KABi INSIGHTS

1H, 2022

THE FUTURE OF JOB

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This issue includes:

THE FUTURE OF JOBS

The Unrecognizable Workforce Of Tomorrow

The type of jobs we do and how we do them have consistently been changing with the world around us. Technology has been the most important driver to create tools that help us do our jobs faster and more efficiently. The invention of the combustion engine led to the creation of cars, heavy-duty vehicles and airplanes, which completely changed the way we do our jobs. Similarly, the advent of the internet and with it, the technological revolution, has led to a similar shift in job profiles for the current generation. Technology has grown at an exponential pace over the past few decades as we attempt to automate our lives increasingly. Today, the effects of robotics and artificial intelligence on our jobs is highly debated. There is little doubt that advancements in these technologies will change the way we work, what we work on, and which jobs will be available to us in the future. Some people will see their jobs change more than others depending on the tasks they are involved in, whereas some jobs will disappear altogether. However, new jobs, some of which that are currently beyond our imagination, will emerge in their state. Future jobs will involve knowledge creation and innovation.

THREATS TO THE CURRENT JOB ENVIRONMENT

The hardest activities to automate with currently available technologies are those that requires a high degree of imagination, creativity and strategic thinking. Managing and developing people, which require the application of expertise in decision-making, is a classic example of such an activity. On the other hand, routine and repetitive work like machine line operations, manufacturing and compliance testing fall easy prey to automation. According to Mckinsey, with the help of currently demonstrated technology, close to half the jobs which people are paid to do across the globe, could theoretically be automated. Although less than 5% of jobs consist of activities that can fully be automated, in about 60% of occupations, almost half of the component activities are vulnerable to automation, indicating significant transformation of the workplace and changes for all workers.

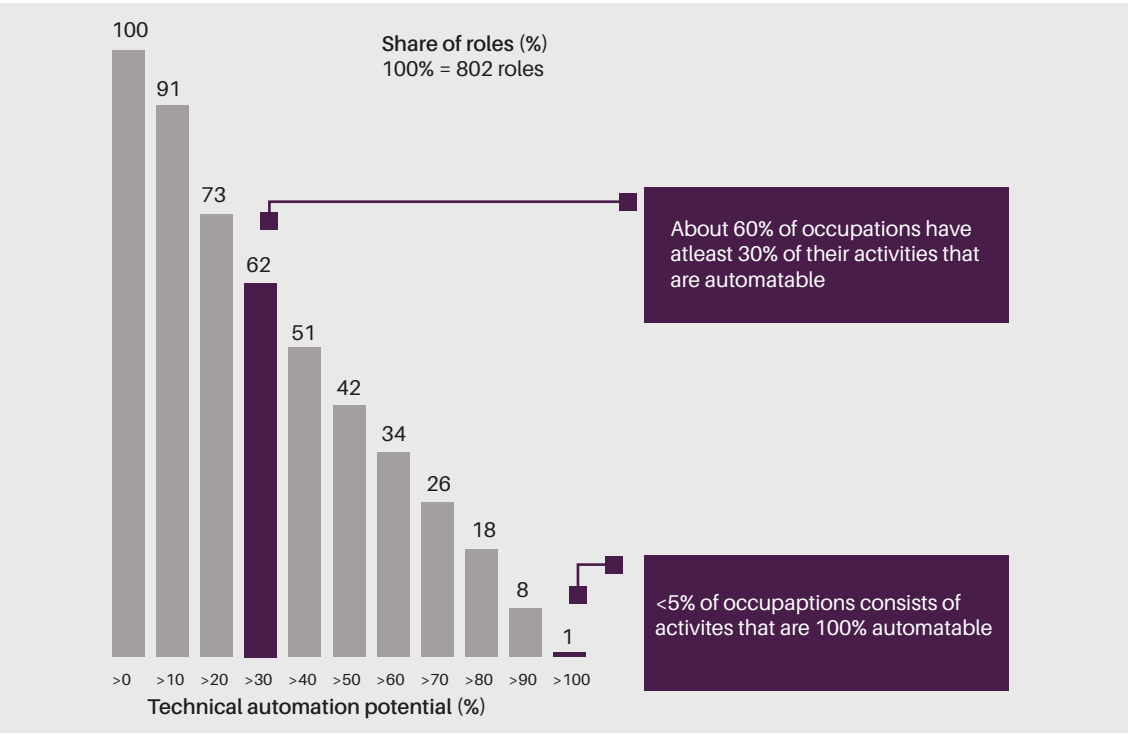
IN ABOUT 60% OF OCCUPATIONS, ALMOST HALF OF THE COMPONENT ACTIVITIES ARE VULNERABLE TO AUTOMATION.

Automation is predicted to eliminate 6% of the jobs in the United States by the year 2021 according to a Forrester report. Furthermore, Deloitte estimates that 39% of jobs in the legal sector could be automated by the year 2025.

While the technical viability of automation is important, it is not the only factor influencing the pace and extent of adoption. The cost of developing and implementing automation solutions in the workplace, the benefits of automation beyond labor substitution, the labor-market dynamics, and regulatory and social acceptance are some of the other factors to keep in mind, as per Mckinsey.

Nowadays, we see a growing concern about the availability of enough jobs for workers in the future, given the exponential growth seen in automation. History suggests that such fears may be unfounded as, over time, labor markets adjust to changes in demand for workers from technological disruptions. However, this is a long-term process, and we cannot discount the threat it poses during the transition period. Jobs most vulnerable to automation include repetitive physical activities in predictable environments, like operating machinery and preparing fast food. Collection and processing of data can also be done faster and more efficiently with machines. This could dislocate large amounts of labor, for instance, paralegal work, in loan origination and auditing. Jobs involving managing people, applying interpersonal expertise and social interactions will face fewer threats from automation. Childcare and Elderly care, which are more unpredictable in nature, will be in high demand because they are technically challenging to automate and often command relatively lower wages, which makes automation a less attractive business proposition.

With sufficient investments, innovation, and economic growth, countries will be



Example Occupations

Sewing Machine operators, graders and sorters of agriculture products

Stock clerks, travel agents, watch repairers

Chemical technicials, nursing assisstans, Web developers

Fashion designers, cheif executive, statisticians

Psychiatrists, legislators

Source: US Bureau of Labor Statistics, Mckinsey Global Institute Analysis, 2017

able to create new jobs to offset the impact of automation. A bigger challenge is to ensure that workers have the skills and support needed to transition into new jobs. The countries which fail to address this issue during the transition phase harbor potential threat of increasing unemployment and low wages in the economy.

If displaced workers can be reemployed within a short period, automation will aid in lifting the overall economy and full employment could be maintained in both the short and long terms. Wage growth will be faster and productivity will be higher. However, if the displaced workers take years to find new work, unemployment would rise in short to medium term. Labor markets would eventually adjust over time and unemployment would fall, but average wages will end up lower in the process, which could dampen aggregate demand and long-term growth of countries.

FUTURE SKILLS REQUIREMENTS

Although no one can accurately predict what jobs will look like in the future, we can identify skills that can help us adapt to this changing environment. Critical thinking, creativity, people skills, STEM (Science, Technology, Engineering, and Mathematics), SMAC (Social, Mobile, Analytics and Cloud), interdisciplinary knowledge, are some of the skills people will require as a prerequisite to any job of the future.

Analyzing our current environmental dynamics, one of the requirements of the possible job of the future can be that of a waste management engineer. As humans are in no hurry to stop producing waste, innovative methods of waste disposal will be in dire need. Turning garbage into clean energy, or figuring out ways to combine it and make it strong enough to construct roads and buildings are some of the challenges in front of a waste management engineer.

With the advent of the personal computer, skilled software developers have been in high demand. The smartphone boom and the developments of tablets, cloud computing, and other similar interactive technologies have made software development one of the highest paying

jobs in the world today, and this trend is only to increase going forward. As technological integration continues to seep into more and more company operations, applications software developers will find work in a variety of professional settings.

