "Organizations that will position themselves for success... are the ones that can own the narrative around automation. To be really clear about the fact that change is going to come, it's going to be a sizeable change, but that they are not in a position to protect jobs – because jobs have always changed and jobs will continue to change – but they can protect people."

ACTION 2: SET UP A CENTER OF EXCELLENCE

Establish an internal Center of Excellence (CoE) dedicated to reskilling your workforce and supporting their needs involving RPA and AI technologies. With the support of your technology vendors, this dedicated unit should develop a knowledge base and library of reusable solutions, accessible company-wide. People are eager to learn – 66% of employees we surveyed agreed they want to know more about how AI can help them do their job. The CoE will serve as a vital educational resource and raise the collective awareness of automation technology within the organization. One RPA buyer described their company's CoE: "We have IT... we have the RPA team in there and also the top management, and the [people] who are making our internal systems. We have steering committees for them and we explain to them what we did with a bot and how it is interacting with our internal systems and we're really talking a lot with each other. I think that helps."

Dispatch teachers from the CoE to introduce and showcase RPA or AI technology to each department. Field questions and quickly dispel misinformation about the technology that could lead to greater confusion or problems down the line. "We did a roadshow within the company. We did movies of the bots running in the project... We told them the story about what RPA is and how RPA can help them in their departments," described one RPA buyer.

Finally, expand your conversation externally. "To make work a place where people want to learn," MIT reports[2], "many companies are encouraging employees to participate in platforms and communities where they can share ideas with and learn new skills from experts in other organizations." This inter-company learning can be a tremendous resource, the absence of which was lamented by early adopters of RPA that we spoke to: "It wasn't that easy because we had no one to talk to [in 2016]. That was a little bit difficult because all these things we thought about, we had to handle ourselves."

CHALLENGE 3: DIVERSITY

Radical societal change brings with it a fundamental shift in trust. Automation and, especially, AI come with a unique set of trust issues: not only is the technology new, but it promises to disrupt nearly every existing industry.

From a diversity standpoint, AI can have an impact on both the practitioners creating and using the technology and the people affected by the data and algorithms generated. The World Economic Forum recently reported that only 22% of global AI professionals are female and they note this gap has "remained constant over the past years" even as "AI encompasses an increasingly in-demand skillset"[1]. The report warned that algorithms and biased data may provide avenues that disproportionately affect women, those less able, the vulnerable, lower income brackets and others.

IIf certain demographic groups aren't present in a data set, for example, they won't be selected by the algorithm going forward. Or if a data set is overweighed with one kind of population sample, then bias will likely be present[2].

> "I think it's changing for women in tech roles who deal with automation. Many of these women also have busy family lives, they are well-equipped for it, as the importance of being adaptive and able to handle change becomes more and more apparent."
>
> RPA lead at a major financial services firm, reflecting on her own experiences

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The challenge of diversity is to trust in an organizational balance between values and value

In particular, women are disproportionately affected by automation. Contrary to popular belief, the segmentation of women out of the IT industry is new, not traditional. Early on, whole sections of computing were considered by 20th century cultural norms to be 'women's work', akin to secretarial or data-entry roles. Today, both education and the tech sector struggle to regain gender parity. Only 27% of female students they surveyed said they would consider a career in technology, compared to 61% of males, and that only 3% of females said it would be their first choice. More than three quarters (78%) of students surveyed could not name a famous woman working in technology, compared to two thirds that could name a famous man working in technology[3].

Solving the lack of diversity issue in technology, and in augmentation in particular, also has major economic repercussions for "those who were left behind by such fast-moving technological developments in the past: minorities, women, working mothers, disabled persons"[4]. The gender gap in particular is also compounded by the prevailing tendency to overlook women for senior roles or to provide them with opportunities where they might acquire cutting-edge skills[5]. Even at base technology levels, only 40% of female AI specialists have machine learning skills, compared to 47% of their male counterparts[6].

