

# Artificial Intelligence:

## Transforming work and the skills required

**I have written before about the effects of change on organisations as well as the perceived threat of Artificial Intelligence (AI), particularly on the future of work. I now want to look at it in greater detail focusing on what we as individuals and organisations can do to work in harmony with the new advancements.**

Increasingly we have seen headlines and sound bites highlighting the risk AI poses to employment. Some examples include:

“Robots threaten 15m UK jobs<sup>1</sup>”

“Current AI technology could automate 45% of the activities people are paid to perform, about 60% of all occupations could see 30% or more of their constituent activities automated by today’s technology.<sup>2</sup>”

“Robots will destroy our jobs – and we’re not ready for it<sup>3</sup>”

While shocking headlines might make us think that we are doomed, technology has been impacting industry for a long time. Although there has often been short-term pain, ultimately new roles have been developed. For example, the introduction of robots within manufacturing led to large redundancies, but the “service sector” soon became a new employer. This is reinforced by PwC’s ‘UK Economic Outlook’<sup>4</sup> which reports that although 30% of existing jobs in the UK could face automation by the 2030s, many jobs will evolve rather than ceasing to exist and new opportunities will open up in other sectors.

Whatever the possible outcome, the good news is that we have time to prepare for the future, both as individuals and as organisations.

## What is AI and how is it affecting the human workforce?

One definition describes AI as “the science and engineering of making intelligent machines, especially intelligent computer programs.”<sup>5</sup>

According to Techopedia, “some of the activities computers with artificial intelligence are designed for include: Speech recognition, Learning, Planning and Problem solving.”<sup>6</sup>

It is true to say that many jobs have already been affected. To date, these have tended to be where there is physical activity in a predictable environment, like manufacturing and retail.

Going forward, I believe, it’s less about whole jobs being lost and more about all jobs being affected in some way. As AI becomes more sophisticated, it won’t always be the jobs we expect that will be affected.

Management Today quotes Richard Susskind, IT adviser to the Lord Chief Justice of England and Wales, and co-author of ‘The Future of the Professions’ as saying, “Increasingly capable machines and systems are taking on more and more of the tasks that we used to think were the exclusive territory of human professionals – for example, medical diagnosis, legal document drafting, tax planning, designing buildings, writing earnings reports and auditing company accounts. The pace of change is accelerating.”<sup>7</sup>

Doctors, lawyers and architects are not professions we would think of as being low paid or being low skilled. It should also be considered that even if a job is low paid there might not be a business case for automation despite the fact it is technically possible. Therefore, it is reasonable to conclude that from a cost saving perspective its higher paid roles that are more at risk, particularly in some industries. For example, roles that involve collecting and processing data.

McKinsey and Company presents technical feasibility and five other factors to consider: costs to automate, relative scarcity, skills and cost of the workforce, benefits beyond labour cost substitution, regulatory and social acceptance.<sup>8</sup>

From a regulatory perspective, “the law is not keeping up with what technology can do,” says Alistair Maughan, technology partner at legal firm Morrison & Foerster. “If a company uses Robotic Process Automation to replace, say, insurance claim processors then the insurance company needs fully to understand every step of the claim process and accurately describe them to the vendor – robots only do exactly what they’re told. If there’s a problem with the claim processing, liability is complicated. Does it lie with the customer or the vendor? Who is responsible?”<sup>9</sup> This is something that will need to change as well as new labour and employment laws to protect workers.

It is true to say that although lots of jobs could be completed by AI and robots, there is a question about whether society would accept that in some cases. For a very long time the airline industry has had planes that can almost fly themselves. Using automation, the two pilots are free to monitor the flight, systems, fuel and weather conditions and ultimately make passengers feel comfortable. How long will it take for society to feel comfortable with an entirely robotic operation?

## What should we be doing to combat it?

### Individually

If we use PwC’s theory that we can expect the impact of automation in 2030 then what you need to do may depend on your age as well as the type of role that you have.

If you are age...		
<b>50</b>	<b>You may not be affected very much</b>	Particularly if you are in a role which involves managing and developing people (9% chance of automation with current technologies) or where expertise is applied to decision making, planning or creative work (18% chance of automation).
<b>40</b>	<b>And in a role that is at high risk of automation, don’t panic</b>	It’s time to become more efficient. Although labour cost substitution may be the driving force for automation, other factors are also important. Reduce these by increasing output, improving quality and reducing the error rate and thus the likelihood of automation.
<b>30</b>	<b>It may be time to retrain</b>	For example, a mortgage adviser’s role is likely to involve less data processing and more time with clients. Developing your customer facing skills is one option.
<b>20</b>	<b>It may be time to get a knowledge job</b>	This could be in teaching, politics or healthcare. Knowledge work is the most difficult to automate. Consider anything that doesn’t happen regularly, for example the valuation of fine art. Alternatively, you could look at the manual labour that is unpredictable; cleaning hotel rooms, picking up litter in public areas. You could also consider setting up a business in any of these fields.

### Organisationally

Organisations need to think about the areas where AI might impact their business. This should include internal operations, but also identify possible effects on customers and markets. Will it be necessary to find new or additional markets? Are there likely to be lots of people sitting around once their roles have been automated? As one example, think of the big Actuarial companies which had to find work for people when final salary pensions started being phased out. Employees were moved into new areas including compensation and benefits consultancy.

It is key to audit all process throughout the organisation and to rethink the organisation's talent strategy.

