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E-guide

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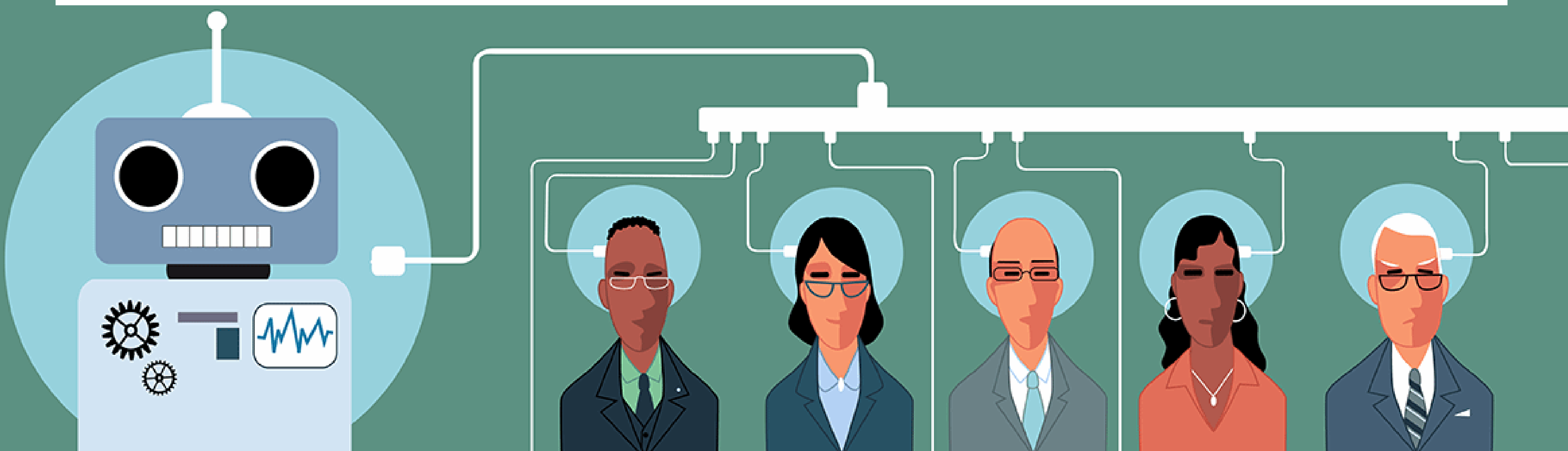
AI proves value in HR, but handle with care



In this e-guide

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Artificial Intelligence could be, and often is, seen as a bogeyman in HR. The infamous Amazon case, widely reported in 2018, where a recruitment algorithm decided not to consider women candidates because of their gender, basing itself on past data, is a byword for how things can go wrong with AI in HR.

But AI is also proving its value for HR. The Amazon debacle, which came to light in 2015, leading to the termination of that specific project in 2017, has not stopped companies using AI to standardise recruitment. And Amazon said it had never used the rogue algorithm for real, in any case.

The increasing prominence of AI, and other digital technologies, means that organisations are also being forced to re-skill the workforces they have recruited and retained. Even CIOs will need to up their game to stay relevant, we find.

And, contrary to popular common wisdom that AI is bound to be on the side of the bosses and against the workers, we also see, in this e-guide, how the allocation of work by algorithm might have advantages for workers as well as employers, even in the so-called "gig economy".

Moreover, there is more to advanced HR software use than AI. In this e-guide we see it being used, in richly detailed case studies, at a strategic level by a trio of companies: at the merged Standard Life and Aberdeen Asset Management, The Gym Group, using data analytics to support expansion , and Agfa-Gevaert, to effect a spin-off.

Brian McKenna, business applications editor

Amazon AI debacle won't stop adoption for recruitment

Cath Everett, guest contributor

Amazon hit the headlines in October this year following revelations that the online shopping giant had scrapped the development of a secret artificial intelligence (AI)-based recruitment tool because it showed bias against women.

The project was intended to automate the sifting of job-seekers' CVs by giving them a score ranging from one to five stars. But by 2015, a year after the initiative was launched, the Amazon team realised that candidates for software developer and other technical roles were not being dealt with in a gender-neutral way.

The problem was that the data fed into the AI system, which consisted of 10 years' worth of CVs, reflected the male dominance of the tech industry. As a result, the system taught itself to prefer male candidates and penalised CVs that included words like "women's" as in "women's chess club captain". It also downgraded applicants from two US all-female colleges.

Although Amazon initially tried to edit the software to make it respond neutrally to female-oriented terms, there was no guarantee that gender discrimination would not be introduced in other ways and so the project was shelved in early 2017.

While the retailer attested that the tool had never been used in a real-world scenario by its recruiters, the incident does raise a number of issues, not least whether recruitment will remain a jumping off point for AI to take root and grow across the wider human resources (HR) function, as has been the presumption to date.

So what lessons can be learned from Amazon's unfortunate experience and what kind of impact is it likely to have on adoption levels in an evolving market such as this one?

Jozsef Blasko, senior HR director at the Coca Cola Company, believes that, based on his research at the Department of Management at the London School of Economics into hiring talent for team capacity building which included AI usage, the Amazon scenario should be taken as a "warning sign".

The issue is that because machine learning software can only learn based on the data that is input into it, so any pre-existing bias will inevitably be baked into the system and possibly even amplified, he says.

Nonetheless, although Blasko thinks the situation could temporarily "influence the market and the mood", ultimately he does not view it as a "deal breaker". Instead, he sees AI adoption as part of an ongoing trend towards standardising the recruitment process both to make it more repeatable and to improve the candidate experience.

An evolving market

Meanwhile, according to Doug Rode, senior managing director at recruitment consultancy Michael Page, which is already using AI to automate some of its own hiring processes, while it is true that the market is still maturing, some early adopters are now starting to use it in what he describes as both "basic and sophisticated" ways.

At a basic level, the software is being employed to streamline and automate workflow processes in areas such as CV screening and processing as well as arranging interviews. But more sophisticated applications are also being used to undertake activities such as candidate assessment.

"One of the key drivers behind the adoption of AI software in the recruitment space is the time-saving benefits it offers users," says Rode. "It can also help to streamline lengthy processes and is particularly useful when applied to roles that generate a large volume of applications such as sales or customer service.

