Wales TUC Cymru

Negotiating the future of work:

Automation and New Technology

Foreword

The introduction of new technologies, like the issue of tackling climate change, will have huge impacts on jobs in the next few decades, yet they often fall outside of union-management relations. This is a huge risk, putting us on track for a more unfair labour market. It's clear that the rapid introduction of new technologies is changing work in so many ways – it effects how we do our jobs, what we do and how we're managed. But it's very important we remember that the introduction of tech is always an employer's choice, and it isn't a one-dimensional issue. There are both short and long-term implications, many of which matter to workers.

Any interventions in these areas are not neutral for the workforce – they can either make work more fulfilling, secure and rewarding, or they can displace, discriminate and disadvantage workers, worsening existing inequalities linked to workers' characteristics and place. Widening the scope of consultation and collective bargaining is therefore the best way to protect workers in a rapidly changing economy. The issues that arise from a shift towards more workplace automation and other new technologies, as well as those that relate to decarbonising the economy, throw up similar challenges – things like retraining, job design and evaluation, workforce planning and redeployment are all key, and will make the difference to whether we achieve that 'just transition' vision. Our movement needs to steer this agenda to make sure that workers get a fair deal. But we know that employers often don't consult on these issues, and we urgently need to engage with them on long-term workforce planning issues and transitioning the skills base of the Welsh workforce.

Access to learning and skills for workers is key to moving this forward. We have an established and successful union-led learning programme in Wales, and a network of professional and active workplace reps. We have an opportunity to use these assets to make a difference on this agenda. This is one of two reports highlighting the importance of supporting workers to access new skills and, crucially, embedding good practice by negotiating with employers across the key sectors we know are most impacted. It is aimed at our workplace reps. It is for you to use to start these conversations with your employers and colleagues to realise the ambition of a just transition in Wales and address the big changes facing workers today.

In solidarity

Shavanah Taj
General Secretary
Wales TUC

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Negotiating automation and new technology: Executive Summary

Automation is the process by which machines replace tasks previously done by humans. It has been a relatively a constant feature of work as technology has developed over the centuries. However, the current wave, which includes advanced digitalisation, artificial intelligence, semiautonomous interconnected machines, advanced robotics, 3-D printing, nanotechnology, and advanced biotechnology, are having such a transformative effect that they have collectively been described as a "fourth industrial revolution" or Industry 4.0.

New technology is already reshaping work in positive and negative ways

New technologies are being used to redesign occupations and change the content, character and context of jobs. This has implications for the 'quality' of work, how it is valued, how intense it is, the skills and tools required to do it, how safe it is for workers and the relative power it affords to employers versus workers.

A positive experience can be the introduction of labour saving technology which frees workers from demanding manual labour and lets them engage in more meaningful tasks. An example of a negative outcome comes from Barclays bank where a new computer monitoring system tracked the time employees spent at their desks, and registered how long users were offline.

It is an issue for all workers

The changing nature of job roles due to technology will impact all workers regardless of skill level. Automation, digitisation and AI will have an impact on both 'routine' and 'high-skilled' jobs. e.g. Increases in processing power, new software and the use of 'big data' is already having an impact on so-called professional occupations such as accountants, lawyers, doctors and teachers.

The pace of change is accelerating

Over the next decade, these new technologies are predicted to develop further and become more integrated into economies around the world. Although the exact nature and pace of technological change is hard to predict, and will vary across different sectors of the economy, the Covid 19 pandemic is accelerating the process. In a survey for the World Economic Forum, "94 per cent of UK companies said they were accelerating the digitalisation of tasks as a result of Covid-19, and 57 per cent said they were accelerating the automation of tasks".

New technology is both a risk and an opportunity for Welsh workers

It is as yet uncertain what the impact of new technology will mean for numbers of jobs in Wales, and whether new jobs will be created, but what is clear is that it's an urgent issue and the time to act is now.

Up to a third of Welsh jobs could be lost and many others displaced

Think tank, Future Advocacy, found that automation could have a devastating impact on Wales with around a third of jobs at risk of disappearing altogether by the 2030s. It forecast that, by sector,

46.6%

of jobs in manufacturing

32.3%

of jobs in finance

44%

of jobs in wholesale and retail could be lost in little over a decade.

Less affected will be human health and social work (17%) and education (8.5%). The study also found Wales' top 10 private employers were in sectors where jobs are at a high risk of being lost to automation and that Alyn and Deeside was the most vulnerable constituency in Wales and the fourth in the whole of UK.

The Wales 4.0 report aimed to take a more nuanced view of what new technology means for the country. It agrees that there may well be a high risk to jobs, but that it depends on the sector. In the private sector "the Welsh economy is dominated by businesses that are locked into peripheral parts of global value chains with their headquarters, research, design and business intelligence function located elsewhere. This means that functions located in Wales tend to be less secure, more portable and hence more at risk of automation."

On the other hand, the relatively high proportion of the Welsh workforce (compared to the rest of the UK) in public services, may offer some degree of shelter from the threat of automation at least in the short term.

There's no guarantee that significant new jobs will be created

The Wales 4.0 report challenges the optimism of some who say that new technology will create a net gain in jobs. It says there are no guarantees that new, as yet, unknown jobs will be automatically created by new technology. The evidence does not easily show potential new areas of mass employment, and in fact points to most new employment in Wales being 'replacement jobs' in the short-to-medium term as well as to a worrying trend towards more low quality, non-standard forms of employment.

An opportunity to transform the Welsh economy

The Wales 4.0 report sets out a range of policy recommendations that could ensure new technology is both beneficial to the Welsh Economy and workers. The aim is to support the creation of Wales as a global hub of digital innovation.

> "The question now is whether Welsh Government and its key social partners are prepared to 'will the means' as well as 'will the ends' to make digital innovation and the future economy truly work for the people of Wales." (Wales 4.0)

What unions can do

It's clear if the introduction of new technology is left to be driven solely driven by the 'logic of the market' ,it will be used primarily by employers to make 'efficiencies', drive down labour costs, and reduce standards. Unions can act now to:

- ➔ Push for Wales 4.0 recommendations to be adopted,
- ➔ use social partnership seats to influence strategic policy on new technology
- ➔ Organise at workplace and employer level to negotiate agreements on new technology that both protect and benefit workers

Existing agreements are few but show what can be won

New technology has been increasingly on every UK union's agenda, although it seems that, as yet, there is little actual collective bargaining taking place specifically on the issue in the UK. Exceptions include the CWU's agreements with the Royal Mail Group, and the progress towards agreements being sought by Unite reps across a number of sectors, after the union's push to get workers campaigning on the issue (see example below).

Outside of the UK, there are more examples of unions negotiating around new technology – a main example being the German transport union EVG's Work 4.0 agreement it reached with the Deutsche-Bahn Group (DB AG). However, collective agreements are still few and far between. This is because it is still an evolving issue, on top of which unions have been busy dealing with the fallout from the pandemic.

Starting a conversation with members

Automation can be a strong mobilising issue that draws on members' concerns about job security, the changing nature of job roles and heightened pressures on the workforce. However, it is hard to start campaigning around automation without knowing what is happening in the workplace already, understanding members' feelings about the issue, and having at least some idea of the likely impact on jobs and specific job roles in the future.

The unions that have successfully negotiated new technology agreements have either carried out extensive research, reflective exercises and a consultation with members

or have existing bargaining apparatus in place that ensures that the union is consulted on any planned changes long before their implementation.

Securing worker's voice

The core aim of negotiating around automation is that the introduction of new technology should not be made unilaterally by employers but by mutual agreement.

At the strategic level, workers' concerns around new technology must be addressed with social partners in terms of its impact on whole sectors of the economy, regions and skills needs. There is already progress towards an agreement on digitalisation in the Workforce Partnership Council (WPC) covering the public sector. However, progress on issues has been slower in the Council for Economic Development structure set up for partnership working in the private sector.

At the workplace and employer level, new technology is such a potentially huge issue affecting workers that it warrants its own space for discussion apart from any existing joint negotiating or consultation committees. Unions that have agreements on new technology have set up new Joint Working Groups on technology and others are consulted via their partnership structures.

Setting standards around the quality of work

There is plenty of experience to show that digital innovation does not automatically guarantee a decent standard of work. A collective agreement should make sure that, as technology transforms all types of occupations; it is not used as an excuse to devalue or deskill jobs or in any way demean workers and instead promotes Fair Work.

Redeployment and reskilling

The reskilling and retraining needs of workers in a transforming economy are likely to be significant.. Ideally, it is an issue that should be addressed through social partnership; with employers, unions and policy-makers working together to support job redesign and training initiatives, and in the process identifying in good time where new technology and processes may lead to job losses or a need for retraining. One way to start a conversation on future skills needs in wales is through the Wales union learning fund.