Nearly every facet of society depends on the proper functioning of complex information systems. A significant part of this is the safety and security of our information, with increasing demand for information security analysts who can ensure the safety and security of critical information. Information security analysts may find employment in a wide array of settings, including major corporations like financial institutions and insurance companies, tech companies, private information security assurance agencies, and many more.

As people age and their spending patterns change, there will be a noticeable increase in spending towards healthcare and other personal care services. This will create significant demand for a range of occupations, including doctors, nurses, health technicians, and personal-care aides in countries around the globe. Biomechanical engineers will be creating organ and body parts from stem cells and prosthetic materials that do not exist yet; further opening up new job requirements in the medical industry.

With the occurrence of large-scale natural calamities becoming more and more frequent, governments will require the assistance of experts who would be able to analyze weather patterns and accurately map the Earth's core to figure out how to predict these calamities with sufficient warning times.

People cannot survive on fossil fuel forever; so alternative energy sources are the only hope in the future. Therefore, there will be a demand for engineers to design and install solar panels and wind turbines. Moreover, energy consultants would also come into the picture to guide companies as well as governments in the selection process of which alternative sources of energy will best suit their needs in the presence of space and cost as constraints.

Finally, space exploration is becoming more and more probable with visionaries like Elon Musk, Richard Branson, and Jeff Bezos, racing to be the first to land on Mars. Civilian space exploration is soon going to become a reality, and along with engineers and coders to build the spaceship, we will need trained pilots to maneuver larger rockets.

CONCLUSION

The technology-driven world in which we live is a one filled with both promise and challenges. Cars that drive themselves, machines that perform surgical procedures, diagnose diseases by reading X-rays, and algorithms that respond to customer-service inquiries are powerful new forms of automation that are already in existence. As technological advancements continue to progress, we cannot be blindsided by the possibility of large-scale employment displacement coming our way in the future. A large number of people may need to shift occupational categories and learn new skills in the years ahead. For the first time in decades, this occupational change could be on a scale not witnessed since the evolution of the workforce out of agriculture in early 1900s in the US and Europe, and more lately in China. It is very much possible that the future of the job market will be radically different and almost alien to what we have now. The rapid ascent of sophisticated technology, global connectedness, and convergence of technology will make the workforce of the future almost unrecognizable.

THE GIST

The Current State of Technology in HR

Technology has grown at an exponential pace over the past few decades as we attempt to automate our lives increasingly. Today the effects of artificial intelligence and robotics on our jobs cannot be ignored.

New Jobs Are Beyond Our Imagination

New jobs, some of which are currently beyond our imagination, will emerge in their state and will be based on the new technologies that will be invented. Future jobs will generally involve knowledge creation and innovation.

The Future of The Job Market Will Be Different

Technology has grown at an exponential pace over the past few decades as we attempt to automate our lives increasingly. Today the effects of artificial intelligence and robotics on our jobs cannot be ignored.

A NEW ERA IN TALENT ADMINISTRATION

Talent Management in the Age of Technology

The sweeping transformations of technology have affected all facets of business departments such as marketing, operations, finance, and Human Resource (HR). Particularly in HR, the influence of technology is felt across various activities such as hiring, training, and managing talent. The change is happening gradually and large organizations have taken the lead to make the HR function more agile, lean and efficient. The employee landscape has also transformed with the advent of digital platforms that have increased the transparency in the job market.

The United Arab Emirates (UAE) and the Kingdom of Saudi Arabia (KSA) each have more than 3 million users on LinkedIn, a professional networking site that has changed the way employees and employers connect and interact. LinkedIn is so popular among the working-age people in the UAE that they remain the most connected group globally, with an average connection of 211 people per user. With increased transparency, people are more aware of their value for the skills that they possess and the plethora of opportunities that are available to them. The transformation brought by digital advancements is drastic that employers themselves are subjected to reviews and ratings in online platforms such as Glassdoor, Indeed, and CareerBliss. Increasingly, dimensions such as organizational culture, work-life balance, peer recognition, job flexibility, and satisfaction have gained currency over monetary benefits.

THE GIST

Technology Transformation in HR

The influence of technology is felt across various activities in HR such as training, hiring, and managing talent. The change is happening gradually and large organizations have taken the lead to make the HR function more agile, lean and efficient.

Telent Administration Differs Across Companies

Different businesses have different skill set needs that may or may not be subject to disruption. The impact of deploying technology solutions to manage talent can improve profit margins by as much as 2.75% as per McKinsey research.

The GCC Region is 'Finally' Adopting Technolog

In the GCC region, companies have started adapting it business models to embrace technology. In HR, advanced technologies such as AI are being tried out in various facets of business divisions across some sectors. *[**BLOOVO is an AI-powered recruitment technology solution provider and is a pioneer in AI adoption**]*

Traditionally, talent management has focused on the dimensions of 'employee' and 'workflow' by HR managers. The functions and strategies that previously were supported through Human Resource Management Systems (HRMS) are amidst transformation led by digital technologies. Led by advancements in artificial intelligence, machine learning, big data, cloud computing, and mobile capabilities, HR services are being delivered in new ways. While the previous improvements focused on bettering the existing process, the current advancements could enable the HR practitioner to do entirely new things.

EMPLOYEE LIFECYCLE

The impact of digital technology encompasses the entire spectrum of the employee life cycle from hiring to onboarding, training and development, performance appraisal, and succession planning.

ARTIFICIAL INTELLIGENCE POWERED RECRUITMENT ON THE RISE

Attracting and acquiring talent is one of the first steps wherein a prospective employee interacts with the organization. Historically, organizations sift through multiple resumes, often thousands in number, to see if they possess the required skillsets for the role as advertised. The process, apart from being costly, is time consuming, and the results are not that encouraging either. Moreover, in reality, the best candidates suited for the role would hardly apply or actively look for new opportunities. Lack of standardized templates for resumes and different ways of representing the skillsets make it even harder for the HR personnel to screen the resumes. To make matters worse, often the resumes in company databases would be outdated.

Digital advancements, particularly in artificial intelligence and machine learning, have led to innovative and

faster ways of talent identification and acquisition. In the GCC, BLOOVO which is a leading recruitment technology company adopting self-learning machine learning algorithms to do the matching, considers the job requirements and the skills that are required by employers, and would rank all the candidates in their database and produce the top matching profiles who best match the company requirements. A feature such as this is the first cornerstone in automating the initial screening and selection of matching talent, which could significantly cut short the time taken to find the best fit.

Additionally, in Silicon Valley, start-ups are attempting to come out with AI-based solutions that could help address various issues that are prevalent in the recruitment phase. Using machine learnings and by combining available data on a resume such as schools attended, past employment history, along with social media activity, they help construct a psychological profile of candidates to pre-screen. Automated video screening is also on the rise, wherein the candidate's facial expression, body language, micro-gestures, words used, and voice changes are captured to draw inferences.

ONBOARDING CONTINUES TO BE AN INTEGRAL PART OF THE RECRUITMENT CYCLE

Onboarding talent is a crucial step wherein the new employees are equipped with the necessary knowledge and acquainted with the organizational culture to become competent members. According to Appical, an effective onboarding program could lead to 66% higher time-to-productivity ratio, 54% higher employee satisfaction and 50% greater new hire retention. Digital tools have simplified the onboarding process while making it interactive and engaging. Firms such as Appical use augmented technology and virtual reality to personalize the onboarding process and made it fun. The roles and responsibilities are well defined, and thus, the purpose of the employee is established. In most cases, organizations have started engaging with the employees before their first day, in a process that is now being referred to as 'pre-boarding'. It enables new joiners to better connect with the organizational goals and values and start contributing from day one. Certain organizations are also involved in upskilling of the new hires by offering them tailored training programs that shall enable and better equip their employees to discharge their duties effectively.