Despite the challenges and risks, AI-enablement offers considerable, transformative rewards for those who walk the path. Conversely, those who lag due to fear or uncertainty will be left behind or rendered obsolete. The stakes remain exceptionally high. Already, consumer attitudes toward an organization's social citizenship are closely linked to its success. Engagement on topics such as diversity, gender pay equity, income inequality, immigration, and climate change can lift financial performance and brand value, while failure to engage can destroy reputation and alienate key audiences[7].

Ultimately, the interpersonal connectivity demanded by AI will compel businesses to humanize their workplace in order to succeed. Social responsibility ties into this trend as "human capital is inextricably tied to social capital"[8] and both are tied to consumer brand loyalty and the business' bottom line. Emotional and psychological factors come into play, as there is a direct negative correlation between welfare indicators and economic growth[9].

Table 3: Gender and skills in the workplace

	NET AGREE		
	FEMALE	MALE	DIFFERENCE
I take advantage of re-skilling/skill development trainings offered by my employer	**60.7%**	**56.9%**	**3.8%**
I am encouraged by my organization to explore new ideas at work	**61.8%**	**62.8%**	**-1.0%**
I have participated in trials of automation technology at my workplace	**35.2%**	**41.1%**	**-6.0%**
My productivity would increase in the long run if my organization provided more opportunities to trial and error different types of AI/RPA in my work	**54.5%**	**59.5%**	**-5.0%**
I welcome the opportunity to experiment with new automation technologies	**60.8%**	**65.6%**	**-4.8%**

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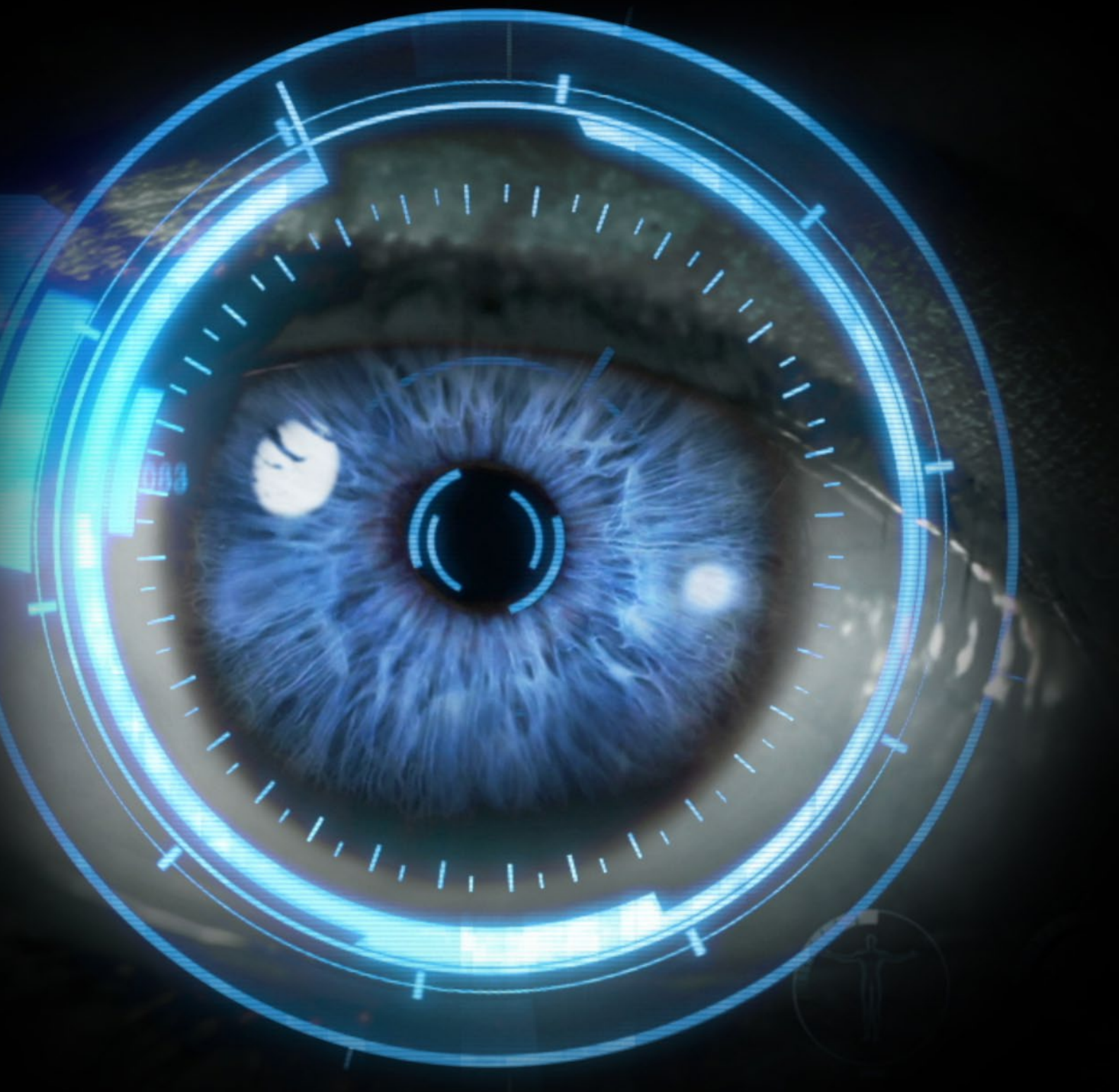
Comparing net agreement response rates between women and men across the survey, females lead significantly in one area: their willingness to take advantage of skill development trainings however they feel slightly less encouraged by their organization to explore new ideas than men did. Women were slightly ahead of men in their estimation that empathy and emotional intelligence will be beneficial skills in the automated workplace of the future, but slightly fewer women than men agreed that technical skills will be useful.