Better terms and conditions

There are predictions that industry 4.0 will generate significant financial and productivity gains for the UK. PWC estimates that artificial intelligence alone could add £232 billion to the economy by 2030. It is also estimated that smarter manufacturing, employing robotics, artificial intelligence, industrial internet of things and additive manufacturing, could add a further £455 billion. Whilst there are no guarantees that new technology will automatically lead to productivity gains in Wales, an agreement could ensure that any future gains are fairly distributed.

Health and safety

Depending on the workplace and the type of new technology concerned, there are likely to be a number of health and safety issues to include in any agreement. These include:

- ➔ Ergonomics – is new machinery safe, body movements etc.?
- ➔ Mental health
- ➔ Work intensification
- ➔ Social isolation

Unions are also lobbying for a 'Right to Disconnect' law as well as providing model agreements on the issue.

Protecting worker data

One of the main concerns around new technology is that data on workers is being unfairly captured and leading to the increased monitoring and surveillance by employers. Recent research has found that an increasing number of workers are having their every movement at work tracked, many without even being aware that this is happening. There are a number of ways unions can intervene to protect workers.

Remote working

Many reps and officials are currently in the process of negotiating new policies and agreements around homeworking as a result of big shifts caused by the Covid 19 pandemic. Some of these negotiations also achieve positive outcomes for workers in relation to the use of technology.

Negotiating the future: The takeaways

- ➔ Successful intervention is possible
- ➔ The time to act is now
- ➔ Prepare the ground and engage members
- ➔ Use industrial strength
- ➔ Engage in dialogue at all levels

Summary of agreements

Initiative	What has been won
CWU and Royal Mail Group	The CWU's framework agreement with the Royal Mail group establishes principles around the introduction of new technology and structures through which the union can participate in its design through to its implementation. The main principle is that technology is to be used to improve processes and not to be used to 'de-humanise' work in any way. The National Trials Working Group with the employer oversees trials of new technology, and agrees terms of reference (ToRs) around each introduction. They have recently reduced automated parcel sorting machines and a new digital HR system. The ToRs guarantee everything from safeguarding the jobs of direct employees, to health and safety, data protection and minimum staffing levels. Locally, CWU negotiators have used the introduction of the new technologies to win improved shift patterns and a shorter working week for members.
Unite automation campaign	After an extensive research and dissemination exercise that involved workshops on automation across all 19 of its industrial sector groups, Unite reps have initiated campaigns around new technology in a number of sectors: from passenger transport, to food manufacturing and automotive. Although momentum was slowed due to the Covid 19 pandemic, stewards at Rolls Royce Motors (BMW Group) got their management to set up a Joint Working Group on new technology which will discuss how to safeguard jobs and any concerns about new equipment.
EVG union and Deutsche Bahn (Germany)	The Work 4.0 agreement between German transport union EVG and the railway group Deutsche Bahn is a comprehensive long-term deal providing ongoing safeguards and support for workers as the railways face increasing automation and digitalisation. Negotiated after a significant research and consultation exercise with members, the agreement starts out with a definition of 'quality work', which is asserts should be maintained even as job roles change with incoming technology. It lays out a number of ways in which the union will work jointly with the employer in the design of new technology, in examining the skills needs of specific job roles as they evolve, to the design and roll out of training so that no worker is 'de-skilled'.

Partnership Council working in Wales	The Workforce Partnership Council is developing a set of principles on digitalisation that support the involvement, participation and consultation of staff and trade unions when new digital and data methodologies and new technologies are introduced. This follows the recommendations of a WPC report on the impact of innovative technology on the public sector workforce and will build upon the principles of the Partnership and Managing Change Agreement which requires state employers to use best endeavours to ensure employment continuity whenever changes are made which affect the workforce. It also requires employers to consult trade unions at the earliest appropriate opportunity and before any irreversible decisions are made. Progress is slower in the private sector Council for Economic Development
Partnership working: (Various employers)	There are also several positive examples of unions working in partnership with employers to ensure the best possible outcome for workers of the introduction of new technology. For example Community union and Zurich Insurance have worked together on an extensive internal reskilling and redeployment process, elsewhere UNISON members at Wheatley Group and GMB members in an ASDA warehouse can feedback constructively to employers around technology and see improvements.
Singapore social dialogue process	In Singapore, government, unions and employers worked together in 'social dialogue' to address new technology, draw up industrial transformation maps across different economic sectors and work out a strategy to facilitate the transition, including reskilling workers.
Swedish job councils	In Sweden, another model for solving the reskilling and redeployment needs created by technology is the Job Security Councils. These are funded by workers and employers (0.3% of payroll of affected companies) and act as an insurance scheme for workers, offering careers guidance and training.
Remote working agreements	In recent months, UK unions PCS in HMRC and the CWU in Santander have won remote working agreements that have safeguarded jobs as technological change and the impact of the Covid 19 pandemic has led to these employers choosing to downsize their office-based operations.

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What is the future of work?

What is the future of work?

The nature of work is changing. We are currently undergoing a process of major economic transition and restructuring driven by the introduction of new technologies, and legislation requiring the whole economy to decarbonise in order to combat climate change. The need for a rapid post Covid recovery is only accelerating the process.

Unions need to act now through all available negotiating structures from the workplace level up to social partnership councils to ensure that workers have a strong voice throughout the transition, play an active role in re-defining the jobs of the future and shape the skills training needed to adapt to the shifting environment.

The International Labour Organisation (ILO) summarises the four main processes of change already underway in the labour market. Union reps and officials will want to be up-to-speed with how they are unfolding within their sector so that they can intervene and negotiate the best outcomes for members.

➔ New job creation across many sectors of the economy

Automation and digitalisation are already creating the new 'platform-based' jobs such as those seen in the gig economy and are predicted to create new jobs in areas including data analysis, information security, digital transformation, software, applications, artificial intelligence and machine learning.

The transition to net zero will create new jobs in renewable energy; in energy efficiency (in manufacturing, transportation, building construction and operations, etc.); in organic agriculture; in various employment-intensive adaptation measures intended to protect and restore ecosystems and biodiversity, and in infrastructure and green (public) works intended to adapt to climate impacts and build resilience.

➔ Job substitution

Existing jobs are being substituted as a result of shifts in the economy. With automation replacing tasks from a range of jobs, from repetitive physical labour such as operating machinery on production lines to collecting and processing data for example paralegal work, accounting and back office work, these job roles are likely to be transformed but not necessarily eliminated as workers shift to perform other roles within organisations. This has implications for occupational profiles and skill needs.

Similarly the move from less to more efficient, from high-carbon to low-carbon, and from more to less polluting technologies, processes, and products will also substitute jobs. Examples include a shift from truck-based transportation to rail, from internal combustion engine manufacturing to electric vehicle production, or from landfilling to recycling and refurbishing.

➔ Job elimination

Certain jobs are being eliminated, either phased out or massively reduced in numbers, without direct replacement. This may happen where previously labour-intensive job processes are fully-automated; for example, fully-automated ports, the transition to online banking and retail. It will also occur in sectors of the economy where energy- and materials intensive economic activities are reduced or

phased out entirely. Greater energy, materials, and water efficiency (along with boosts in recycling of materials and reuse of products) could lead to substantial job losses in the primary sector.

➔ Job transformation

Finally, many, and perhaps most, existing jobs will simply be transformed and redefined as day-to-day workplace practices, skill sets, work methods, and job profiles are automated, digitalised or greened. For instance, workers everywhere are increasingly interacting with new software, devices and machines that are altering the rhythm of their daily working lives. As the economy shifts towards low carbon working, plumbers, engineers and electricians will have to reorient themselves to carry out similar work in the new environment. Automotive workers will produce more fuel-efficient (or electric) cars. Farmers will apply more climate-appropriate growing method (ILO, 2016)

The scope of this project

This project that set out to find practical examples of what unions have already negotiated to prepare their members for the major changes to working life being brought about through increasing automation and rapid technological change and the transition to net zero economy.

The research involved:

➔ A review of secondary literature and extensive desk research

➔ A search of the Labour Research Department's (LRD) collective agreements database

➔ A survey of LRD's union contacts

➔ Follow up interviews with key contacts

➔ Attendance of union workshops on relevant issues

It is clear that collective bargaining on these current transition issues is still in its infancy with very few concrete examples of agreements. Nevertheless, the research uncovered a number of examples of union negotiations and activity from across the UK and abroad that will be of interest to reps and officials looking to take action on these issues.

These findings have been split into two separate guides. This guide focuses on examples and key areas for negotiators looking to achieve agreements around automation and new technology.

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Negotiating automation and new technology

Negotiating automation and new technology

Automation is the process by which machines replace tasks previously done by humans. It has been a relatively a constant feature of work as technology has developed over the centuries. However, the current wave, which includes advanced digitalisation, artificial intelligence, semiautonomous interconnected machines, advanced robotics, 3-D printing, nanotechnology, and advanced biotechnology, are having such a transformative effect that they have collectively been described as a "fourth industrial revolution" or Industry 4.0.

