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Engineering Futures

Stage 1 Findings Report

Prepared for the Alex Ferry Foundation

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Participating organisations

Communication Workers Union (CWU)
Community
Engineering Construction Industry Training Board (ECITB)
GMB
North of Tyne Combined Authority
Prospect
RMT
RTC North
The Common Room
Trades Union Congress (TUC)
Supply Chain North East
Unison
Unite

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Executive Summary

Introduction

This report outlines findings from an exploratory scoping study of trade union and employer organisation perspectives on the future of work and worker representation, commissioned by the Alex Ferry Foundation. Debates on the future of work (FoW) consider how jobs are being transformed through rapid technological change, alongside wider political and socio-economic factors. 'Social dialogue and industrial relations' represent a key dimension of the FoW, yet the role of trade unions and worker voice is under-represented in current discussion (Balliester and Elsheikhi, 2018; Vereycken et al., 2021).

Aims and methods

The study aimed to understand the future of work from the perspectives of trade unions and employer organisations, with a particular focus on the manufacturing and engineering sectors. It aimed to explore how workers are involved in shaping key FoW issues in the workplace. Data was drawn from semi-structured interviews (n=15) with key representatives from trade unions, employer organisations and infrastructure bodies. The findings are summarised under four headings: *Future of work drivers*, *Future jobs and skills*, *Future of the employment relationship*, and *Trade union futures*.

Findings: Future of work drivers

The data identified a range of technological, political and socio-economic drivers of the future of work. Significant technological change was described, including the introduction of artificial intelligence (AI), digitisation, robotics, advanced automation and emerging 'green' technologies related to carbon reduction. Discussions raised both potential benefits and risks to workers, emphasising that it is often not the technology itself but the reasons behind its implementation that dictate its implications for the workforce. Wider drivers include the current economic model and new forms of capitalism, industrial change and regional factors, and the political and policy landscape (including austerity and current industrial strategy). Alongside this, wider global and demographic challenges such as climate change, labour mobility and the COVID-19 pandemic were highlighted as crucial influences on the FoW.

Findings: Future jobs and skills

Destruction and displacement of jobs was reported across some areas of manufacturing, engineering and the energy sector; driven by both technological change and the wider economic and political factors already described. Potential job creation opportunities offered by the UK 'green agenda' were described with a mixture of both optimism and scepticism. Discussion highlighted the importance of wider industrial strategy and procurement policy in retaining high quality, UK-based jobs. Jobs growth to date was reported to have been concentrated in lower paid and non-standard forms of

employment (NSE), contributing to increasing labour market polarisation and concerns around the availability of decent work for future generations.

Skills transitions, particularly related to the shift from fossil fuels to renewable energy production, were raised as a critical and under-represented area in both research and policy on the FoW. Participants called for 'heavy intellectual thinking' (R4) to prevent a repeat of the mass unemployment that followed the 1980s coal mining closures. Key challenges include licensing and certification barriers to cross-industry labour mobility and a perceived lack of targeted government policy, alongside a lack of clarity about who should be accountable for skills transitions - government, employers or the individual. Youth employment was also highlighted as a crucial area of focus, with increasing precarity and the 'hollowing out' of middle-tier jobs presenting a 'whole generation challenge' for young people entering the workforce.

Practice examples related to the future of jobs and skills included an internal redeployment and re-skilling scheme in the finance sector, early work on cross-industry 'skills passports' by the ECITB, and an innovative, cross-employer apprenticeship scheme piloted in the construction sector.

Findings: Future of the employment relationship

The discussions outlined wide-ranging implications for the future of the employment relationship. Considerations included management-employee relationships and organisational culture, data protection and privacy, 'routine T&Cs' and worker protections, work quality and precarity, and health and wellbeing. Advanced technology was suggested to have expanded to 'almost every aspect of the employment relationship' (R1). Key issues included increasing levels of worker surveillance and monitoring, as well as the creation of a 'digital leash' for remote workers with potentially significant implications for work-home boundaries and wellbeing. A shift towards the 'gigification' (R2) of traditional forms of employment and erosion of its human aspects was also identified. Work quality emerged as a particular area of concern. Specific to manufacturing and engineering, participants highlighted increasing use of 'fire and rehire' practices and creation of 'two-tier workforces' in some existing workplaces, leading to a weakening of pay, terms and conditions for new generations of workers.

The final sub-section focuses on workplace communication and employee voice, highlighting low perceived levels of worker consultation in future of work changes. This was reported to be confounded by a shared 'digital fog' and lack of understanding of new technologies amongst workers, HR teams and senior management. Positive practice examples included workplace data agreements and collaborative work on the 'right to be informed' in the communications sector, as well as Stadler's employee engagement in skills transition planning in the rail sector, and a national pilot of body-worn cameras in the ambulance service.

Findings: Trade union futures

The final findings section summarises participant views on the future of trade unions and worker representation more broadly. A range of challenges were illustrated, related to union membership and internal structures. These include the need to adapt to new employment forms such as those without a physical workplace, and to drive innovation related to 'ossified' internal structures and outdated data systems in some organisations. Despite these challenges, substantial opportunities were also identified. Examples included the development of new forms of representation for those in non-traditional forms of employment (including remote and gig workers) and an emerging 'upstream' role for trade unions during the procurement and design phases of new technology.

The discussions highlighted strong interest and motivation towards the strengthening of trade union strategy in response to the FoW, both as individual unions and as a wider, collective movement. Existing examples of collaborative practice on specific issues include the TUC's AI Working Group. Key components of a shared trade union identity described by participants combined the movement's traditional roots in working class power and activism with a strengthened, broader discourse related to commonality and community values. The data illustrated some tensions between an identified need for innovation and modernisation, versus the view that a shift in attention away from traditional collective bargaining and strike action could weaken the movement over the long-term. Finally, the section outlines participant suggestions of key 'asks' for any incoming labour government, including the formation and formalisation of UK industrial forums and a focus on creating a national culture that cultivates and values trade union organising as a central mechanism of working-class voice.

Discussion and next steps

The discussion section summarises overarching themes. Particular emphasis is placed on the importance of wider drivers of change, the role of government policy in shaping positive work futures, and the need for sector-specific and complexity-informed analysis to understand the 'myriad futures of work' (R4) and their interrelationships. The coexistence of different, compartmentalised - and sometimes conflicting - narratives on the future of work are considered, before setting out research priorities. These include skills transitions, worker surveillance and monitoring, automation of the management function, and attempts to better understand how to strengthen worker voice and representation in workplace decisions about the future of work. Key areas for policy development include inter-union strategy on the future of work, policy and practice guidance on enhancing worker voice in FoW decisions, and tailored support for SMEs in navigating technological and workplace change. Finally, the discussion sets out ideas and next steps for the current research, including case study exploration of key FoW issues at the individual workplace-level. This will enable in-depth insight into how workers are involved in critical workplace decisions around technology, data and skills.

1. Introduction

1.1 Background

This report outlines findings from a scoping study of trade union and employer organisation perspectives on the future of work and worker representation. The research was commissioned by the Alex Ferry Foundation and undertaken by a team from Newcastle University Business School. Given the Foundation's focus, the reported findings place particular emphasis on insights related to the manufacturing and engineering context. However, the report also draws upon practice from other sectors in order to position the discussion within the wider employment landscape.

1.2 What is the 'future of work'?

The future of work (FoW) has emerged as a significant area of concern for academics, policymakers and the public. Grounded in the idea that we are witnessing a fourth industrial revolution, discussion focuses on the impact of rapid technological change - including artificial intelligence (AI), robotics and digitisation - on jobs, skills and wages (Schwab, 2016). More recently, the debate has expanded to include wider social, economic and political factors such as climate change, migration and ageing populations (Santana and Cobo, 2020).

The International Labour Organization (ILO) defines the future of work along five key dimensions:

- The future of jobs (including job creation, destruction and workforce composition)
- Job quality
- Wage and income inequality
- Social protection systems
- Social dialogue and industrial relations (Balliester and Elsheikhi, 2018)

1.3 Current discussion on the FoW

Current views on the future of work are highly polarised. Some authors predict large-scale redundancies and mass unemployment, while others argue that new jobs will be created through technological advancement (Frey and Osborne, 2013; Ford, 2015; McKinsey, 2017). An alternative and increasingly supported view is that technology is likely to alter the structure of work and the types of tasks that make up job roles, rather than significantly altering the total number of jobs available (Spencer, 2018; WEF, 2020).

Beyond this, discussion on the future of work focuses on how impending change will affect employers and workers. Wide-ranging issues are highlighted in the literature, including predicted impacts on work quality, job satisfaction and work-life balance; as well as issues related to privacy and the use of AI technology to exert control over

workers (Findlay and Thompson, 2017; Wood et al., 2018; Santana and Cobo, 2020; Smith and McBride, 2021). Researchers have examined the expansion of non-standard forms of employment (NSE) such as self-employment, gig and platform work. Concerns are raised around job security, employment protections, working conditions and collective power for these groups of workers (Balliester and Elsheikhi, 2018; Wood et al., 2018; Smith and McBride, 2021). Discussion also focuses on spatial aspects of the future of work, including remote and flexible working approaches which feature heavily in post-COVID workplace planning (Aroles et al., 2019; Santana and Cobo, 2020).

In 2017, the International Labour Organization (ILO) identified four 'megatrends' which are predicted to play a central role in the future of work: technology, climate change, globalisation and demography (ILO, 2017). The debate has recently broadened to include a wider set of socio-economic and political influences which may impact the future of work. Examples including climate change, ageing populations, migration, international conflict, increasing wage inequality and the global political landscape (Santana and Cobo, 2020; Willcocks, 2020; Balliester and Elsheikhi, 2018).

1.4 Worker representation and the FoW

'Social dialogue and industrial relations' represent a key dimension of the future of work, with traditional collective bargaining approaches facing significant challenge as a result of declining membership, demographic and structural change (Balliester and Elsheikhi, 2018). The intergenerational trend of declining union membership in developed countries is expected to continue; largely explained by the ongoing shift away from industrial employment towards service-based economies (Balliester and Elsheikhi, 2018; The Economist, 2015). Commentators argue that this decline in bargaining power has formed the main driver of increasing wage inequality over recent decades (Summers, 2017).

While industrial relations and employee voice can be considered a crucial element of the future of work, examination of how trade unions will be shaped by - or their role in shaping – the FoW is currently limited. The surrounding literature is criticised for its conceptual nature and lack of empirical findings, representing, 'a discourse of possibilities rather than a reflection of what is actually going on in organisations' (Vereycken et al., 2021:60). Discussion highlights the importance of trade unions analysing and adjusting their organising approaches, to enable reactive and relevant responses to the changing world of work (Tyrone, 2016; Collins, 2015).

