

HR TECH OF TOMORROW

TECHNOLOGY PRODUCTS AND PRACTICES THAT ARE POISED TO
TRANSFORM THE WAY HUMAN RESOURCES WORKS





EXECUTIVE SUMMARY

Onboarding new employees with chatbots, instead of HR professionals. Basing hiring decisions on software's assessment of candidates' body language. Automatically rewarding workers with a bonus when they reach their five-year anniversary through blockchain-based technology.

At first glance, those practices may not seem like something the HR industry is on the cusp of adopting within the next decade or two. However, if you consider how much technology has advanced in the last 20 years — Apple's iPad release, often thought to be the start of the tablet craze, happened just eight years ago; 4G network speeds, which helped make remote work widely possible, only became available in the U.S. and U.K. in 2012 and 2013 — bots, blockchain systems and other innovations don't sound all that unrealistic.

The consumer technology landscape is continuing to progress at a rapid pace, and HR tools will likely follow suit. In the coming years, they have the potential to transform into even more sophisticated management systems, providing a stronger employee experience — and reducing the amount of repetitive tasks HR professionals need to perform, freeing them up to handle work that better benefits the institution.

This white paper will examine the transformation HR tech has taken in recent years — and paint a vivid picture of what the HR technological landscape may look like in the future. Developments in enterprise-oriented technology have already made a significant difference in the way HR professionals find, hire and manage employees; could the best be yet to come?



INNOVATIONS THAT HAVE ALREADY MADE A MARK

The amount of technology that's now available for HR use is almost overwhelming. The uses they involve are no less daunting: Some are better suited for smaller organizations. Others address needs that may be specific to certain industries struggling with retention issues, or skills gap concerns.

Some products provide multiple solutions, such as systems that merge core HR functions with talent management tracking aspects. The tools released in recent years have provided numerous features to help improve and facilitate a variety of HR processes, ranging from recruiting to data analysis. As of today, some of the progressive tech tools and practices the HR community has already embraced include:

BIG DATA

Today, companies can use data analysis to identify patterns and provide deeper insight than ever before into various HR functions, ranging from crunching the numbers involved in their interviewing process to reveal areas they can improve to reduce hiring times to efforts to increase productivity through better employee time management.

Companies, of course, need to have implemented technology to measure analytics to gain a bird's eye view of organizational procedures; 41 percent, according to a [study](#) from Brandon Hall Group, say that was the central reason they added human capital management technology.

Data analytics use, though, doesn't seem to be growing at a rapid pace. The amount of organizations performing predictive analytics exercises and connecting HR data to business outcomes remained virtually unchanged from 2016 to 2017, according to Deloitte's annual human capital trends [report](#); still, most view it as a goal—71 percent say people analytics is a high priority within their organization.

TEAM-BASED APPS

A number of companies have begun offering group-oriented apps in the past few years; more than half provide between two and 10 custom apps for employees, contractors and business partners, according to a 2016 Apperian [report](#). Human resource-related apps can be an effective choice—29 percent of organizations say HR service-related apps, such as applications that aid in time tracking, room booking and benefits, provide the most positive business impact.

CREATING ONLINE PASSIVE RECRUITING NETWORKS

For years, organizations have strengthened their passive recruiting endeavors through establishing and remaining in contact with groups that consist of former employees, social media users and other potential candidate and referral sources. Some employers have created robust systems to keep in touch with former employees, who can recommend candidates and in some cases, be rehired down the road. Those workers, according to the [Harvard Business Review](#), are 40 percent more productive in their first





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quarter than brand new hires — and also tend to stay with an organization longer.

Still, there seems to be room to grow in this area. Nearly half of HR professionals fail to re-engage candidates every six months or more; 57 percent don't employ any tools to capture information about jobseekers who didn't officially apply for an open position, according to CareerBuilder [data](#).