TRAINING AND DEVELOPMENT ARE KEY TO EMPLOYEE RETENTION

In reality, the alignment of certain employees' values and skills would be more valuable for the organization than the rest. It is imperative that organizations invest in talent management to ensure that each one of the employees gives their best. For that, the employee should perceive that the organization is just and provides equal opportunities for all. The jobs for employees are assigned after matching with the skillsets that they possess and with what the job entails. Personality traits are assessed using psychometric tests before allocation to teams. Few organizations also organize group games to see the ability of the

AN EFFECTIVE ONBOARDING PROGRAM COULD LEAD TO 66% HIGHER TIME-TO-PRODUCTIVITY RATIO.

employees to connect before finalizing on the decision. Digital tools enable to capture better and anticipate the employee contribution concerning their potential. Training programs could then be tailored to meet the needs and fill the gaps. Organizations have been heavily investing in developing tailored training courses to keep their employees motivated and skilled.

PUTTING THE RIGHT APPRAISAL SYSTEM IS A NEEDED TRACKING TOOL

Performance appraisal is a laborious process that is usually done annually. It is estimated that employees on an average lose two workdays to fill the cumbersome appraisal sheets. Traditional methods of monitoring employee contribution are often perceived to be biased and unfair as they are shrouded in secrecy due to the lack of transparent evaluation process. Moreover, with time, the value of the work that they did in the first quarter is mostly lost. With digital tools, continuous evaluation is possible. By deploying 'predictive analytics,' one could identify employees whose productivity falls below the required threshold and could flag the need for mentoring or additional training needs, as the case may be. Continuous monitoring of the employees' contribution and providing real-time feedback would also improve the satisfaction and engagement quotient.

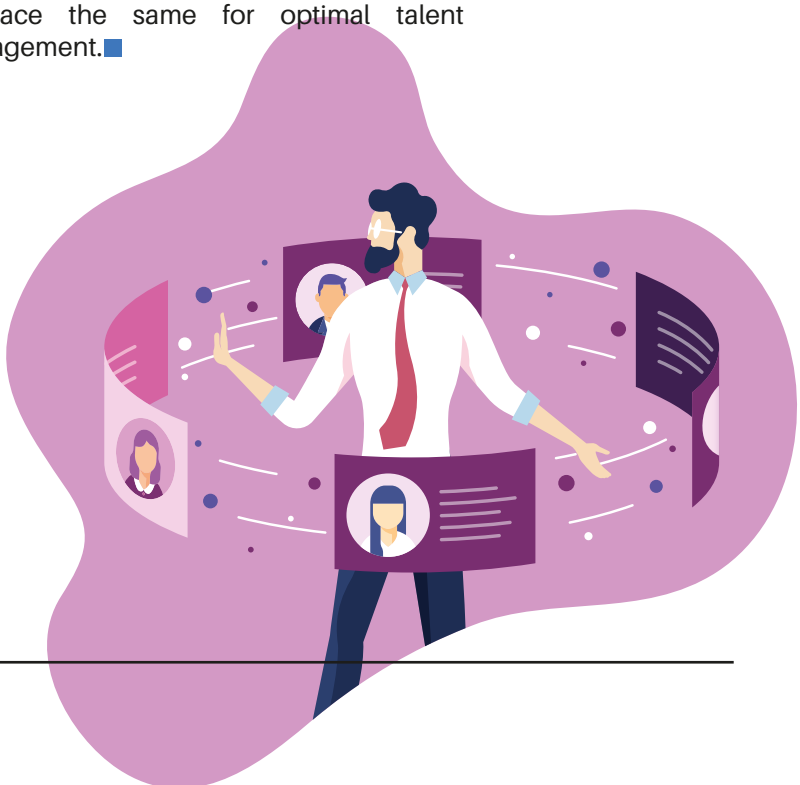
FAILING TO DEVISE A SUCCESSION PLAN CAN BE FATAL

An employee is not forever, and there is a need to continuously groom talent to fill in the roles as and when people step out to pursue other ambitions. Thus, there is a need to ensure a steady stream of executives who could fill in the roles and take up the responsibilities as quickly as possible. Maintaining a diverse pool of talent who could future proof the workforce would result in stable teams and successful organizational development. However, it is easier said than done. In reality, succession planning process could be misconstrued as lacking confidence in the current incumbent. The increased mobility of the workforce exacerbates the problem in the digital age. Analytics are increasingly being used to ensure the organization has the requisite bench size with appropriate skills to ensure the transition is smooth.

ONE SIZE DOES NOT FIT ALL

The impact of technology in effectively managing the talent of an organization varies depending on the specific operating model of the organization. Different businesses have different skillset needs that may or may not be amenable to the technological developments and to eventually reap benefits. The impact of deploying technology enabled platforms to manage talent is measurable and it has been documented by McKinsey research that companies could realize as much as 275 basis points improvement, on an average, in their profit margins. The impact on profit margins would be profound on organizations that employ high-skilled workers and whose operating model involves continuously changing teams such as consulting services. A proper recruit with appropriate knowledge and skills would result in productivity gain and additional revenues for the firm. On the other hand, organizations that employ low-skilled workers such as in retail or construction sectors could reap benefits by decreasing the attrition rates and saving on the recruitment time and efforts.

In the GCC, advanced technologies such as artificial intelligence are being tried out in various facets of business divisions such as sales & marketing, finance and operations. In the HR division, organizations are reliant on people skills and judgment. As the technology evolves and the adoption rate increases, we expect GCC organizations to embrace the same for optimal talent management.■

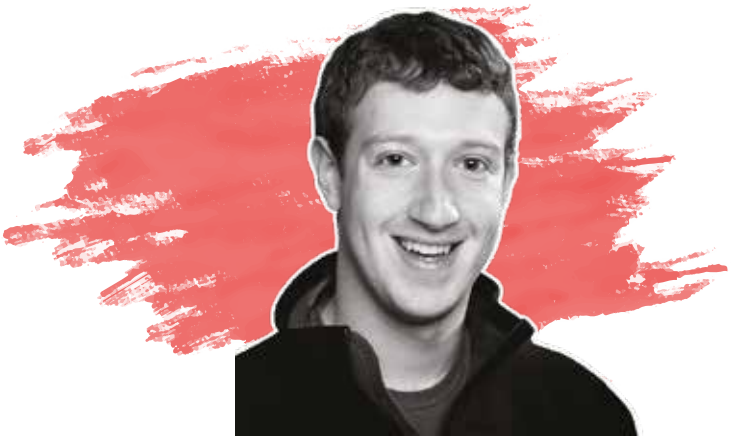


A VIEWPOINT

Benefits and Threats of Artificial Intelligence

The public's perception of what artificial intelligence (AI) can do is mostly influenced by science fiction literature and movies. These artistic visions often invoke fear and paint a dystopian view of what AI is and what it is capable of doing. This, however, does not reflect the current stage in AI development. What these descriptions are warning about is the potential of the emergence of a 'Super Intelligent Enemy', which can prove to be dangerous if its interests do not align with our own. However, even though such an AI-powered system might never come into existence, this has not stopped industry experts to participate in intense argument on the pace of AI development and its threat to humanity as a whole.

Many feel it is shortsighted to ignore the multiple ways in which AI could improve society. Healthcare is one of the best examples cited in an argument of AI helping humanity. It is far easier for an AI system to see the difference between a benign cyst and a malignant tumor, determine how well a burn is healing, monitor health conditions and automatically deliver medicines. Moreover, AI is extensively being used in self-driving vehicles. By removing the human element from driving, some experts predict that self-driving cars could eliminate almost 90% of all road accidents. AI is also helping the environment by analyzing global threats, such as decreasing biodiversity, and helping to develop solutions such as how best to enact conservation efforts. Autonomous systems are also revolutionizing agriculture, from planting seeds and fertilizing crops to administering pesticides. Moreover, AI is also used to tackle the threat of widespread fake news. YouTube, Twitter and Facebook are extensively using machine learning and AI algorithms to curb the spread of fake news and fake accounts responsible for spreading political propaganda and hate speech throughout the internet.



