Opportunities and threats to the public sector from digitisation
Definitions:
In this report we will use 'digitisation' to refer to the introduction of processes and services which are carried out by digital technology. Or the transition of processes and services which were previously carried out by workers, to digital delivery.

Executive summary
This report considers the government’s commitment to transforming public services through digitisation. It looks specifically at the impact of digitisation on the public sector workforce.
Opportunities

Trade union organising

- Digitisation has accelerated during the Covid-19 pandemic, and members became more reliant on trade unions to protect jobs, incomes and access to social protections.
- Public service unions have adapted to changing workplace environments using innovative digital methods to organise and mobilise their membership.

Better services

- Digitisation can improve efficiency and enable information sharing, integration and personalisation of services.
- Governments can meet the expectations of citizens who increasingly expect a 'digital first' approach. ¹
- During the pandemic, offering services digitally means the public can retain access to services they need.
- Digitisation can expand access and engagement between the public and government, if done well and in conjunction with the workforce and service users.

Risks

Deskilling and job losses

- The impact of digitisation on jobs in the public sector will depend on technological innovations and the level of uptake.
- It is likely some jobs will be lost while new ones will be created.

• Estimates suggest in 60 per cent of jobs at least a third of tasks can be automated. ²

• Access to life-long training is vital if workers are to keep pace with technological change. ³

**Employment relationship**

• Digitisation will impact employment relationships at different stages: recruitment, line management, end of employment and collective action.

• It will also affect monitoring and surveillance. This is covered in the TUC’s work on AI⁴, and workplace monitoring.⁵

**Workforce:**

• The impact of digitisation will differ across sectors, jobs and geographical areas.

• Women, BME workers, young workers and migrants are overrepresented in jobs that are very liable to digitisation. ⁶

---

² McKinsey (2020) *Where machines could replace humans--and where they can’t (yet) | McKinsey*


⁴ TUC, 'Work and the AI revolution', [https://www.tuc.org.uk/Almanifesto], March 2021

⁵ TUC 'I'll be watching you, a report on workplace monitoring' [https://www.tuc.org.uk/research-analysis/reports/ill-be-watching-you], August, 2018

⁶ IPPR, 'The future is ours, women, automation and the economy in the digital age', [https://www.ippr.org/research/publications/women-automation-and-equality], July 2019
• The evidence suggests a digital skills gap, particularly amongst workers in precarious types of employment. The lack of on-the-job training opportunities puts these workers at high risk of unemployment in the future.

**Recommendations**

**Skills**

The government should commit to:

• Setting an ambition to increase investment in both workforce and out of work training to the EU average within the next five years.

• Introducing a right to a mid-life career review, and face to face guidance on training.

• Introducing a new life-long learning account, providing the opportunity for people to learn throughout their working lives.

• Introducing a new targeted retraining programme aimed at those facing redundancy due to industrial change.

• Any digitisation implemented across the public sector should be done with due regard to the Public Sector Equalities Duty.

• Review its commitment to digitalisation in partnership with recognised trade unions across the public sector. This could follow the model of the Sweden’s Job Security Councils.

**Industrial**

---

The key principles from the TUC’s 2021 AI manifesto should underly the introduction of digitisation in the workplace, these include: 

- New technology, processes and changes to ways of working should be negotiated with the workforce and their representatives.
- Negotiate for members to have increased in-the-job access to digital skills and development training, with particular consideration given to workers most likely to miss out on training at work.
- Advocate for greater regulation over the use and exchange of data in the public sector.

**Introduction**

"The lessons we learned from coronavirus (COVID-19) have shown us that now...is the perfect time for us to accelerate the digital transformation of public services across the whole of government." 

In 2021, the government reaffirmed its commitment to transform public services through digitisation. This report considers the impact of that, looking specifically at the workforce. We will consider the risks and opportunities of digitisation on jobs, skills and working conditions.

---

8 TUC, 'Dignity at work and the AI revolution, a TUC manifesto', March 2021
9 Gov.uk (2021) The next steps for digital, data and technology in government - Government Digital Service (blog.gov.uk)
Since the Covid-19 pandemic, the pace of digitisation has accelerated across all areas of the economy. In the public sector, digitisation, like all new technology, is only as good or bad as the uses to which it is put.