2. Aim and methods

2.1 Aim and research questions

In response to observed research gaps outlined in the previous section, the current scoping work contributes to a broad research aim: To examine the future of work from the perspectives of trade unions and employer organisations, with a particular focus on the manufacturing and engineering sectors.

The scoping work is intended to form part of a wider study, which explores the following research questions:

1. How do trade unions and employer organisations understand the future of work, including key issues raised and their implications for the manufacturing and engineering sectors?
2. What role do trade unions play in shaping FoW debates, and where can they contribute most or have the most influence?
3. How are identified FoW issues playing out in practice and how are trade unions supporting workers to deal with changes to work, skills and employment practices?

The findings are anticipated to help shape the debate around the role of trade unions - and worker voice more broadly - in the future of work. This report outlines initial themes and emerging discussion, alongside recommendations for further research and policy development.

2.2 Methods

The scoping research was made up of the following activities:

1. Interviews with trade union representatives and other key stakeholders (*n*=15)
2. Literature scoping on the future of work and worker voice, including academic, policy and media discussion

Interview participants included trade union representatives (*n*=9) as well as those employed in employer organisations and infrastructure bodies (*n*=6). A purposive sampling approach was taken, whereby potential participants were invited to take part based on the relevance of their role and expertise to the research questions. A list of participating organisations can be found at the start of this report, which includes all member unions of the Confederation of Engineering and Shipbuilding Unions (CSEU). Interviewees held a range of national and regional roles. These included for example Deputy General Secretary, Regional Secretary, Regional Organiser, Regional Officer, Policy Officer, Director of Communications and Research, Director of Strategy and Policy, Chief Executive and Head of Research and Policy.

The interviews were semi-structured and exploratory in nature. Discussions focused on understanding broad issues related to the future of work, specific concerns (including

those specific to manufacturing and engineering), and the role of trade unions and worker representation in current or anticipated change. The interview topic guide is provided in *Appendix A*.

Interviews lasted between 44 and 94 minutes. The majority took place online due to considerations related to COVID-19. Two were undertaken face-to-face: one on university and one on organisational premises.

2.3 Ethics and confidentiality

The study received ethical approval from Newcastle University Business School.

Participant information sheets and consent forms were provided in advance of the interviews. Discussions were audio-recorded with consent from participants. In order to uphold university research ethics requirements regarding confidentiality and anonymity, the data was anonymised. No individual names are included in the report. Instead, a respondent number is provided (R1-R15) with an indication of organisation type and role focus.

2.4 Data analysis and outputs

The interviews were transcribed verbatim, then coded and analysed using an approach based on Ritchie and Spencer's (1994) thematic framework analysis. This involves an iterative series of processes including familiarisation, indexing, framework development, mapping and interpretation. Key themes emerging from the analysis are used to structure the upcoming findings sections.

The remainder of this report outlines key findings from the scoping interviews, summarised under four headings: *Future of work drivers*, *Future jobs and skills*, *Future of the employment relationship*, and *Trade union futures*.

3. Future of work drivers

This section outlines key findings related to technological, political and socio-economic drivers of the future of work.

3.1 Technological change

3.1.1 **Types of technology**

Described as a technology and digital 'gold rush' (R2), the interview discussions highlighted a wide range of technological advancements which are playing – or are predicted to play – a significant role in the future of work. These included artificial intelligence (AI), robotics, advanced automation, digitisation and the development of green technologies related to carbon reduction and renewable energy. The COVID-19 pandemic and subsequent increase in remote working was perceived to have accelerated implementation of some technologies beyond what could have been predicted, particularly those related to worker surveillance and monitoring.

There was notable sector variation in the technological change observed by participants. Key advancements identified in manufacturing and engineering included advanced automation, robotics and green technologies. Emerging examples of AI-driven change included electronic train technology, self-driving lorries, autonomous ships and the introduction of visual and drone technology to detect rail engineering faults. The implementation of other forms of AI, such as activity tracking and worker surveillance technology, was considered an increasing element of day-to-day work in sectors such as logistics and finance. However, these technologies were reportedly less prevalent in traditional manufacturing and engineering contexts due to the already highly visible nature of productivity on the 'shopfloor'.

3.1.2 **Potential benefits and tech 'neutrality'**

The discussions raised several perceived advantages of technological advancement, centred on the potential benefit to workers of system innovation and improvement. These included reduction in workplace illnesses and injuries obtained through repetitive or dangerous tasks, as well the opportunity to reduce working hours and presenteeism - potentially creating more meaningful jobs - through the replacement of menial and mundane tasks. Potential climate benefits were also described as a result of innovation in carbon-neutral technology, alongside the benefits of shared 'data power' (R1) to achieve greater transparency on issues such as equal pay. Member consultation carried out by the trade union Community found that the majority of workers surveyed held a positive view of the potential benefits of new technology.

In the current study, the key issues raised by participants were not the technologies themselves - which were considered 'neutral' in many cases - but two related factors:

a) The motivation and wider drivers behind the technology's implementation, and

b) How evenly the benefits of technology are distributed within the workforce

While common narratives on the future of work tend to focus on the technology itself as a central driver of change, interviewees emphasised the importance of how technology is implemented - and the underlying intentions behind its introduction - in understanding implications for the future workforce. The next sub-section will consider wider economic, political and social drivers.

3.2 Economic, political and social factors

3.2.1 **The economic model and new forms of capitalism**

The most commonly discussed driver of the future of work and implementation of advanced technology was the current economic emphasis on profit and accountability to shareholders. Characterised by competitive market pressures, cost-driven efficiency savings and privatisation, interviewees described the prevalence of 'extractive business models' whereby large organisations direct money away from local communities. The focus on 'profit over people' (R5) was considered a universal driving force that reached across sectors. This was perceived to have been exacerbated by the widespread emergence of low-cost business models in sectors including rail, logistics, retail, hospitality and the airline industry.

With labour costs forming the largest expense in most business structures, some participants suggested that technology was being used as a strategic mechanism to reduce labour costs; in addition to other tactics such as the outsourcing or 'offshoring' of jobs to exploit cheaper international workforces. This was reported to drive down wages, increase casualisation and erode terms and conditions for workers over the long term. The current economic landscape was seen as a significant barrier to the sustainability of alternative business models with a community or workforce-focused ethos, due to their reduced ability to compete with low-cost private sector models.

Other identified drivers of the future of work included economic turbulence and 'shocks' such as the COVID-19 pandemic, Brexit, the 2008 financial crisis and the current cost-of-living crisis. The wide-ranging impact of COVID-19, including its implications for the redesign of work and workplaces, will be considered further in upcoming sections.

3.2.2 **Industrial change and regional factors**

The economic emphasis on profit and efficiency-driven cost savings was considered against the backdrop of significant deindustrialisation in the UK. Widespread importing of goods and the offshoring of manufacturing, alongside a shift towards a service-based economy, was described to have led to the 'hollowing out' of entire industries. This was reported to have resulted in contracting workforces and smaller workplaces, impacting supply chains through reduced profit margins and weakened economies of scale. A range of SME-specific issues were also identified. These included financial, informational and attitudinal challenges in investing in new technology and the adaptation of work practices.

On a positive note, identified growth sectors included pharmaceuticals, finance and

social care. The national and global 'Green Agenda' was considered to hold strong potential for creating green economy jobs in markets such as electric vehicles, renewables and retrofitting homes. However, the significant offshoring of traditional industries prompted concerns that some remaining sectors offer relatively low paid or low skilled work, combined with low unionisation rates and lack of state investment. Examples included retail, care work and the wider service sector.

Regional factors were also perceived to act as a driving force behind the future of work. The combination of extractive business models and lack of strategic emphasis on local supply chains was considered to exacerbate regional disparities. Some participants expressed scepticism in relation to the national government's 'Levelling Up' agenda, with current investment sitting alongside uneven post-2008 public sector funding cuts and regional inequalities in connectivity and jobs. Regional heritage and industrial identity, particularly for young people and the future workforce, was also raised as a critical area for further consideration.

3.2.3 **Political and policy landscape: Changing role of the state**

The interview data illustrated the importance of political and policy-level drivers of the future of work, particularly related to UK industrial strategy and government investment. Central government industrial strategy was referred to as inadequate and characterised by 'moon-shots' (R2) accompanied by narrow, sector-specific investment. Current strategy was also criticised for a perceived lack of focus on supporting UK jobs. The crucial role of public contracting and procurement policy was highlighted, given its potential role in supporting domestic supply chains and UK-based, good quality jobs.

Austerity politics was also raised as a key perceived driver of the future of work, in light of the subsequent reductions in public spending, public sector funding pressures and government-mandated cost-savings in sectors including rail, health, social care and other public services. Finally, the current 'hostile' (R6) political environment for trade union organising was argued to play a critical role in the future of worker representation and voice. The 2016 Trade Union Act was described to have significantly weakened the movement, with the legislated workplace recognition and industrial action thresholds making it both difficult to organise and difficult to take strike action.

3.2.4 **Wider global and demographic challenges**

Additional global drivers of the future of work identified by participants included climate change, ageing workforces, migration and labour mobility. Shifting customer and employee values and expectations, particularly for younger generations of the future workforce, were also highlighted and will be considered further in later sections.

Participant insights: Future of work drivers

A myriad drivers and futures of work:

> *'You have got this myriad futures of work… and the driver behind them is often very different. Just transitions is about climate change. Artificial intelligence, robotics has nothing to do with climate change. It has to do with labour costs, it has to do with profit margins… The way they all come together I don't think has been properly thought out yet…'* (R4, trade union, policy and research)

Economic drivers and 'offshoring' of jobs to international workforces:

> *'The reality of it is… bearing in mind you've got the Tyne, the Tees and the Wear, there's no employment on there. If you go to [name of cruise ship operator], the big cruise ships there, they're all foreign nationals… So it's not just technology, it's also exploitation of the labour market… driving costs down.'* (R5, trade union, regional organiser)

Taking a balanced approach to technology:

> *'It would be silly to say that all automation is wrong. If you think about repetitive strain and all the different injuries that people have had over the years, a lot of the jobs we've got machines doing are things people wouldn't thank you to do... So I think we've got to take a really balanced approach… take forward that pragmatic step when we're in negotiation.'*
> (R12, trade union, regional officer)

The role of procurement policy and government contracting:

> *'In terms of the future of work within greener renewables, there is structural and contractual bias at the outset which prevents and hinders domestic supply chains taking advantage of contracts. Which is why we are seeing wind turbines being made in the south-east China sea and being brought over in cargo ships to the coast of Scotland… Price has still been the primary driver associated with billions of pounds of contracts going offshore, halfway around the world.'* (R4, trade union, policy and research)

Global drivers, geographical factors and a post-COVID two-speed economy:

> *'I think there's a risk of further continuance of a two-speed economy coming out of this [COVID-19] crisis… Knowledge jobs will bounce back because they can be done from anywhere, and that will be the national narrative, and then this other side of jobs at the margins of technology as it currently stands, where there will be a restructuring of the economy, potential hardships. Many of those jobs will be outside of London and outside the big cities, so it already suffers from not really being part of the normal narrative.'*
> (R2, trade union, communications and research)

4. Future jobs and skills

This section outlines key findings related to jobs, skills and the future labour market.