However, women indicated less experimentation with automation technology, both in trials (6% fewer women than men have participated in workplace trials) and the perceived value of these trials (5% fewer women than men indicated workplace trails of AI/RPA would help their productivity), as well as their baseline willingness to experiment with automation technology (4.8% fewer women than men indicated they welcome such experimentation).



WHAT HAPPENS IF WE DO NOTHING?

Lack of diversity fosters biases and constrains the innovation, problem solving , and overall experience of the organization.

SO WHAT SHOULD WE DO RIGHT NOW?

ACTION 1: CREATE PROGRAMS TO ATTRACT DIVERSE TALENT POOLS

If you want a diverse workforce you need to build a diverse workforce. It won't happen by accident or good intent alone. Build a workforce with resilience and a growth mindset, focusing on diverse minds rather than only skills and capabilities. Build internships to promote learning, ensure development opportunities, and address the hiring gap now.

ACTION 2: AUGMENT HR WITH TECHNOLOGY

Today's organizations are struggling to adapt to a growing temporary and contract workforce, and accommodate both remote and international workers, necessitating a whole new approach to the employee-employer relationship, recruitment, retention, and human resource management. AI is now a critical use-case for HR to infuse talent management decision making and to drive business performance. It is also key to take HR analytics from the periphery to the center of talent decision making and drive business performance.

Leverage new HR models to access non-traditional talent pools. To address the diversity gap, organizations need to rethink HR to ensure diverse hiring practices, fair and equitable development and promotion opportunities, manage the potential of algorithmic bias in new automated systems and understand the bias of the organization as a whole.

CHALLENGE 4: AUTHENTICITY

Gartner analysts consider AI mischaracterization to be one of the top three problems that are impeding real development and adoption of artificial intelligence technology[1]. They also report over 1,000 businesses declare their products to be AI driven[2], but MIT Sloan Management Group reports that fewer than 39% of companies globally have an AI strategy at all, and "only one in 20 companies have incorporated AI into their offerings or processes in any significant way."[3]

Many companies claim to be using RPA or AI in some capacity, but how are they communicating its use to their customers and internally to their workers? Gartner reports the term "artificial intelligence" did not even appear in their top 100 search terms in January 2016. By May 2017, it ranked number 7.

Further, "Gartner predicts that by 2020, AI will be a top five investment priority for more than 30 percent of CIOs"[4]. This rapid focus on the technology will inevitably lend itself to problems as companies rush to capitalize on the potential.