In 2019, the Institute for Government (IfG) identified 19 projects totalling £38bn aimed at digitising public services. Their report highlights the risks and requirements government and the wider public sector should be aware of when digitising services.10

Digitisation offers government cost savings and potential improvements to services. However, these expectations may be unhelpful and unrealistic.

“They fail to recognise the uncertainty inherent in digital transformation, locking programmes into fixed and unrealistic timelines”11

There needs to be sufficient focus on “changing culture, behaviour, the operating model and ways of working”, and preventing programmes from becoming detached from the operations of the team.12

Public sector trade unions must be at the forefront of the process of integrating new technology and adapting to the new ways of working it creates, to ensure workers maximise the benefits of this wide-ranging transformation.

**Impact and opportunities in work**

10 Institute for Government 'The hidden obstacles to government digital transformation', October 2018, p3
11 Ibid
12 Ibid
Opportunities

Digitisation holds the possibility to improve the quality of work and the service the public receives. For instance, through more personalised healthcare facilitated by digitised information sharing across difference services. But it also provides new opportunities to unions organising and mobilising in the sector.

Digitisation has allowed increasing flexibility. Roles that had previously required staff to come into an office can now be carried out at home. This had become pertinent during the pandemic when travel to and from work and gathering was often discouraged.

As a result, employers are also feeling the impact of the pandemic. In 2021, ACAS reported that half of employers expected more flexible work requests from their employees and 55 per cent expected to see more staff working from home or remotely at least part of the week.¹³

Before the pandemic 80 per cent of GP appointments were in person. This dropped below 50 per cent once the pandemic began and distanced appointments continue to make up a significant proportion of the total.¹⁴ While there are clear advantages to in person appointments, the increase in digital appointments has allowed the total number of appointments to increase above pre-pandemic levels.¹⁵ This does not obviate the need for greater

¹⁴ BBC ' Face-to-face GP visits still near lockdown levels',[https://www.bbc.co.uk/news/health-58670560], September 2021
¹⁵ BMA ' GP appointment levels higher than pre-pandemic',[https://www.bma.org.uk/bma-media-centre/gp-appointment-levels-higher-than-pre-pandemic], September 2021
investment in GP numbers (and the health service generally) but it does indicate the value of using technology to create more flexible provision.

Organising

The Covid-19 pandemic forced a radical adjustment in modes of work across public services. Trade unions in the sector have had to adjust to more diffuse and fractured workplaces.

Organising in a digital landscape has brought new challenges for reps. It has also created opportunities, particularly for disabled members or those with caring commitments, who may have faced barriers to participating in traditional organising that required a physical presence.

In the past 18 months we have seen public service unions adapt to increased home working and use innovative digital methods to engage and grow their membership.

In January 2021, the National Education Union (NEU) held a record-breaking meeting, of over 400,000 members. The meeting agreed clear demands that staff not return to in person teaching when it was unsafe. The government was forced to u-turn on a full return to schools.16

In June 2021, GMB members at Airedale NHS foundation waged a successful campaign to improve pay and conditions.17 The campaign

16 Union News, 'The biggest meeting in UK political history? 400,000 people join NEU Zoom call', [https://www.union-news.co.uk/the-biggest-meeting-in-uk-political-history-400000-people-join-neu-zoom-call/], January 2021

made significant use of digital campaign tools including an online community petition and letter-writing tools.

These are important examples that the movement can learn from and develop to ensure that workers can continue to access to unions in physical and digital workspaces.

In a recent survey of union reps and union learning reps (ULR), provides further demonstration of the good work undertaken by unions despite the disruption of the pandemic.

Despite the impact of the pandemic posing significant challenges and requiring changes in focus and ways of working reps and ULRs still reported some advantages to increased digitalisation.

Over a third felt that the nature of their role had changed significantly during the pandemic. With respondents citing increased workloads and increased focus on health and safety and mental health.\(^\text{18}\)

Forty-nine per cent of reps and ULRs that had worked from home felt they had been less effective, but 41 per cent felt that they had been equally effective at the role. Reps and ULRs highlighted that providing access to learning without the necessity of travel was a major advantage, as well as other flexibilities, including fitting learning into busy work schedules, having shorter online sessions as opposed to all- or multi-day courses, and ending the problem of classroom sessions not running due to low numbers signing up.\(^\text{19}\)

**Better services**

Digitisation holds out the prospect of improvements to the nature of public sector work. With services delivered through digitisation of

\(^{18}\) TUC, 'Union reps supporting learning and skills', January 2022  
\(^{19}\) Ibid
processes and information sharing facilitating integration, increased efficiency and personalisation.