4.1 The future of jobs

4.1.1 Job destruction

In line with common understanding on the future of work, interviewees described ongoing job losses in a range of sectors including manufacturing, engineering, rail, maritime, oil and gas, retail and finance. Job destruction was linked to both technological change and to the wider socio-economic and political drivers summarised in the previous section. Significant sector differences were observed in the extent and types of jobs affected, ranging from specific roles or workforce tiers through to whole-industry 'reduction in the establishment' (R5), for example in the rail industry. A future research agenda was suggested to improve understanding of where displaced workers go and how individual decisions are made with regards to redundancy, redeployment and early retirement.

4.1.2 Job creation

Some participants expressed optimism regarding the potential job creation opportunities offered by net zero and 'green jobs' agendas, including in the renewable energy sector and in retrofitting homes. Others held more sceptical views, arguing that to date such ambitions had not been realised. Jobs created in industries such as offshore wind were reported to have been largely made up of white-collar roles and those offered to migrant workforces, rather than the blue-collar, UK-based roles originally anticipated. This highlighted a perceived mismatch between policy aspirations and employment capacity created. Elsewhere, jobs growth was reported to have been primarily concentrated in the private sector and gig/platform economy – leading to concerns about work quality and worker protections which will be considered further in the next section. The role of government investment and procurement policy in UK jobs creation was highlighted, with discussions referring to a perceived string of past 'avoidable failures', due to a lack of strategic support for UK-based jobs. A need for substantial, targeted jobs creation programmes was emphasised.

4.1.3 Labour market polarisation

A combination of the 'hollowing out' of middle-tier jobs in many traditional industries, alongside the creation of new jobs in lower paid and more precarious sectors, was identified as a key driver behind growing labour market polarisation. Questions were raised around the availability of decent work, both for existing workers and for young people entering the labour market. Concerns were also raised over the development of a 'two-speed economy' (R2) in the aftermath of the COVID-19 pandemic, characterised by significant income inequality and the separation of middle-class, white-collar, hybrid-working models from those in more precarious employment who are often unable to work from home.

4.1.4 **Job restructuring**

The interview discussions supported the suggestion that, on the whole, job restructuring was likely to play a more significant part in work futures than either job destruction or creation. Observed and predicted impacts varied by sector and industry, from significant 'transformational change' across the rail industry to a more nuanced restructuring of individual tasks, for example in advanced manufacturing. Identified outcomes of job restructuring were both positive – through the replacement of repetitive, mundane or dangerous tasks – and negative, for example where restructuring led to work intensification or increased productivity expectations. In terms of wider trends, some participants reported an emerging shift towards task or project-based roles, away from more traditional job role structures. One interviewee described a movement towards the 'gigification' (R2) of more traditional forms of employment, in part steered by technological advancements such as AI-driven performance management.

4.1.5 **Non-standard forms of employment**

A notable workforce trend was identified in the growing numbers of workers taking up non-standard forms of employment (NSE). This related to expansion in the availability of gig and platform roles, alongside increased rates of people in self-employment or in agency, temporary or otherwise precarious work contracts. While the emergence of gig and platform work has prompted much attention in the future of work literature, one respondent argued that such roles demonstrate how little has changed in terms of historical working conditions and working class power relations. Comparison was drawn for example between today's zero hours contracts and the precarious employment of dockyard workers in the 1960s.

4.1.6 **Spatial aspects of the future of jobs**

Finally, participants raised several areas for consideration related to spatial and geographical aspects of future jobs. The COVID-19 pandemic's acceleration of remote, home and hybrid forms of working was suggested to have led to new norms and shifting worker expectations about the spatial structuring of work. While acknowledging the potential benefits of flexibility to groups of workers including those with disabilities or caring responsibilities, concerns were raised around fairness and a potentially detrimental impact on those who are unable to work flexibly. Discussions referred to the emergence of 'anywhere jobs' and 'the nowhere office' (R2) as potentially transformative aspects of the future of work. Implications for organisational culture and worker identity will be considered in the next section.

The data also emphasised geographical factors, including the location of good jobs and the potential for remote working to reduce regional disparities and impact of 'brain drain' on local economies. Conversely, it was reported that increasing employment of remote workers outside of London had served to drive down wages in the banking sector, by generating new pay norms that did not include London salary weightings.

Participant insights: The future of jobs

Technology and the future of jobs:

> *'The whole debate about technology and jobs is fascinating isn't it? Does technology kill jobs, or does it create different jobs? And I suspect, either way, there'll be workers in our industry that will be displaced, or at risk of being displaced because of it.'*
> (R14, employer organisation, strategy and policy)

Job destruction and replacement:

> *'As technology advancements come to the fore, what we're seeing is the actual replacement of the asset… the human being… people being displaced, people being made redundant, people being taken out of the establishment, which in turn has seen a contraction in the industry.'*
> (R5, trade union, regional organiser – describing the rail industry)

Jobs creation expectations and reality:

> *'This 'green jobs' revolution that is often spoken about is largely a myth. In Scotland for example, in 2001 the Scottish Government said… that by 2020 they would create 48,000 direct and indirect jobs in the offshore wind sector alone. Last year, according to the Office of National Statistics, we barely had 1,300 jobs. It shows you the mismatch between aspiration and ambition and the actual capacity, the actual real jobs being created that actually allow a future of work to properly take hold… A lot of those 1,300 jobs are white collar jobs, they are office staff, they are not what you would call manufacturing jobs.'* (R4, trade union, policy and research)

Jobs creation and work quality:

> *'When we talk about how many jobs that are created… we've just got to make sure that the creation of these jobs is above minimum wage… it's got to be a real living wage and good terms and conditions of employment, because… overall, outside the [manufacturing and engineering] sector, when you look at all of these job creations, they are the bare minimum… people are leaving one job to go to another for ten pence more an hour.'*
> (R12, trade union, regional officer)

Zero hours contracts, power and precarious work throughout history:

> *'There's a difference between changes in technology and changes in however power operates in the workplace. So, where there have been loads of advances in technology, I don't think that there have been that many changes to the fundamental way that power works in the economy... Fifty years ago people would line up at the dockyards and they would get picked by the gaffer in the morning and know whether or not they had work. And today's equivalent, the exact same thing is happening, it's just happening via a text message with a zero hour contract... But the fundamentals of who has power and how you can assert power as a worker, I think hasn't changed since we first started to form unions in the middle of the industrial revolution.'* (R13, trade union, regional secretary)

4.2 Skills and the future workforce

4.2.1 **Skills transitions**

Skills transitions emerged as a major theme in the data analysis and was identified as a critically under-considered element within future of work discussion. The concept of 'skills transitions' refers to the requirement for reskilling and retraining in industries where transformational change is taking place, due to technological advancement or other drivers. Described as a 'skills crisis,' sectors considered to be most affected by current or future skills mismatches included manufacturing, engineering, rail and the energy sector. Discussions focused on the need to enable worker mobility and transferability of skills, including mobility across occupations. The importance of facilitating a 'just transition' for workers in these industries was emphasised, characterised by long-term strategic planning, gradual transitions, worker choice and availability of options.

A wide range of barriers to achieving a just transition were identified. These included cost barriers to organisations retraining staff, employer time and capacity requirements, government passivity and lack of accountability (though this was considered more of an issue in England than Scotland), and societal norms which emphasise individual liability for training and skills. In addition, structural and industrial-level barriers related to licensing and certification were reported to prevent workers from transitioning their skills to neighbouring industries. At the policy level, some participants perceived a lack of adequate focus on skills transitions in both future of work narratives and in government responses. Concerns were raised about the risk of repeating the mass unemployment that followed the 1980s coal mining closures, unless a significant 'reset' (R4) is sought in the way that skills transitions are addressed.

4.2.2 **Just transitions and industrial strategy**

The link to industrial strategy and contracting policy was considered particularly important in relation to skills transitions, given the mechanism such policy provides to build a robust domestic industry base and enhance worker mobility through jobs creation. Existing 'contractual bias' (R4) inherent in price-based contracting decisions was perceived to have historically disadvantaged domestic supply chains, leading to the dominance of large multi-national companies and subsequent offshoring of significant numbers of jobs to outside of the UK. Potential solutions were offered in the form of 'contracts for difference', which require a proactive approach to the use of government purchasing powers.

While it was suggested that there is 'not much good practice' (R10) in the area of skills transitions, a small number of emerging practice examples offered valuable insight into employer and industry-level activity. Two examples from the finance and engineering construction sectors are provided in boxes 4.1 and 4.2 overleaf. Discussions emphasised the need for cross-sector collaboration, strong employer-further education (FE) partnerships and strategic use of employer training and skills budgets. Interviewees

highlighted a perceived need for employer incentives and strategic government investment and support, alongside a refocus on the importance of lifelong learning.

Box 4.1 *Zurich – Internal redeployment scheme*

In the finance sector, Zurich is supporting employees in roles at risk of automation through an internal redeployment and reskilling programme, designed to enable workers to transition to different areas of the organisation. Based on extensive workforce analysis and future skills projections, options available to staff include upskilling for new roles (such as those in data science or cyber security), moving to different roles and teams, or funding for external training courses for those who wish to pursue an alternative career outside the finance sector.

> *'They've been really practical, they're using technology in a much smarter and more efficient way than we've seen in other employers in other sectors… They're being very responsible in how they do it… I think it's working in terms of setting a very good standard for how you should support the workforce if they are impacted or their jobs do change.'*

Box 4.2 *ECITB – 'Connected Competence' skills passport model*

The Engineering Construction Industry Training Board (ECITB) is supporting the industry-driven *Connected Competence* programme, working with industry bodies and sector leaders to test out the feasibility of a 'skills passport' model to increase labour mobility and skills transitions across related sectors. Based on existing national occupational standards, it focuses on developing agreed cross-industry, standardised training and testing in order to secure a 'transferable future' for workers.