This hype cycle can lead to over-exaggerated marketing claims and overpromised development results, a phenomenon currently referred to as 'AI washing'. The issue is to promote authentic engagement and motivation across an organization by building real and valuable relationships and not overpromising to customers or to employees.

> "Ethical requirements and governance are certainly creating much more scrutiny, lots more attention from across all parts of senior management. It's not necessarily slowing down AI implementation but it's bringing much more cross-functional participation. I believe the demand for education, insight and assurance is only a healthy thing."
>
> Rob McCargow, Director of Artificial Intelligence, PwC UK

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The challenge of authenticity is living your ethics inside and out of your organization

Innovation is only possible with the buy-in and support of leadership, the employees tasked with developing it, and the people who will be impacted once the process is complete. As we understand from the earlier challenges, augmentation is not just about new technology, it is about changing the organizational culture. In today's work environment, authenticity is highly valued. Motivating the workforce by ensuring trust, authenticity and transparency is of paramount importance at a time when that change can be so difficult to understand.

Organizations that foster collaboration, invite employees to participate in the discovery and planning stages and offer them sufficient support, both educational and interpersonal, will be able to cultivate an engaged, effective workforce[5]. Understanding that innovation requires considerable creativity and specialized problem-solving skills will help leaders learn where to channel their efforts. The good news is that as automation and AI services become more functional, workers performing increasingly abstract tasks will find themselves supported, even without leadership intervention[6]. The results of the multi-region research here suggest just such a movement – where workers are ready to embrace the challenges of change.

Amidst growing anxiety and fear that AI/automation will replace humans at work, the challenge is to not only upskill/reskill and maintain space for humans, but also to ensure that the introduction of automation actually increases motivation and engagement among workers. In its most basic set of indications from psychology, motivation is a mix of vigor, energy and absorption. Can we ensure job satisfaction and opportunities to learn and grow in our organizations? This needs to be coupled with a clear sense of understanding among workers of the direction the organization is going in and its commitment to transparent and authentic change management that increases innovation and openness.

"You've got to be a bit careful, there's always this thing about the hype wave and the things that people are doing that get relabeled into different growth categories... and you get a lot of different definitions about what AI is," said David Martin, Consultancy Director, Ether Solutions.

Table 4: AI skepticism

	NET AGREE				
	ALL	UK	USA	Japan	India
I am skeptical when an oranization claims their product/service has AI capabilities	53%	46%	60%	35%	69%
I feel like a lot of people are talking about AI and yet nobody seems to know what it is	57%	45%	64%	43%	76%