For instance, general accounting operations, cash disbursement, and financial control which are carried out by multiple government departments are all good candidates for digitisation. This has the potential to make processes faster and more efficient.\textsuperscript{20}

Digitisation of public services has the potential to 'green' our public services and help the government deliver on its net zero ambitions through energy management tools. And it can pave the way for more integration of our public services, enabling information sharing between services.

For any of these advantages to be realised there is a need for clear guidelines, quality assurance and consultation with and consideration of the workforce and recognised trade unions.

In the absence of these safeguards there are significant risks to public sector workers in digitisation. We explore these next.

\textbf{Risks}

\textbf{Deskilling and job losses}

The impact of digitisation on jobs in the public sector will depend on technological innovations and the uptake of them but it is likely some jobs will be lost while new ones will be created. The OECD estimates that globally 14 per cent of workers will lose their jobs to digitisation.\textsuperscript{21} The British union Unite believe that over 230,000 of its


1.4 million members could lose their jobs by 2035, with many workers in health services and local government being at risk.\textsuperscript{22}

Even where jobs aren’t lost or created, estimates suggest 60 per cent of occupations could see at least one third of their day-to-day tasks become automated. This transformation will require new skills from the workforce. Workers will need access to retraining and the opportunity to develop new digital skills.

However, access to training is unequal across the public sector. Around 20 per cent of adults in low skilled work have access to training compared to 60 per cent of adults in high skilled work.\textsuperscript{23} This means many of those whose jobs are most likely to be lost to automation have the least chance of accessing the training they need to maintain employment.

Digitisation can transform people’s experience of work and the satisfaction they get from carrying out their jobs. In Sweden, the introduction of new ICT systems led to a deskilling and disempowering experience for the workforce.\textsuperscript{24} A range of invisible skills and knowledge that the workers had built up were rendered irrelevant by the technological changes, and their work became more monotonous. The workers felt they had changed from being agents in their work to victims of a process.

Trade unions can play an important role in mediating these processes and managing change, ensuring that workers concerns are heard and their interests protected.

\textsuperscript{24} PSIRU, ‘Digitisation and public services’
Impact of digitisation on the employment relationship

As well as changing the nature of work in the public sector, digitisation will impact the employment relationship. The impact will occur at different stages including recruitment, line management functions, monitoring and surveillance, ending employment, and the impact on collective action.

The implications for workers who are managed by AI are significant. Yet previous TUC research suggests worker interests may often be marginalised or overlooked when new technology is introduced at work, evidencing the need for strong trade union representation.

The use of AI in people management can also impact on the employment rights of workers. For example, the new technology might result in discriminatory and unfair outcomes for workers, their human right to privacy might be infringed, and their data might not be handled in accordance with data protection law. In addition, there are significant implications in terms of workers’ physical and mental wellbeing, for example when workers experience the extreme stress and pressure of constant, AI-driven ‘real-time’ performance assessment and monitoring.

For an in-depth exploration of these issues please refer to TUC's 'Technology Managing People' report.

\[25\] TUC (2020) Technology managing people
Workers most at risk

Digitisation offers the opportunity to improve the working standards of many workers. It will transform the skills required from the workforce and result in some job loss as well as job creation. Some occupations within the public sector are more easily automated: areas such as public administration and finance, compared to others such as health, education and social care. However, it is unlikely any area of the public sector will be left untouched by the effects of digitisation.

Without investment in life-longing learning and opportunities to retrain and upskill, many public sector workers feel unprepared for digitisation and are rightly concerned that it constitutes an attack on their jobs, terms and conditions.

Demographics of risk

Digitisation will not take the form of a single, coherent, and contiguous process, with unilateral effects across society. The impact of digital tech will be felt differently by different groups of workers.

