

DECODING THE FUTURE

How can local government ensure that it rides the wave of change rather than being engulfed by the fourth industrial revolution?

By **Karen Day**

The world is in transition. According to the World Economic Forum, we are moving into the fourth industrial revolution: a period of enormous technological acceleration that will see robotics, machine learning, big data and artificial intelligence becoming commonplace.

Its impact will be far-reaching, particularly in the workplace. It's predicted that a third of our current workplace skills will be outmoded, some jobs will vanish, and, according to McLeod, Scott and Karl Fisch in *Shift Happens*, when our current cohort of primary school children join the workplace in the next 12-15 years, 65% will be doing jobs that don't currently exist.

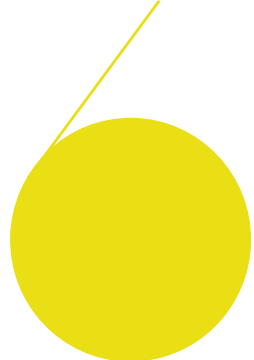
The pressure on governments globally is not only to create the right economic conditions for new tech to flourish but to prepare its public services and its workforce with the right skills. Combined with other macroeconomic factors, such as an ageing population, governments can either ride this wave

of fundamental change or be engulfed by it.

Automation has been creeping into our lives for several years, but it is the pace of change to come that will challenge the public sector. Marcus Shephard, senior researcher at the Institute for Government, says there's no single tech game-changer but a perfect storm of advances coming together.

"There's AI, cryptocurrencies, drones, the internet of things, self-driving cars. They aren't all big applications, but lots of little applications that people are building to problem-solve," he adds.

Highways England, for example, started testing autonomous self-driving dumper trucks at a road construction site in May. The agency says these trucks will speed up efficiency by being able to work around the clock. While councils in London launched the London Office of Technology and Innovation in the summer to collaborate on digital innovation, including smartbots to help deliver services and big data analysis. ►



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Marcus Shephard, Institute for Government

There has been much doom and gloom about the impact of these potential changes, and it is clear that some roles will become redundant. The Bank of England predicts that, within 20 years, two-thirds of jobs will have the potential to be automated. According to the WEF's *Future of Jobs* report, in 2018, 71% of task hours across 12 industries it surveyed were carried out by humans, and 29% by machines. By 2022, it expects this ratio to have shifted closer to parity, with 58% of task hours performed by humans and 42% by machines. But while some commentators are predicting mass

unemployment, tech can augment roles, meaning more time for higher-value work and potentially much improved public services. "If you look at the 2,000 [government] lawyers, much of their legal work is discovery," says Shephard, who is researching the impact of automation on the public sector. "There are estimates that machine learning could automate 30% of what a lawyer does. Do we get rid of 30% of the workforce or leave them and let them do more?" He points to frontline workers and says there will also be a need to interact

directly with people – but some duties can be replaced. Prison officers, for example, might use drones to keep tabs on the prison population and an AI system to predict violent hotspots, leaving them to focus more on prisoner rehabilitation. But all the potential of this new tech may go untapped without the right skills and the right workforce to maximise it. The WEF says the top 10 skills required in the workplace by 2020 will be significantly different from those we needed back in 2015. Complex problem-solving, critical thinking, creativity and emotional intelligence will be in greater demand as more tasks are subsumed by tech.

In a survey of 72 global public sector organisations last year, CIPFA found that 71% of respondents felt strategic thinking would be a priority non-financial skill in the next 10 years, compared with 66% now. Significantly, 58% thought that tech expertise would be a priority financial skill in 10 years, compared with just 37% now. The WEF predicts that, by 2022, the global average skills stability (the measure of the main skills needed to perform a job that stay the same) will be just 58%. This means a huge 42% change in average skills will be required in the next three years to be ready for the impact of the wave of tech and macroeconomic factors.

The public sector globally is no stranger to managing its talent. The cost of training some of the world's biggest workforce groups – the military, teachers, doctors and social workers – means that retaining them long-term is vital for efficiency and value for money. But it is not easy.

According to the Office for National Statistics, one-year retention rates across the public sector in the UK have dropped since 2012-13. Among social workers, for example, the rate fell from 96% in 2012-13 to 87% in 2016-17. In the finance profession, CIPFA's global survey, *Talent Management in Government Finance*, found that the top three barriers to building sustainable talent were bureaucracy, lack of development



► TALENT MANAGEMENT

Programmes in the public sector: facing the future

Local Government Association

The National Graduate Development Programme is very much local government's 'grown-your-own' talent management scheme. Run by the LGA and set up around 20 years ago, it's the only national graduate scheme specifically for local government. It's a two-year fast-track programme, whereby graduates are matched with councils and complete a minimum of three placements within their employing authority.