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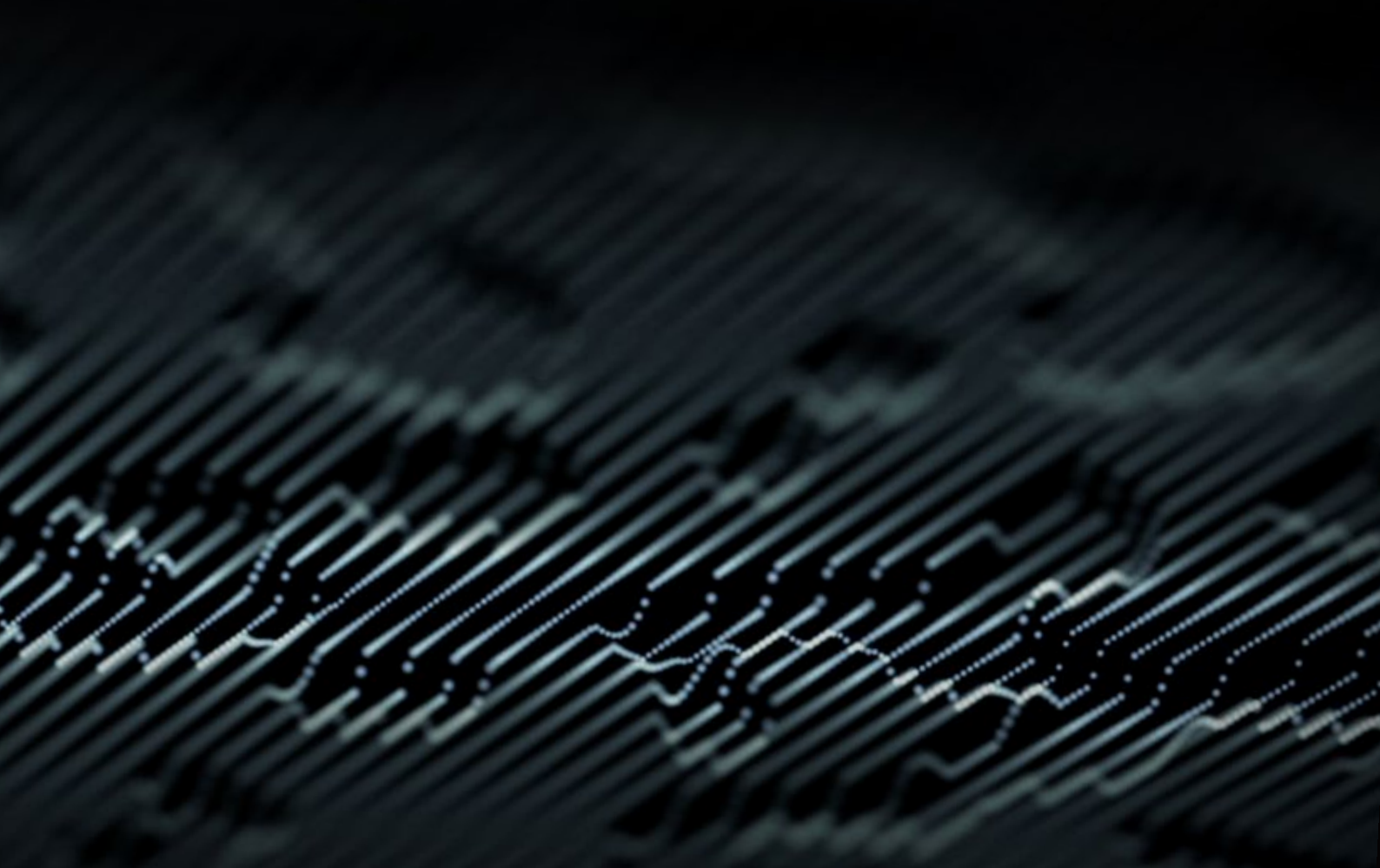
Recent research by an investment firm in London looked at 2,830 European companies that claim to make use of AI. "Yet only 60% of these companies were able to produce evidence of AI material to their value proposition."[1] Workers echo this kind of discrepancy, with many (53%) agreeing that they are skeptical when an organization claims their product/service has AI capabilities. Part of the problem may be a lack of understanding as to what AI actually is – 57% of all respondents across all regions agreed that a lot of people are talking about AI and yet no one seems to know what it is.

Pride in one's work is a good indicator of job engagement and satisfaction, and in the context of AI washing could factor into the collective psychology of authenticity within a given organization. Employees who are proud of their work also generally trust their organizations to be honest about AI in products and transparent about changes caused by AI implementations.

Table 6: AI inside of one's own organization

	NET AGREE				
	ALL	UK	USA	Japan	India
My organization is transparent about changes that happen in my workplace that are the result of implementing automation	54%	41%	70%	18%	85%
I trust my organization to introduce new technology to our workplace that is actually useful	61%	51%	77%	29%	86%
My organization adds AI functionality only if it will make a useful contribution to our products and services	56%	41%	68%	35%	81%



WHAT HAPPENS IF WE DO NOTHING?

The more worker and customer trust is betrayed, the harder it will be to market the technologies and realize the real value in the long run.

SO WHAT SHOULD WE DO RIGHT NOW?

ACTION 1: INSIDE OUT RESPONSIBILITY

Just be clear

Gartner advises, "focus on building a collection of case studies with quantifiable results achieved using AI,"[2] and notes that AI washing can be combated by sticking with simple solutions to basic problems and building AI expertise over time. Not only is this approach easier to deliver, but guarantees immediate ROI.