Mark Zuckerberg is a major proponent of AI and is certain that it will help resolve major societal issues. Facebook is implementing an integrated AI algorithm to help to fight terrorist propaganda on the platform. Facebook's current AI helps to spot spammers, remove fake accounts, and reduce political and digital fraud.

"I think that AI is going to unlock a huge amount of positive things, whether that's helping to identify and cure diseases to help cars drive more safely, to help keep our communities safe. We need to make sure that we don't get too negative on this stuff because it's too easy for people to point to an individual failure of technology and try to use that as an argument to slow down progress."
Zuckerberg said during an interview at the 2018 Viva Technology conference in Paris.

"I am in the camp that is concerned about super intelligence," Gates said in 2015. "First, the machines will do a lot of jobs for us and not be super intelligent. That should be positive if we manage it well. A few decades after that, though, the intelligence is strong enough to be a concern."

However, a number of scientists, engineers, and renowned tech gurus fear that once we build an artificial intelligence system smarter than humans, a form of AI known as Artificial General Intelligence (AGI), doomsday may follow. AGI is an evolution in machine intelligence, where a machine can successfully execute any intellectual task, which a human is capable of performing. Bill Gates recognizes the promise of an AGI, yet has publicly voiced his concerns over it.

"At least when there's an evil dictator, that human is going to die. But for an AI, there would be no death. It would live forever. And then you'd have an immortal dictator from which we can never escape." Musk cited Google's DeepMind as an example of how quickly computers can gain knowledge.

Elon Musk has been one of the most vocal critic of the rise of AI and its threat to humanity. Musk believes that autonomous machines are more dangerous to the world than North Korea and that it could potentially release weapons of mass destruction. Among his several warnings, Musk has compared the adoption of AI to "summoning the devil" and an "immortal dictator from which we can never escape".

Even the great astrophysicist Stephen Hawking had warned that the development of a sentient artificial intelligence could be the worst event in the history of human civilization; as such a machine would then be able to quickly outsmart human intelligence and replace us altogether.

"The development of full artificial intelligence could spell the end of the human race. Humans, who are limited by slow biological evolution, couldn't compete, and would be superseded. Computers will overtake humans with AI at some point within the next 100 years. When that happens, we need to make sure the computers have goals aligned with ours."
The cosmologist told BBC News in 2014.

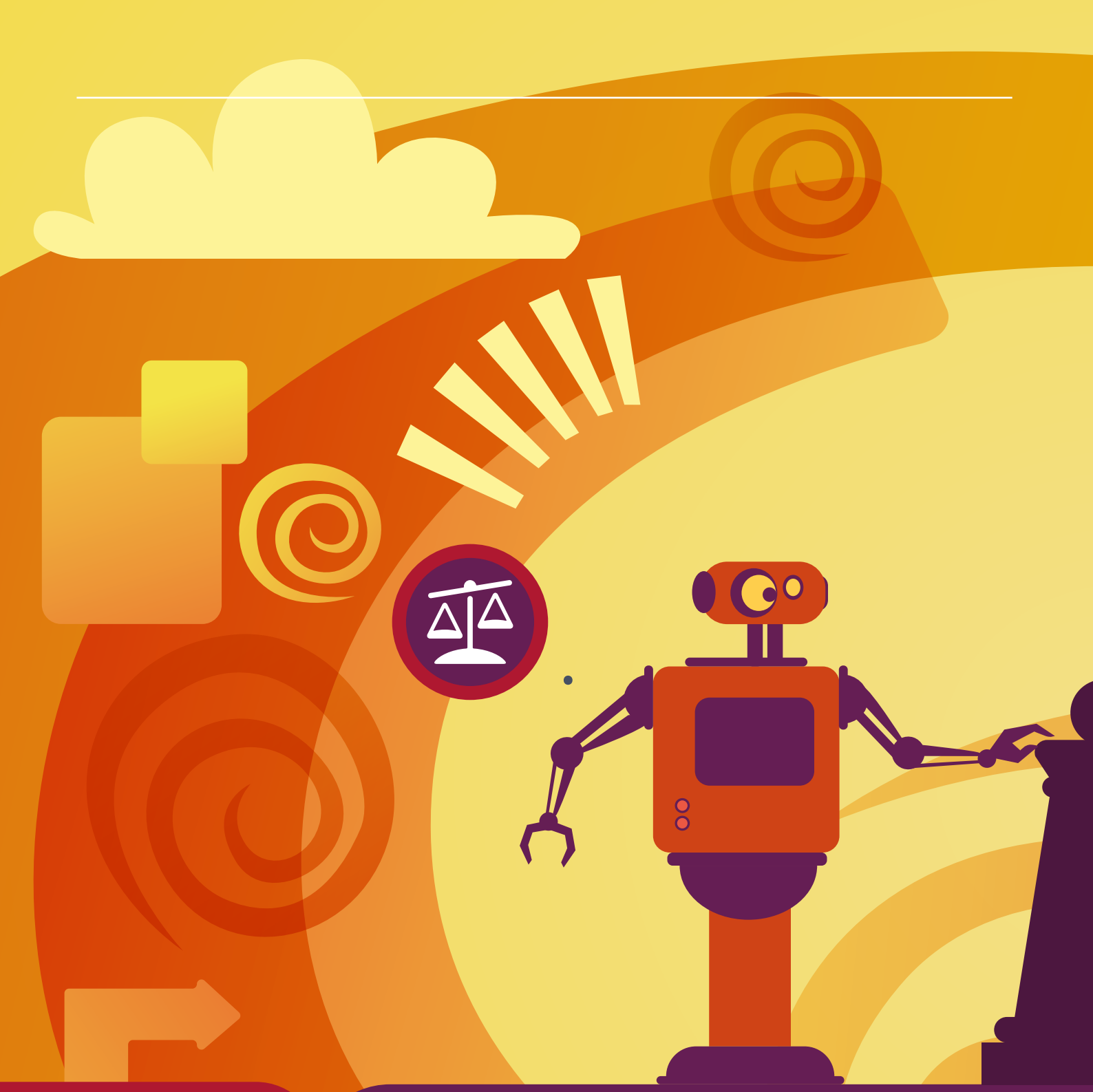
Google CEO Sundar Pichai while speaking about the importance of AI at an MSNBC Town Hall in 2018, drew parallels of AI with electricity and fire, essentially saying that AI is both useful and dangerous at the same time.

Pichai said: "AI is one of the most important things that humanity is working on. It is more profound that, I do not know electricity or fire. It is fair to be worried about AI. We want to be thoughtful about it."

Apple CEO Tim Cook is optimistic about the potential of AI, but is concerned about its misuse in exploiting individual privacy.

"At its core, this technology promises to from people individually to benefit us all. Yet advancing AI by collecting huge personal profiles is laziness, not efficiency. For artificial intelligence to be truly smart, it must respect human values, including privacy. If we get this wrong, the dangers are profound,"
he warned at the 40th International Conference of Data Protection and Privacy Commissioners, 2018.