Collaborating with a national scheme gives councils access to a pool of graduates and subsidised recruitment and training costs. The 2019 cohort comprised 150 graduates, who were placed with 60 councils. They will work toward a level 7 qualification in leadership and management.

The scheme has an impressive retention record. According to a survey of nearly 500 former trainees, over 90% had remained in the public sector.

New Zealand State Services Commission

New Zealand has taken a public sector-wide approach to talent management. It set up the State Services Commission after realising a third of the country's workforce was aged 50 or over. The SSC aims to grow leaders with more diverse backgrounds and skills, remove barriers to joining state services and ensure that it is learning from the knowledge of its older workforce.

Graduates are now expected to work across a range of public services – previously, workers tended to stay in one department throughout their careers. The SSC also supports exchanges with the private sector and non-government organisations.

At a senior level, it has established a public services leaders group, which includes some 850 senior public servants. This supports their careers, potentially up to chief executive. Current chief executives are expected to help build up the next set of leaders by nominating people for training and development.

The SSC has also established a set of 'movement' standards to help public servants transition between agencies and departments and remove perceived barriers. It has also created a talent management toolkit, which it expects all its 36 agencies to embed as part of their own talent management practices.

The toolkit includes a leadership success profile, common assessments and analytics and a talent management information system. The TMIS holds information on all public servants, including education, training and involvement in any talent management schemes.

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MCLEOD, SCOTT AND KARL FISCH, SHIFT HAPPENS

opportunities and poor working conditions, particularly for younger staff. Jenny King, talent management consultant to CIPFA, says the differences between the public and private sectors, particularly in the finance profession, mean that transitioning between the two can be difficult, meaning that a 'grow-your-own' strategy is vital.

"People don't usually work in the public sector because it pays better, so money is not going to be the ultimate solution," she says. "By addressing ways of managing talent, through career development, it gives them that extra." She points to the NHS Wales Finance Academy as a prime example of the public sector's grow-your-own approach. Set up partially in response to difficulties recruiting in remote parts of Wales and a potential early loss of leaders owing to tax changes on pensions, the academy covers all 700 finance staff in Wales. It has set up five talent-management schemes including a graduate training programme, one for future finance leaders and one for aspiring directors of finance.

However, with the forthcoming tech revolution, it's hard to predict what will be developed and adopted first, so skills gaps are harder to plot. Henry Parkes, senior economist at the Institute for Public

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Jenny King, talent management consultant



Policy Research, says that, with an ageing population, older workers might be slower to adapt than digital natives.

However, he warns that “you can’t just roll out new tech”.

“There will be a lot of uncertainty over what those skills gaps will be,” he says. “There is a need for the government and tech firms to work in consultation with workers to get a better understanding of what the barriers might be.”

King adds that, with such unpredictability, the public sector needs to prepare people to be “change-ready”.

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She adds that the type of collaboration already seen in some public sector talent management programmes, such as the Government Finance Academy, run by the

Government Finance Function, will be crucial in allowing scarce resources to be pooled and knowledge shared.

The Government Finance Function, which includes around 10,000 civil servants across 39 organisations, has already acknowledged that staying ahead

of tech changes is one of its main challenges. But this is also seen as an opportunity, with robotics, automation and AI a potential means of “removing an administrative burden on our people”.

Mike Driver, head of the Government Finance Function and chief financial officer at the Ministry of Justice, says: “Developments in technology and trends towards employees retiring later and more flexibly increasingly means that people must enhance their skills and master new ones throughout their working lives.”

He explains how the GFF’s strategy prioritises people and capability. “We have outlined a strategic and ambitious plan to build a confident, resilient and diverse finance profession across government, equipped with the knowledge, skills and experience to meet current priorities and anticipate future challenges.”

At the centre of its people strategy are “diversity and inclusion”, Driver notes. These factors play a key part in building that resilience to change.

Shepherd adds that thinking around how automation and the fourth industrial revolution will affect the workforce is still “very new”. “The carrot,” he says, “is that it has the potential to make government better in so many ways.”

But the clock is ticking and, as the WEF warns, there is only a small window of opportunity to make sure that our talent is ready. ●

See also interview with Mike Driver, page 32