New technology is already reshaping work in positive and negative ways

There are already many examples of how new technologies are already impacting work, making certain jobs obsolete and changing the daily activities of workers. These include: wearable technologies tracking the movements of Amazon workers in warehouses, the movement to online banking reducing the need for bank clerks, the automation of supermarket check-outs, computerised clinical diagnostics, remotely-operated machinery in ports and robots on production lines.

New technologies are being used to redesign occupations and change the content, character and context of jobs. This has implications for the 'quality' of work, how it is valued, how intense it is, the skills and tools required to do it, how safe it is for workers and the relative power it affords to employers versus workers.

It's rapidly shifting terrain that can have both positive and negative consequences for workers. The Future of Work Commission, Sharing the Future: Workers and Technology in the 2020s (a collaboration between the Fabian Society and the Community Union) found many examples of how automation can improve processes in daily working life. However, there are also a growing number of warning signs that technology, especially when imposed without consultation or consent, can lead to less desirable outcomes such as replacing humans with machines, increased surveillance or deskilling.

A positive experience can be the introduction of labour saving technology which frees workers from demanding manual labour and lets them engage in more meaningful tasks. An example of a negative outcome comes from Barclays bank where a new computer monitoring system tracked the time employees spent at their desks, and registered how long users were offline. Following a backlash from staff and privacy campaigners, the system was scrapped shortly afterwards. (Commission on Workers and Technology, 2020).

It is an issue for all workers

The changing nature of job roles due to technology will impact all workers regardless of skill level. Automation, digitisation and AI will have an impact on both 'routine' and 'high-skilled' jobs. e.g. Increases in processing power, new software and the use of 'big data' is already having an impact on so-called professional occupations such as accountants, lawyers, doctors and teachers. The Wales 4.0 report calls for an urgent "national conversation with citizens on the future of work and the economy in Wales aimed at encouraging discussion of the challenges and opportunities presented by digital innovation (including the growing influence of AI)."

The pace of change is accelerating

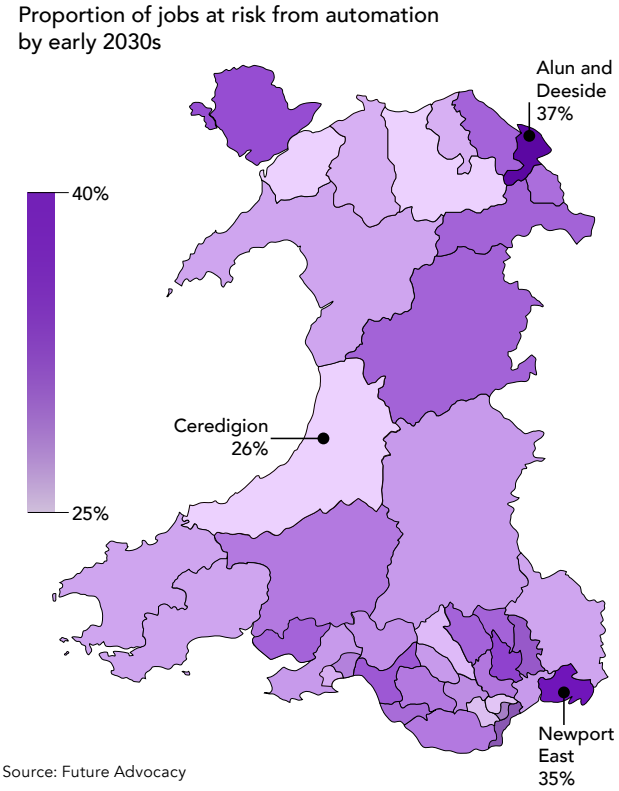
Over the next decade, these new technologies are predicted to develop further and become more integrated into economies around the world. Advances in robotics and AI are increasingly encroaching upon functions previously though to require humans such as 'emotional labour'; there are already humanoid robots that can read facial expressions and

> "For business leaders, a reliance on human labour might now look like a systemic business risk, whereas consumers may start to prefer less labour-intensive services. (RSA report)"

hold a conversation employed as carers, other robots and machines can carry out surgery, rapidly scan vast databases e.g. legal cases, control autonomous vehicles or run chatbots.

Although the exact nature and pace of technological change over the coming decades is hard to predict, and will vary across different sectors of the economy, the Covid 19 pandemic is accelerating the process. In a survey for the World Economic Forum, "94 per cent of UK companies said they were accelerating the digitalisation of tasks as a result of Covid-19, and 57 per cent said they were accelerating the automation of tasks". Even industries that traditionally rely on pools of cheap labour, such as food manufacturing, are now investing in robots after the challenge of the pandemic.

New technology is both a risk and an opportunity for Welsh workers



Source: Future Advocacy

> … over the next decade, digital technologies will result in both job displacement and creation, but of even greater significance is its impact on how we experience work. Digital technologies can be used to augment skills and improve job quality, but they can also be used to deskill and eliminate jobs (Wales 4.0)

It is as yet uncertain what the impact of new technology will mean for numbers of jobs in Wales, and whether new jobs will be created, but what is clear is that it's an urgent issue and the time to act is now.

Up to a third of Welsh jobs could be lost and many others displaced

Think tank, Future Advocacy, found that automation could have a devastating impact on Wales with around a third of jobs at risk of disappearing altogether by the 2030s. It forecast that, by sector, 46.4% of jobs in manufacturing, 32.3% in finance and 44% in wholesale and retail could be lost in little over a decade. Less affected will be human health and social work (17%) and education (8.5%). The study also found Wales' top 10 private employers were in sectors where jobs are at a high risk of being lost to automation and that Alyn and Deeside was the most vulnerable constituency in Wales and the fourth in the whole of UK (see Figure 1).

However, whilst such studies are an important reminder of the scale of the potential threat to jobs, and the likely affected sectors, their accuracy cannot be relied upon. By focussing on 'occupations' and the feasibility of their wholesale replacement by technological innovation, they do not look at the factors driving technological change in the 'real' economy. Just because something can be automated, does not mean it will be automated.

It is also hard to accurately predict the risk that new technology poses to specific tasks within job roles rather than to whole occupations. Studies that focus on this aspect tend to foresee a lower percentage of jobs overall will be eliminated; with an OECD report predicting that only 10% of jobs in the UK are made up entirely of tasks that will be automated. However, how the process actually unfolds will depend on numerous factors, such as the cost-benefit to employers.

The Wales 4.0 report aimed to take a more nuanced view of what new technology means for the country. It agrees that there may well be a high risk to jobs, but that it depends on the sector: "the Welsh economy is dominated by businesses that are locked into peripheral parts of global value chains with their headquarters, research, design and business intelligence function located elsewhere. This means that functions located in Wales tend to be less secure, more portable and hence more at risk of automation."

On the other hand, the relatively high proportion of the Welsh workforce (compared to the rest of the UK) in public services, may offer some degree of shelter from the threat of automation at least in the short term. Also "Employment growth in occupations including creative industries, hospitality, sports and fitness, may be offset by falls in workforce share for manufacturing and financial and professional services (resulting from a decline in customer service and administrative positions involved in Contact Centres)".

There's no guarantee that significant new jobs will be created

Several studies on the impact of new technology predict that despite large-scale displacement of jobs due to technological change, there will be an overall net gain. They maintain that the advances in technology will also bring opportunities to create new high-skilled jobs required to operate and manage any new systems. A PWC study predicts that while around 7 million existing jobs could be displaced in the UK, around 7.2 million could be created, a small net jobs boost of around 0.2 million, although the changes will be uneven by sector (PWC 2018).

However, the Wales 4.0 report challenges the optimism of this assumption. It says there are no guarantees that new, as yet,

unknown jobs will be automatically created by new technology. The evidence does not easily show potential new areas of mass employment, and in fact points to most new employment in Wales being 'replacement jobs' in the short-to-medium term as well as to a worrying trend towards more low quality, non-standard forms of employment.

An opportunity to transform the Welsh economy

The Wales 4.0 report sets out a range of policy recommendations that could ensure new technology is both beneficial to the Welsh Economy and workers. The aim is to support the creation of Wales as a global hub of digital innovation. These recommendations require around £100m initial investment and co-ordination from the Welsh government, as well as providing opportunities for engagement from social partners. They include (amongst others):

- The creation of six Industrial Innovation Clusters (IICs) each with a designated lead body to develop Industrial Transformation Roadmaps (ITRs). The ITRs will identify current strengths and the potential for advancing digital innovation at a regional, national and international level.
- The creation of new institutions and policy groups such as:
  - An AI Institute for the Future Economy to help position itself on the global map as a digital nation and facilitate a more integrated approach to the application of leading-edge research in AI across Wales.
  - A Lab for Work@Wales4.0 which will act as a central resource for industry, government and social partners to gain insight on future trends concerning technology and its impact on the economy and work.
  - A Future Economy Commission reporting to Welsh Ministers and with membership drawn from international business leaders and experts. The new Commission should have responsibility for advising on the coordination, oversight and delivery of Wales 4.0 and ensure that national considerations take account of global opportunities
- Integrated and financial support for the industrial transformation process.
- A focus on skills: including reforms aimed at building capacity within post-compulsory education so that it is able to deliver the step-change required in preparing for the future of work in an age of lifelong learning. the development of a new Skills Framework for Wales. A series of capacity building projects should also be supported and aimed at creating the multiversity institutions of the twenty-first century.