It's important to show this level of clarity because you care about people's interests, not just because you need to be perceived as caring about people's interests. Additionally, a business shouldn't make claims about their use of AI to come off contemporary if people later find out that you don't use AI at all.

Be a leader in creating ethical guidelines for your company

""[Ethical requirements and governance are] certainly creating much more scrutiny, lots more attention from across all parts of senior management. Interestingly it's not the preserve solely of the CIO or the CTO. What we're finding is that this is often on the agenda for the human resource directors, the chief marketing officers, and in-house counsel amongst others. It's not necessarily slowing down AI implementation but it's bringing much more cross-functional participation. I believe that the increasing demand for education, insight and assurance is only a healthy thing," Rob McCargow, Director of Artificial Intelligence, PwC UK told us.

ACTION 2: WHAT DO YOU DO AS A BUSINESS SO YOU DON'T GET ACCUSED OF AI WASHING?

- If you don't want to be accused of it, don't do it – it might mean that the features you introduce are small.
- Be honest - do not exaggerate claims of automation or AI functionality in your products & services
- Offer proof - provide concrete numbers and records demonstrating how you use AI, including what datasets are used to train machine learning algorithms
- Demonstrate governance – adhere to regulation and be transparent about internal policies, procedures, and code of conduct for the ethical and honest use of automation and AI. Periodically report the status of automation in your organization and how it measures up to the rest of your operating environment.
- Use clear language – avoid overly buzzword heavy marketing, and don't use wording that blurs or confuses meanings. Clarity around terminology and AI capabilities is also critical.
- Trade in utility, not hype – organizations can help mitigate AI washing by stepping away from the hype cycle and ensuring their products are both effective and necessary.

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CHALLENGE 5: RESILIENCE

A survey in 2010 of more than 1,000 employers in the UK found that 9 out of 10 leaders would hire someone with the right attitude more than those with better skills[1]. Current leadership thinking from the World Economic Forum echoes this message, suggesting the right attitude coming from leaders is more important than intelligence[2]. Resilience allows employees to come along for the journey and to focus on learning rather than a specific outcome or goal.

The World Economic Forum believes new technology will create twice as many job opportunities as are lost[3]. These new jobs are likely to require very different skills (typically people-centered ones). Taken together, those with the right attitude can be given the opportunity to re-skill and up-skill in an automated world. In its 2014 study on the future of work, the UK Commission for Employment and Skills found that "in future, new attitudes and behaviors will be needed, founded on flexibility, resilience, collaboration, enterprise and creativity. Above all the ability to respond to change will be critical."[4]

> My employees have to be flexible in their thinking... They have to be open minded in everything we do, and that's what I'm telling them all day long, break your old mindset, try to open your mind... It's absolutely necessary for us to think open-minded."
>
> RPA buyer at a major financial services group

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The challenge is to promote dynamism – an innovative organization capable of responding to change

To be augmented you have to think augmented. It is a journey and a constant process of change.

"I think it's extremely necessary to 'overthink' what kind of skills you need to do your job well," said one RPA buyer. "We didn't change the skills for our IT guys, we are [just] starting to do that now. But we were working on mindset where the people here understand that it's necessary to understand IT tactics to do the job. My guys here are all process managers. They've never had something to do with IT or started with IT. I have guys here who are able to build bots and they understand the coding, they understand structured data and unstructured data and how to work with them. I think this change in skills is necessary for the people... When we hire juniors they don't need to be IT guys, but they have to be familiar with digitalization topics."

The results from the table below indicate respondents are in solid agreement that their organizations support risk, experimentation, and trying new ideas. However, when asked if this support has extended to being asked what tasks should be automated and being given opportunities to trial automation, there is a drop off, as the figures in **Table 7** demonstrate.