> *'It's essentially trying to get the industry to agree to a base standard of competencies for different trades, chemical engineering, welding, pipe-fitting, all sorts of trades… And once workers get that, can demonstrate they're performing at that standard, they don't have to retest and retrain. So that's one way you can facilitate transferability... If you pass the test and get the accreditation, it means that every company recognises it and you can transfer between them.'*

4.2.3 **Youth employment**

The interviews pointed to a range of youth employment challenges, both specific to STEM careers and in relation to the future labour market more broadly. The importance and value of young people's skills and knowledge, particularly related to technology, was emphasised as crucial to the future workforce. Described as a 'whole generation challenge', concerns were raised about the availability of decent jobs and breadth of career options open to young people entering the labour market. The 'hollowing out' of

middle-tier jobs, combined with the current shift towards service economy roles, was described to pose both a 'risk to the skills base' (R13) and to individual work identity.

Diminishing options for young people were seen to have been compounded by higher education (HE) fee increases, leaving many school leavers questioning the value-for-money of university degrees. On one hand this was considered a potential opportunity for further development of, and investment in, non-HE technical education. However, concerns were raised over a perceived skills-jobs mismatch in some current provision, with parts of the college system described as 'cash cows' which do not always adequately prepare young people for the transition from education to work.

Specific to STEM careers, discussions pointed to a complex set of circumstances whereby short-term skills shortages and recruitment challenges sat alongside significant uncertainty about future career trajectories, particularly in manufacturing and engineering. The importance of enhancing the appeal of STEM was highlighted. Solutions described included outreach work with schools and the use of values or mission-based marketing to appeal to values-driven career decisions - seen as an increasing trend amongst young people. The importance of involving young people in programme design was also raised. Practice examples included The Common Room's Youth Board and the ECITB's Innov8 working group, which aim to involve future industry leaders in advising and shaping strategy and the future workforce.

A range of issues were identified in relation to current apprenticeships provision, particularly around role security and longevity for the young people employed. The apprenticeship levy was suggested to have disadvantaged some smaller businesses, with the significant financial commitment pitted against a perception that, once qualified, smaller organisations will lose young people to larger employers with greater progression opportunities. A local solution to some of these issues was described by one interviewee, in the form of a cross-employer, collaborative apprenticeship scheme. This is described in Box 4.3 below.

Box 4.3 *PlanBEE – Cross-employer, flexible apprenticeship scheme*

Gateshead College runs a flexible apprenticeship scheme supported by a consortium of more than 20 businesses in the North East, across engineering, construction, architecture and building services sectors. It responds to current skills gaps and apprenticeship challenges by enabling young people to gain skills across a range of employers within one apprenticeship. The programme has won several awards and in 2021 expanded into the North West, in partnership with Manchester City Council.

> *'I think it's brilliant… A cohort of construction companies got together… recognising a skills gap but also recognising that they couldn't all afford to take on their own cohorts of apprentices, so… they collectively have a group that move around each business… Embedding that flexibility with those young people is going to set them up for life really.'*

4.2.4 **Future workforce demographics and diversity**

The discussions raised a series of challenges related to diversity and the demographic make-up of the future workforce. Considerations included ageing workforces and how this might impact on technology capabilities for older 'digital immigrants' versus younger 'digital natives'. Specific to manufacturing and engineering, interviewees reported a need to increase workforce diversity on a range of factors including age, gender and ethnicity; particularly at more senior levels within organisations. Brexit was reported to have weakened diversity of nationality for some manufacturing organisations, due to the loss of large numbers of workers from Eastern Europe.

On a positive note, some gradual progress was noted on aspects of diversity and inclusion in recent years, including examples of initiatives developed to increase gender and ethnicity diversity in STEM subjects. One such example is provided in Box 4.4 below. The importance of creating role models for future workforce generations was considered central to this incremental progress.

Box 4.4 *The Common Room – Gender and ethnic diversity in STEM*

The Common Room is responding to a lack of diversity in the engineering sector and associated apprenticeships programmes, by working with young people to broaden perceptions of engineering and encourage people from different backgrounds to consider it as a career.

Initiatives have included open days where young people and their families can meet current apprentices, including young women and young people from minority ethnic groups. A podcast series developed during lockdown, *The Face of Engineering*, features women engineers (and predominantly women from ethnic minorities) in a range of roles and industries across the north of England. The Common Room has also developed a shadow Youth Board, set up to ensure that the perspectives of young people help influence the organisation and its future.

> *'Even through the cohorts of apprentices that we work with, there is still a lack of diversity. I think some of that is about perceptions of what the jobs are like… It's about trying to get some different role models in front of young people.'*

Participant insights: The future of skills

Just transitions in the energy sector:

> *'This debate about let's increase the phasing out of fossil fuels… so you want to do exactly what happened to the coal mines and basically put hundreds of thousands of people out of work without properly and effectively transitioning them - by building up the jobs in the first place, by ensuring the skills transferability, by ensuring that their skills are being refreshed in order to take advantage of these new areas of work... ensuring that we have a contractual process that enables the jobs to be created. The absence of thinking is incredible, it really is.'* (R4, trade union, policy and research)

Youth employment and future jobs:

> *'We've got all the maritime colleges here… We'll take these young kids through, give them a ticket, a competency, but there's no job at the end of it… there's a lot of false promise. So these young kids going through university, going through education… whatever form it is, achieving these credentials, but there's no active employment opportunity for them at the end of it.'*
> (R5, trade union, regional organiser)

Future skills and work identity:

> *'I think there's been a massive misunderstanding of the importance of having those types of [manufacturing and engineering] jobs… people's job is their meaning, it's what they do, and they get so much more out of it than just their wages. It's part of your identity. I'm not from here, I'm not even from the UK, but I've heard about mak'ems and tak'ems. It's part of the identity. So when that disappears what is there?'* (R13, trade union, regional secretary)

Accountability and capacity for skills transitions:

> *'With the steel industry… the skills they have now they're all very transferrable and they're going to be valuable going forward… It's just how can our members be brought on that journey… when we've asked how much time their employer's given them to develop certain skills, it's been so limited, and when you actually look to national government support, I mean they scrapped the union learning fund… There's just nothing there because I think they are expected to upskill themselves.'* (R10, trade union, research and policy)

Job numbers and skills transitions:

> *'There's a project happening in the north sea... an oil pipeline… they're repairing it, and you're talking about thousands of workers, something like 3-4000 workers at various stages… You go and repair a wind turbine, it takes two people… So there's a lot of talk about transferring oil and gas workers over to offshore wind, but I think the big concern within the industry is, is there going to be the number of jobs required for them?... What do you do with everyone else?* (R14, employer organisation, strategy and policy)

5. Future of the employment relationship

This section outlines findings related to the future of the employment relationship, including management culture, work quality, wellbeing and employee voice.

5.1 Management relationships and culture

5.1.1 **AI-powered management, monitoring and surveillance**

A key theme in the interview data was the gradual implementation of AI-driven forms of management. Described to have encroached into 'almost every aspect' (R1) of the employment relationship, this was reported not just for new types of role such as platform workers but also in some more traditional workplace settings. Participants described growing use of technology in the following functions:

- Recruitment, retention and termination of employment
- Line and performance management (including 'algorithmic management')
- 'Remote management' of home workers - the 'digital leash' (R2)
- Worker surveillance and monitoring

There were observed sector differences in the introduction of AI and other forms of advanced technology into the management relationship. The use of 'intrusive monitoring' was described in the logistics sector, with workers performance managed '24-7' through activity tracking software designed for 'extensive, intensive surveillance' (R5). A less intrusive level of monitoring was reported in some public services, such as local authority highway maintenance and trade work teams. However it was described as less prevalent in most forms of manufacturing and engineering, due to the already highly visible nature of productivity in the factory shopfloor context.

As already noted, interviewees stressed the importance of the motivation behind the technology's implementation, rather than its existence *per se*, in understanding how it is used and its impact on workers.

5.1.2 **Organisational culture, trust and identity**

The introduction of advanced technology into the management relationship was set against a perceived broader trend of shifting management philosophy and culture. Offering the potential for micromanagement, or in extreme cases exploitation, advanced technology was suggested to have raised productivity expectations and pressure on workers in some organisations. Movement towards a management ethos focused on the 'gamification of work' (R2), eroding its human aspects and encouraging competition between workers, was also described. The crucial importance of leadership ethos and management culture in how technology is used was highlighted.

The sub-theme of trust featured heavily in the discussions, both in terms of worker trust/distrust in the technology itself and trust/distrust in employer motivation for its implementation. Worker and organisational identity were also raised as key issues,

particularly in the wake of COVID-19 and growing management concerns about worker engagement, loyalty and how to embed business values and behaviours in remote or hybrid working contexts. Participants predicted that values-driven career decisions may increase, particularly for younger generations – raising questions over the interface between organisational, worker and individual identity for the future workforce.

Participant insights: Management relationships and culture

AI-powered management decisions:

> *'We'd identified the potentially really serious implications for workers of the introduction of these types of AI-powered technologies to… recruit people, to line manage people… a whole raft of decisions ranging from what team they should go in based on team dynamics, what format that team should take, training, decisions on absence management, capability, disciplinary proceedings, even in terms of selection for redundancy so termination of employment as well...*
>
> *There is experience of AI-powered tools making decisions about people across almost every aspect of the employment relationship from beginning to end and not only within the gig economy.'* (R1, trade union, policy officer)

AI, monitoring and dehumanisation of the workplace:

> *'The fourth industrial revolution, artificial intelligence, all this stuff coming in… they give management the best weapons they've had in our lifetime but doing… all the things we stand against, so dehumanising the workplace, people monitored literally every minute they're at work, people tracked every minute they're at work. People disciplined based on data and not on human interaction or emotional intelligence or anything else… People's human rights in that environment, the humanity of it all – it's massively important.'* (R3, trade union, deputy general secretary)

Data, ethical standards and degradation of management culture:

> *'Because this software is sold into companies and lots of it is developed in America or different jurisdictions, I think there are risks that products are designed to a standard that we don't recognise, onto British or European management culture. And that begins to then degrade management culture… Things are brought in by procurement… and there's a disconnect in it.'* (R2, trade union, communications and research)

5.2 Worker protections, work quality and wellbeing

5.2.1 **Data protection and digital governance**

The introduction of advanced technology into the employment relationship was linked to a series of concerns related to data protection and digital governance. Key issues included employee choice, awareness and consent. In addition, privacy concerns were raised regarding organisational access to sensitive personal data. Discussions stressed the importance of organisational transparency and adherence to legal standards, in light of vast international variation and the potential for global technology to 'set the standard' below what is considered ethical or legal in the UK. Concerns were also raised regarding employee ability to access and correct inaccurate data, or challenge AI-based employment decisions. It was argued that workers should have this right built into contractual agreements.