"In order to work properly, this sort of technology needs a lot of data, which can take time to collate and feed into. AI technology becomes more intelligent and useful over time, so it's important for businesses to have realistic expectations and understand that it isn't a quick fix."

Another important consideration, says Marc Stuut, head of global talent acquisition at Unit4 Business Software, is to ensure there is a well-defined strategic objective and clear return on investment (ROI) before jumping in.

"The question is whether a particular type of application is validated and reliable, and what kind of investment does it require in terms of purchasing additional tools and software? It can also be hard to determine the ROI as there aren't that many proof points, or proven business cases, around at the moment," he says.

But despite the promise that AI software holds in terms of cutting costs and improving efficiency, Michael Page's Rode does not expect to it to completely replace humans by automating the entire recruitment process from end-to-end.

"Positive candidate experiences often come from the productive and meaningful human connections formed during the recruitment process, so completely automating this and relying on AI technology would be detrimental to these relationships," he says. "Therefore, AI should not be seen as replacing human interaction, but complementing it."

Coca Cola's Blasko agrees. "As long as team leaders have objectives and responsibility for delivering on those objectives, they'll want to remain involved in the hiring process as they have a stake in an individual's success or failure," he says. "So while machines may make recommendations about selection, it won't be more than that and humans will always make the final call."

Case study: Heat Recruitment

Heat Recruitment, which uses AI functionality across a number of different hiring processes, sees the software less as a means of replacing staff and more about enhancing what they do.

The technology, which is embedded into the consultancy's candidate database, customer relationship management system and various add-on modules, makes it possible to automatically match job-seekers with available roles to create possible shortlists rather than rely on faulty human memory to identify candidates. It can also send them automatic, personalised messages as required.

So that job-seekers do not become frustrated in having to undertake multiple searches for different equivalent job titles on the company's website, the AI system is likewise able to recognise these discrepancies and include them all in its findings.

Another useful activity consists of identifying recruitment patterns and trends in the company's data. For example, the software has revealed that hiring in the financial services space tends to slow down during March in anticipation of the financial year-end, making it easier to work out when and where staff should focus their efforts to be most productive.

Steve Preston, Heat's managing director, says: "AI helps to remove those repetitive, basic tasks such as scheduling interviews that take a lot of time, which allows our consultants to focus on higher value activities. It also makes their jobs more enjoyable as the less interesting tasks are taken over by AI, so their wellbeing is better and they're happier."

Since starting to use software two years ago, Preston indicates that retention rates have jumped from 84% to 93% among consultants who have passed their probationary period. Two out of three now also stay on after going through their training, compared with the previous one in three.

Preston attributes the doubling of the consultancy's turnover and trebling of its headcount to 85 over that time directly to the introduction of AI. There has also been a three-fold jump in the number of candidates applying for jobs from its website.

But Preston does not believe there will ever come a time when AI will run the recruitment process from end-to-end, not least because it is unclear who the client would go to if things went wrong. he says.

"Fundamentally, recruitment is a relationship-based industry – relationships with work colleagues, candidates and clients – and you have to understand all of them," he says. "So while AI will help with selection, the last phase of screening and the final decision will always be human."

Case study: NBCUniversal

"It is vital that when we add AI into the recruiting effort, we don't lose our human appeal and risk brand equity declines in the process," says Seldric Blocker, global vice president and talent acquisition director for NBCUniversal's early career programs.

NBCUniversal is a US-based multinational media and entertainment conglomerate that is owned by telecommunications giant, Comcast. It recognised that not only were ethnic minorities and women under-represented across its business, but unconscious bias was also an issue that made itself felt among people of all backgrounds and cultures.

The situation was further compounded by the fact that New York and Los Angeles are the country's largest media hubs, but are generally considered expensive and inaccessible to move to for people from lower socio-economic backgrounds.

As a result, the company decided to introduce recruitment software provider Oleeo's Intelligent Selection system in a bid to boost the diversity of its workforce. The aim in doing so, says Blocker, was to ensure that it consisted of people with "multiple points of view that reflect society's multiple points of view".

"That means being ever more inclusive of diverse audiences, developing content that matters and enhancing the diversity of our own talent," he says. "AI provides innovative ways of making this a transparent part of our business plan with the next generation of talent."

The system was introduced to support the hiring of "future leaders" as it was considered the most competitive area of recruitment globally. Moreover, Blocker says, it "was an area where we needed to make strides in delivering diversity and inclusion".

The AI software itself, meanwhile, scores all applications and event registrations using more than 120 prescribed data points within job-seekers' CVs and profiles. The total for each candidate is then aggregated to provide a final score, and this score is used to create a list of recommended candidates that best match the criteria set, all "in a fraction of the time it would take humans", says Blocker.

To double-check that no bias has entered the system though, an explanation to clarify how scores were arrived at is also given during each element of the process.

In graduate recruitment terms, Blocker asserts that the system is now helping NBCUniversal make "significant strides" in meeting Comcast's goals of having ethnic minorities consist of 33%, and women 50%, of its workforce in the future.

"When we let machines use data to make prescriptive recommendations, we are free to spend more time on the high touch, human side of talent acquisition – nurturing great relationships," he concludes.

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3 types of AI recruiting tools HR can use to find top talent

Mark Feffer, guest contributor

Artificial intelligence and machine learning have made notable progress into HR departments over the last 18 months. The market for AI recruiting tools, in particular, has expanded.

Why? "Automation, baby!" said Joel Cheesman, a well-known observer of talent acquisition technology and co-host of the recruiting-focused *Chad & Cheese Podcast*. Because of AI, "entire conversations can happen via chatbots and automated messaging without recruiters raising a finger."

Candidate sourcing is seeing similar benefits. For example, LinkedIn now offers recruiters a customized list of candidates as soon as they post a job, Cheesman said. Then, there's programmatic advertising, which uses algorithms to buy, place and optimize employer messages. As products like the programmatic advertising platform JobAdX and the screening system Uncommon become more popular, Cheesman said, "the days of posting and praying are over."

While the technology is complex, AI recruiting tools often provide practical help for the challenges that make talent acquisition and the hiring process a subjective and overly labor-intensive process. By eliminating many of the menial tasks involved and using data to more closely match candidates to jobs, AI recruiting tools can make the process both more streamlined and more intelligent.

One result is that recruiters can devote more time to providing a candidate experience that sets their company apart in a competitive labor market.