EMPLOYEE ENGAGEMENT SOFTWARE

There are dozens of employee engagement HR technology products available, ranging from survey aids to HR software that tracks disengaged workers; yet not all organizations utilize them. Some items, for instance, are designed to provide management support for recognition and reward efforts, which can help keep employees engaged. Such solutions can, according to an Oracle [report](#), help HR reward employees fairly and transparently; less than half—44 percent—of employees, however, say their company uses the latest technology to enable them to perform effectively.

AI

AI use is in its earliest stages in HR; more than one in 10 HR managers, though, say it's becoming a regular part of the department's functions, according to a 2017 CareerBuilder [survey](#). Most of the current use seems to relate to the recruiting process — comparing results from a candidate's soft skills questionnaire to skills the company's top performers possess, for example, and conducting online searches for signs of negative candidate attributes. Some AI use, though, has touched on operations, including potentially suggesting types of coaching and guidance for employees based on what they're viewing online.

STORING DOCUMENTS AND SERVICES IN THE CLOUD

HR departments have been moving programs and documents to cloud-based storage systems for some time; as of last year, nearly three-quarters, 73 percent, of organizations used a cloud-based system for at least one or more processes, according to PwC [research](#).

Cloud storage makes it easy for HR professionals to quickly access information from both inside and outside the office, for employees to directly access HR forms and other documents, and reduces the risk duplicate or outdated versions will be distributed from someone's desktop. With leading on-premise HR software providers shifting their efforts to the cloud—such as SAP, which announced a program in January to help customers with on-premise human capital management solutions transition to the cloud—support for legacy on-premise systems could be phased out, according to a 2017 report from research and advisory firm Information Services Group. By 2020, ISG predicts more than half of all enterprises will rely on at least partially cloud-based HR solutions.





TECH ADVANCEMENTS TO COME

The HR tech landscape has experienced an incredible amount of change in the past few years — and more innovative tools are undoubtedly on the way to help make employee-related work more efficient, accurate and effective.

Although it's difficult to guarantee all new tech advances that hit the market will have be applicable to HR, departments that keep current with new solutions and product uses will be ideally situated to imagine new, inventive ways to use technology that's designed for both HR and other markets.

A few of the emerging tech trends that HR may be able to be utilize in the future include:

BLOCKCHAIN TECHNOLOGY

While blockchain technology — often associated with Bitcoin — use is still in its early stages in general, some of its most promising applications have a direct correlation to HR.

Early use at academic institutions like MIT suggest blockchain could potentially revolutionize the way candidates convey credentials and other information to potential employers. The technology essentially serves as a ledger of various records; each new action, or item, that's added is verified by the entire blockchain network, instead of a single point of authority, such as a university or college.

Proponents have suggested the technology be used to allow students to keep a record of their academic, professional and other achievements that could be added to throughout their lifetime—a digital resume of sorts—and shared with employers via a link, instead of having to send multiple resume and other files over email. Because educational providers would technically upload certificates and other official documents to each student's blockchain record, employers could be assured the materials were authentic, making background checks easier. More providers would have to buy in to the blockchain system to make that kind of record a reality; it remains to be seen if that will happen — but the possibilities are intriguing.

COLLABORATIVE TECHNOLOGY

With more and more employees working remotely — 70 percent of businesses around the world have employees who work from home or team members spread across several sites, according to a recent [survey](#) — the need for tools to allow in-office and external workers to collaborate is increasing. Companies could, as a result, potentially begin increasingly investing in platforms designed to help employees connect more seamlessly to IT systems — and each other — than email, texting or other current communication technologies will allow. Email and IM, for some, may not be robust enough. Seventy-three percent of companies, in fact, feel they need to add collaborative tools that increase productivity by tying communication to specific business tasks, such as meeting deadlines.





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SOFTWARE THAT HELPS COMPANIES AVOID MISSING QUALIFIED CANDIDATES

Talent rediscovery software use seems to be far from commonplace; the tech tool is, however, being used at some organizations to re-examine resumes and identify qualified candidates who may have initially been passed over.