The introduction of workplace data agreements as a potential solution to digital governance concerns was described in the communications sector. Details can be found in Box 5.1 below.

Box 5.1 *Workplace technology agreements – Royal Mail and CWU*

In 2020, the Royal Mail Group and the Communication Workers Union (CWU) agreed a collective workplace agreement, *The Pathway to Change*, which includes principles related to the introduction of new technology and use of employee data. Provisions include the right to trial new technology and work practices before they are rolled out, local management-led decision making, and a right to human review of technology-based decisions. These commitments aim to ensure that technology advancement does not lead to dehumanisation of the workplace or exploitation of workers.

> *'It's about the culture… for most of our workers, and many of them have many years of experience, they've gone to work in the same pile of bricks everyday for years now… and we've got to get that right… our big strapline during the negotiations on the new technology bit was that slavery was abolished in, was it 1833, and we're not bringing it back under the guise of new technology.'*

5.2.2 **'Routine' T&Cs and worker protections**

Embedded in ethical debate on worker terms and conditions, the interview discussions pointed to wide perceived variation in employer respect for workers' rights, protections and 'routine T&Cs' as 'pillars of security' (R3) for workers. Key identified issues included:

- Pay/remuneration (including the minimum wage having 'become the maximum wage' for many workers and occupations)

- Health, safety and working environments (including remote working contexts and heavily monitored roles)
- Equality and discrimination (including in AI-based and automated management decisions)
- Job security, casualisation and employment status
- Precarious contracts (including zero hours, part-time and temporary)
- Retirement security (including issues related to extended working lives for those who can't afford to retire)
- Maternity and sick pay
- Training and career progression

5.2.3 **Work quality and precarity**

In some extreme contexts, particularly in the logistics sector, interviewees described a 'pessimistic reality' for working conditions, including precarious work contracts, long working hours and increasing work intensification. In the maritime and renewable energy sectors, the reported exploitation of cheap international workforces meant that these workers were not able to share the same legal protections as those directly employed in the UK. Across sectors with a high prevalence of zero hours contracts, these were suggested to have become a 'conditioning tool' (R13) to prevent workplace organising, as workers could be let go or have their hours severely reduced without any requirement for explanation. This contrasted sharply to examples of progressive employers and positive practice offered elsewhere in the report.

In manufacturing and engineering the picture varied yet was considered fairly negative overall, with participants describing a gradual degradation of job security, terms and conditions over time. Increasing use of 'fire and rehire' practices, alongside a growing prevalence of 'two-tier workforces' whereby new workers are recruited on less favourable pay, terms and conditions compared to existing staff, were described to have led to a gradual erosion of work quality and job security across the sector.

Local attempts to find solutions to issues related to work quality included the introduction of employment charters, community wealth-building approaches and the development of cooperatives as an alternative to for-profit employment models. An emerging example, supported by the North of Tyne Combined Authority (NTCA), is provided in Box 5.2 overleaf.

5.2.4 **Health, wellbeing and workplace boundaries**

Confounded by the COVID-19 pandemic, discussions raised a range of issues related to boundaries - both around the working day and between the workplace and home life. For some workers, remote working was described to have created a 'digital leash' to the office, leading to a blurred interface with home life and expansion of the working day into non-work time and non-work spaces. Related gender disparities were raised, particularly for working mothers and those responsible for caring or household domestic chores.

Linked to earlier points on shifting management philosophy, a perceived erosion of the social and human aspects of work was also highlighted. Participants suggested a trend of increasing isolation at work, particularly given the rise in non-standard (NSE) forms of employment including remote, platform and self-employment. Risks were highlighted in relation to the loss or weakening of workplace relationships and contact with both colleagues and managers. The COVID-19 pandemic was considered to have provided a 'natural experiment' into how to replace this contact and peer-to-peer support with digital alternatives, with mixed results. Additional concerns around mental health and wellbeing included work intensification, anxiety-related issues and the impact of increasing pressures related to productivity and performance.

Finally, discussions confirmed that traditional trade union concerns around workplace health and safety were very much at the forefront of the future of work. Issues included health considerations for home workers, alongside the potential for industrial injury, disease and disorders in emerging low paid sectors. Public safety and service accessibility were also raised as related issues, for example due to workforce reductions in the rail sector meaning fewer public-facing staff in stations and on trains.

Box 5.2 *Alternative employment models for agency workers*

Teaching unions NEU and NASUWT are working with the North of Tyne Combined Authority (NTCA) to explore the development of a local alternative to the private agency model in supply teaching. Early ideas are based on a cooperative, community interest employment model and involve collaboration between NTCA, union officers, workplace reps, supply teachers and technical support from the North East Business Innovation Centre. The aim is to enable improved terms and conditions for supply workers as part of a wider community wealth-building approach.

> *'It's a really good model. It benefits the supply teachers… It'll be better terms and conditions for them… Hopefully, eventually we'll be able to get the members of the co-op registered with the Teachers Pension Scheme, which they don't have, which will be a big thing. But also they'll have opportunities for training. It benefits the schools and public purse… because money's not being siphoned off by private agencies… so it's a bit of a win-win on both sides really…'*

Participant insights: Worker protections, work quality and precarity

Worker protections and low-cost business models:

> *In the world of parcels… nearly every company that we're in competition with… they've got the bogus self-employed contracts for people, so they're not getting sick pay, they're not getting holiday pay, they're not getting pensions… half of them or more are not paying national insurance… effectively the country or the state has been subsidising these employment models, but they're not giving people anything. They're not giving them any security in life…'* (R3, trade union, deputy general secretary)

Retirement security and extended working lives:

> *'I've got people working on the [public transport system]… seventy years of age and still working… that should not be happening, because they can't afford to live… it's a reality of where we are.'*
> (R5, trade union, regional organiser)

Erosion of work quality in manufacturing and engineering:

> *'Employers are contacting us to try and bring in a second-tier contract, so to bring people in on reduced terms and conditions… we're fighting that… because moving forward, as the older people retire it just means that everyone is on a hell of a lot less… I think they're definitely the two biggest concerns within manufacturing and engineering moving forward, the fire-and-rehire and the two-tier contract.'* (R12, trade union, regional officer)

Zero-hours contracts as a 'behavioural tool' for employers:

> *'Zero-hour contracts are a behavioural tool for employers, because if you're organising and you're getting 35 to 40 hours a week but your zero-hour contract says you're on zero hours… they don't have to justify at all not giving you work the following week. So, if you're a single mum and you're trying to organise other women who are working for a care company… they don't have to justify anything; they can just reduce your hours down. You have no power to do anything about that.'* (R13, trade union, regional secretary)

Remote working, individual pressures and opportunity:

> *'People want to stay working from home, but it's not really about themselves, or their opportunity, or them as an individual. It tends to be more about taking on more domestic chores. And what does that do for those individuals? What does it do for society as well? It's quite concerning.'*
> (R12, trade union, regional officer)

Participant insights: Boundaries, engagement and wellbeing

Two sides of the 'flexibility' narrative:

> *'Lots of the narrative in the media and elsewhere is driven by employers. Our workers want flexible working… And actually, the word 'flexible work' has tended to mean lower paid, more precarious… It rarely, in the work relationship, means better and a higher standard… Flexible for who?'*
> (R2, trade union, communications and research)

Technology, agency and health:

> *'These types of technologies impact on mental and physical health… a lot of the workers reported a sense of isolation and a sense of a sort of loss of human agency… When workers had problems, they could sense that there was some form of unfairness in the way that the technology was operating, but they couldn't find a way to get to the root of that unfairness, to actually understand how the technology was operating and how the decisions were being made.'* (R1, trade union, policy officer)

Impact of remote working on engagement and worker loyalty:

> *'People are just so singular, sitting at home… people actually don't feel that loyalty towards the organisations that they used to have or towards their colleagues that they used to have either… Those natural conversations that would happen in the corridors, over a cup of tea… none of that is taking place. So people are becoming more disengaged.'*
> (R12, trade union, regional officer)

Home-work boundaries and wellbeing:

> *'My mum would always say, if you've had a bad day at the office, come home, shut the door, put it behind you, don't worry about it till the morning. But how do you put it behind you if your work is actually in your home?'*
> (R2, trade union, communications and research)

AI and discrimination:

> *'One really significant form of unfairness is the potential for discrimination… in terms of protected characteristics under the Equality Act… we found evidence of potential for discrimination on the grounds of race, sex, disability etc... all to do with the data that's been used to train the algorithm.'*
> (R1, trade union, policy officer)

The 'digital leash' and work-life balance:

> *'They call it the digital leash… We're being pulled towards our computers or answering emails and our phones. It creates a downward spiral of always being on, feeling the pressure to work. And I think the more we disperse… we need to reflect on what is work-life balance, what does quality of work look like.'* (R2, trade union, communications and research)

5.3 Workplace communication and employee voice

5.3.1 **Awareness and communication of technological change**

Awareness and communication of technological change emerged as a key theme within the data. Challenges were identified both between employer and employee and between organisations, procurement teams and technology designers. The data suggested a generally low level of awareness and understanding of the scope and potential of new technology amongst workers, as well as within senior management, HR and procurement functions of many organisations. This lack of clarity was described as a shared 'digital fog', which posed significant challenges to transparency and understanding at both sides of the employment relationship. Potential solutions described by interviewees included the provision of a 'right to explainability' (R1) or 'right to be informed' about new technology within employment contracts, providing an opportunity to bring employees and employers together for shared learning.

5.3.2 **Employee consultation in the future of work**

Discussions highlighted the importance of employee consultation and engagement in organisational decisions about the future of work. With a few notable exceptions, in general there was a very low perceived level of consultation and worker engagement in the introduction of new technology and other future of work changes. This was supported by trade union member consultation findings, which highlighted a strong desire from employees for greater involvement in decision-making on technological change. Engagement between employers and trade unions was also suggested to have room for improvement, with some positive practice but otherwise wide variation in levels of communication and engagement, particularly at the early stages of implementation. Two exceptions which provide useful practice examples are provided in Box 5.3 and 5.4 overleaf. The importance of involving young people in decisions about the future workforce was also highlighted, with the Common Room providing a useful practice example in their development of a Common Room Youth Board to help guide decisions about the organisation's direction and focus (see Box 4.4, page 21).