"The question now is whether Welsh Government and its key social partners are prepared to 'will the means' as well as 'will the ends' to make digital innovation and the future economy truly work for the people of Wales." (Wales 4.0)

What unions can do

"The technologies themselves are not the problem; it is the logic driving their introduction, which tends to be to reduce labour costs and standards." (IndustriALL report).

It's clear if the introduction of new technology is left to be driven solely driven by the 'logic of the market' ,it will be used primarily by employers to make 'efficiencies', drive down labour costs, and reduce standards. Unions can act now to:

- ➔ Push for Wales 4.0 recommendations to be adopted,
- ➔ use social partnership seats to influence strategic policy on new technology (see box),
- ➔ Organise at workplace and employer level to negotiate agreements on new technology that both protect and benefit workers (see examples in rest of report).

Social partnership in Wales

Wales TUC is committed to working with government and employers in social partnership to achieve fairer and better policy outcomes for workers throughout Wales. The culmination of this is the Social Partnership and Public Procurement Bill, which will introduce a social partnership duty for many of Wales's public bodies and a fair work duty which Welsh Government must comply with. It has also resulted in the Social Partnership Council, a cross-sector social partnership arrangement which has been meeting fortnightly during the pandemic and will be put on a statutory footing once the bill becomes law.

The Workforce Partnership Council (WPC) is the tripartite social partnership structure of the trade unions, employers and Welsh Government covering the devolved public services in Wales and the forum for cross-public services workforce matters.

The private sector has the Council for Economic Development. Meeting three times a year, it continues to be a useful forum to consider major policy decisions and economic trends. However, social partnership working in the private sector more generally is far more ad hoc and challenging in relation to certain policy areas. Often, the union density in a sector tends to reflect how much attention is paid to the workforce by government, when we would argue that the opposite should be the case – un-unionised workers are inherently more vulnerable.

Existing agreements are few but show what can be won

New technology has been increasingly on every UK union's agenda, although it seems that, as yet, there is little actual collective bargaining taking place specifically on the issue in the UK. Exceptions include the CWU's agreements with the Royal Mail Group, and the progress towards agreements being sought by Unite reps across a number of sectors, after the union's push to get workers campaigning on the issue (see example below).

Outside of the UK, there are more examples of unions negotiating around new technology – a main example being the German transport union EVG's Work 4.0 agreement it reached with the Deutsche-Bahn Group (DB AG) that will be used extensively as an example in this report. However, collective agreements are still few and far between. This is because it is still an evolving issue, on top of which unions have been busy dealing with the fallout from the pandemic.

Many UK unions have legacy agreements that could be evoked to deal with the impact of new technology, such as those that provide for consultation around any major workplace changes such as restructuring or the implementation of new equipment. For example, some local authorities still have clauses in their agreements around the introduction of computers that date from the 1980s. Some 'organisational restructuring' agreements may also have 'no compulsory redundancy' and/ or redeployment clauses which can safeguard workers to a certain extent from any technology-induced changes.

However, the scale and nature of the coming technological changes, and the fact that powerful interests are promoting their acceleration as we emerge into a post-pandemic 'recovery', mean that any agreements and/ or consultative committees in place already may not be detailed nor informed enough to adequately protect and/ or provide for members' interests as the pace of change increases.

The rest of this report looks at the agreements already in existence and pulls out the key themes that officers and reps will need to consider when preparing to enter negotiation or discussions with employers around new technology. They are:

- ➔ Starting a conversation with members
- ➔ Securing workers' voice
- ➔ Setting standards around the quality of work
- ➔ Safeguarding jobs
- ➔ Redeployment and reskilling
- ➔ Better terms and conditions
- ➔ Protecting workers' data
- ➔ Remote working

89%

of workers do not know whether their employer is using HR systems run on AI

Starting a conversation with members

Automation can be a strong mobilising issue that draws on members' concerns about job security, the changing nature of job roles and heightened pressures on the workforce.

Over the last few years, Unite, UNISON and Prospect have all developed model new technology agreements and provide bargaining support for reps and stewards who want to campaign in this area. The issues are also rising up the agenda at conferences, with UNISON members passing motions on automation in 2018 – and automation being high on the agenda of sector conferences at Unite. However, without agreements in place, to date, the union response to technology in the workplace has largely been reactive. More needs to be done to engage members.

It is hard to start campaigning around automation without knowing what is happening in the workplace already, understanding members' feelings about the issue, and having at least some idea of the likely impact on jobs and specific job roles in the future.

Recent research has shown that in many workplaces, workers may not even know how technology is impacting them, nor are very many consulted prior to its implementation.

- A recent TUC survey found that a shocking 89 per cent of workers do not know whether their employer is using HR systems run on AI to manage functions such as performance, shift patterns, absences, leave and/ or recruitment (Technology Managing People, 2021)

- A survey by the Community Union carried out just before the pandemic found that two-thirds (65 per cent) of workers said they had not been consulted the last time a new technology had been introduced at their workplace.

- A recent UNISON branch survey also found that just 17 per cent of branches had been consulted over the introduction of automation.

How to start a conversation on new technology

If new technology is not yet an established workplace issue, there are many available sources of information to get the conversation started.

If there is a good relationship with the employer, it may be possible to ask them for their future plans for investment in new technology via existing bargaining and consultation apparatus. Member surveys can also be a good source of intelligence on how technology is impacting job roles and what they feel about the future.

In some cases, it may be necessary for officials to 'feed-in' information from external sources about what technology may be coming or is already in place in other similar workplaces and sectors, as in the Unite example on page 00.

Many unions and the TUC already provide material on automation and digitisation that can be used as bargaining support for campaigns. There is also an increasing amount of union-backed research looking into how their members are already being affected by technology (See APPENDIX 1).

The unions that have successfully negotiated new technology agreements have either carried out extensive research, reflective exercises and a consultation with members or have existing bargaining apparatus in place that ensures that the union is consulted on any planned changes long before their implementation.

Unite has made a considerable efforts to start a conversation with members and prepare the ground for negotiating around new technology across all its 19 industrial sectors, although progress towards reaching agreements has been hampered by the Covid pandemic.

Example: Unite's research and consultation exercise on automation

In 2017-18, Unite the Union undertook a major research and consultation exercise on automation in order to encourage bargaining on the issue across its 19 industrial sectors. As a first stage, the National Organising and Leverage Department prepared a report summarising the threats and opportunities poses by sector. It also developed a model new technology agreement.

The initial research findings were workshopped in sector and regional committees, with the feedback from the reps involved leading to the production of more detailed sector reports that could be used as a basis for campaigning on new technology. Before the Covid pandemic hit, the Unite strategy was making positive inroads at over 1000 employers in several sectors:

Passenger Transport and new technology: in 2019, Darren Brown who works at Stagecoach Oxford, and is Vice Chair of Unite Passenger Transport committee said: "We are building a combine of leading reps in the bus industry to campaign for a national new technology agreement to protect bus workers' jobs from the threat of automation. I urge all reps to take this up urgently."

There were also promising signs in food manufacturing with Unite shop stewards at Nestlé attempting a new technology agreement to safeguard jobs in an industry where employers are currently talking about now being the time "to take labour out of the equation".

A number of German unions have also been involved in detailed proactive work to prepare the ground for new technology negotiations.

Example: The Arbeit 2020 project in Germany

In Germany, three major unions, led by IG Metall, collaborated with external researchers and consultants in a research and learning exercise on new technology in several manufacturing plants. The Arbeit 2020 project, which began in 2016, aimed to empower local works councils' members to bargain over digitalisation at the workplace level. It was part-funded by the regional Ministry of Labour, Welfare and Social Affairs and the European Social Fund and had the technical support of two consultancy firms (Sustain Consult and TBS). The project involved over 30 metalworking companies and was also supervised by the Institute for Work, Skills and Training of the University of Duisburg-Essen.

Once invited into the workplace, the union officials and consultants held workshops with worker reps as well as interviews with managers and IT experts (usually in charge of devising digitalisation projects) in order to gain an idea of the company's strategy towards innovation.

The next stage was workshops with employees by departments, to collect insights about the current state of operations as well as likely future developments. These considered:

- ➔ work organisation (with specific regard to the chain of command);
- ➔ technology (with particular emphasis on the level of digital connectedness and the level of self-control of machines);
- ➔ employment trends, skills and qualification measures and working conditions (considering elements such as stress and workload).

After these processes were completed, the union-consultant group drew up a "Map of digitalisation" for the company, highlighting the issues that need to be tackled. This was then used for bargaining with management. The project resulted in the signing of agreements shaping future digital change in several plants. The plant-level agreements were then used to influence the wider company's development plans.