We predict higher interest in opportunities for development. Organisations will need better managers, particularly in people management and all associated areas. There will be a need to deal with the pace of change and particularly ambiguity. People will also need to develop their skills in face-to-face communication.

All training elements should give people the skills to make decisions when the amount of data is limited or there are limited precedents. This sort of decision making is not industry specific, so the skills gained will be transferable. It is important to act before AI becomes an issue and to start developing your workforce to be AI resilient.

For years one of the issues many managers have had to deal with is the lack of data for decision making. People often say, "we don't have the data to make that decision," when often they have too much data. In the future, people will need to become:

- Better at identifying the critical data
- More confident about using their judgment and being accountable for the decisions they make

Some of these skills can be honed by practice. Management games and simulations offer an excellent opportunity to enable individuals and teams to do this. If you have been in a situation where you felt out of your comfort zone but you survived, then it isn't as scary the next time and you usually make better decisions. You are better at both managing your own emotions and dealing with data gaps.

Now imagine being able to put your employees through a program of simulations that put them 'out of their depth', developing critical decision-making skills but in a low-risk environment with detailed feedback and support.

This is how business simulations will help you to develop your teams to be more efficient, more empowered and therefore better decision makers. The benefits will be immediate whilst also insulating them against the changes that will be driven by new technologies.

### Final thoughts

The jury is out on whether AI will destroy jobs as we know them today. At a speech about the UK economy in December 2016, Bank of England Governor Mark Carney said that "every technological revolution mercilessly destroys jobs and livelihoods – and therefore identities – well before the new ones emerge."<sup>10</sup> However, there is plenty of talk about the collaboration between AI and humans. One example is the bricklaying robot now working alongside human partners in America. SAM (Semi-Automated Mason) can lay bricks six times faster than the average labourer. Creators, Construction Robotics, see SAM as "just there to do the heavy lifting," while masons are still required to inspect quality and complete any complicated manoeuvres.<sup>11</sup>

One thing is certain, there will be a major shift and re-deployment of jobs. To be successful, you will need to be ahead of the curve. Previously, this meant training to get a different or better job. Now it is imperative to train (or re-train) to have a job at all. An article in Edge ILM Magazine stated that, “we’re going through another industrial age, where workers roles will be redefined because of automation, robots and artificial intelligence. The learning of new technologies to date has been based on the carrot. I want to learn this. In future, it will be the stick. Without certain skill, you’ll be unemployable because they won’t need humans stacking shelves in Tesco.”

In a recent study, researchers found “AI could automate all human tasks by the year 2051 and all human jobs by 2136.”<sup>12</sup> So, it’s time to take the bull by the horns. Create your own personal action plan and if you run a business do an audit.

As a starting point think about the factors McKinsey and Company suggested: costs to automate, relative scarcity, skills and cost of the workforce, benefits beyond labour cost substitution, regulatory and social acceptance. Are there areas of your organisation at risk from AI? If there are, can you help by retraining and upskilling your employees? Maybe now is the right time to invest in a training programme to develop personal and people management skills using games and simulations; tools where individuals need to work together giving and receiving feedback and overcoming obstacles in a collaborative manner.

### Why Elgood?

Elgood Effective Learning offers a creative service, listening to your business needs, working with you to identify the key issues, and developing an engaging method to communicate critical messages throughout your organisation. We have over 50 years’ experience in developing business games and simulations and have worked across the globe with a range of different Companies.

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#### References

1. The Guardian, Robots threaten 15m UK jobs, says Bank of England’s chief economist (12 Nov 2015) <https://www.theguardian.com/business/2015/nov/12/robots-threaten-low-paid-jobs-says-bank-of-england-chief-economist>
2. McKinsey and Company, Four fundamentals of workplace automation (Nov 2015) <http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/four-fundamentals-of-workplace-automation>
3. The Guardian, Robots will destroy our jobs – and we’re not ready for it (11 Jan 2017) <https://www.theguardian.com/technology/2017/jan/11/robots-jobs-employees-artificial-intelligence>
4. PwC, UK Economic Outlook: Prospects for the UK economy and housing market after Brexit (July 2017) <http://www.pwc.co.uk/services/economics-policy/insights/uk-economic-outlook.html>
5. John McCarthy, What is Artificial Intelligence? (Nov 2007) <http://www-formal.stanford.edu/jmc/whatisai/>
6. Techopedia, (July 2017) <https://www.techopedia.com/definition/190/artificial-intelligence-ai>
7. Management Today, Will AI make us redundant? (10 May 2017) <http://www.managementtoday.co.uk/will-ai-us-redundant/future-business/article/1431951>
8. McKinsey and Company, Where machines could replace humans—and where they can’t (yet) (July 2016) <http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/where-machines-could-replace-humans-and-where-they-cant-yet>

9. Raconteur, Workplace success through robotic process automation (28 June 2017) <https://www.raconteur.net/technology/workplace-success-through-robotic-process-automation>
10. Business Insider UK, Mark Carney: 'Every technological revolution mercilessly destroys jobs well before the new ones emerge' (6 Dec 2016) <http://uk.businessinsider.com/bank-of-england-mark-carney-technology-jobs-market-fourth-industrial-revolution-2016-12>
11. Digital Trends, SAM is a construction robot that can lay bricks 6 times faster than you can (31 March 2017) <https://www.digitaltrends.com/cool-tech/sam-bricklaying-robot-6x-faster-than-you-can/>
12. Business Insider, Here's when robots will start beating humans at every task (19 June 2017) <http://www.businessinsider.com/when-robots-will-take-peoples-jobs-2017-6?IR=T>



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