But even before we get to the point where computers have an unstoppable superintelligence, there are much more pressing developments to worry about the technology that already exists and is fast evolving. Generative Adversarial Networks (GANs) is a type of AI that are good at making counterfeit images, and videos as well, thereby producing photorealistic images and videos of nonexistent people. It is already possible to make a reasonably convincing clip that can map words into a video of Barack Obama giving a speech. In the future, when such a technology is perfected, foreign intelligence agencies could use it to produce a fake video of any politician using a racial dialect for taking a bribe. In such a world, false news is going to become much more difficult to disprove and even if disproved would have propagated enough to cause irreparable damage. Recurrent Neural Networks (RNNs) is another type of AI capable of altering reality. Processing and generating written and spoken communication, similar to that of a human, are two of the tasks RNNs are most commonly used for. We've all heard about how social media was manipulated in 2016, in part through the use of bots. But as the ability to imitate human content improves, it won't be necessary for Russians to come up with crude imitations of American media. Vast networks of social media accounts run by RNNs will be able to shape narratives and manipulate perceptions. However, most of the industry experts do not lie at the extreme end of this debate. Instead, they acknowledge the potential AI possesses in helping society and are developing the technology keeping its risks in mind.■



CANDIDATE SELECTION CONCERNS

Legal and Ethical Aspects of Using AI in Recruitment

BIAS & PRIVACY

THE GIST

AI is 'Renovating' The Recruitment Function

AI is nowadays changing how the recruitment process is carried out. Although AI can be used as a tool for a bias-free screening tool, it leaves behind several unanswered questions about accuracy, ethic and legal implications.

Candidate Privacy Under Question

Using AI in collecting data, drawing assumptions to understand candidate behavior and understanding their future performance might lead recruiters into breaching candidates privacy.

Embedding Ethics in Recruitment

Recruiters need to establish clear guidelines on how social and private data of a candidate is being used, keeping in mind the potential harm such overreaching algorithms and predictive software can cause.

Hiring can be a long drawn out process, and making the final decision can be something of a gamble. The decision is further complicated if the hiring is done from abroad as seen across most of the GCC countries. The pressure of making quick decisions can lead to hasty and misguided selections. While it is difficult to gauge the impact, the consequences of a bad hire on the company is extensive. Adverse press resulting from fraud, harassment, or violence towards co-workers, or abuse of company data could lead to potentially irreparable reputational damage for the company. Digital innovations and advances in artificial intelligence (AI) have produced a range of unique talent identification and assessment tools, promising to help organizations improve their ability to find the right person for the right job, faster and cheaper than ever before.

AI IS DISRUPTING THE RECRUITMENT LANDSCAPE

The introduction of AI in recruitment has recently been seen as one of the emerging trends in hiring. AI is nowadays changing how the recruitment process is carried out. AI can act as a bias-free screening tool, which levels the playing field, ensures diversity of candidates and helps businesses find the best talent. Some businesses are doing away with resumes entirely, amid suggestions that they reveal too much information like gender, religion, schooling, which have very little to do with whether or not the candidate will be a good fit to the organization and instead trigger potential bias.

One application of AI is helping in the unbiased screening of canidates through algorithm-based matching technologies that would systematically inform hiring managers of the suitability of applicants by analysing every aspect of their profiles and comparing that to the job opening. Furthermore, the analysis of video-interviews during the recruitment process by filming candidates as they are answering questions is another area where AI can play a signifant role. In such case, AI measures things like micro-muscle movements in the person's face to make judgments about their communication skills, level of enthusiasm and emotional reactions. This can then be used in shortlisting candidates based on applicable skills in a way that is free of human bias. Companies can improve attention to detail, eliminate interviewer bias to race or gender and target the specific traits of a customer-oriented role that employers desire in their teams. This has helped in reducing the interview time per candidate, thereby optimizing the recruitment process as a whole.

However, as futuristic and promising as it may seem, AI is not without its own flaws and we cannot ignore the potential ethical and legal implications the automation of HR processes introduce. There is no unified ethics framework guiding AI development and its application across all industry verticals. Moreover, AI is developed using a deep learning model, which relies on conditioning. This means that if the training data itself has inherent biases, that is what the machine is going to learn and reproduce. As part of a machine-learning project, if an engineer provides a training data set to the AI algorithm, it might reflect the inherent bias of the engineer himself. As a result, the machine-learning algorithm develops a model that incorporates the bias of the engineer, which might produce unwanted and discriminative results. Among the top three principles outlined by Google, which would help guide development in artificial intelligence, is tackling bias, which even the world's biggest search engine is facing difficulty in defining. Scientists have also revealed findings, which raise the issue of existing social inequalities and prejudices being reinforced in new and unpredictable ways into these AI training algorithms in the form of gender, racial, and cultural bias .

CANDIDATE PRIVACY, DISCRIMINATION & HIRING DECISIONS

We are also seeing the rapid growth in the use of bots for screening social media postings of applicants to understand their political and sexual orientation. These tools put unprecedented power in the hands of recruiters who pursue data-based human capital decisions. While these methods are no doubt disrupting the recruitment and assessment

process, they leave behind several unanswered questions about accuracy, and the ethical, legal, and privacy implications that they introduce. This is especially true when compared to longstanding psychometric assessments such as the NEO Personality Inventory, the Wonderlic Cognitive Ability Test, and the Raven's Matrices. These methods are scientifically derived and carefully validated, with reference to relevant jobs, identifying dependable links between scores that the applicant receives and their subsequent job performance.

On the other hand, there is far less information available about the new generation algorithm-driven AI tools that are increasingly being used in the recruitment assessment. Most of these tools have appeared as technological innovations, rather than from scientifically derived methods or peer reviewed, independent and trustworthy journals. As a result, it is not always clear what they are truly assessing, whether their underlying hypotheses are correct, or how they may be able to predict a potential candidate's performance.

Using AI in collecting data and drawing assumptions to understand the behavior of a candidate and predicting their future performance, might lead recruiters into breaching candidate privacy. Today, for example, what an individual likes on Facebook can be used to infer their race, sexual, political and religious orientation with considerable accuracy. This might also apply to a facial recognition software. A recent research conducted by Michal Kosinski from the Stanford University predicts that face-reading AI may soon be able to discern a candidate's sexual and political orientation as well as mood or emotion with a high degree of accuracy.

AN ETHICS FRAMEWORK MUST BE THE FOUNDATION ON WHICH ANY AI TECHNOLOGY IS CREATED AND IMPLEMENTED.

Most countries in the world have laws protecting their citizens from discrimination during the recruitment process. For example, the Disabilities Act prohibits employers to discriminate with individuals suffering from mental or physical illness, the Employee Polygraph Protection Act generally prohibits employers from using lie detector tests as a pre-employment screening tool and the Genetic Information Nondiscrimination Act prohibits employers from using genetic information in employment decisions. However, these AI-powered tools help bypass such laws as they can decipher the same kind of information without any personal interaction on the part of the recruiter, which can then be used to screen applicants off the list without their knowledge.

EMBEDDING ETHICAL CONSIDERATIONS IN RECRUITMENT

Recruiters need to establish clear guidelines on how social and private data of a candidate is being used, keeping in mind the potential harm such overreaching algorithms and prediction softwares can cause. Both the compliance perspective and the ethical aspect of data snooping needs to be looked into by the recruiter before implementing such a solution. While an employer may not be violating any laws in merely scanning an applicant's personal information, the company may become vulnerable to legal exposure if it makes adverse recruitment decisions by relying on any protected categories such as race, place of birth, native language, or based on private information that it does not have the right to consider, such as possible physical or mental condition.

Using AI, big data, social media, and machine learning, employers will have ever-greater access to a candidates' private lives, attributes, challenges and states of mind. Whilst the use of AI may have their benefits, it also strips away the very aspects of humanity from the recruitment process, reducing an applicant to a set of descriptors. New technological breakthroughs are already crossing the lines between public and private attributes of an individual's life, and there is every reason to believe that they will be increasingly capable to do so in the future.

Over time, it is expected that the role of technology will keep increasing in our lives, which will directly or indirectly influence the workplace environment. In this era of machine learning, artificial intelligence, and automation, there are several new obstacles in our way that we have not encountered before. How the various judiciary committees will handle situations where employers have relied upon tools using these proxy variables is unclear; but the fact remains that it is unethical to take a decisions based upon certain protected or private characteristics of an individual no matter how these were learned or inferred. There are no easy answers to many of the questions of privacy introduced by this technology. Therefore, an ethics framework must be the foundation on which any AI technology is created and implemented. What such a framework can do is help companies create solutions to minimize, if not eliminate, bias in their algorithms. Therefore, AI applications combined with human intervention can lead to an unbiased recruitment process and high quality workforce in the organization.