Box 5.3 *Stadler – Worker representation in skills transitions planning*

In the rail engineering sector, the train manufacturing company Stadler has been working with trade unions Unite and RMT to focus on long-term skills and workforce planning, in the transition from heavy engineering to electrical and computer-based train technology. Early conversations with regional officers and workplace reps have focused on how to ensure the right skills and training to enable a successful transition for existing staff, while also considering early retirement provision for older members of the workforce who may not wish to continue in such a drastically changing role.

> *'They're going to massively evolve within their workplace… you can see huge changes within the next couple of years… the discussions that [RMT and Unite] have had from the start of this is… how do you transit the workforce? How do you make sure you carry them with you?*
>
> *…Even the design of the new train had all the trade union reps involved from day one… going down to different sites looking at different trains in different parts of the country. They put the designs in front of them, had the opportunity to make comment… I suppose it's about engagement isn't it?'*

Box 5.4 *Ambulance Service – National pilot of body-worn cameras*

In 2018, the North East Ambulance Service (NEAS) took part in a national pilot of body worn cameras for frontline ambulance staff. Unison, alongside other trade unions and employers, were involved in national and local discussions as well as supporting the pilot. Learning from this has since informed national roll out, with implementation focusing on employee choice and awareness.

> *'It's been a really positive process… Completely joined up, partnership working throughout in terms of trade unions and employers on a national level and on a local level… It was very much, there was a lot of nervousness around it but we can see that this has potential value… so let's have a look at it, let's explore it with people who are willing to explore it.*
>
> *Something we really supported is that it's left for the individual to have some autonomy over. So it's not something that's… used as a tool against them or to monitor them, but it's a tool that can be used by them as and when they want… Something that the trade unions were clear on was our parameter that, if they wanted us to buy into it, it has to not be about monitoring.'*

Participant insights: Workplace communication and employee voice

Lack of worker awareness of AI-informed management:

> *'Workers just had an almost complete lack of awareness… of when AI might be being used to make decisions about people… We also found a very low level of consultation of workers before these types of technologies were introduced… not only on an individual basis but also when we surveyed the [trade union workplace] reps… If you're not being consulted, then the chances are these technologies are being introduced and used but you just don't know about it.'* (R1, trade union, policy officer)

Transparency, trust and data usage:

> *'The majority of people aren't sure what data is being collected or how it's being used. And that just feeds into that culture of trust.'*
> (R2, trade union, communications and research)

Lack of worker consultation in technological change:

> *'The story's quite positive really, a lot of workers said they welcomed tech change to make their jobs better and healthier, but the vast majority are just not consulted… around sixty to seventy per cent of workers are just not being consulted when technology is introduced or changes are implemented in their workplace.'* (R10, trade union, research and policy)

6. Trade union futures

This section outlines findings related to the future of trade union organising, including perceived challenges, opportunities and strategic priorities.

6.1 Trade union membership, structures and challenges

6.1.1 **Membership**

Trade union representatives described significant diversity in union membership, comprising a wide range of white and blue-collar roles in the public and private sectors. Industries represented included manufacturing, engineering, light industries, logistics, finance, retail, transport, public services, health and social care.

In terms of membership levels the picture was very mixed, with disparities in union density and influence by sector and region. Declining membership was reported for some trade unions in traditional industries such as rail and manufacturing, largely considered to be a result of contracting and ageing workforces. Low unionisation rates in sectors such as hospitality, retail and social care were considered to have contributed to weak pay structures, terms and conditions for these workers. This was explained by a lack of collective bargaining and contractual oversight compared to more densely unionised sectors.

Some larger trade unions reported an increase in membership during the COVID-19 pandemic. Suggested reasons for this included the increasing spotlight on worker safety, terms and conditions - particularly for key workers - alongside the growing cost-of-living crisis.

Participants described wide-ranging membership challenges, including:

- Organising in non-traditional workplaces and its implications for workplace recognition, recruitment, visibility and communication
- Organising workers in non-standard forms of employment (NSE), including people with multiple jobs or non-linear careers
- Organising smaller sectors and individual workers, including how the trade union 'offer' should be adapted to meet the needs of these workers
- Organising in sectors with transient and international workforces
- Organising low paid workers, with membership costs as a barrier
- Organising private sector workforces, including issues gaining access to workplaces with historically poor terms and conditions
- Organising traditionally 'female' occupations such as care work, which can have low membership density and high levels of privatisation
- The political and legislative environment, including current recognition thresholds
- A perceived broader shift in worker identity towards 'individualism' and away from a focus on collective power

With the traditional trade union model built on the idea of 'shopfloor' collective bargaining, discussions highlighted the importance of new and creative ways to recruit and organise workers. While some interviewees held fairly pessimistic views of future trade union strength, in light of historical declines in membership and density, others argued that current conditions are no worse than in the early days of the movement and should be seen as a challenge to be overcome rather than a point of no return. In addition, significant opportunities for membership growth were recognised, particularly in emerging and less traditional sectors. There was some evidence of unions already adapting their recruitment strategies and membership offer in response to the changing world of work, which will be considered further in section 6.2.

6.1.2 **Trade union structures and business model**

The interviews highlighted the breadth and diversity of the role of trade unions in UK industrial relations, with significant variation in identity, ethos and preferred modes of action across the different unions. Core activities included traditional collective bargaining and workplace action, lobbying government, legal work and legislative influence, alongside lifelong learning and skills development. In declining industries, the trade union role was reported to have become an increasingly reactive, 'firefighting role' (R5), out of necessity in an attempt to protect jobs and improve redundancy arrangements for workers.

Participants described wide variation in trade union approach, from those considered more 'militant' and willing to take strike action to those favouring less conflictual methods of action such as lobbying and legislative change. There was also variation in levels of perceived creativity, and in the extent to which trade unions were considered grassroots or activist-led. Participants noted a difference in approach between some larger and smaller unions, suggesting it to be, 'a different game', and a 'different mentality as well' (R5). This significant variation led to visible tensions and divergent perspectives on the movement's perceived shift away from 'proper organising' (R13), towards a more legislative focus.

In terms of reported challenges for trade union structures and business models, participants described similar issues to those facing other organisations. These included declining resources and capacity, alongside the need for efficiency savings due to reducing membership in many smaller unions. This was compounded by increasing complexity in achieving workplace recognition in new or challenging sectors such as care work and logistics, as well as the considerable time and cost involved in legal challenges and tribunals. Additional challenges were raised around the need for investment in internal operating and data systems for some unions, highlighting the key role of data in the future of organising. The COVID-19 pandemic was suggested to have posed significant challenges for the traditional trade union model through the loss of face-to-face contact. Yet it was also described to have provided a valuable opportunity to develop and test alternative ways to engage with a more diverse base of members.

Finally, discussion focused on trade union constitution and democratic processes. Internal structures were described as outdated, 'ossified' (R6), or even 'rotten' (R13) in some cases. Internal bureaucracy, lack of flexibility and non-progressive attitudes towards change were cited as barriers to innovation for some unions. Related challenges were identified around representation and diversity, particularly in terms of gender and ethnicity. Gradual progress was noted in recent years, particularly in terms of increasing representation of women at senior levels of the movement, while participants also described ongoing work to encourage greater diversity amongst union workplace reps.

6.1.3 **Relationships with employers**

The importance of strong workplace relationships with employers was emphasised, to detect 'early warning signs' of emerging issues and to foster a deep understanding of local issues and their surrounding complexity. While a number of positive working relationships were highlighted, the legislative environment around consolidation was reported to foster a culture of delayed engagement in many crisis situations, creating a reliance on 'rear-guard action' rather than early work to avoid job losses.

As might be expected, participants described highly variable employer relations. These ranged from positive relationships based on transparency, openness and mutual respect, through to conflictual relationships and those considered 'fake'. Discussions emphasised the importance of celebrating the many effective employer relationships held by trade unions. On the other hand, the existence of 'sweetheart deals' in isolated cases was perceived to undermine the movement and its collective power. One participant stressed that the movement's focus should be on relationships with the workforce, not with the employer. Employer tactics including closure threats to thwart strike action and use of zero hours contracts to discourage workers from unionisation were also described, particularly in low pay/low conditions contexts.

6.1.4 **Communication and public awareness**

Discussions emphasised the importance of public and member perceptions, and therefore a strong public-facing profile and presence, to the future success of the trade union movement. Public understanding of trade unions outside traditional industry was considered to historically have been constrained by unfavourable and narrow media coverage. However, participants described the beginnings of a perceived shift in public understanding prompted by COVID, with the heightened focus on worker protections and conditions for key workers argued to have led to more positive media coverage and trade union visibility. Interviewees also expressed a sense of shifting public perceptions about working conditions more generally, suggesting that people were increasingly feeling that 'enough is enough' (R12).

Participants highlighted the importance of outward-facing public communications which provide accessible information and emphasise the relevance of trade unions to people's working and wider lives. As an example, Community trade union described a recent overhaul of their website to include sections on basics such as, 'What is a trade union?'

Participant insights: Trade union membership, structures and challenges

Need for trade union modernisation:

> *'My reflections are that manufacturing and engineering in particular are still relatively heavily unionised, but the thing that holds it back is where the unions haven't modernised themselves - so in some ways the companies are more progressive than they are.'*
> (R11, employer organisation, chief executive)

Trade union challenges – collectivism vs self-interest:

> *'We try to have a TUC and we try to have a common voice, and I think sometimes the unions lose that commonality and that collectiveness, because they're only focused on their own self-interest. And I think that's why we've seen a demise in the trade unions.'*
> (R5, trade union, regional organiser)

Trade unions inaction and public perceptions:

> *'There are lots of challenges for unions because I guess we've not really been seen as a vehicle for people to exercise their frustrations about what has been happening. I think the trade union movement in this part of the country has been quite quiet if I'm brutally honest. We have companies closing and I don't see any occupations taking place, I don't see any big marches… Where's the anger coming from? It doesn't seem to be coming from anywhere.'* (R13, trade union, regional secretary)

Supporting members in non-traditional and non-linear forms of employment:

> *'Members are increasingly doing different jobs, switching between sectors, their careers don't look like what we were used to probably twenty years ago, and what does that mean for us as a union in terms of when we're thinking about the future of work, the immediate practical support? So we have members who are self-employed but have part-time jobs on the side, we've got full-time employees who might do a bit of gig work on the side… And everything in between really from agencies, zero hours and all sorts.'*
> (R10, trade union, research and policy)

Public awareness of trade unions:

> *'We're really open to try new things because we have to. A lot of people don't even know what a trade union is, never mind that we still exist and how we can improve their working lives.'* (R10, trade union, research and policy)

6.2 Trade union opportunities in the future of work

Despite the significant challenges facing trade unions, the interview discussions held a strong sense of optimism regarding opportunities for worker representation and collective bargaining in the future of work. In addition to shifting public perceptions of trade unions and of the working class more broadly, a range of opportunities and areas of ongoing innovation were identified. These are summarised in Table 6.1 overleaf.