With the continually tight talent market, ever-increasing time constraints and other challenging factors HR professionals face, imagining we'll see heightened software use in the recruiting process isn't a completely outlandish notion.

Similarly, HR departments may, in larger numbers, begin turning to blind hiring software that removes information — and by proxy, the risk of unconscious bias, which studies have shown [names](#), dates and other elements can trigger. With solutions currently available to strip first and last names, photos and other information from applicant tracking system data, it's entirely possible solutions that cloak identity in other ways will make their way to market in the future.

TOOLS THAT ENABLE BOTH EMPLOYERS AND EMPLOYEES TO PROVIDE FEEDBACK

While traditionally, supervisors and leadership may have been the ones asking for input, companies have, in recent years, used pulse surveys and other methods to tally employee sentiment. In the past eight years, tools from companies such as Amazon and Workday have debuted that allow employees to submit assessments of their coworkers' performance and enable managers and staff members to solicit feedback from teams and other stakeholders.

While employees may appreciate being asked to share their opinion, they want to hear their employer's thoughts, too — presenting a growing opportunity for tech providers that offer information gathering and sharing tools. A [survey](#) from engagement solution provider Officevibe found 65 percent of employees feel they aren't getting enough feedback at work. Companies can benefit from giving it: Ones that implement methods to provide employees with regular feedback experience turnover rates that are nearly 15 percent lower than other organizations, according to Officevibe.

NEW METHODS OF MICRO-LEARNING

Simply providing information for employees isn't enough; employers need to present it in an engaging, effective way to make sure workers absorb the material. Most employees — 90 percent — want engaging and fun instruction, according to a 2017 Axonify [survey](#); and many (80 percent) would like to receive it more regularly.

A number of organizations, however, still rely on traditional training methods. Nearly half





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of employees receive online training or a mix of classroom and online training; 31 percent receive no workplace training at all.

That may someday change. Easily accessible learning systems that recommend and deliver education on a regular basis and provide a more dynamic, personalized experience than the standard watch-at-your-own pace learning modules are reportedly in the early stages of use — and show significant potential for meeting employee needs. Due, in part, to the many media and other distractions people now face, the average attention span shrunk from 12 seconds in 2000 to 8 seconds in 2013, according to Microsoft [research](#). Employers, as a result, need to find a way to make important information digestible to ensure it has an impact.

HEALTH AND WELLNESS TOOLS THAT HELP IMPROVE WORK AND HOME LIFE

We know workplace stress is on the rise — 71 percent of employees experience higher than moderate stress in the workplace, according to a 2017 CareerCast [survey](#). Providing health and wellness programs is one way employers can help meter the effect; the initiatives may also offer indirect benefits. A recently released [study](#) conducted by the U.S. Office of Personnel Management measuring federal employees' work experience found 68 percent who participated in a health and wellness program or telework/flex schedule were found to exceed performance standards at their review; up to 68 percent expressed stronger intentions to remain with their employer.

With the news this year some organizations are expanding the focus of their wellness programs and, in certain instances, adding nontraditional elements such as financial health instruction to help employees lead less stressful, more fulfilling lives — coupled with research indicating health and wellness programs may help employers reduce overall health costs — use of health and wellness tools is likely to grow.

UNIFIED SYSTEMS

Although traditionally, HR, along with other company departments, may have housed and shared information using a separate product than other groups, one recent study, conducted last year, suggests information mergers may be in the works. The Oracle and MIT [study](#) found 35 percent of organizations plan to create a shared finance and HR cloud storage function; 42 percent expect it to improve productivity and performance.

RECRUITING GAMIFICATION

Resumes may be on their way to being passé; at some organizations, HR professionals are employing more interactive methods, such as creating online game experiences that are being used in their recruiting process, to both attract and assess candidates. The benefit is two-fold: The recruiting tool can help attract attention and draw applicants; in addition,





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having candidates engage with the game offers organizations a chance to pre-screen their logic, tech and other skills.