The agreements contained clauses on union rights to information and/or the establishment of labour-management working groups, as well as provisions regarding more substantial issues such as skills development, apprenticeship contracts, working hours and workers' data protection. According to IG Metall official Patrick Loos, the process led to a realisation "that most relevant problems were related to the area of organisation, leadership, training and working conditions…. Each plant had a different situation and it was impossible for outsiders to go in with fixed specifications for the shaping of change." IG Metall used its experience of Arbeit 2020 as the basis for training 1000 full-time and voluntary officials to act as 'promoters of change' in the workplace.

Example: Putting people at the centre of new technology on the railways

The German EVG union represents the vast majority of workers in the state-run railway company Deutsche-Bahn (DB). It began its strategy towards negotiating its ground-breaking 'Work 4.0 ' agreement with the company by carrying out a major research and consultation process. The first stage was a union-only reflective exercise to generate ideas around how to 'humanise' the coming changes. Officials and reps asked themselves the following broad question:

- ➔ How can we shift the focus of technical change onto people?
- ➔ Can people be part of digital changes?
- ➔ How can flexible workplaces support a life/ work balance?
- ➔ How are digital transformation skills designed?
- ➔ In the future, will people be able to work autonomously or will they be controlled digitally?
- ➔ How are work processes/jobs changing?
- ➔ How must employee data protection be refined?

The next stage was a mass consultation with 15,000 members to find out how technology was impacting them and their hopes and fears for the future. The union then ensured that the agreement included the setting up of a joint working group to investigate how technology was affecting the specifics of job roles within the sectorThis provided space for more detailed and ongoing research into changes.

Securing worker's voice

The core aim of negotiating around automation is that the introduction of new technology should not be made unilaterally by employers but by mutual agreement. Consent and negotiation around technology is beneficial to workers and employers alike. For employers, open dialogue about innovations can prevent reactions and disruption further down the line.

At the strategic level, workers' concerns around new technology must be addressed with social partners in terms of its impact on whole sectors of the economy, regions and skills needs. The Wales 4.0 report recommends the government create a number of new structures; that, if implemented unions could participate in, such as: 'Industrial Innovation Clusters' that will be responsible for Industrial Transformation Roadmaps for different parts of the country, a 'Future Economy Commission and a new institute to monitor the labour market. Meanwhile, unions can use Wales' established social partnership forums to negotiate positive new technology outcomes for workers.

There is already progress towards an agreement on digitalisation in the Workforce Partnership Council (WPC) covering the public sector. However, progress on issues has been slower in the Council for Economic Development structure set up for partnership working in the private sector.

Example: Partnership working on digitalisation in the Public Sector

The Workforce Partnership Council is developing a set of principles on digitalisation that support the involvement, participation and consultation of staff and trade unions when new digital and data methodologies and new technologies are introduced. This follows the recommendations of a WPC report on the impact of innovative technology on the public sector workforce and will build upon the principles of the Partnership and Managing Change Agreement which requires state employers to use best endeavours to ensure employment continuity whenever changes are made which affect the workforce. It also requires employers to consult trade unions at the earliest appropriate opportunity and before any irreversible decisions are made. The report and agreement are available here:

Workforce Partnership Council, 2021: The future of work: the impact of innovative technology on the workforce: A report on the key issues impacting the workforce created by the changing nature of work.https://gov.wales/the-future-of-work-the-impact-of-innovative-technology-on-the-workforce-html

Workforce Partnership Council agreement: partnership and managing change, https://gov.wales/workforce-partnership-council-agreement-partnership-and-managing-change

At the workplace and employer level, new technology is such a potentially huge issue affecting workers that it warrants its own space for discussion apart from any existing joint negotiating or consultation committees. Unions that have agreements on new technology have set up new Joint Working Groups on technology and others are consulted via their partnership structures.

A 2019 BEIS Committee report argues that this consultation should begin early on: "For businesses investing in automation and changing how they work, engagement with the workforce needs to take place well before significant changes are considered or begun, rather than at the point that new technology appears in a workplace."

Example: CWU and Royal Mail: National Trials Working Group

In the 2018 Four Pillars Agreement, the Communication Workers Union (CWU) and Royal Mail Group (RMG) established a National Trials Working Group to discuss and agree to deploy new initiatives including new technology and equipment. The structure, which has been in place since that date, ensures that the union has a voice in any new technology the company introduces from the point of concept design. Further, the new technology is subjected to a trial period under terms agreed upon by the union and measured by agreed criteria.

The actual wording of the agreement is:

Royal Mail and CWU will consult fully on the aims and objectives of proposed new methods, technology or automation at the concept design stage. A trial will be designed to seek to validate the proposed change. A terms of reference will describe the content, location and success criteria. Timescales for the trial should be expedient and will not exceed 90 days. When success criteria are demonstrated as met, this will trigger deployment, subject to business case approval. The consultation will take place at the national level and early enough to allow meaningful input/involvement in shaping the most appropriate trial that will meet the stated objectives, prior to any business case being concluded.

Example: Joint Working Group at Rolls Royce Motors (BMW Group)

During their pay negotiations in 2018, Unite Stewards at Rolls Royce Motors (BMW Group) won a commitment from BMW to take part in a joint working group looking at the future of automation. The group will be managed by, and report into, the main Company Council. It gives workers a say on the introductions like the self-scanning glove that BMW Group want used on the production line.

Dave Elson, Unite convenor at the company says "you wear the glove and it has a barcode in it, it picks up once the parts are done and automatically downloads everything, it saves a process but it also cuts a job out. We've spoken to company about a new technology agreement so that, as a union, we can understand better the impacts of this technology and the impacts on the industry… [we want] to protect our members and their jobs"

Unite recommends that ideally any new consultation structure with an employer around new technology should be formal and created by agreement, as this is the best way of guaranteeing that the discussions occur prior to implementation, and that workers get adequate time to prepare and respond to any plans. Unite suggests that reps aim for four separate elements:

- ➔ a separate New Technology Joint Negotiating Committee with the employer;
- ➔ a New Technology Sub-Committee composed entirely of reps to discuss technology issues and disseminate the findings to the workforce;
- ➔ dedicated New Technology Reps entitled to facility time who specialise in workers' issues relating to New Technology and sit on the New Technology Sub-Committee; and
- ➔ a New Technology Fund set up by the employer to fund the work of the Sub-Committee.

The lack of formal bargaining apparatus around new technology does not preclude union involvement in dialogue with employers. There are examples of employers from across many different industrial sectors that have engaged in partnership working around the impact of new technology. Whilst this often means that workers have less say prior to the introduction of a new technology, and are therefore not as empowered as a collective agreement would make them, collaborative structures can help to facilitate any transitions, plan strategies for training and/or redeployment and allow workers to voice concerns and give feedback.

Example: Partnership working on new technology in the finance industry

The financial services sector has been hit particularly hard by automation. However, the sector also has many examples where employees are included in the discussions around technology changes.

Tim Rose, General Secretary of the Nationwide Group Staff Union, says: "Over recent years we've seen more services being delivered to customer digitally – online and mobile banking. The uptake of these services has increased during the pandemic as people have stayed away from visiting branches. This then increases the pressure on the viability of the branch network and traditional branch based jobs. With customer footfall in decline how do you make a branch sustainable? We're currently working with Nationwide to understand what other work can be undertaken by branch employees and to look ways of working more flexibly to make these jobs viable – but we're probably talking about a gradual change over a 2-3 year period."

Insurance company Zurich insurance also has a number of structures where big upcoming national changes can be discussed with Community union and workers' voice incorporated. It has a National Partnership Council, a UK employee consultation board which has an organisational change subgroup and the potential to create 'business specific Project Change Groups' where specific changes can be discussed.

Example: Opportunities for workers to give feedback

Where new technology has already been introduced, unions can work to ensure that there is continuing dialogue around how it is impacting workers.

In Scottish housing company Wheatley Group, new caseload software was introduced to housing officers, replacing the need to fill in paperwork on site with the use of iPads. Although the technology was generally seen as an improvement, there were also many challenges with it, particularly around features it lacked and the changes to working practices. UNISON rep Paul Stuart was able to feedback on these issues, and suggest further processes that the workers would like to see automated in the future through the union-employer consultative committee.

In ASDA Normanton, the GMB union has helped to set up 'circles of improvement' where workers can communicate with management around technological innovations on site. In an interview with the Commission on Workers and Technology a manager said: "the stronger the relationship we have with the union, the better we've become and we make far quicker decisions in enhancing our depot".

Setting standards around the quality of work

There is plenty of experience to show that digital innovation does not automatically guarantee a decent standard of work. Well known examples where it clearly does not are in the 'gig economy', where self-employed workers in companies such as Uber and Deliveroo have no rights and are sometimes paid under the minimum wage, and in other tech-heavy 'disruptor' companies such as DPD or Amazon where workers feel excessively monitored and overloaded. A collective agreement should make sure that, as technology transforms all types of occupations; it is not used as an excuse to devalue or deskill jobs or in any way demean workers.