Table 6.1. *Identified opportunities and ongoing areas of innovation for trade unions*

Technology and data opportunities
• Use of technology to build alternative organising models for workers without a 'shopfloor' • Remote engagement opportunities • Enhanced use of membership data to understand demographics, issues and concerns - and using this to inform internal strategy development • Use of social media to increase visibility, public awareness and perceived relevance
New and enhanced forms of membership
• Private sector and third sector membership, including occupations less traditionally associated with trade unions (such as retail) • Gig and platform workers, individual members and the self-employed
New and enhanced areas of focus
• Data and digital (including workplace agreements, bargaining guides for workplace reps, AI-related legislation on issues such as home-work balance and the 'right to disconnect') • Decent work principles and work quality • Mental health and wellbeing • Self-employment issues including worker protections, pay transparency and upskilling • New health and safety concerns in emerging work contexts such as remote and gig working • Skills transitions and upskilling • Leading on 'overlooked' issues including automation of the management function and exploitation of overseas labour
New and enhanced types of activity
• 'Tech organising' activity including workplace data and 'pro-technology' agreements, lobbying and campaigning, legal expertise and representation, development of ethical principles and introduction of workplace data reps • Knowledge creation role in generating balanced discussion and sharing 'data power', as well as developing sector/role-specific solutions • Influencing the development and procurement stages of new technology • Developing the 'offer' for individual members, including contact centres and networking/ collective voice opportunities • Long-term early action with employers, including involvement in strategic workforce planning and proactive engagement before new technology is implemented • Role beyond the workplace, including community development
New and enhanced types of relationship
• Social scientists, tech designers and procurement teams • Private sector and third sector employers • Social partnerships and collective, cross-union collaborations with non-TU and government partners on specific policy and practice issues (E.g. Energy sector skills transitions, large infrastructure projects, AI legislation, local and regional economic development) • Celebrating good employers

Participant insights: Trade union opportunities

Trade union movement at a crossroads:

> *'I do think we're at a massive crossroads, within the trade union movement as a whole, but I think it's really exciting.'* (R12, trade union, regional officer)

Shifting union focus and role of workplace reps:

> *'I think it's really exciting… because people are starting to openly talk in a way that they haven't done before… for years they [workplace reps] were just told to go out and recruit people five days a week, and it was like they were window salesmen. And now we're talking about building communities and we're talking about organic leaders in the workplace and how you identify them, how you bring them on board and how we shouldn't be worried about whether or not we're going to meet the 50 per cent threshold; we should be absolutely smashing through that…'* (R13, trade union, regional secretary)

'Three-pronged' strategic approach to technology implementation:

> *'It has to be a three-pronged effort… we've got to deal with the issues that are already taking place in the workplace, try and influence employers at the point they're considering application of these technologies in the workplace, and then one step further down the chain, also try and influence procurement and development.'* (R1, trade union, policy officer)

Data as a new core focus for trade unions:

> *'Data is the new health and safety at work… how do you manage risk and reduce harm from something which is intangible and out of sight?.. How do we establish rights and responsibilities around digital technologies?'*
> (R2, trade union, communications and research)

Creating a positive TU narrative and celebrating good employers:

> *'I think what unions don't talk about enough is positive work with good employers, in a traditional sense of unions. We're always in the news… about striking, but in reality that's not the situation of the unions day to day. So how do we push a positive story out about trade unions? Working with good employers, creating real positive change in workplaces and sectors for our members and saying that loudly and proudly rather than just being on and talking about striking because, don't get me wrong it's a part of what we do when we need to do it. But we need to tell the story more about the amazing stuff that unions have done for years and years and years and continue to do. To shape that narrative and the appearance of unions.'*
> (R10, trade union, research and policy)

6.3 Trade union identity and strategy

6.3.1 **Trade unions: A movement at a crossroads?**

The interview data painted a rich picture of trade unionism as a movement 'at a crossroads', with current successes and concerns pitched as 'a story of two very different halves' (R12). This was considered by some to be exciting times, with positive shifts described in the form of increasingly constructive discussions about the need for modernisation and adaptation.

There was some agreement on a perceived need to strengthen existing, overarching strategy for the trade union movement as a whole. Underpinning this need, participants described perceived strategic failures of the movement, particularly related to a period of 'accommodation', 'inaction' and 'distraction' in the years following the 2008 financial crisis. This period was described to have been characterised by intense inter-union competition for members, born out of concern for each union's own survival. Accompanying this, some participants described a culture of change aversion and historic reluctance to learn from failure. The impact of the COVID-19 pandemic and current cost-of-living crisis were identified as presenting a key opportunity to reinvigorate the movement's shared identity and collective focus.

6.3.2 **Cross-union collaboration and strategy building**

Several positive examples were offered of existing collaborative, cross-union work with wider stakeholders on key issues of importance. These include for example the TUC's AI Working Group (see Box 6.1) and the North of Tyne Combined Authority's cross-union forum which focuses on inclusive growth and decent work.

Building on this, participants acknowledged a desire for increased opportunities for cross-union strategy building, collective reflection and learning - related not just to specific issues but to the movement as a whole, and the future of organising itself. Combined with existing collaborative work, it was anticipated that this could help to address inter-union competition, lead to greater opportunities for joint working and strengthen the movement's 'common voice'.

6.3.3 **Tensions between modernisation and tradition**

Tensions were described between the identified need for modernisation and adaptation in response to the changing world of work, versus concerns that this could shift attention away from traditional 'shopfloor' forms of collective bargaining and industrial action. Concerns were raised that union influence and working-class power could be weakened if traditional collective action were to become less central to the movement's identity. One participant argued that a focus on the future of work can actually detract from the observation that little has changed for the working class, in terms of underlying power structures. From this perspective, the power associated with the threat of workplace strike action was considered crucial, particularly in light of historically mixed results of other forms of negotiation and compromise.

6.3.4 Key components of an enhanced identity for trade unions

Participants identified a need to reinvent the 'generational memory' (R5) of trade unions, in order to attract new generations of members, while retaining its roots in grassroots activism by and for the working class. Key components of an enhanced trade union identity described by interviewees were as follows:

- Embedded in trade union 'roots' of power and working-class conditions; 'proper organising' and grassroots activism; workplace recognition, collective bargaining and strike action; and a focus on relations with the workforce, not the employer
- Centred on the movement's commonality and collectiveness, enhanced through a 'common voice' and shared strategy on the future of organising
- Framed within wider values which are important to members and to the public, including community identity
- Built on a positive narrative, being 'loud and proud' about what the trade union movement has achieved and its potential to continue leading positive change (to sit alongside discussion of the challenges ahead and significant issues faced by workers)
- Based on an underlying willingness to be creative and dynamic, learn from failure and be reflective as a movement
- Informed by a solid base understanding of capitalism and principles of organising

6.3.5 Future trade union strategy: What should be prioritised?

From a strategic perspective, a number of participants acknowledged that it would be naïve to anticipate positive change to the organising landscape under the current UK government. One interviewee advocated for the movement using this moment to focus on 'getting its house in order' (R13) and developing clear, cross-union strategy on what to ask of the next labour government.

In terms of external relationships, ideas were raised to campaign for the following:

- Creating favourable conditions and cultivating a national culture that values trade union organising (initially through repeal of the 2016 Trade Union Act)
- Creation and formalisation of UK industrial forums, as a replacement for existing national agreements (which are optional)
- An enhanced role for trade unions in early development and procurement stages (for example related to technology, care work and infrastructure projects)
- Legislation to enable earlier, preventive work with 'employers in trouble'
- Investment in opportunities for wider collaborative models involving trade unions, employers, government and communities

In addition, the following priorities were raised as internal considerations for the trade union movement:

- Strengthening the 'common voice' based on a broad definition and ethos of collectivism, and recognising strength in the movement's diversity
- Focus on building and strengthening 'work-based communities' - through recognition agreements, skills development and enhanced roles for workplace reps
- Targeting profit-making companies and sectors that display 'workforce contempt', while also supporting struggling industries and businesses
- Focus on transparency and accountability, including exploring the potential for 'open-shop' negotiations

The next and final discussion section will draw together key themes from across the findings, before setting out initial ideas and next steps for future research and policy development.

Box 6.1 *Trades Union Congress – TUC AI Working Group*

The TUC is facilitating inter-union collaboration on future of work issues through its established TUC AI Working Group, with a particular focus on algorithmic management and employee data rights.

Set up in 2020, the working group brings together representatives from 15 affiliate trade unions as well as international union confederations. The group meets regularly and has worked together on a wide variety of reports, guidance and other outputs on the use of algorithmic management and AI at work. As well as contributing to external projects, members of the group share relevant work taking place in individual unions and campaign together on key issues such as data transparency.

Reports and related information can be found here:
https://www.tuc.org.uk/AImanifesto

Participant insights: Trade union identity and strategy

Trade union identity and organising conditions:

> *'I think sometimes trade unions get distracted by a lot of the changes that are happening. We operate in a world today where union identity is really, really low actually. But I don't think the conditions for organising as a trade union movement are worse than what they were when people were down the mines. Back then they were able to build a union when we didn't have offices… we didn't have access to the legal system, we didn't have political representation in any form whatsoever; and if we were able to grow a movement at that stage then I don't understand why we can't do it now.'*
> (R13, trade union, regional secretary)

Reinvigorating trade union workplace identity:

> *'I think a lot of this is about trade unions reinvigorating that sort of workplace identity - finding their identity again. It's not just about health and safety or equal opportunities, it's about day-to-day issues in the workplace and tackling day-to-day abuse of workers…'*
> (R3, trade union, deputy general secretary)

Trade union roots in working class representation:

> *'I do accept trade unions have to change, to a degree. But we can't ever forget why we're there, which is to represent and improve the terms and conditions of the working class.'* (R5, trade union, regional organiser)

Combining traditional methods and modernisation:

> *'There's room for modernisation and thinking about how to do things differently. But I don't think that has to mean moving away from big collective action and strikes… that's really beneficial and really important… I think modernising is more about how we sell… the concept of a trade union and the value of it, being involved in it. And I think part of the value is that we can take those actions.'* (R15, trade union, regional organiser)

Trade union strength – a story of two halves:

> *'As a trade union movement, we're at a real crossroads… I think it's a story of two very different halves. When I look at industrial workplaces, who are physically still in the workplace… people are stronger than ever… trade unionism is stronger than ever… On the flip side, I'm very concerned about the amount of workers who are working from home… that they will in time, I think, disengage from the trade union movement… they're not feeling that camaraderie or that collectivism…'* (R12, trade union, regional officer)

7. Discussion and next steps

This final section draws together the report's main themes and issues for consideration, before setting out priorities and initial ideas for future research and policy development.