SHAPING UP THE MODERN HR

Why Organizations of Tomorrow Demand New Kind of HR?

THE GIST

Reorganizing Organizations is Now Inevitable

High performing organizations have begun to operate as empowered networks, coordinated through culture, IT and talent mobility. This requires companies to redesign the organization itself with new business and operational models.

HR Departments Are No Longer Silos

HR has evolved from being a silo department placed away from the core business planning and activities, to one that closely works with the management team to understand business needs and deliver them through enabling and empowering employees.

Rebranding HR

In many firms, HR functions have been renamed using terms such as 'people management', 'employee experience', 'talent management' and 'human capital' to signal a shift in the brand, and to cope with digitization initiatives taken at the corporate level.

Disruptive forces in the form of technology are changing how we live and work, thereby creating an urge in enterprises to rapidly adapt. Regardless of industry, every company now has the need and potential to be digital, and therefore global. As there exists an abundant data resources, companies can now utilize it to segment and personalize products and services. This also provides the opportunity for companies to swiftly expand into new spaces of innovation. All these changes have a deep impact within how the workplaces are structured and how they operate. This creates a necessity for organizations to rethink the way they hire, engage, develop, reward and lead their workforces.

FROM "FOR WHOM" TO "WITH WHOM"

High performing organizations have begun to operate as empowered networks, coordinated through culture, information systems and talent mobility. This requires companies to redesign the organization itself with new business and operational models being implemented at different levels. Networks and ecosystems are swiftly replacing the existing organizational hierarchies. The fast-paced business activities demand that firms are not weighed down by legacy practices, traditional systems, and behaviors that consume resources in the form of time and money, but do not deliver the desired results. This has led to the popular question; "for whom do you work?" to be replaced by "with whom do you work?"

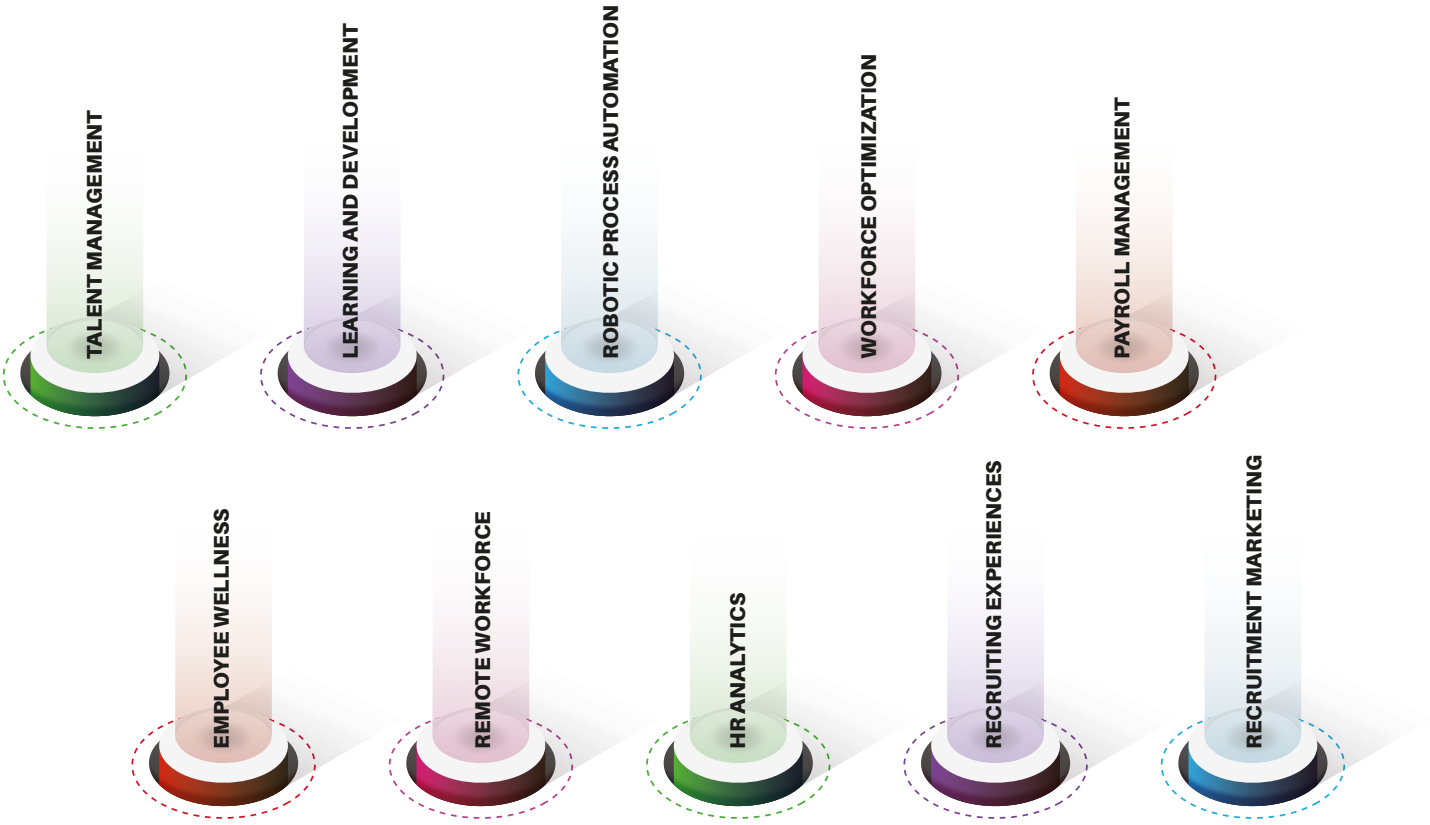
HR Management primarily was designed as a compliance function in an organization, which focused on talent management, process and transactions. However, the changing business and organizational structure demands an HR system that is agile, data-driven, and deeply skilled in attracting, retaining and developing talent. HR is transforming into an innovative consultancy with a wider scope and responsibility to design, strategize and enhance the entire employee and employer's experience.

Changing business environment demands an HR system that is more strategic as opposed to administrative. A strategic HR team has the potential to build a team of employees most suited to the company's requirements, and digitizing functions will enable the higher management to focus on functions like increasing the market share of the business, growing the customer base, driving product innovation, increasing sales and helping the company be more responsive to market, among other accomplishments.

A SHIFT FROM A SILO DEPARTMENT TO A COMPANY-WIDE INTER-RELATED FUNCTION

HR within an organization has evolved from being a silo department placed away from the core business planning and activities, to one that closely works with the management team to understand business needs and deliver them through enabling and empowering the key resource: employees. With the rise of disruptive technologies like blockchain, AI, machine learning, VR/AR and people analytics, the potential of HR practices has expanded significantly. The HR department within an organization possesses a wide variety of data, including payroll, social media, employee engagement surveys, leadership assessments and developments, performance reviews, recruiting, and exit interviews, which if processed rightly guarantee key insights into forming business decisions.

There are two specific shifts happening that play a significant role in shaping the future of the HR industry; options on how companies support the traditional HR functions, and talent retention in an environment where employees are capable and willing to swiftly move to different workplaces. The GCC region has a robust regulatory environment, advanced infrastructural facilities and strong sets of skills and capabilities within the local and expat populations. Further, the region's current interest in leveraging technology and innovation is expected to benefit the HR dimension in the GCC companies. It is estimated by the World Economic Forum that 41% of all work activities in Kuwait are susceptible to automation, 46% in Bahrain and Saudi Arabia, 47% in the UAE, and 52% in Qatar. As compared to 2015, 21% of core skills required across all occupations will be different by 2020 in the GCC. There will be a strong demand for professionals who can merge deep knowledge of their industries with the latest analytical tools to quickly adapt business strategies. Online platforms are on the rise with concepts like crowdfunding sites,



remote and virtual work emerging. This requires the HR division in companies in the GCC region to manage a distributed and virtual workforce, integrate freelancers and mitigate the challenges arising from online work. In addition, it requires companies to develop in their employees a culture of continued learning and understanding of the evolving infrastructure.