"Today, smart companies are refocusing their process methodology ... to ensure that candidates have a great experience," said Chad Sowash, a talent acquisition consultant and Cheesman's podcast co-host.

"Recruiters are no longer spending copious amounts of time on one thing, like researching one specific candidate on 12 different sources or spending 30 minutes Googling a candidate's contact information," said Madhu Modugu, CEO of the recruitment platform developer Leoforce. "AI is doing these things behind the scenes, then giving you the data instantly, which frees up time to spend on other things."

That begs the question: How can employers best apply AI recruiting tools? What are the best ways individual recruiters can put AI recruiting tools to use? And what difficulties of using AI should recruiters understand? To understand the answers to these questions, you must look at how different tools work within distinct parts of the recruiting process. Here are three types of tools that recruiters should consider.

1. AI candidate screening tools

A number of AI recruiting tools are available to help recruiters with the first and perhaps most daunting aspect of a search: identifying candidates who have the skills, experience and traits necessary to succeed in a job. Typically, an intelligent feed distributes job postings to internal and external job boards.

"It's an XML feed that goes out programmatically into the interwebs to target the right types of candidates on the right types of sites," Sowash said.

When applicants respond, AI guides the system to make better matches.

"It provides a mechanism for making sense of the data in a way that's not really possible to the human eye," said Keith McCook, a vice president at talent analytics platform OutMatch. Machine learning in particular, he said, can identify patterns and make sense of data whose variables put it beyond the analysis of humans alone.

This is particularly important today, when the range of information on any given candidate is continuously growing. Whether AI recruiting tools are parsing resume content, identifying keywords or capturing assessment data, they interpret myriad candidate data to help recruiters make sense of what McCook calls "the stacks and stacks of digital resumes that flood into their systems."

AI also allows companies to put candidate data to greater use by looking at it in a more contextual way, Sowash said. Not only can AI see candidates in the context of positions they've applied for, the tools can match them with other job requisitions that might better meet the needs of both the individual and the companies.

2. AI tools for an improved candidate experience

Because today's labor market is tight, companies want to develop relationships with candidates even if they don't receive a job offer. Part of accomplishing that is ensuring all the applicants come away with a good impression of the employer brand. Just because a person doesn't fit with one opportunity doesn't mean he won't be a contender for a future position, according to recruiters.

Streamlining the application process is an important part of providing a good experience. AI-powered chatbots and other messaging tools can help by allowing candidates to complete their applications in just a few minutes. These tools can also answer questions and automate interview scheduling so candidates and HR can arrange phone interviews without having to exchange numerous voicemails and emails.

"It's just walking them through the process with technology instead of having a recruiter do every single one of those steps," Sowash said.

"The last thing a company needs is five recruiters sitting in a cube doing nothing but administrative tasks every single day," he said. When AI systems simplify screening or perform organizational chores, recruiters "can have an actual human interaction with the hiring manager, as well as with the candidate."

3. AI tools to customize hiring decisions

When properly used, some AI recruiting tools can do more than simplify processes. They can enable recruiters and hiring managers to identify the best-fitting candidate for each role with more certainty.

"It allows them to say, 'Well, it looks like this person has some potential for the job. Now let's look a little deeper into the specifics of that situation,'" McCook said. "Who's the manager? What's the team? What's the level of experience and kind of relationships that are required for that specific opening, not just that job in general?"

That kind of ability offers "a huge opportunity to increase the value proposition for recruiters," McCook said. "Now, they're spending time doing things that a computer can't do."

Rather than follow a rote decision-making process, recruiters gain the time to consider different information as they navigate the final steps of making an offer or a hire.

"It really helps them to make an effective hire in a way that the machine alone never could," he said.

The challenges of AI for recruiting

Of course, implementing AI recruiting tools comes with certain challenges. AI recruiting tools can include bias, as the recent Amazon debacle showed. Correcting bias will require a number of strategies, including better development practices. And there may be other issues.

In some cases, recruiters don't use AI to its fullest potential, Sowash said. Many have been slow to adopt new tools because they're used to conducting searches a certain way and don't see a reason to change their approach. According to Cheesman, that's dangerous.

In his opinion, recruiters who don't embrace and understand automation technology will fall behind. "Unless you're leveraging AI messaging solutions like TextRecruit's Ari or Canvas's Canvasbot, you're going to lose out on top talent," he said.

In other cases, organizations try putting tools to use in ways for which they weren't intended.

"They're trying to jam all of these square pegs into round holes because they say AI or machine learning on them," Sowash said.

On top of that, employers haven't done enough to enable the adoption of AI recruiting tools, Sowash said.

"This is process methodology," he said. "Companies are looking at recruiters and saying, 'Why doesn't this work?' But it's not the recruiter's fault. It's because the company didn't re-engineer the entire process, and that's what needs to happen."

In Modugu's view, that's changing.

"Even one year ago, HR managers had to make the case for AI. Now, they're in the 'we need it now' mindset," he said. "With unemployment at a low right now, many HR managers say they're struggling to find candidates who have the right skill sets. They're looking for tools that can help fill this gap."

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Can work allocation algorithms play fair?

SA Mathieson, guest contributor

Over the course of six months in 2016, writer James Bloodworth worked for four companies: Amazon, in one of its warehouses; a home-care provider; insurer Admiral's call centre; and Uber.

Drivers for taxi operator Uber are self-employed contractors with no employment rights, but even so, Bloodworth thought working this way might be an improvement on his previous experiences, giving him control over when he drove and leaving time to write a book.

Control is not what he got. Uber drivers are offered work through an app which does not tell them anything about the next job, either its duration or destination. A driver accepting too low a proportion of jobs will effectively be fired, while refusing two or three in a row will result in them being locked out of the app for a period of time.

A dip in user ratings can also lead to a driver being barred, but higher fares are available during unsociable hours – when customers are more likely to leave poor ratings. Bloodworth also experienced Uber's attempts to nudge him into continuing to drive, even if he had been on the road for hours, by telling him he had nearly earned a certain amount.

"All in all, it was a peculiar sort of freedom," he sums up in *Hired: six months undercover in low-wage Britain*, the resulting book.

Allocating work by algorithm is not an inherently bad idea, according to James Farrar, chair of United Private Hire Drivers, a branch of the Independent Workers Union of Great Britain, who has co-led legal action against Uber for drivers' rights.