Augmentation frees up human time to perform higher order activities through enhancing and amplifying human capabilities but so far we have not been completely successful in knowing what soft or technical skills will be required. What we do know is that change will happen and humans will have to respond - so without focus on having the right mindset we risk training and re-skilling for the wrong jobs.

Table 7: Employees at organizations supporting experimentation and automation

	NET AGREE				
	ALL	UK	USA	Japan	India
I feel supported by my organization to take risks in my work	58%	46%	70%	36%	83%
I am encouraged by my organization to explore new ideas at work	62%	53%	75%	37%	85%
At my organization unsuccessful projects are considered learning experiences	57%	49%	71%	32%	78%
I have been asked to identify the tasks that could be automated in my role	39%	22%	48%	13%	71%
I have participated in trials of automation technology at my workplace	39%	21%	51%	12%	71%

WHAT HAPPENS IF WE DO NOTHING?

Without embracing change, you can't evolve your technology, your skills, your diversity or your authenticity.

SO WHAT SHOULD WE DO RIGHT NOW?

SOLUTION 1: EVERY WORKER NEEDS TO RIDE THE LEARNING WAVE - AND DELIVER GROWTH MINDSET WORKSHOPS

What's clear is that people are going to need to continue to learn throughout their lifetime. The idea that you get an education when you're young and then you stop and you go and work for 40-50 years – that's over. All of us are going to have to continue to adapt, get new skills, and possibly go back for different types of training and credentials.

The learning wave suggests three steps in learning: wonder, discover and apply. This process matches the same S-curve trend of technology as beginning, growing, maturing and declining. It is just within the growth stage of one technological implementation that we must already be innovating for the next technological transformation. The same is true for learning on the job – it's a learning journey.

Achieving a dynamic workforce that can handle change depends largely on what Carol Dweck terms "growth mindset," the notion that intelligence growth and talent are learnable and achievable. Agility and the constant technological "maturation" process associated with digital transformation require flexible thinking to thrive in a constantly changing environment. Agility not only predicts change, it expects it, because technology changes. So, workers must adapt and be resilient. Technology is seen as a facilitator as well as a measure of individualized change management.

SOLUTION 2: SCREEN EMPLOYEES FOR LIKELIHOOD TO CHANGE

Customize workplace interventions for solids (high resistance to change), liquids (medium resistance to change) and gases (low resistance to change) - this means understanding initially who in the organization has high and low resistance to change so that learning and skilling projects can be organized and delivered accordingly.

How AI and automation are handled is critical, not only because social pressure demands it, but because humane implementation is critical for AI and automation to make a meaningful impact on productivity. Other considerations that must be taken into account: decentralized workforce (who is touching the data? Where? What happens to their access when they leave?), decentralized office structures (what third party systems does the data pass through? Are they secure? Is the data protected?), are your AI and automation systems auditable? How are they being monitored to ensure systems are working according to design? Successful automation adopters take a participative and collaborative approach, and enable quick decision making to facilitate speed and scale.

With RPA, we see an example of the need to break down internal business silos and communication between business areas. Companies that attempt the process without companywide buy-in and collaboration waste valuable company resources and fail to benefit as they should. Thus, not only does RPA enable employees to function in a more personable, collaborative space after the fact, the sheer act of integrating pushes the entire company workforce to break down walls and communicate better.