7.1 Discussion

7.1.1 **Summary of key findings**

This scoping study aimed to explore the future of work and worker representation from the perspective of trade unions and other stakeholders, with a particular focus on the manufacturing and engineering sectors. The findings have outlined wide-ranging challenges and opportunities across jobs, skills and the employment relationship. They have highlighted a heavily nuanced and often polarised debate, presenting almost every aspect of the future of work as a 'double-edged sword' and highly complex area of policy and practice. The findings have emphasised the importance of examining not just technological advancement but also other critical and related issues such as work quality, precarity, identity and wellbeing.

In addition to the key themes covered in earlier sections, several cross-cutting themes emerged from the analysis. These emphasise the importance of sector and industry variation, wider drivers of the future of work, the role of the state, and workplace power relations. Of particular note across all areas of discussion was an overriding lack of worker representation and voice within workplace decisions about the future of work.

The findings have demonstrated an ongoing expansion of technology into 'almost every aspect' (R1) of the employment relationship, including areas such as worker surveillance and monitoring, where the scale and pace of change had been unanticipated in the pre-COVID world. Implications of this are yet to be fully understood, with concerns raised around the impact of technological and wider change on home-life boundaries, privacy, identity, employee engagement, mental health and wellbeing. Degradation of the 'human' aspects of work and what this means for workers provides a key area for further exploration.

The findings have illustrated an ongoing, gradual erosion of work quality, terms and conditions for both new and existing occupations. An 'upflow' of precarity into traditional work spaces was clearly visible, for example through increasing use of 'fire-and-rehire' tactics and creation of two-tier workforces in manufacturing and engineering. This trend was also reflected in wider sectors where it was considered to be aggravated by the expansion of low-cost business models. Concerns were raised over the potential for further labour market polarisation, exacerbated by the possibility of a post-COVID 'two-speed economy' which draws lines - in both economic and spatial terms - between those who can benefit from remote work and those who can't.

The data has highlighted that future of work drivers span beyond the technology itself to a range of economic, social and political factors including new forms of capitalism and

wider global challenges. These drivers manifest differently across sectors, industries and workplaces - leading to a 'myriad futures of work' (R4). Posing a key challenge for future research and analysis, this requires both sector-specific analysis and a focus on wider system interconnectivity and complexity, in order to understand variation in actual and anticipated future of work outcomes.

Skills and industrial transitions were raised as a key under-researched area in the future of work discussion, including a 'whole-generation' impact on jobs and skills for young people entering the labour market. This topic provides a useful illustration of interconnectivity and the need for a whole-system approach to creating positive change. Discussions highlighted a circular, interdependent need for targeted industrial strategy, government investment, innovative procurement policy, sectoral analysis of skills and demand growth, and high quality, responsive technical education. Each component was identified as essential to a work future where good jobs are retained and created within UK industry, while the corresponding skills base is nurtured to meet future demand and encourage growth in domestic industry. The importance of industrial heritage and identity for the future workforce was also highlighted as a neglected area of consideration within the future of work discourse.

The final findings section highlighted both challenges and significant opportunities for trade unions in shaping the future of work. Discussions pointed to an emerging new identity for trade unions, which goes beyond 'health and safety or equal opportunities' (R3) to bring to the forefront issues which are becoming critically important to people's lives - such as data privacy, post-COVID work boundaries and mental health. In addition, the findings serve as a reminder of perceptions that, despite new technology and other changes faced by workers, little may have changed when it comes to the power struggles of the working class. Finally, the data has highlighted that current times provide a critical moment for the trade union movement, with FoW changes offering a key opportunity - through learning, data and strategy-building - to strengthen public perceptions of the movement as an integral part of working lives and community values.

7.1.2 **Narratives on the future of work**

Throughout the interview discussions, participants referred to different - and sometimes conflicting - narratives on the future of work. These included media, government and trade union narratives, as well as specific narratives on related issues such as 'flexibility', COVID-19 and the green economy. The trade union discourse was described as having evolved from an early, alarmist narrative focused on the potential negative impacts of technology and AI on jobs, to a more pragmatic and balanced view which focuses on how to ensure fair distribution of the rewards that technology can provide while minimising potential threats.

While the data pointed to the development of a more mature discourse over time, current media and policy narratives were considered to have 'compartmentalised' the future of work into different facets including:

- The *technology* narrative, which focuses on AI, robotics and advanced technology as the primary drivers of change
- The *climate change* narrative, which focuses on net zero ambitions, renewable technology and potential jobs creation within the 'green economy'
- The *skills* narrative, which focuses on skills shortages, transitions and youth employment
- The *white-collar COVID* narrative, which focuses on workplace restructuring, remote and hybrid working but overlooks sectors or industries where remote working is not an option – creating a 'binary divide' (R2) between those who can work flexibly and those who can't

The perception that manufacturing and engineering have been left out of narratives on the future of work, particularly in post-COVID working, can be seen in the following quote:

> *'The reality is, half of British workers have been leaving their houses regularly to attend work throughout this pandemic in supermarkets, in the power sector, in lots of bits of manufacturing… The worry is engineering, manufacturing type jobs are being left out the narrative around the future of work because… an echo chamber of policymakers and decision makers who write about the future of work tend to reflect the people they know… There's a privilege in the way the future of work is talked about which isn't often recognised.'*
> (R2, trade union, communications and research)

Building on earlier discussion around interconnectivity and system complexity, the co-existence of different narratives provides a key area for further research, in order to synthesise and join together separate discussions on the future of work.

7.2 Research and policy priorities

7.2.1 **Participant perspectives on existing evidence**

In response to perceived shortfalls in existing narratives on the future of work, the discussions highlighted a need for 'heavy intellectual and financial thinking' by policymakers, academics, trade unions and business. A need for improved conceptual understanding, in order to inform effective industrial strategy, was indicated in the following areas:

- *Sector and industry-specific analysis* which aims to understand system complexity, variation in FoW drivers and outcomes, sector-specific solutions and the 'multiple work futures' which are playing out
- *Learning from history*, including the impact of coal mining and shipbuilding closures, historically successful transitions such as the move from town gas to gas networks, industries such as steel which have successfully dealt with wide-ranging new forms of technology, and placing current trade union circumstances in historical context
- *Learning from international practice*, including state-subsidised domestic industry in EU countries, the trade union role in state infrastructure in Scandinavia, 'big bargaining' trade union movements in the US, and Ecuador's legislative move to prevent companies paying shareholder dividends unless workers are paid a 'dignity wage'
- *Better synthesis* of current siloed and compartmentalised debate on different elements of the future of work

7.2.2 **Research priorities identified in the scoping discussions**

This scoping study supports the view that understanding the role of trade unions and employee voice more broadly in the future of work is a crucial area for research and policy development. In addition, the following specific areas for future research were identified:

- Automation of the management function
- AI-driven worker surveillance and monitoring
- Skills transitions and 'just transition', including:
    - Labour mobility, worker adaptability and reskilling decisions
    - Solutions to structural industry barriers to worker mobility
    - Sector and industry-specific analysis
    - Accountability for skills transitions (state, organisation and worker)
- 'Offshoring' of jobs and the exploitation of overseas labour
- Management culture and degradation of the 'human' aspects of work, including implications for wellbeing, identity and the 'social contract'
- System complexity and the interrelation of different drivers and outcomes of the future of work (need for whole-system analysis and response)
- Analysis of why membership has increased for some trade unions - what can we learn about what workers need and value?
- Understanding any broader attitudinal shifts related to organising, workers' rights and class consciousness

7.2.3 **Policy priorities**

In addition to the research priorities already outlined, the findings highlight a number of potential areas for policy development. These include:

- Strengthening inter-union strategy on the future of workplace organising – what role can funders and academics play in supporting this?
- Developing policy and practice guidance on how workers should be involved in shaping workplace decisions about the future of work
- Building collaborative spaces for shared learning about new technology, involving workers, management, procurement teams and trade unions
- Exploring how trade unions can take advantage of data and technology advancements to better understand their membership, inform internal and cross-union strategy, and engage with the public in novel ways
- Developing tailored support for SMEs navigating the future of work, including peer-to-peer networking approaches

7.3 Next steps

This scoping study has provided a broad overview of current thinking, challenges and priorities for trade unions and other stakeholders in navigating the future of work. Relying on a limited dataset made up of targeted stakeholders, further work is recommended to test the assumptions contained within the report and further develop the ideas and suggestions made by participants.

This initial research is intended to form part of a larger, developmental study which focuses on the role of trade unions and employee voice more broadly in the future of work. Stage 2 will provide in-depth, case study exploration of how key FoW issues translate into specific experiences and outcomes at the local workplace-level, with a key focus on worker representation and voice. These include the implementation of specific forms of new technology, the development of workplace data agreements, and organisational-level skills transitions planning. This phase will aim to identify factors which can maximise or improve worker voice in different settings, as well as identifying key sites or supply chains which can act as markers of good practice related to future technological, employment and skills change.

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Appendix A: Interview topic guide – Scoping interviews

1. In general terms, what does the expression 'Future of Work' mean to you and to the workers/organisations you represent?
    - What are the main issues it brings to mind?
    - How much does FoW feature in your current work/role?
2. Can you tell me more about…/ What specific issues related to the Future of Work are of most concern - or considered most important - to you and to the workers/organisations you represent?
    a) Technology advancements (automation, AI, digitisation, surveillance tech)
    b) Skills, type and nature of jobs etc.
    c) Working conditions/quality of work (including pay, pensions, T&Cs)
    d) Productivity
    e) Wider social, economic or political issues (Brexit, COVID, green agenda, labour migration, supply chains)

    [Ask for details of: *Why important; Predicted impact on workforce; Any current negotiations or activity on this issue; Role of union and workers in this issue*]
3. How do you see the role of trade unions (and/or worker representation more generally) in the Future of Work?
    a) Strategic-level? Workplace-level? Other?
    b) Challenges? Opportunities?
    c) Any specific examples of negotiation between organisations, trade unions and employees on FoW issues?
    d) Formal vs informal negotiations
4. Any final thoughts or reflections, or anything we haven't covered that you think is important?
    - Is FoW a useful phrase/concept to frame the issues raised here?