Many drivers working for conventional minicab companies pay a fee for the privilege (Uber takes a percentage, typically 20-25%), only to see controllers giving the best jobs to their friends, ordering them to collect their takeaway food and even demanding bribes. "People didn't just walk away from those operators, they ran to Uber," Farrar says.

But the company's algorithms create their own problems. Uber tells prospective drivers that "there's no office and no boss", adding that "with Uber, you're in charge". Farrar says this is not reflected in the way the company's algorithms allocate jobs and influence driver behaviour.

"These companies thrive on their ambiguity in nudging and exercising control while denying they have that control," he says. "They are trying to dance on this fine line between triggering workers' rights claims and controlling their businesses."

There are significant financial benefits for "gig economy" companies in keeping workers as self-employed, and Farrar thinks this is part of the reason companies rely on algorithms rather than explicit instructions. "It's management control nonetheless, but it'll be brought behind the curtain," he says.

It is difficult to know exactly how Uber and many other gig economy companies use their algorithms to manage workers, as their workings are not usually disclosed.

Farrar says that the 2011 Autoclenz case, where the UK supreme court decided that supposedly self-employed workers for a car-cleaning provider were entitled to the minimum wage, has given companies incentives for secrecy, as the judges used Autoclenz's actions rather than its stated policy in deciding the case.

He and his legal team have previously used Uber's own data as evidence, but the company now releases much less, given this could be used against it. However, Farrar says Uber gathers data about its drivers, including braking and acceleration rates and how fast they accept or decline jobs.

Empowered and flexible planning for workers

Some drivers attempt to fight back, according to Amany Elbanna, associate professor of information systems at Royal Holloway, University of London.

Through her research with Uber drivers, she has found that some use software on their phones to say they have completed a job before they arrive or to accept incoming jobs automatically. Others stay just outside "virtual taxi rank" zones at airports, where drivers are placed in a queue before being allocated jobs, aiming to get work faster.

Even so, Uber retains most of the power. Elbanna says the company could give drivers more control of how they work by providing the approximate start and end points of the next job offered, which would allow a driver who wants to stop working shortly to refuse a long trip. Instead it punishes those who reject too much work.

"This is a critical question, whether it is using data for surveillance and punishment or for empowering and to encourage people," says Elbanna.

She adds that a data watchdog could also help empower drivers, such as by investigating complaints over measurement, with some drivers claiming differences between distances recorded on vehicle milometers and those used by Uber to calculate fares. She also thinks there should be guidelines on how work performance data is used, to stop managers using data to carry out surveillance of individuals.

Elbanna also believes algorithms can improve conditions for workers, such as by ensuring they take breaks and helping them to plan their schedules. She previously worked for a university where one colleague liked to walk his dog every day at midday, while another wanted to be home by 5pm to make dinner for her children. The university worked this out manually, but software could allow workers to enter their availability and then work out schedules from that.

"Work allocation systems provide an excellent opportunity to integrate ideas we have always wanted," says Elbanna.

Danish technology company Planday goes some way towards providing such flexibility for shift-based workers. Through an app, it allows them to say when they are and are not available and to swap or give up shifts to other workers.

For the latter, the system checks a receiving worker is happy to accept a transferred shift and lets employers set rules, to ensure that the right skills are available and even to prevent named individuals working together. It also provides a communications channel for workers who are outside an organisation's email system, a way to manage holidays and information on earnings.

Chief executive Christian Brøndum says that at present, many employers focus only on cutting costs, resulting in unhappy workers. "There is going to be a power-shift in the market between businesses and workers," he says. In the future, the company plans to incorporate other sources of data such as weather forecasts, so employers can change staffing requirements based on these.

Avondale Care Scotland, which runs four 24-hour nursing care homes in Falkirk and Fife, has to ensure a legally set mix of staff at each site at all times. Director Adrian Hendry says that Planday has made it easier to produce compliant rotas, which it now does six to eight weeks in advance rather than as little as a fortnight previously, saving around £500 a month in staff time.

Hendry adds that the company's 450 staff love the system, with earlier information on rotas giving them more time to plan and the ability to exchange shifts as long as mandatory staffing ratios are still met.

"It gives them much more autonomy and power to speak to a colleague," he says, as they do not have to go through an administrator during office hours. "It's a quicker process for them, a more efficient process for us and a safer process, as we're guaranteed the skill mix will be correct."

Labour as a service

UK-based Broadstone provides organisations with a platform to find workers, initially in privacy security, but with plans to expand to other industries. Chief executive Tom Pickersgill describes this as "labour as a service", akin to what employment agencies offer, but at a lower price and with greater flexibility. It currently has around 10,000 people seeking work, and hopes to increase this to more than 40,000 during 2019.

Employers list shifts and workers apply for them, rather than being offered jobs automatically. An employer can make its own choices on who to take on, but Broadstone offers an optimised list. While it doesn't publish the algorithm used for the latter, it is based on whether workers have "badges" which can be won by undertaking three shifts without cancelling or maintaining a certain star rating, for example.

"If you can get those badges, you should be in a good position," says Pickersgill. Those who qualify for all five badges receive a minimum hourly rate of £14, compared with £9 for those starting with the platform.

But most gig economy companies, including Uber, run their own systems. "One of the problems with these platforms is they are not peer-to-peer," says Pete Robertson, associate professor at the school of applied sciences at Edinburgh Napier University. "A lot of it is to do with the power balance between employer and employee."

A more equitable model would be a marketplace used by multiple employers with channels for workers to exchange information freely, he adds. But if companies can get workers onto their own platform, they are unlikely to give up the power this offers.

A few such companies are starting to improve what they offer workers, although these have not yet involved algorithms. Following an employment tribunal victory by union GMB, which found self-employed workers for UK courier

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Hermes were entitled to holiday pay and the minimum wage, the company has agreed a collective bargaining agreement which includes holiday pay and a minimum per-hour rate.

Hilfr, a Danish company that helps people find home cleaners, has similarly decided on a collective agreement with trade union 3F, which covers holidays, sick pay and pension contributions for those who complete 100 hours of work through the platform. However, it does not choose who goes where.

"We let customers decide for themselves," says Dennis True, Hilfr's chief executive, through searchable listings. He says that the company did not consciously decided against using a job-allocation algorithm, but adds that Hilfr's "system works".

Software can offer casual and shift workers more control while cutting administration for employers, which may also find their workforce is more contented and more willing to stick around. But it can also push people into working in ways that are not in their interests.