Data company Umbel created a challenge in which developers [write](#) a game-related program to demonstrate their coding skills. The [U.S. Army](#) created a game to illustrate what the experience of being involved with the organization is like; the Swedish Armed Forces' [game](#) emphasizes the importance of teamwork.

VIRTUAL REALITY

Recent VR-related tech advancements in the consumer market, due to VR hardware becoming much more affordable and widely available, indicate virtual reality may be a key player in the next wave of tech recruiting tools. Business-related VR spending is forecast to rise to \$9.2 billion by 2021, according to Tractica [research](#).

Some organizations have already dipped their toe in the water. Automaker Jaguar, for example, created a VR [program](#) that lets engineer and designer candidates analyze 3D car prototypes. Following the trend of government agencies serving as early tech adopters, the U.S. [Navy](#) and Department of Agriculture's [Food and Inspection Service](#) also started using VR tools in 2016 in recruiting to illustrate what working at each agency is like.

WEARABLE DEVICES

Having employees don wearables to track their movement and gauge time management is a use that's been proposed; and research indicates wearable metrics may offer some advantageous results. Programs that track health indicators with a wearable device help reduce overall employee health costs, according to 62 percent of the companies that have such a program, according to a 2016 Aflac [report](#).

Encouraging company-wide wearable use, though, may present some issues. A recent [survey](#) gauging IT professionals' concerns about IoT devices noted that more than 35 percent believe wearables and sensors are highly vulnerable to Wi-Fi-based attacks.

Data privacy is another consideration Companies need to factor any local data protection legislation requirements into how they plan to record and store employee information that's gathered through the devices—particularly in light of the impending EU General Data Protection Regulation security and compliance requirements, which are set to go into effect in May 2018.

The GDPR provisions provide individuals with the right to confirm whether or not personal data concerning them is being processed, and why; halt personal data from being processed and have data that's been gathered erased.

The regulations apply to all companies that are handling personal data that relates to subjects who reside in the European Union — regardless of the company's location. So a corporation headquartered in the U.S. with offices in France would likely need to take the requirements into consideration if it, for example, decided to offer employees heart rate





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monitors as part of a team-based step tracking challenge.

Organizations in breach of GDPR can be fined up to 4 percent of annual global turnover, or €20 Million, whichever is greater.

EXPANDED AI USE

AI is presently a buzzword — but don't take that as an indication it's a fad. As chatbot technology improves, AI may become a greater part of the recruiting process; not only could it help HR answer job applicants' questions more quickly, improving candidate experience, intuitive response technology could also potentially enhance employee experience by eliminating the wait for a human HR representative to respond to work-related queries.

In one recent [survey](#), HR professionals said they felt the talent training process could benefit most from AI. The Allegis Group research suggests AI tools may be able to monitor and suggest appropriate learning modules for employees, rather than requiring employees to — perhaps incorrectly — assess the need themselves.



CONCLUSION

More than half — 55 percent — of HR managers say they anticipate AI will become a regular HR component within the next five years; yet only a very small amount, 7 percent, think a robot could do their job, according to CareerBuilder data.

HR staff members offer a number of proficiencies AI could never fully replicate. The technology can't assess candidate psychology, or gauge whether an applicant qualifies as a cultural fit for an organisation. It can't implement data analysis findings completely on its own — certainly not with the same dexterity as an HR professional.

HR departments in a variety of industries could, however, potentially benefit from using AI to improve operational aspects such as productivity, program effectiveness and ROI.

Being an early adopter may pay off. As artificial intelligence capabilities increase, HR departments that have embraced the technology will theoretically be uniquely positioned to grow in tandem with AI — and pioneer new, inventive ways to use it.

In the coming years, qualified new hires aren't likely to become easier to find. Organisations that have incorporated AI and are using it to enhance employee experience may find themselves at the forefront of being able to address employee needs.

Becoming a more desirable choice for both potential and current employees could, in turn, establish the organisation as a key player in the competitive talent marketplace — which, whether a company has achieved it through technology or other means, as most HR professionals will confirm, is rarely a bad position to be in.

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