DIGITIZATION IS A NEED THAT CAN NO LOGER BE IGNORED

Innovation, analytics and the rapid adoption of cloud and mobile technologies within the HR process has become the mandate for organizations of today and the future. HR professionals are required to be more business-oriented professionals with critical new skills in the following areas:

1.Organizational Networks: evaluating, creating and strengthening network capabilities and expertise.

2.Employee Engagement and Culture: understanding and assessing the workplace culture on various parameters, and developing models to improve it for both the employer and the employees.

3.Data-driven Mindset: the need to become evidence-based leaders with expertise in behavioral economics and testing.

4.Digitization: developing core HR digital platforms and apps.

5.Employment Experience and Brand: crafting and communicating the company's value propositions.

TOP TEN HR TECH TRENDS FOR 2019

HR can navigate the new business dynamics by leveraging the advancement in technology, particularly by utilizing AI and big data to create opportunities for strategic value creation. Recruitment can be made more focused in nature through digital tools such as social media and cognitive assessments including natural language processing (NLP), and predictive self-learning algorithms. Machine learning platforms can rank the priority of open requisitions. Organizations use tools that match prospective candidates to the available job openings through a fit score based on the job skills and previous work experiences.

Social listening is another technique utilized by firms to track the organization's and competitors' publicly available reviews that serve as a critical source to maintain periodic reputation checks. Firms that have high application rates are already using applicant screening systems that use AI in a bid to reduce the man hours required for recruitment. It also leads to elimination of human errors. The AI tool also reduces the redundancy of tasks, making it possible for HR managers to focus on higher value activities that demand human intervention.

BEING DATA-DRIVEN CAN BE THE PATH TO INFORMED DECISION MAKING

The use of people analytics and predictive talent modeling can help organizations identify pain points and prioritize future analytics investments. Data analytics can also help organizations to accurately identify those employees who stand a risk of exiting the firm, and convince them to stay with more informed efforts. This not only leads to more customer satisfaction but also ensures cost optimization.

As businesses evolve in response to technology intervention, HR is being redefined in the following ways:

1. Automation tools ensure that the entire process of recruitment is standardized.
2. Data analytics, particularly people analytics is being embedded in the day-to-day HR processes, thus using the predictive power to drive better decision making.
3. Functional changes in HR operations guarantee more time for the HR professionals to undertake strategic work that add value to the firm.
4. New roles such as workforce analytics professionals, robot trainers, virtual culture architect, data, talent and AI integrator and cyber ecosystem designer are emerging as a result of the change in HR structure.
5. Full-time paid employment is on the decline as the growing sharing economy or gig economy is attracting workers as micro entrepreneurs

REBRANDING HR

A number of key developments are impacting today's HR function. Companies opt for tools that enable continuous monitoring of performance, thereby making the formal quarterly or half yearly staff reviews obsolete. With companies encompassing one data model to enable real-time KPIs to track and evaluate performance, the process will become more automated and streamlined. Firms demand a real-time management and HR needs to respond to this by using analytics and data in intelligent ways to strengthen employee management.

Most employees now are extremely tech-savvy and expect a seamless and unique experience on a day-to-day basis. The workforce will increasingly comprise more millennials who expect cutting-edge technology to assist them in their jobs, which requires the organization to constantly invent new ways to engage the employees.

As the power of technology is growing rapidly, technology needs to become a trusted partner at work, augmenting an individual's role in smart ways so that the employees can focus on those aspects of the job that require human touch and skills. Artificial intelligence create efficiencies at scale and anchors most of the new technologies that organizations are adopting.

In many firms, HR functions have been renamed, using terms such as 'employee experience', 'people management', and 'human capital' to signal a shift in the brand. Organizations are yet to cope with how digitization fundamentally change human work and in what ways humans and the emerging machine coworkers will work together. This is likely to create new value for customers and the firm. This demands HR managers to reimagine the work across the enterprise and HR with digitization and automation.■

A NEW STATE OF REALITY – WHEN ALGORITHMS MANAGE PEOPLE

Using Algorithms to Manage People and Teams

THE GIST

"Algorithmic Management" In Action

As an emerging concept, algorithmic management is the process whereby managing employees happens by directing algorithm-based information about their performance as well as incentivizing them to improving their performance.

Algorithms Can Help Manage Overheads

Automated work scheduling algorithms can be a powerful tool, whether in the form of sending employees home when sales are slow, or rapidly staffing up with changing market conditions or during seasonal promotions.

The Drawbacks of Being Managed by Algorithms

Algorithmic management may sound like an optimistic future, but it has uncanny echoes from the past and algorithms in the hands of unethical managers could do more harm than good in several ways.

One of the latest predicaments for leaders in an age of Artificial Intelligence is when and how to use algorithms in order to manage people and teams. The labor market is undergoing a structural change with the evolution of something known as a 'gig economy'. It is a system of free markets, in which temporary jobs are common and organizations contract with independent workers for short-term engagements. In the absence of a permanent relationship, employers are no longer obligated to supervise these temporary workers. The contractual nature of the work also limits the flexibility of employers to influence how these individuals perform. Supervisors are able to monitor their performance, but since the work being performed is not at the same location as the company managing the platform, there are multiple complications which arise. Therefore, an important question arises on how to get these workers to behave and perform in line with company objectives. This is where the idea of algorithmic management appears. The term "algorithmic management" was coined by academics at the Carnegie Mellon University Human-Computer Interaction Institute, as an attempt to explain how gig companies such as Uber manage their worker force.

THE TERM "ALGORITHMIC MANAGEMENT" WAS COINED BY ACADEMICS AT THE CARNEGIE MELLON UNIVERSITY HUMAN-COMPUTER INTERACTION INSTITUTE

ALGORITHMIC MANAGEMENT IN A GIG ECONOMY

The idea of algorithmic management rotates around the concept of managing employees by directing algorithm-based information about their performance, as well as incentivizing them to improving their performance. The concept of "surge pricing" used by most of the ride-sharing services is designed to attract independent drivers to work during unfriendly hours or poor weather conditions by automatically raising the price customers have to pay during that period. Similarly, the option to "rate your driver," allows the company to regulate the performance and conduct of the drivers through the passengers, by automatically penalizing drivers with a poor score, who are not matched as frequently as the ones with a higher score. British delivery company Deliveroo has devised an interesting algorithm, which provides its independent delivery personnel an approximation of how long it should take them to complete a trip. The delivery personnel can then compare their actual timing with that provided by the algorithm. A consistent outperformance can earn them an additional bonus or other incentives to continue performing with high efficiency. Companies are increasingly implementing these algorithm-based automation techniques as a strategy to scale the business without losing agility. As an example, Walmart, in order to compete more effectively with Amazon, is exploring ways to use gig economy workers, which would help them expand without worrying about increased complexity in employee management.

ALGORITHMIC MANAGEMENT TO OPTIMIZE PERFORMANCE

Algorithmic management is about the only way to influence and incentivize workers on these platforms, keeping them on a contractual status. In addition, algorithmic management not only complements employer supervision, but also helps substitute it altogether. In other words, the need for supervisions would automatically reduce if data-driven tools can push employees to work in accordance with company objectives. Organizational automation will undoubtedly present some serious challenges to the nature of work we perform. Companies will need to face a challenging tradeoff of whether to reduce human assistance by performing actions entirely with the use of AI, or use

these AI algorithms to augment employee performance and coordinate with distributed and autonomous teams of independent workers. Automating repetitive tasks will free people to indulge in previously unchartered and meaningful tasks. Moreover, the power of algorithms can also be harnessed to optimize subtle and complex decision-making process of the organization. Therefore, algorithmic management should not be viewed as inherently bad.