Publishing the algorithms or at least the measures gig economy companies draw on to allocate work would be a significant step. But while United Private Hire Drivers' Farrar sees algorithmic transparency as critical, he believes that the most important issue is that companies accept responsibility for the actions of their algorithms.

If managers feel there is a psychological distance between them and the software, Farrar thinks it increases the risk of them abusing workers as they can claim that they are merely curating a community rather than running a business.

"An algorithm is just a management instruction," Farrar says. "What does a good machine-based management system look like? It looks like a good manager that instructed the machine."

Next Article

IT leaders grapple with workforce skills gap as they deploy AI and digital technology

Bill Goodwin, premium content editor

CIOs and leaders in digital technology are predicting significant growth in their use of artificial intelligence (AI), automation and the internet of things (IoT) in their businesses over the next two years.

But they face challenges scaling the technology across their organisations as they grapple with a workforce and university and school leavers who lack the digital skills businesses need, research by Deloitte has revealed.

The number of organisations that say they have reached a state of maturity with digital technology is growing, but it's a journey, with 28% still in the early stages of development, according to the survey of more than 150 digital leaders in the UK's largest companies and public sector organisations.

The results showed that more CIOs and chief digital officers felt confident in their capabilities, compared with this time last year, but two in five leaders at organisations that are in the early stages of deploying digital technology said they did not yet feel ready to develop a digital strategy for their organisations.

Becoming a confident digital leader

The best digital leaders, the research showed, take time out from their day-to-day work to learn about the latest technologies.

They read about digital technology, listen to podcasts on their commute to work and buy the latest consumer gadgets for the family to try them out, said Deloitte partner Oliver Vernon-Harcourt.

"Confident leaders show a propensity to self-learn naturally, seeking out the content and training available within their own organisation, reading non-traditional media and being a bit more explorative in their thirst for knowledge," he told Computer Weekly.

It is easy for busy executives to lose sight of the problems they are trying to solve when their time is taken up developing operating models, job descriptions and plans.

Vernon-Harcourt advised CIOs to "fall in love with the problem" rather than with the solution, claiming it was surprising how quickly people could make an impact. "By pushing yourself to imagine the ideal experience, you will be surprised how close you can get to it right now," he said.

Thinking machines

The survey found technology leaders rate AI as the most important digital technology for their organisations after cloud, cyber security and data analytics.

Over 40% of executives have already invested in AI, and a similar number expect to invest in the technology over the next two years.

Companies are typically experimenting with AI by buying customer relationship management (CRM) software and enterprise resource planning (ERP) systems with built-in AI capabilities, allowing them to try the technology out at a low initial cost with little risk.

They plan to use AI to improve the services they offer to customers through "mass personalisation", and to improve the efficiency of their internal business processes and operations.

AI is still experimental, with 21% of organisations identifying use cases and 43% running production pilots, but very few choosing to scale AI across multiple functions and business areas.

Despite its importance, almost half of digital leaders did not believe their leadership team had a clear understanding of AI or its impact on the enterprise.

Deloitte advises people responsible for developing digital technology strategies to actively learn about the different types of AI available and how they could be used to benefit their organisations.

Although it is still early days, digital leaders need to think about the ethical implications of artificial intelligence technology. Organisations use large datasets to train their AI, and if those datasets have a built-in bias, it is likely the AI will have the same bias.

Most organisations have policies in place to address ethics, and they can be adapted naturally to cover artificial intelligence.

"Conversations must involve not just the teams working with the technology, but also representatives from across the workforce and the customer base that will be affected," said Vernon-Harcourt.

Why organisations need to reskill their workforce

Many organisations say there is a shortage of school leavers and graduates entering the workforce with the digital skills and experience that organisations need.

"The challenge is not just for business, but also for education facilities, as it's very difficult to continually update a curriculum," said Oliver Vernon-Harcourt.

With the half-life of a typical business competency at around five years, and the half-life of a technical skill at two-and-a-half years or less, organisations will need to develop ways of helping their workforce keep their skills up-to-date.

Vernon-Harcourt argued that leaders should encourage the workforce to approach learning throughout their career and communicate the importance of life-long learning," he said.

The key is to make sure learning and development is embedded into the company culture and make training materials easily available, said Vernon-Harcourt.

"Leaders need to act as role models to create a culture with learning at its heart. It's not just a case of telling your team that it's important to learn more about new technology, but also to share what you have been learning yourself to really build that culture," he added.

Just one in four digital leaders said their current workforce had the capability to execute their digital strategy, and 65% said their company's learning and development programme did not support their digital strategy.

Deloitte advises companies to find the skills they need in other ways. That could mean building networks of "gig workers" who can be called in when needed, or putting out work to crowdsourcing or third party organisations, to give them the ability to respond rapidly to changes.

Organisations should consider working with innovative startups, said Vernon-Harcourt. But he emphasised the importance of selecting companies that can assist with your firm's strategy. In some cases, business collaborations with startups have turned into a PR exercise, he said.

Why you need to think about ethics if you are deploying AI

If something is unethical in the analogue world, it will be unethical in the artificial intelligence (AI) world, *writes Matthew Howard, director of artificial intelligence at Deloitte*.

Ensuring that ethical standards are adhered to is essential. Rather than inhibiting AI adoption, ethical and regulatory frameworks should guide us on how to develop and manage solutions that are actually sustainable and scalable in a way that meets stakeholder expectations.

While for many "low-risk" machine learning applications, such as online consumer music or film recommendations, an unsupervised continuous learning model may be the best commercial approach, robust control mechanisms and regulatory frameworks are vital for "high-risk" applications, such as clinical triage, judicial decisions or autonomous vehicles.

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Standard Life and Aberdeen Asset Management turn to Workday to complete merger

Bill Goodwin, premium content editor

Standard Life Aberdeen, one of Europe's largest asset management companies created last year following a merger of two Scottish finance companies, is turning to cloud human resources (HR) services to help it to knit together two organisations with different cultures.

Aberdeen Asset Management and insurer Standard Life joined together in August 2017 to create a company which now has managed assets of £610bn and offices in 46 countries.

The combined group aims to make cost savings of £250m over three years, after cutting an expected 800 jobs from its 9,000-strong workforce.

The group faces the challenge of uniting two organisations which have different approaches to pay and bonuses, working hours and the way they manage their staff.