A new technology agreement should include the principle that any change to working practices does not impact the right to decent, dignified and well-remunerated work. In the German EVG agreement, this is defined positively, outlining what work should look like, while in other cases, such as in the CWU/ Royal Mail framework agreement, it is defined by specifying what technology will not do to working life.

The Welsh Government and Fair Work

One framework for defining work standards is found in the Welsh Government's Fair Work policy. It defines fair work as where:

"Workers are fairly rewarded, heard and represented, secure and able to progress in a healthy, inclusive environment where rights are respected.

Characteristics: Fair reward; employee voice and collective representation; security and flexibility; opportunity for access, growth and progression; safe, healthy and inclusive working environment, legal rights respected and given substantive effect." (Fair Work Wales, 2019)

Example: CWU's core principles for use of technology in Royal Mail Group

The CWU's framework agreement with Royal Mail Group signed in December 2020 lays out clear principles around new technology and how it should impact the nature of work:

It promises to "not allow the exploitative practices that bear down on workers (as seen in companies that operate in the wider post and logistics sector),… not to de-humanise the workplace and to ensure that the key decision makers in the workplace are the local manager and local representative and not the technology." Specifically, it states:

- Technology will not be used to de-humanise the workplace or operational decision making.
- Technology will be used to complement, inform and enhance along with all other factors, the existing resourcing processes, including manager, CWU rep and employee conversations.
- Technology will replace outdated and inconsistent manual methods of information gathering and provide the underlying insight to improve our current processes including resourcing.

The CWU's terms of reference for an automated HR system

In practice, the CWU's framework agreement creates the context in which the union has equal say in setting the terms around the introduction of individual pieces of technology.

In its terms of reference around the trial of an automated hours data capture system, which is being introduced to replace a paper-based manual job previously done by managers and reps logging hours and working out shift patterns, it clearly states that the aim of the new technology is to improve working practices – in line with the principles of the broader national agreements (see above).

The agreement details how the trial will take place, with CWU reps involved in every aspect of the process – and also outlines what success looks like, thus giving clear criteria for the technology's evaluation which includes health and safety and resolving worker concerns.

Example: EVG- Deutsche-Bahn agreement protects quality work

The EVG's Work 4.0 agreement gives its own definition of 'Quality Work' as the starting point for all the other principles around the introduction of new technology.

It defines Quality Work as including:

- ➔ Meaningful work: creating/acquiring space for decision making/avoiding detailed specifications for work tasks (Taylorism)/ facilitating self-organisation
- ➔ Participation of employees: early integration of employees/incorporating ideas and questions/joint examination of implementation and improvement
- ➔ Placement of (specialist) knowledge: clarifying digital skills requirements/ knowledge exchange/offering a wide range of qualification components
- ➔ Human-oriented technology design: clarifying user benefits/(early) integration of users/ensuring ease of use (usability)

Safeguarding jobs

To ensure jobs are safeguarded as more and more processes previously done by humans become automated, an agreement can be used to guarantee that technology will not be used to drive down labour costs and shed workers. Some unions may already have agreements with clauses stating 'no compulsory redundancies'. These offer basic protection for the workforce as new technology is introduced, but could be strengthened by being reiterated with specific reference to technological change.

Example: Safeguarding permanent jobs at Royal Mail

The CWU's national terms of reference agreement around the introduction of automated parcel sorting machines acknowledges that the new machines will reduce the need for human labour, so it has negotiated a strategy with Royal Mail to ensure that directly employed staff are protected. However, in doing so it has been forced to push the labour cost savings onto indirectly employed workers, whose non-standard contracts make their jobs more precarious.

The agreement sets out that the following principles will be agreed and jointly applied through strategic resourcing discussions in line with local resourcing plans:

- Removal of all agency/ordinary casual spend that may be converted to suitable duties for redeployment
- Jointly Agreed Cessation of Fixed Term Contract staff
- Jointly Agreed Re-structuring of OT/ SA spend to create duties to enable re-deployment of surplus staff
- Transfers to other Royal Mail units within a reasonable travelling distance. Any training required will complement the resourcing process and will be arranged to facilitate transfers, lack of necessary skills will not be used as a barrier to any transfers.
- Voluntary option of Buy-Downs of hours
- Voluntary Redundancy offered In line with current National Agreements.

In practice, the introduction of an automated parcel sorting machine at the South Midlands Mail Centre led to local CWU reps negotiating an agreement which created 150 new job roles which will be advertised internally and involve the redeployment of some jobs to work with the new machine.

Area processing rep Paul Bosworth said that the new package will "create 150 new job roles, which will be advertised internally and will be allocated proportionally among early, late and night shifts."

The Unite model new technology agreement proposes that unions should go further and get employers to agree that new technology where possible will create new jobs. It suggests getting the following principles agreed:

- New Technology will only be introduced if the overall number of jobs are protected.
- The employer reinvests cost savings from any introduction of New Technology into areas that promote and provide more and better jobs within the organisation.
- Employer and the Union will engage with each other in an open and creative way to generate ideas for new products and/or areas of work for investment within the bargaining group.

Redeployment and reskilling

The reskilling and retraining needs of workers in a transforming economy are likely to be significant. The CBI's report: Learning for life: funding world class adult education, based on analysis by McKinsey & Company, predicts that nine in ten UK employees will need to reskill by 2030 at an additional cost of £13 billion a year.

A true understanding of changing skills needs and provision requires strategic collaboration between a range of stakeholders, starting with workers and their representatives. Ideally, it is an issue that should be addressed through social partnership; with employers, unions and policy-makers working together to support job redesign and training initiatives, and in the process identifying in good time where new technology and processes may lead to job losses or a need for retraining. One way to start a conversation on future skills needs in wales is through the Wales union learning fund.

Trade Unions have a strong and mutually beneficial role to play in supporting firm transformation. Union learning, supported by Wales TUC Learning Services, is an established training mechanism in Wales that could be positively engaged and expanded to play a greater role in both unionised and non-unionised workplaces (Wales 4.0).

The Wales Union Learning Fund (WULF) and skills transition

The Wales Union Learning Fund (WULF) came into being in 1999 and since then has helped establish many hundreds of joint union/employer workplace learning programmes in almost every industry all over Wales. The unique funding model of WULF makes it an ideal way to for reps and officials to open the discussion regarding skills transition in the workplace, allowing unions to offer initial worker focused funding in order to pilot ideas and put workers on pathways to gain new qualifications. Many unions have already developed programmes through WULF that address retraining for workers whose jobs are under threat, either from decarbonisation or automation.

The amount of funding available to a workplace via WULF is never going to be enough to address the level of need for skills transition in Wales, but it does allow unions to bring something to table when raising the issue of skills transition. Crucially, WULF is only allocated on the assumption of partnership and is linked directly to collective bargaining. This allows the union to embed access to retraining and protect jobs and terms and conditions by using the funding to bargain for skills. We would see a role for WULF in the development of transition agreements across Wales.

You can find out more about WULF and the various projects currently operating in Wales here Learn with your union | TUC or contact your own union regional office, or the Wales TUC Contact the Wales TUC | TUC

There are several successful models from outside the UK of how unions have helped shape the response to rapidly changing skills needs at the workplace and company level. There are also examples of how UK-based employers have worked in partnership with unions to provide training for employees to ensure that they are equipped with skills needed to fill shifting job roles. But research also found that there is a big gulf between this best practice and the general provision.

Example: Reskilling in the EVG-Deutsche Bahn agreement

The EVG – Deutsche Bahn AG Work 4.0 agreement sets out that the union will be involved with skills development from evaluating what is needed for job roles to working with training providers to redesign courses.

Examining specifics of job profiles

The union set up a joint project with the employer DB AG called: "Impact of digital innovation on transport enterprises". In this, the union examined very specific occupational profiles in relation to maintenance, the train crew and sales, and obtained information on the direction of travel of digital change. Although they found that digital changes will run in parallel with the continued use of 'analogue' systems –and therefore workers will need a mix of skills - the digital transformation to occupational profiles (activities) is enormous. The training required must therefore be considered and designed not only by enterprises, but also by employees.

Strategic planning and job re-evaluation

The agreement states that the employer needs to inform the union of the digitisation/ automation strategy early on so that the process is transparent and there is sufficient time to plan how to train up the workforce in the specific skills required for new activities and tasks. Time also allows for thinking around how to prevent the 'devaluation' of certain activities and to instead ensure that they are re-evaluated. The aim is to maintain and develop the qualifications of affected workers.

In-house redeployment teams and skills fairs

At the local level, one of Deutsche Bahn's subisidiaries, DB Systel, which is an IT Service Provider, used the agreement when new technologies such as Cloud-based computing and changing managing processes were having a big impact on the tasks and jobs of employees. The workplace union negotiated an agreement establishing a 'mobility office' for redeploying workers into new jobs. This was staffed by reps with adequate facilities time to manage it. Events such as 'in-house' trade fairs were also organised giving workers an overview of all the new skills requirements for changing job roles and jobs elsewhere in the company.