The potential for job digitisation is similar for women and men in their twenties, but women are increasingly likely to be affected as the groups get older. The Office for National Statistics (ONS) estimates that women hold 70.2 per cent of jobs that are at ‘high risk’ that is, jobs with the highest proportions of component tasks that could be automated. This interacts with age, partly because as women get older, they are more likely to work in part-time roles, and part time work is more concentrated in job roles at higher risk of automation. A survey by UNISON the union found part time workers

26 BEIS, 'The potential impact of AI on UK employment and the demand for skills', October 2021
were least likely to have undertaken any learning at work and were less likely to have trained for ‘work reasons’.27

Because different patterns of employment occur across the country, gender differences are not evenly distributed geographically. In the North East, women are 2.2 times as likely to have their work affected by automation compared to men. In London this figure is 1.5 times.28

Public sector employment is a vital component of some regional economies. ONS figures for September 2021 indicate that public sector employment accounts for 21 per cent of all employees in the North East and 19 per cent in the North West and Yorkshire and the Humber.29

Public sector job losses through digitisation therefore have the potential to serious destabilise these areas, many of which are in the so-called red wall that voted Conservative for the first time in 2019.

Overall, men’s employment is more affected by ethnicity. However, migrant women are some of the most likely to see their work affected by digitisation due to the nature of the work that migrant women undertake. Migrant workers make up 21 per cent of the female workforce, but 29.3 per cent of women in occupations with a

28 IPPR, 'The future is ours, women automation and the economy in the digital age', [https://www.ippr.org/research/publications/women-automation-and-equality], July 2019
29 TUC analysis of ONS 'Public sector employment, September 2021' [https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/publicsectorpersonnel/datasets/publicsectoremploymentreference table], December 2021
Because the evidence suggests some groups of workers with protected characteristics are more likely to be disadvantaged as a result of digitisation, it is vital employers pay due regard to the Public Sector Equalities Duty (PSED). The PSED requires public bodies to have due regard to the need to eliminate discrimination and to advance equality of opportunity amongst different groups of workers.

**Inequalities in access to skills and training**

Within the public sector, there is evidence that workers would benefit from support from their employers, especially in regard to preparing for the digitisation of work.

When digitisation is mismanaged or implemented without consultation with the workforce and their representatives, the effects can be significant. In 2021, PCS balloted members over changes to working practices in Her Majesty's Courts and Tribunals System (HMCTS). They highlighted the flawed and failing Common Platform system among myriad concerns including feeling at risk, incredibly stressed, overwhelmed, and ill.31 PCS and their members are calling for a halt to the system while these issues are addressed. Since 2016, PCS have been campaigning to protect members from job losses through digitisation in the Ministry of Justice.32

---

30 Ibid
32 PCS, 'PCS campaigning and organising in the MoJ', [https://www.pcs.org.uk/justice-sector-including-moj-noms-and-]
Evidence shows access to digital training is unequal across the workforce. UNISON the union surveyed members and found those aged 50+ were six times more likely than youngest (16-26) to report needing training in digital and computer skills.  

UNISON’s survey also found notable differences by type of employment contract. Outsourced workers and those on zero hours contracts are among the least likely to be satisfied with their current job and there are more skills imbalances among insecure workers – particularly those on zero hours contracts. Women, and BME and migrant workers are overrepresented in outsourced, insecure jobs in the public sector therefore it is reasonable to assume they are also more likely to have unmet training needs.

These findings indicate that workers in the most precarious types of employment are often the most in need of upskilling. These workers are at risk of losing their job because of digitisation but have limited opportunities to access the training that would allow them to move into more secure, skilled employment.

In 2017, the TUC's 'Shaping our digital future' report outlined a range of commitments on retraining necessary to ensure workers could adapt to digital technology. These recommendations appear at the end of this report.

It is also vital that companies engage with their workforce. The UK has some of the lowest levels of worker participation in Europe, but the workforce will be vital in ensuring that technologies such as AI are implemented successfully and fairly.

cps/ministry-of-justice/pcs-campaigning-and-organising-in-moj,
May 2016
Unison 'Skills for the future'

Unison 'Skills for the future'

This is an important role that trade unions can play in securing positive outcomes for their members.\textsuperscript{35} Supporting training in ICT and digital skills has been a mainstay of the union learning offer delivered by union learning reps (ULRs) and this was of course hugely boosted by the government grant for the Union Learning Fund (ULF) and UnionLearn. This resulted in more than two-thirds of learners with no previous qualification gaining one for the first time through the ULF.\textsuperscript{36}

**Trade unions winning for members**

So far, we have focussed mainly on the impact of digitisation on the public sector workforce. However, there are several examples of unions winning for members in these areas.