One of the key planks of the merger is a project to move Standard Life and Aberdeen Asset Management's employee data onto a single HR platform.

Nigel Rogers, global head of HR systems for Standard Life Aberdeen, said the group decided to standardise on the IT systems it already had, rather than introduce new technology.

"The overall remit was you had had to pick one company's systems or the other. You could not bring in something new to both companies," he told Computer Weekly.

A simple choice

Standard life was relying on ageing software – Oracle E-Business suite together with Oracle Fusion – to manage its workforce, while Aberdeen Asset Management had replaced its legacy HR systems with Workday's cloud HR service and a learning management system from Cornerstone in March 2016.

"It was not difficult to decide which system to use," said Rogers. "One of them [Workday] is a world-class cloud solution. The other one was on-premise, reaching the end of its life," he said.

The merged company prioritised moving Standard Life Investment's business on to Workday first, as it had the closest fit to Aberdeen Asset Management, with the rest of Standard Life's business to follow later.

Standard Life Aberdeen hired Veran, a specialist in HR and finance technology, as a systems implementer to manage the project. Veran had previously managed Aberdeen Asset Management's HR upgrade.

Standard Life Aberdeen began transferring 3,000 people from Standard Life's HR system to Workday in February 2018.

But the project had to be put on hold within a matter of months when the merged company sold Standard Life Assurance to Phoenix Group – a move that the IT team had not anticipated.

"It meant that a lot of the people we needed to talk to were unavailable, as 100% of their time was taken up with that work. So we had a four-month period when we could do very little," said Rogers.

Ironing out differences

The company used the gap to bring forward a project to introduce standard terms and conditions for employees across the organisation – originally scheduled after the completion of the Workday project.

"We are trying to have the same number of working hours across the UK. Just in Aberdeen, we had people on anything from 30.5 to 40 hours. We are trying to get everyone on the same hours, and the same arrangements for flexi-time, those sorts of things," he said.

At the same time, the company began working on ways to harmonise the HR process – which operates in very different ways in each part of the company – across the combined organisation.

Putting these processes in place first has delayed the Workday project but, ultimately, it will simplify the work, said Rogers.

"Rather than put in a new set of benefits, and a few months later get rid of half of them, we can just do it once. As a programme of work, it makes more sense and it means less duplication," he said.

The company aims to consult its employees in December or January over its proposals to harmonise benefits across the company, after which it will resume the Workday project.

It plans to go live with its HR data from the former Standard Life part of the business in the third quarter of 2019.

The decision to delay moving all of Standard Life's employees to Workday proved prescient in the light of the Phoenix deal.

"It was kind of the right decision, because we avoided trying to set up Workday for the insurance business – which was going to be sold anyway," said Rogers.

Cutting admin pressures

Moving human resources data to a single platform will make it possible for the combined company to eliminate manual HR processes.

Line managers responsible for managing staff in both parts of the business currently have to log on to two different systems to carry out employee appraisals or approve holidays.

“There is a lot time being wasted on having to do things twice on different systems,” said Rogers.

Differences in the way data is stored between the systems can mean that normally straightforward tasks, such as producing a report of headcount across different groups in the organisation, are difficult.

HR staff face similar problems when they want to calculate total compensation across the company.

Standard Life Aberdeen expects to make significant time savings by giving managers the ability to make one-off bonus payments to employees directly, rather than push the request through the HR department.

Cleaning data

The group has simplified the project by keeping customisation of Workday to a minimum.

"We have an overarching agreement of taking what we have, if at all possible, unless there is some reason we can't use it, or it just does not work," he said.

One of the biggest challenges is to transfer the HR data from Oracle's e-biz software to Workday. Veran is running a project to evaluate and cleanse the data and to convert it for Workday. This will include checking the data for each employee to make sure it is internally consistent.

Standard Life Aberdeen has hired a partner, Kainos, to load the data onto Workday.

"There is a decision about what data we want to take over. What is essential is data for live operations, and then for historical data, things like salary history," said Rogers.

Less critical historical data will be stored as "flat files", either in the Workday software, which has the ability to store archives of historic information, or in another data storage platform, such as Microsoft's SharePoint.

When the software goes live, Standard Life Aberdeen will ask employees to check their data and to fill in any gaps.

Future plans

Standard Life Aberdeen plans to start deploying Workday's planning software. It bought the company's planning module at the beginning of 2018, and is interested in moving to Adaptive Insights, a more advanced planning tool acquired by Workday, in June 2019.

Among a range of other potential applications, the planning tool will allow the company to plan its headcount more effectively.

"One thing we want to do is headcount budgeting. We have done it in spreadsheets in the past. If we can do it in one place [on one software platform], it's going to be much more consistent," he said.

Rogers has plans to outsource the combined company's payroll operations. For now, the Standard Life part of the business is running payroll on Oracle's e-business suite, which is now owned by Phoenix, under a transitional service agreement.

Another project will move recruitment processes from each part of the combined group to Workday's recruitment software.

Aberdeen Asset Management and Standard Life Asset management have been using recruitment software from different suppliers, neither of which were suitable for the combined business, said Rogers.

Advice for merging companies

Rogers advises companies going through similar mergers to think about the culture of both organisations before deploying HR software.

"What has made the project harder is change of scope with Phoenix, and deciding late on what terms and conditions would be harmonised," he said.

The Gym Group flexes its muscles with data analytics

Bill Goodwin, premium content editor

The Gym Group, which runs a chain of low-cost gyms, is turning to data analytics technology to support its expansion plans.

Operating from 160 sites, the company relies heavily on information technology to keep its overheads low, allowing it to offer gym membership for an average of £18 a month.

The small cap listed company has replaced its finance and human resources (HR) systems with cloud-based services, giving it the ability to analyse business performance.

The technology is critical to The Gym Group's plans to expand its services by hiring part-time personal trainers to work with clients, in what it describes as a significant change to its business model.

Growing pains

Emma Castledine, group reporting manager at The Gym Group, said last year the company reached the point where it was no longer able to expand due to the limitations of its existing finance and human resources software.

"We got to the state of being a very rapid growth business, so our current finance platforms were going to restrain our business strategy. We needed something not only suitable for our business today, but something that would also be suitable in five years plus," she told Computer Weekly.

The Gym Group has grown rapidly since it was founded in 2007, by building no-frills gyms in former shops and office buildings and offering low-cost membership and 24/7 access.

