AI can enormously increase the degree of predictability in organisational functions, especially HR.

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Adding 'real' value

When Steve Jobs paced the stage in January 2007 introducing the world to his latest creation, the iPhone, not a single observer reacted by saying, "Well, it's curtains for the taxi industry!" Fast forward to 2018 and that appears to be precisely the case. Smartphones evolved from a music-browsing-communication device to an indispensable platform for tools that are fundamentally altering all manner of industries.

Even Andy Grove, who famously quipped that "only the paranoid survive" would have to admit that one would have had to have been unusually paranoid to have foreseen how far and wide the smartphone would reach into so many well-established industries.

Recent developments in artificial intelligence (AI) and machine learning have convinced us that this innovation is on a par with the great, transformative technologies of the past: electricity, cars, plastics, the microchip,

and the smartphone. But, as with these past transformations, it is critical to identify just what is at the heart of this new technology. Despite media and popular culture images of human-like robots and superintelligent computers, the core of recent developments in machine intelligence is something seemingly more pedestrian: a major advance in the ability of machines to predict. Prediction is the process of using information you have to generate information you do not have. We use this new information to make decisions, both ordinary and critical. And, prediction is about to get even better, faster, and cheaper than it ever was.

You may not realise it, but prediction is everywhere. Bankers predict when they assess who will pay back a loan. Doctors predict when they diagnose a disease. Translators predict when they move from one language to another. Every time you make a decision under uncertainty, you make a prediction. Better, faster, and cheaper prediction means more effective decision-making. This will be transformative.

To illustrate, we use a thought experiment: human resources. Talent is scarce, hiring

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mistakes are costly, and the recruiting process has become more complex. Positions need to be posted. Social media and placement agencies need to be engaged. Candidates must be s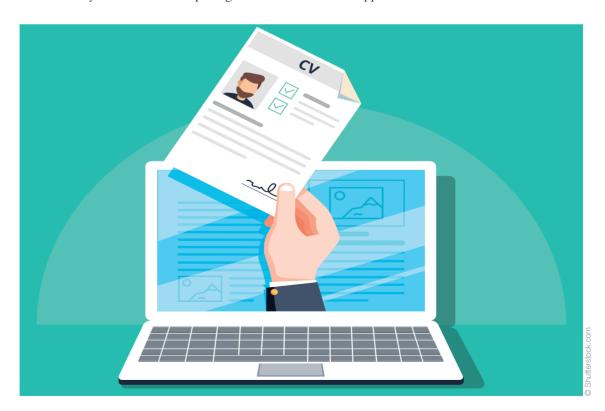orted, then interviewed, then vetted, and then interviewed again. Eventually, you make someone an offer and you want them to accept.

In this workflow, there are multiple decisions and many prediction points. How do you write a job ad that gets the right candidates to apply and the wrong candidates to abstain? How do you identify whether résumés require more investigation? How do you use interviews to ensure candidates are flagged without biases that have no relevance to future performance? And how do you ensure that the package offered

makes sense? Experienced recruiters parse this information, but are taxed by the process.

Within the next few years, the most progressive organisations will use a prediction machine at each and every point. (In fact, a few are already experimenting with several AIs in this process.) In some cases, the machine will substitute the human. AI can take a mass of résumés and read them faster than any human can, identifying the most suitable applicants and rejecting those with flags. Studies have shown that when AI is used in conjunction with interviews, recruitment managers put forward more compelling candidates without as much of the usual bias. Finally, with enough of the right type of data, AI can predict what package will most likely lead the recruit you want to say 'yes.'

Most people are familiar with hiring processes. An organisation recognises a need for a new hire, posts an advertisement, accepts résumés, screens applicants, interviews finalists, and

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eventually selects someone to hire. The decision is determined by a prediction of which applicant will be most successful in the organisation. For the most part, humans make these predictions. They look at an applicant's past accomplishments, ambitions, and interview and predict who will be most successful.

So far, with prediction machines that offer suggestions to recruiters based on slightly better predictions, the work flow remains unchanged. We simply insert prediction machines to improve matters. This enhances productivity and improves outcomes, but it is not transformational.

But imagine what happens as prediction machines improve. They gather information about which applicants were successful and which were not. With enough data, the machines may become so accurate that the application process itself is no longer necessary.

Instead, when a need is recognised, the prediction machine can immediately offer

someone the job. That person does not need to apply. The machine predicts who is likely to accept the job if offered, and who is likely to succeed once the job is accepted. Hiring is no longer about application screening, interviewing, and selecting. Instead, it is about identifying what a successful hire means, and then instructing the prediction machine to hire such a person.

That may seem like science fiction, but prediction has always been at the heart of HR. As with all present forms of human work, we must start anticipating how prediction machines will transform the process, changing the skills required to achieve the desired outcome. Rather than predicting who will succeed, the new HR will emphasise mentorship, coaching, and nurturing talent. New skills are needed. More importantly, better prediction creates new possibilities. The candidate pool is no longer restricted to the people who see a job posting and apply. The position will be offered to whomever is the best fit.

Our point is not that every organisation will do this. Instead, the insight is that rapid improvements in prediction will change the way some organisations operate. They will create new options, making some previously impossible approaches possible.

What does this mean for your business strategy? In each of your workflows, identify every decision taken under uncertainty. Ask how the decision-making process could change if the uncertainty was reduced. That is what prediction machines do—reduce uncertainty. Just as in the case of reduced uncertainty in hiring, you may be surprised once you let your imagination go and explore the options available for operating in an environment with reduced uncertainty. **IM**

(Based on the authors' book *Prediction Machines: The Simple Economics of Artificial Intelligence*, Harvard Business Review Press.)