Companies implementing algorithmic management say that it helps in creating new employment opportunities and an efficient and low-cost consumer services, bring transparency and fairness to parts of the job market that are plagued by inefficiency, opacity and impulsive supervisors. However, strikes by unionized workers from the gig economy, in the streets of London in 2018, put forth a different picture of how these workers are voicing discomfort against the contradictions of being their own boss but still being tightly monitored by the smartphones in their pockets. These workers might be free to choose when to work but not how to work or, more importantly, how much they are paid for their work. The inherent design of these platforms makes them open to manipulation and abuse.

ALGORITHMIC MANAGEMENT SPILLOVER EFFECTS

Companies have drawn criticism for unfair and irregular work schedules created by these automated systems. Automated work scheduling algorithms can be a powerful tool, which could help companies in managing their overheads, whether in the form of sending employees home when sales are slow, or rapidly staffing up with changing market conditions or during seasonal promotions. However, it can also be structured to help an organization avoid its basic obligations towards its employees. In August 2013, for example, less than two weeks after the teen-fashion chain Forever 21 began using Kronos, a workforce optimization platform, hundreds of full-time workers were notified that they would be switched to part-time and that their health benefits would be terminated as part of a move to cut costs and reduce liabilities .

Algorithmic management might sound like an optimistic future, but it has uncanny echoes from the past and algorithms in the hands of unethical managers could do more harm than good in several ways.

"the best way for people to make decisions, is for them to imagine how they would feel about those decisions if they woke up the next morning and found that they were one of the people directly affected and had no input or influence into the decision"

What if algorithms are used to automatically send emails to people when they are just over than five minutes late to work and registering a warning against their name? Or, providing incentives to push people to work even during the time they spend with their families? Or using sensors to monitor the activities of warehouse workers and automatically warning them when they do not work fast enough in stacking shelves? Or even adjusting the color temperature of office lighting to create the illusion of morning even when it is already late afternoon? These are real life examples of the internal workings of giant corporations who are keeping their customers happy with super-fast one-day doorstep delivery options.

Amazon, for example, has already acquired patents for a wristband, which is designed in order to guide the movement of works at its warehouse, using vibrations to keep them alert and more efficient when they slack off. IBM has also applied for a patent for a system, which monitors its workforce with the help of sensors by tracking facial expressions and dilation of the pupil. This data can then be used to automatically deploy drones to deliver caffeinated liquid, thereby keeping the employee's workday free from disturbance caused by a coffee break.

WHO IS THE WINNER?

Therefore, we see that in this age of evolving gig economy, algorithmic management is fueling a precariat class of workers who are denied the protections of traditional jobs. Algorithms open doors for companies to implement widespread exploitation of people who are already at the bottom of the labor market. They can monitor and make sure to pay exactly for the time actually worked, and yet have people waiting on call at all times. The Veil of Ignorance was a thought experiment proposed by the U.S. philosopher John Rawls in 1971. The theory stated that the best way for people to make decisions, which have a far-reaching impact, is for them to imagine how they would feel about those decisions if they woke up the next morning and found that they were one of the people directly affected and had no input or influence into the decision. Algorithmic management advocates should take a similar approach when designing such systems, which manage their own teams and employees.■

THE TALENT DEAL

BEST PRACTICES FOR RECRUITING FROM OVERSEAS

Recruitment (and the selection process) is one of the most critical functions of any organization. In a competitive business environment, acquiring the ideal candidate with the right skills is continuously becoming more challenging.

Over time, organizations are also becoming more and more employee-centric, which reiterates the need for a more robust recruitment process. Hiring overseas candidates in this regard opens a broader pool of talent to choose from and could become the differentiating factor in the success story of a company. A study done by Boston Consulting Group (BCG) along with World Federation of People Management Association (WFPMA) involving over 4,000 respondents across 102 countries across broad range of industries found that companies that excel in recruiting have experienced up to 3.5 times higher revenue growth and twice the profit margin. Employers need to identify the type of overseas personnel they want to target, strategize the recruitment message and decide on how to reach target candidates. An expatriate applicant's positive experience of the recruitment process because of proper planning can affect their perception of the organization and lower the possibility of the applicant not accepting the employment offer. However, if done inadequately, an organization's recruitment efforts to employ overseas candidate can end up producing job applicants who may be underqualified, lack adequate diversity or employees that may quit prematurely. While there may not be any perfect structure, following a predefined set of best practices becomes essential in a successful recruitment process overseas.

While building a reputation and a healthy work culture in an organization is a continuous process and takes years of hard work, an isolated instance of poor decision or action of one employee can adversely influence the brand name of an organization. There may be unfavorable press coverage that could result from fraud, violence or abuse of company data. In this regard, GCC countries aim to introduce more robust employment screening practices in the hiring process that are in tandem with global regulatory changes. For instance, the UAE plans to introduce compulsory background checks on all candidates. Verifying candidates' credentials and background will significantly improve the probability of a good hire from abroad.

Assessing the willingness of the candidate to relocate

The desire to move to a new environment in a foreign country takes immense courage. Searching for a candidate who is willing to relocate to a different country can pose a significant challenge in recruitment. Recruiting

"Companies that excel in recruiting have experienced up to 3.5 times higher revenue growth and twice the profit margin."

and selecting an overseas candidate is a tedious task and usually requires more scrutiny and thoroughness. Assessing the willingness to relocate therefore becomes a vital factor since job offer rejection at the later stage or the early exit of the employee means loss of valuable time and resources. A study conducted by a psychometric assessment firm cut-e, highlights the traits such as mental and emotional stability, respect for diverse viewpoints, high level of professional autonomy as some of the key characteristics that should be considered and can help in predicting the success or failure of an expatriate candidate.

Job profile analysis

Job analysis includes determining the knowledge, skills, and attributes that are essential to perform in a particular role. Research by Recruiting Roundtable revealed that an effective job analysis could have a weight of nearly one-fourth in the hiring of a qualified applicant. A poor job analysis may have an adverse impact on the selection process. The degree of success of international candidates' recruitment process could also be enhanced if information on the topics such as career development path, political conditions, quality of living (education, health or medical facilities), level of difficulty for spousal to adjust, as well as other factors are shared at the time of recruitment process.

Two C's - culture and credential

Careful selection of candidates who are best suited for the job can be tricky. This could be the case if the emphasis is given only on the job specifications while overlooking the cultural aspects. It is also important to understand that there are various degrees to which employees will embrace the new corporate culture. It is improbable that everyone will be able to adapt to a new culture. Testing for adaptability, problem solving, and even an individual's personality, i.e. introvert vs. extrovert are important to consider which can prove to be a key element in recruiting the right candidate. As these qualities may be difficult to learn through training, identifying a candidate that already have these traits can lead a long way in the success of the employee and the organization. Both domestic and expats employees are likely to stay for competitive pay, rewarding job duties and a conducive work environment. However, cultural acclimatization could be the ultimate factor that could determine the success and tenure of an expat employee in an organization.

Behavior-oriented structured interview

Interviewing is the most common recruitment selection technique and a good predictor of work performance. However, recruitment process can often be expensive and time-consuming especially when it comes to recruiting from overseas. An organization may end up merely asking the same set of questions to each applicant believing that they have undertaken a structured interview. It can, therefore, turn out to be an ineffective and inconsistent method for accurately predicting work performance.

The best practice is when structured questions are based on behavioral characteristics. Interviews that are not behaviorally-oriented irrespective of whether they are structured or unstructured may not align with best practice. The key selection criteria determined through a proper job analysis should be ideally used in developing the interview questions that are behaviorally-oriented. ■

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