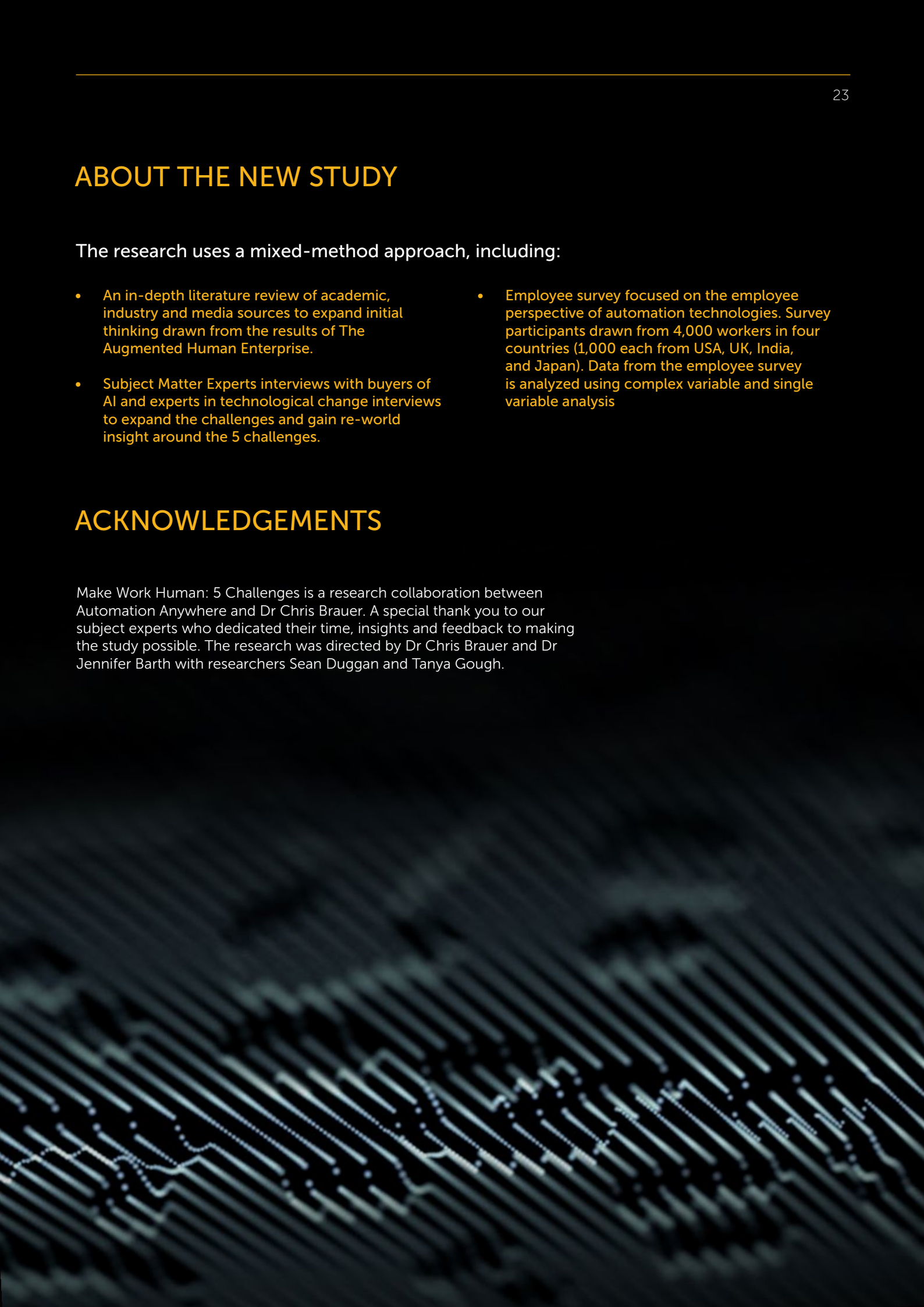
ABOUT THE NEW STUDY

The research uses a mixed-method approach, including:

- An in-depth literature review of academic, industry and media sources to expand initial thinking drawn from the results of The Augmented Human Enterprise.
- Subject Matter Experts interviews with buyers of AI and experts in technological change interviews to expand the challenges and gain re-world insight around the 5 challenges.
- Employee survey focused on the employee perspective of automation technologies. Survey participants drawn from 4,000 workers in four countries (1,000 each from USA, UK, India, and Japan). Data from the employee survey is analyzed using complex variable and single variable analysis

ACKNOWLEDGEMENTS

Make Work Human: 5 Challenges is a research collaboration between Automation Anywhere and Dr Chris Brauer. A special thank you to our subject experts who dedicated their time, insights and feedback to making the study possible. The research was directed by Dr Chris Brauer and Dr Jennifer Barth with researchers Sean Duggan and Tanya Gough.




AUTOMATION
ANYWHERE
Go be great.