Unite the union have drawn up a New Technology Agreement, which is available for workplace reps to use in negotiations with management.\textsuperscript{37} Each workplace can adopt and adapt the agreement to their workplace as and when needed.

The agreement establishes some key principles:

- The introduction and control of New Technology on the shop floor will only be made with agreement of the Employer and the Union on behalf of its affected members.

\textsuperscript{35} Ibid
\textsuperscript{36} TUC, ‘Union learning is needed more than ever’, [https://www.tuc.org.uk/blogs/union-learning-needed-more-ever], October 2020
\textsuperscript{37} UNITE ‘Worker Voice Pay, Draft New Technology Agreement’, 2017
• The Employer will reinvest cost savings from any introduction of New Technology into areas that promote and provide more and better jobs within the organisation.

• New skills or responsibilities will be recognised through negotiated pay increases.\(^{38}\)

And it builds on this to establish the criterion upon which new technology and processes can be employed in the workplace.

Similarly, Prospect union identified a range of victories they and sister unions across the world have achieved: \(^{39}\)

• In 2019, Prospect won a significant settlement for a member who, an Employment Tribunal ruled, had been subject to unlawful indirect discrimination on the grounds of race and age by an online test used to assess applicants for promotion by the Home Office.

• UNI Global, an international federation of unions to which Prospect is affiliated, has secured global agreements on the right to disconnect with Telefonica and Orange, building on work done in France and Spain.

Sweden has employed Job Security Councils to smooth the introduction of new technology and limit worker resistance. These councils feature both trade unions and employers and provide training and support for workers who are made redundant. They are so successful that ninety per cent of workers have found a new job within a year of leaving their old one.\(^{40}\)

\(^{38}\) Ibid

\(^{39}\) Prospect ‘The future of work: employers' collection and use of worker data’, January 2020

\(^{40}\) Financial Times ‘Trade Unions seek role in age of automation’, https://www.ft.com/content/6d50b080-ad56-11e8-8253-48106866cd8a, November 2018
Conclusion and recommendations

Digitisation has the potential to radically shift ways of working across the public sector. The job of the trade union movement is to ensure workers win their fair share of the gains bought by technological advances and protect workers from the worst affects.

The threats of digitisation are clear: job losses, deskilling, loss of privacy and the loss of universal access to essential services. If done without the consultation of workers and their representation, we risk allowing even greater inequality and disempowering both public sector workers and service users.

However, if workers and their unions have the chance to properly engage and lead in its implementation, employers and the public sector workforce can jointly harness the potential digitisation has to offer.

We can identify two broad levels on which the trade union response should operate: industrial demands for workers and political demands for governments.

Recommendations

Government

The government should commit to:

- Setting an ambition to increase investment in both workforce and out of work training to the EU average within the next five years.
- Introducing a right to a mid-life career review, and face to face guidance on training.
• Introducing a new life-long learning account, providing the opportunity for people to learn throughout their working lives.

• Introducing a new targeted retraining programme aimed at those facing redundancy due to industrial change. Any digitisation implemented across the public sector should be done with due regard to the Public Sector Equalities Duty.

• Review its commitment to digitalisation in partnership with recognised trade unions across the public sector. This could follow the model of the Sweden’s Job Security Councils.

**Industrial**

Trade unions' response to digitisation must be proactive and nuanced. Digitisation will impact differently across different areas of the public sector and different workers within them.

The key principles from the TUC’s 2021 AI manifesto should underly the introduction of digitisation in the workplace, these include:41

• New technology, processes and changes to ways of working should be negotiated with the workforce and their representatives.

• Negotiate for members to have increased in-the-job access to digital skills and development training, with particular consideration given to workers most likely to miss out on training at work.

• Advocate for greater regulation over the use and exchange of data in the public sector.

41 TUC, 'Dignity at work and the AI revolution, a TUC manifesto', March 2021