Example: Singapore social dialogue process addresses skills

Singapore provides an example of a tri-partite social dialogue process that was set up to address Industry 4.0 and to design a strategy to facilitate the transition, including addressing skills needs.

In 2016, social partners in the country began to develop a series of Industry Transformation Maps (ITMs) covering how 23 different areas of the economy – ranging from aerospace to public transport to media to retail – were likely to change with new technology. They outline how industries might benefit from technological advances, where new jobs will be created, how the skill demands of these industries will be met, and how industries can remain competitive on domestic and international markets.

Using the ITMs, unions and worker representatives have been pre-emptively encouraging workers to participate in training for any new job requirements. In finance, for example, the introduction of new technologies expanded employment opportunities in fields such as data processing and data compliance. But retraining is also required in tourism and hospitality. Together the social partners have strategically mapped future skills needs and determined how best to prepare workers to meet these needs.

Example: In-house retraining at Zurich insurance

In the past few years, Zurich has introduced more than 120 new automated processes carrying out around a million individual transactions annually, including customer payment and policy documentation, with a further 100 in the pipeline. The number is expected to double in 2021 and is equivalent to more than 55 employees working 24 hours a day, 7 days a week.

In partnership with the Community union, the company has thought extensively about the future skills needs of its workforce and invested £1m in training opportunities and a 'data academy' to allow existing staff to take advantage of new career paths. The insurance giant plans to upskill two-thirds of its workforce, around 3,000 UK employees, in data literacy and various tech-driven competencies in the next half decade. The company has also identified about 270 new jobs in the fields of cybersecurity, data science, and robotics that require retrained workers.

The in-house partnership retraining effort is cost-effective for the insurer, who believes it will save around £1 m in recruitment and redundancy costs. Currently, several members of Zurich's underwriting and claims, human resources, and finance teams are undergoing the retraining process.

Example: Swedish Job Security Councils

The Swedish Job Security Councils (JSC), in existence since the 1970s, are an end-to-end transition service that redeploy workers at-risk of automation in the case of collective redundancies into sectors that are more resilient. They are non-profit organisations that are based on collective agreements between social partners (unions and employers) and are funded with 0.3% of the payrolls of the companies involved. They act like an insurance scheme, career guidance and training services for affected workers.

Example: Italian metalworkers agreement

After almost a year and a half of negotiations, the Italian National Collective Bargaining Agreement (NCBA) for the metalworkers' industry (CCNL Metalmeccanici), covering over 1.5 million employees, has been renewed up to June 30, 2024. It contains an innovative clause on continuous training that is designed to meet the needs of workers as industry transitions.

Better terms and conditions

"A shorter working week without loss of pay can help workers stay in work when new technology reduces the number of tasks that need to be done by people. We need a radical response to the new realities of the labour market. The gains from technology should be used to change the lives of working people including better retirements and shorter working time." Sharon Graham, Executive Officer, Unite

The literature on automation and digitalisation tends to predict that industry 4.0 will generate significant financial and productivity gains for the UK. PWC estimates that artificial intelligence alone could add £232 billion to the UK economy by 2030. It is also estimated that smarter manufacturing, employing robotics, artificial intelligence, industrial internet of things and additive manufacturing, could add a further £455 billion. Whilst the Wales 4.0 report warns that there are no guarantees that new technology will automatically lead to productivity gains in Wales, an agreement could ensure that any future gains are fairly distributed.

In principle, the introduction of new technology to improve productivity should lead to better pay and conditions for members, whether that is a pay increase or a reduction in working time with no loss of pay. Whilst it hard to find current agreements that link pay deals specifically to the introduction of technology, there is mounting evidence that technological change is helping to popularise the idea of a four day week with no loss of pay in the UK and beyond.

Example: Four day working weeks in Europe

In 2018, IG Metall in Germany, which represents the metalworking and electrical sectors, won workers the right to reduce their working week from 35 hours to 28 for two years along with a 4.3% pay rise to increase flexibility, particularly for workers with caring responsibilities. The union is now calling for workers in the automotive industry to be given the same. It argues that the car industry is struggling with the transition to electric and the impact of the pandemic and that cutting hours could be a way of retaining the skilled workers and expertise needed for the transition, as well as saving on redundancy costs.

Early in 2021 the Spanish government also accepted a proposal to trial a project to subsidise employers that introduce a four day working week. The pilot will be guided by a panel of experts – including representatives from government, unions and business.

Example: Using technology to protect pay and shorten working week at Royal Mail

When Royal Mail planned to roll out new digital HR technology across the company, the CWU got an agreement that it would not be used to affect pay.

The terms of reference for the HR system state that:

- Scan In/Out data will not be used for the automatic reduction of contractual pay or allowances based on data captured, or to reduce overtime pay where a (verbal) contract has been agreed with the manager prior to commencement.

In its local level agreement at the South Midlands Mail Centre, CWU representatives chose to push back against the shift patterns that the new HR Technology came up with and instead used the introduction of another new technology, parcel sorting automation, to argue for a shorter four day working week for many.

Shifts at the Northampton site will change from an eight-hours on five days to a 9.5-hour four-day duty, with the extra time worked being 'split' between the start and end of each shift.

Area processing rep Paul Bosworth said that the new package will "will enable people on the new patterns to have either Fridays, Saturdays or Mondays off work, improving their work-life balance and giving them more time with their families."

Health and safety

Depending on the workplace and the type of new technology concerned, there are likely to be a number of health and safety issues to include in any agreement. These include:

- ➔ Ergonomics – is new machinery safe, body movements etc.?
- ➔ Mental health
- ➔ Work intensification
- ➔ Social isolation

Unite recommends that a stand-alone New Technology Risk Assessment be carried out prior to any implementation of new software or equipment that considers the mental health of workers, anyone with physical disabilities and any potential side effects or toxicity from any materials used in the technology.

Prospect is also lobbying as a union for a 'Right to Disconnect' law in the upcoming Employment Bill as well as providing a model agreement on the issue drafted by the Irish Financial Services Union. The preamble to this reads:

"New technologies are providing a great opportunity for flexible working arrangements for staff. Many staff now avail of different hours and location arrangements meaning work is often conducted at different times of the day or week. However, we are conscious that this can create risks, expectations, or pressures to work longer hours that often encroach on home life. Disconnecting from work is vital to a healthy and sustainable work life balance. Staff's mental health, wellbeing and personal down time is important to us.

"In this context we support our staff's right to disconnect. As an employer, we do not expect staff, normally, to work more than their contractual working hours. If you find you are, you should talk to your line manager or your union representative. If you do receive a work email, or any other form of communication outside of working hours, there is no expectation that you read it or respond until you are working.

"We encourage eligible staff who work overtime to claim and ensure they are paid for this work. We also have an on-call and standby allowance, again for those eligible. Anyone required on standby should be in receipt of this allowance. Other than contact related to on-call, or where expressly agreed with the staff member, your employer undertakes not to contact you outside of your agreed working hours for work related matters. "This right and policy apply to all staff under our group including agency and contract workers."

The model agreement proposes specified commitments on "hours of work and overtime", "disconnect out of hours", "regular breaks and lunchtime", "managing meetings and times", "oncall, standby, weekend attendance and other allowances", "culture of work", and "complaint procedure".

Example: Right to disconnect, risk assessments and stress management at Deutsche-Bahn

The EVG's Work 4.0 agreement has the 'promotion of worker health' at its heart. It has a whole section on 'stress, dissociation and health protection'. In particular, it acknowledges that the use of mobile technology e.g. smartphones and iPads etc. requires a multitasking ability that can potentially cause psychological stress to workers.

The agreement specifies that the constant 'availability' that mobile technology enables should be regulated, i.e. that workers be given the right to disconnect and that full 'psychological' risk assessments be undertaken. It also ensures the employer provides funding for activities such as 'stress management seminars'.

Example: Using virtual reality to model ergonomics in Siemens

The Commission for Workers and Technology found that workers in Siemen's Congleton site use a Virtual Reality Cave to simulate the changes in the working environment as new technology is introduced to the factory. One part of the 'Cave' tool designs the plant to maximise productivity and another part is an ergonomic simulation tool. This second tool is for maintaining the health and safety of the operators using data from the plant design to simulate what the strains and stresses on the bodies of the operators will be.

Example: Guidelines for use of automated parcel sorting machines at Royal Mail

The CWU-negotiated terms of reference for the introduction of automated machinery (PSMs) at Royal Mail ensures that ergonomic studies have been undertaken during their trial period and that specific staffing rules are adhered to in order to protect the wellbeing of workers. They say:

"These studies have included involvement from a Health & Safety aspect and feedback from individuals working on the machines to ensure that relevant issues, i.e. operator fatigue, repetitive strain etc. have been factored into the operational arrangements for staffing the PSMs."