The company grew by 140% in 2017 when it took over 13 gyms from competitor easyGym in a £25m deal. It aims to add a further 15 to 20 gyms each year.

The Gym Group had relied on Sage200 accounting software to run its accounts, but the software, designed for small companies, was limited in scope and did not offer the data analysis capabilities The Gym Group was looking for, said Castledine.

It used iTrent payroll and HR software, provided by MHR in Nottingham, to manage its database of employees. "It is a good product, but internally we were not extracting the most from it," she said.

Heavyweight analytics

The Gym Group set out to replace its financial software, but saw it made sense to bring finance and HR together in a single cloud service, said Castledine.

After evaluating a range of software, the company began deploying Workday's cloud HR and financial software in January 2018.

Castledine hired Deloitte as an implementation partner to manage the project. Deloitte used a team of developers in India, which carried out the programming in a series of sprints using agile development methodology.

"Deloitte's methodology in terms of test planning was very good and robust," she said.

The company acquired its portfolio of gyms from easyGym just a week before the Workday go-live date.

"For most significant implementations, a major change so close to go-live would spell disaster and panic, but we were able to fully integrate new sites and employees in the Workday platform in days," she said.

The project went live, on schedule, in July 2018.

Without the new software in place, Castledine said the former easyGym staff would have had to fill in time sheets on a different IT system, which would not be great for employees or the business.

One important part of the project was integrating The Gym Group's membership database into Workday.

The group originally started with custom-designed software to store its membership data, which includes details such as members' access PINs, the gym they use and how often they use it.

Two years ago, it switched to Clubware, software developed by an Australian company for fitness centres to manage billing, class booking and to provide detailed reports about how members use the gym.

The company is using Workday's Studio software, which is capable of pulling data from diverse applications into Workday software, to merge and analyse data about its members from its Clubware membership management system and financial data provided by its direct debit collection agencies.

"For the first time we are able to generate revenue on a member-by-member basis. It's very smart from an accounting point of view. We can see revenues member by member and gym by gym," said Castledine.

For example, the company's HR team has used the software to create a dashboard that allows managers to analyse and model their team's expenses.

"We are only just starting to generate this rich source of data," said Castledine. "Reports are easy to put together. I can pick a gym and create a chart on it very quickly."

The business case for the project was not about reducing costs, but about enabling the company to respond more quickly and to continue to grow.

"For a high-growth business like ours, it's not about reducing heads. It's about being able to deliver on strategy and be as flexible as we can," she said.

Personal training

The project will make it possible for the gym chain to hire a larger number of part-time trainers – a key part of its strategy to introduce a new business model – without increasing administration overheads.

The company has held trials of the new model at nine sites and recently tested the administrative processing associated with Workday at a further four sites.

"This is a significant change to our business model, but we are confident that it will be a key part of our operations for the next 10 years," the company reported.

It plans to introduce the new model in the fourth quarter of 2018.

The Gym Group also plans to introduce an app that will offer members digital services such as instructional videos, fitness challenges and the ability to track workouts.

It also plans to introduce artificial intelligence (AI) software in areas where it can increase operational efficiency, along with advanced data modelling and analytics to support decision-making in a number of areas of the business.

Castledine advises businesses embarking on transformation projects not to be afraid to go for easy wins.

"Where it is a big transformation, it's about not being afraid to acknowledge some of the basics. For finance, it can approve financial entries much more efficiently, which means our system of financial control is much better," she said.

Next Article

Agfa's move to cloud HR paves the way for healthcare IT spin-off

Bill Goodwin, premium content editor

Agfa-Gevaert, which makes imaging and IT systems for healthcare, printing and industrial applications, is investing in cloud IT services to prepare it for restructuring its health IT business.

The €2.4m turnover group, which is based in Morstel, Belgium and operates in more than 40 countries, will separate Agfa Healthcare IT into a self-contained business unit in 2019.

The project has enabled the group's HR team to win funding from the board to redevelop its HR IT technology, including a group-wide, cloud-based core HR system and a centralised payroll across its healthcare IT business.

Peter Dignef, global head of HR services at Agfa, said that replacing the company's older on-premise HR IT systems with HR cloud services was essential to creating a healthcare IT business.

"If we were not able to do this, creating an independent organisation would be extremely difficult," he told Computer Weekly.

The company plans to replace multiple HR tools with a single payroll and cloud-based HR system across 30 countries.

As a standalone business, Agfa Healthcare IT will no longer have access to the economies of scale of being part of the Agfa-Gevaert group.

"We have 30 people supporting HR transactional activities in the 30 countries Agfa Healthcare will continue to operate in," said Dignef. "Only six of them will join the Agfa Healthcare organisation.

"If you want to continue with limited resources in HR, you need these solutions to get there. Otherwise, you would need many more employees," he said in an interview at the Unleash World Conference and Expo in Amsterdam.

The company evaluated a range of HR technologies in late 2017, including Workday and Oracle, and SAP's SuccessFactors software.

Workday was a good system with a solid data model, said Dignef, but the company opted for SAP's SuccessFactors.

Agfa-Gevaert and its implementation partner, Belgian SAP technology specialist Flexso, already had experience of SAP's technology from earlier projects.

SuccessFactors also had the advantage of allowing Agfa to deploy HR functions module by module, said Dignef.

Agfa-Gevaert began deploying SAP's SuccessFactors Employee Central core HR across the company in January 2018.

Agfa Healthcare IT began a parallel project to deploy a payroll system from Neeyamo, PayNComp, in April 2018, which it is integrating into Employee Central.

Employee Central will act as a unique database for all employee data, gradually taking over from a wide range of other HR and payroll systems across the organisation.

The project is complex, said Dignef. "You have SuccessFactors, SAP on-premise and payroll – all the data has to be aligned. There has to be one source of data for everything."

Chronology

2003: Agfa introduces its first company-wide HR information system using software from German supplier SAP running on on-premise IT hardware. Up to then, HR had been managed locally in each country. Agfa's finance department produced headcount figures for the group, but the company had no central list of employees.

2004: Agfa uses SAP to introduce a company-wide performance management programme, followed by a competency management programme.

2006: Agfa deploys a SAP-based learning management system across the group.

2010: Agfa replaces a range of paper-based and software recruitment process with iCims recruitment software.

2016: Agfa introduced cloud-based HR processes, after buying SuccessFactors recruitment and onboarding modules. It deploys recruitment across the company.

September 2016: Agfa holds a workshop with its recruiters to design a company-wide recruitment process.

January 2018: Agfa begins deployment of SuccessFactors Employee Central core HR database as a cloud service. The project will enable Agfa to create a single record of employees across the group, replacing local country-based records.

April 2018: Agfa Healthcare IT begins a project to adopt a payroll system from Neeyamo, PayNComp, and to integrate it into SuccessFactors.

November 2018: Agfa goes live with Employee Central in five countries and with payroll in the UK.

January 2019: Agfa plans to go live with Employee Central and Neeyamo payroll in nine countries.

April 2019: Agfa plans to go live in a further 11 countries.

May 2019: Seven more countries due to go live with Employee Central and payroll.

June 2019: The last country, Belgium, due to go live, bringing the total to 28 countries.

Agfa Healthcare IT has appointed one dedicated programme manager devoted to the work, and has asked other employees to spend part of their time on the project.

Flexso is teaching Agfa's staff how to deploy SuccessFactors technology as the project rolls out.

The systems integrator carries out the integration work for the first country in each region, supervises Agfa staff completing the integration work in the second country, while Agfa completes the work unsupervised, said Dignef.

So far, Agfa has rolled out Employee Central to five countries and plans to reach 28 more in 2019. It has deployed Neeyamo's payroll system in the UK.

The company expects to make savings in IT maintenance costs by moving its HR records from on-premise computers running SAP to the cloud by 2020.

The IT department charges €600,000 a year to support the HR information system and the learning management system that are run on-premise.

Agfa will still need an on-premise SAP system to run finance, access management and other systems, but Dignef expects the maintenance bill to be significantly smaller.

"There is a whole IT department working to keep these systems alive," said Dignef.

The SuccessFactors recruitment technology has enabled Agfa to appoint recruitment specialists to actively look for candidates to fill posts.

Rather than wait for responses from job ads, they can approach potential candidates, giving Agfa a head start at time when recruiting skilled people is increasingly competitive.

"In the past, we posted an ad and waited for applicants to react," said Dignef. "Now we post a job and start searching LinkedIn and job sites."

SuccessFactors will, for the first time, give the company's managers an overview of when their employees in different countries are on holiday.

The organisation previously had about 50 different systems to manage requests for leave and provide managers with reports from overseas, which did not share data.

"It is incredible how much time in HR we spent managing this," said Dignef. "The big win is at the transactional level, and its often hidden cost. We are doing this in a more efficient way now."

Agfa plans to replace the on-premise learning systems in its health IT operations with a SuccessFactors cloud learning platform in 2019, subject to board approval.

Dignef said cloud-based learning will be more user-friendly than the existing on-premise learning system, and will be easier to maintain.

Agfa's HR IT systems

- SAP Cloud Platform
- SAP SuccessFactors Employee Central
- SAP SuccessFactors recruiting solutions

One of the biggest technical challenges in the project was the need to integrate SuccessFactors in the cloud with the company's SAP software on its own computer systems.

"When you link SuccessFactors with SAP, it is always difficult because you have to customise, so it was more complicated than we had expected," said Dignef.

The first integration – payroll – took longer than expected because of unexpected difficulties during testing.

Agfa Healthcare IT is expected to separate from the rest of the group in mid-2019, after which the non-medical part of Agfa's business is expected to decide on its own group-wide payroll software.

"Gradually, SuccessFactors will take over as the number one source of data," said Dignef.

Dignef advised companies embarking on a similar project to give themselves a realistic timescale for completing the work.

Agfa's demerger plans meant Dignef had little choice but to meet a predetermined deadline.

"Integration is very complex," he said. "You have to do it right. If you don't integrate right, no one can follow any more – you change something three systems later."

Dignef said he expected the company's systems in most countries to go live by the project deadline, but there may be delays in some of Agfa's larger operations, such as Belgium, Germany and the US.

How Agfa build its company-wide HR IT system

Agfa-Gevaert first introduced company-wide HR information systems in 2003, giving the group a centralised record of its employees.

Until then, the company had relied on its finance department to produce a headcount of staff, while the company managed HR and employee records in each country.

Peter Dignef, global head of HR resources, said: "Before that, everything was local, so it was very scattered. Also, the processes were local. Every region had its own way of doing stuff."

Next came a company-wide learning management system in 2006, and by 2010, the company had begun a project to introduce software to manage and track recruitment across the group.

"Recruitment was managed locally," said Dignef. "Some regions were very professional, some were very paper-based, and they did not really have a tracking system."

Agfa looked that the tools being used in different regions before selecting a system used in North America – iCims.

As digital technology began to distrupt the company's traditional film business, Agfa realised it had to offer its customers and employees something new.

It wanted to improve the branding of its websites for staff and have the capability to link its recruitment process to platforms such as LinkedIn to advertise jobs and find candidates.

"We were one of the big competitors to Kodak, which is a brand everyone knows – and everyone knows what happened with Kodak," said Dignef. "We had to change everything, going from a film company, a chemical company, to become a more digital company."

Dignef assessed a number of recruitment technologies, including Oracle Fusion, Workday and SAP's SuccessFactors.

Agfa chose SuccessFactors, partly because the supplier could also offer an integrated learning management module.

"I was already looking at my roadmap for other processes," said Dignef. "We had tools that were quite strong in recruitment, but had no solution in learning. I wanted to have one system where I could meet all the requirements."

The HR team invited its main recruitment staff to a meeting in Antwerp in September 2016 to develop a company-wide recruitment process.

"During one week, we went through the whole process," said Dignef. "We had a discussion and came to a consensus. That is extremely powerful, because we did not have a solution put forward by headquarters."

Agfa hired Belgian SAP systems integrator Flexso to deploy the SuccessFactors recruitment software module.

Flexso used a preconfigured version of the software – dubbed an accelerator – that contained a built-in workflow. This simplified the project, said Dignef.

Dignef had been pressing Agfa-Gevaert to roll out further SuccessFactors modules. The opportunity came in summer 2017 when the board decided to make healthcare IT into a separate business unit.

Healthcare IT differed from the rest of the group, had greater autonomy and had no blue-collar workforce, and it made strategic sense for it to operate as a standalone business.

"I said we can do this if we have a core HR system linked to a global payroll system covering 28 countries," said Dignef. "They said do it."

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