"In line with the outputs of above activity it is confirmed that no individual should work at a specific station for more than two hours and all operators must therefore be rotated every 2 hours. In order to accommodate this facility discussion and agreement will take place locally with the CWU to ensure that it is included in the resourcing plan for the site. To enable full compliance with the rotation system and to provide the opportunity and ability to have as many members of staff as possible trained to use the PSM, the manual sorting area should also be utilised as part of the rotational process in the agreed resourcing plan."

Protecting worker data

One of the main concerns around new technology is that data on workers is being unfairly captured and leading to the increased monitoring and surveillance by employers. Recent research has found that an increasing number of workers are having their every movement at work tracked, many without even being aware that this is happening. Examples include the use of CCTV, but also 'keyboard-stroke' and other software used to monitor a worker's computer activity, 'wearable-technology' and algorithms as 'management' tools.

Without agreements in place, much union work in this area has been reactive. This includes, for example, the GMB speaking out against the introduction of intrusive tracking technology imposed on Churchill security guards, and the National Union of Journalists stopping the Telegraph from using heat and motion sensor devices to monitor the time journalists spend at their desk.

Education unions UCU, NASUWT and the NEU also encouraged their branches to get agreements around the move to blended learning in schools, colleges and universities that happened during the pandemic. They wanted to ensure that there was adequate training and support to use the technology, no intensification of workload and that no staff member is recorded or observed without their consent. With recorded teaching sessions particularly, there are issues around data protection and intellectual property rights.

The main principles that have been agreed by unions around data and new technology are that workers' data should be protected, only captured consensually and that workers' privacy should be maintained.

The Prospect union recommends union reps get involved in Data Protection Impact Risk Assessments (DPIAs) during the introduction of any new way of gathering workers' personal data - carrying one out is an employer's legal duty under GDPR regulations. The UK Information Commissioners Office (ICO) has stated that consultation with data subjects is a key part of this process. Reps and officers should ask employers if they are aware of their responsibilities to conduct DPIAs and to confirm the existence of any DPIAs relating to the processing of workers' personal data. They can also ask to be informed and involved as and when future DPIAs are undertaken.

Example: Keeping personal data private in Royal Mail

The CWU agreed that the new automated HR system in Royal Mail Group, which includes the use of smart cards, will not be used to capture further worker data. The Terms of Reference states:

"It is recognised by both parties that the advances in the capability of technology of this nature has transformed the transparency of our actions in everyday working life. This provides opportunities for innovations in identifying training needs and operational efficiencies, but it also raises genuine concerns for employees in respect of intrusiveness and individual privacy. Therefore it is reaffirmed that all data usage will fully comply with the terms of Section 17 of the Four Pillars Agreement.

Movement of staff between work areas or tasks will not be monitored or recorded by the hours capture hardware.

No data will be captured in relation to tasks performed or productivity of individuals.

Where toilet/welfare facilities are off the work floor, no records will be kept of the number or duration of visits by any individual member of staff."

Example: Data protection in EVG/DB Work 4.0 agreement

The EVG's Work 4.0 specifically bans 'mechanical performance and behaviour control' and ensures its agreement goes beyond the German data protection laws.

Remote working

Many reps and officials are currently in the process of negotiating new policies and agreements around homeworking as a result of big shifts caused by the Covid 19 pandemic. Some of the core issues involved in these negotiations are also related to the use of technology. The following are some examples of what has already been negotiated in this area.

Example: Remote working agreement in Spanish public services

The Spanish FSC-CCOO and FeSP-UGT public service union federations have signed a new agreement on remote working covering 2.5 million public sector employees. The agreement includes basic principles that remote working arrangements should be voluntary and reversible and subject to key provisions relating to health and safety, equality, transparency and objectivity. The agreement protects employee rights as well as guaranteeing services for citizens. Other important elements include a 'right to disconnect', data protection and the right to privacy.

Example: Remote working in HMRC

The PCS union recently struck a new deal with HMRC which includes a 'progressive approach' to remote working. New contracts will entitle all employees to work at least two days a week from home. Lorna Merry at PCS says that HMRC has also agreed to consult with unions on future changes to working conditions. "While we have agreed some changes to working practices, through our negotiations with HMRC, we have built in mitigations and safeguards for affected members."

Example CWU and Santander agreement on new ways of working

A ground-breaking agreement has been struck between the CWU and Santander on an innovative and progressive new approach to the post-Covid world of work.

The deal preserves jobs and avoids compulsory redundancies that would otherwise have been inevitable as Santander announced the closing of multiple offices.

New 'dual location' contracts will be introduced to allow the majority of employees in closing and consolidating sites to work mainly from home, but with regular attendances at a nearby 'collaboration hub'. Meanwhile, the interests of those who simply cannot work from home have also been protected with process agreed between union and bank to ensure that office space is prioritised for those with exceptional circumstances. Clauses include:

- A financial incentive supporting 'dual location' arrangements including a one-time gross £500 cash lump sum (not pro-rated for part-time employees) for S1/G1 and S2/G2 (and equivalent grades in Santander Technology) in advance of the first year of formalised dual location working. This is to enable individuals (including part-timers) to set up a suitable home environment – though all IT equipment and a chair will be provided by the Bank.

- After the first year, a gross £500-a-year allowance (pro-rated for part-timer employees) for S1/G1 and S2/G2 (and equivalent grades in Santander Technology) being paid to 'dual location' contract holders on an ongoing monthly basis after the first anniversary of their switch.

- The introduction of a new 'Dual Location Charter' providing clear boundaries and support for working at home that will sit alongside the Bank's existing 'industry-leading' wellbeing programme.

The agreement gives employees genuine choice over their futures as the Bank embarks on a historic move to a predominantly homeworking operating model for those affected by the changes announced to its property estate.

According to CWU national officer Sally Bridge: "The firm view of the union's Santander national team is that we've not just secured that objective, but in the process have negotiated a series of choices, safeguards and compensatory allowances for eligible employees which collectively add up to a ground breaking package that sets an entirely new benchmark of worker protections as we enter a 'new normal' that is likely to see similar developments taking place across the wider economy."

Example: EVG agreement, flexible terms and fixed ‘on call’ rates

The Work 4.0 agreement regulates the principles and frameworks for mobile working. It states that, in principle, all employees have a right, on a voluntary basis, to mobile working or alternating mobile working. However, they must retain an operational portal. There are three types of mobile working:

- Alternating homeworking (partial working at home on a voluntary basis)
- Mobile working (at varying locations on a voluntary basis, where the operational workplace is the focus)
- Company-organised mobile activities (wholly or partially at varying locations specified by the company).

The agreement also standardises fixed minimum pay rates for ‘on-call’ work and states that:

- Operational matters should not be compromised to the professional disadvantage of the employee.
- The employer provides the necessary mobile devices.

A workplace outside the company must be suitable for the performance of work, i.e. data protection and confidentiality must be ensured.

4

Negotiating the future: The takeaways

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Successful intervention is possible

There may only be few collective agreements around transition issues as yet in the UK, but the many initiatives that have already been undertaken by unions both here and abroad show that workers' voices are starting to be heard at all levels and momentum is clearly building as the economy emerges from the Covid 19 pandemic.

The time to act is now

The major processes of industrial transition being driven by new technology and decarbonisation are already well underway and posing a threat to both the existence and quality of jobs. Unions need to be pro-active now if they are to secure a strong voice in how the transition unfolds, safeguard the livelihoods and wellbeing of their members and ensure that they are well positioned to take advantage of any new opportunities that arise.

Prepare the ground and engage members

The most comprehensive agreements and campaigns mentioned above have needed considerable prior research work ahead of time around the impacts of the transition processes to specific job roles that can feed into discussions with, and help mobilise, affected reps and members.

Use industrial strength

The early agreements around transition issues have been negotiated by unions where there is considerable industrial strength. This points to the importance of using strength where it exists to push for agreements on transition issues as well as to the vital longer-term work of organising and building collective power in workplaces, employers and sectors where little currently exists.

Engage in dialogue at all levels

The strongest transition agreements are based on some form of tri-partite dialogue, where governments, employers and unions work together to devise the plans.

5

Apendix and sources

Appendix: Bargaining support materials automation

- **Unite Model agreement and bargaining guide**

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- **The Unison model agreement**

  https://www.unison.org.uk/content/uploads/2018/04/Bargaining-over-Automation.pdf

- **TUC guide on AI in management processes:**

  https://www.tuc.org.uk/AImanifesto

Prospect guides on data and new technology:

- **Data Protection Impact Assessments:**

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- **The right to disconnect:**

  https://library.prospect.org.uk/download/2020/01157

- **Managing the Transition to a Digital Workplace: Annex to the Workforce Partnership Council's Partnership and Managing Change Agreement (Wales)**

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Interviews and comments

- ➔ Tim Rose, Nationwide Union
- ➔ Kate Dearden & others from Future Work Commission, Community Union
- ➔ Dave , General Secretary Postal Operational, CWU

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This report is also available in the Welsh language.

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