

# TUC

Changing the world  
of work for good



# WHEN AI IS THE BOSS

AN INTRODUCTION  
FOR UNION REPS

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# INTRODUCTION

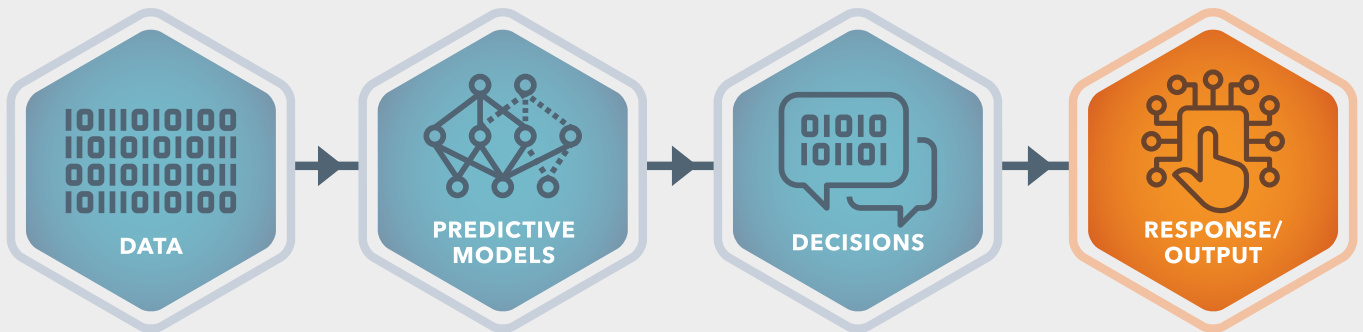
At first glance, artificial intelligence (AI) can seem like an impenetrable subject, but workers must have a say in how AI is used at work. If this is left to bosses and tech companies, workers' rights and interests will be overlooked.

Recruitment and management by AI is increasingly common in workplaces across the country. The price of this can be discrimination, overwork and invasion of privacy. These issues demand urgent attention.

This guide sets out how AI systems work, what the implications are for workers and unions, and some of the solutions unions can provide.

As one of the few remaining counterbalances to the power associated with global tech companies and commercial control over data, unions have a key role to play in both protecting workers against the risks associated with AI at work, as well as ensuring they benefit from the opportunities offered by AI.

**FIGURE 1:** The components of AI



## WHAT IS AI?

### Artificial intelligence

**Artificial intelligence (AI) means when computers carry out tasks that you would usually expect to be completed by a human. For example, making decisions or recognising objects, speech and sounds.**

AI is increasingly being used to automate management functions, making many important decisions about people at work.

### AI systems

It might be helpful to think of AI as a system with different components.<sup>1</sup> These components, explained further below, include:

- › data and data processing
- › predictive models generated using the data
- › decisions made using the predictive models; decision-making rules might stem from a machine-learning algorithm
- › a response or output based on the decisions.

### Data and data processing

**TIP** Remember that artificial 'intelligence' isn't always intelligent - AI can be flawed, just like a human being.

Data is like the fuel for AI. Data is used to train the algorithms used in AI systems and to enable predictive models to be developed by picking up patterns in the data.

**TIP** AI systems can go wrong if inaccurate or incomplete data is used. Technologists play a key role in whether or not the correct data is used.

Once the AI system is complete and an AI-powered tool is operating, it will then use data in a different way.

This is when the AI system processes data in real time, eg data about performance at work, and makes decisions based on that information.

As you can see, data is the foundation of AI.

**FIGURE 2:** The AI value chain



## Machine learning and predictive models

Machine learning is when computer programmes are trained on data and learn to carry out tasks (like making decisions), based on patterns in the data.

The conclusions that can be drawn from these data patterns are called predictive models. Predictive models are generated by machine learning using historic data. These models enable AI decision-making.

## Algorithms

An algorithm is a mathematical rule. Algorithms are used in many different contexts. Algorithms used in technology are often a set of rules applied by a computer to come to a decision.

## AI value chain

The AI value chain is the term used to describe the different stages in the creation and application of AI. These stages include:

- › Development. This is when software developers employed by tech companies create the code that forms the basis of the AI. Data is gathered and machine learning takes place to create an AI-powered tool.

- › Procurement. This is when employers purchase AI-powered tools and platforms.
- › Application. This is the roll-out of the new technology into the workplace by the employer.

Key actors in the AI value chain include technologists (developers/coders/software engineers), tech companies and employers.

There are usually two 'users' of the technology - the employer and the worker. AI can also be used to monitor the action and movements of service users such as students in universities or patients accessing health services.

**TIP** Consider how unions and workers can influence the different components of AI, and each stage of the AI value chain.

# HOW IS AI MANAGING PEOPLE?

**AI is used to manage people at all stages of the employment relationship. For example, AI is being used to hire people, to line-manage them and to make decisions about dismissal.<sup>2</sup>**

Management by AI has long been on the rise in platform work (where workers use an online platform to access work). It has now spread into many different sectors and workplaces, accelerated by the coronavirus pandemic and increase in remote working.<sup>3</sup>

**TIP** AI might be operating at work through, for example, a CCTV camera or webcam, on a laptop, a mobile phone, a portable fitness or location tracker, a health monitor, a personal computer or tablet.

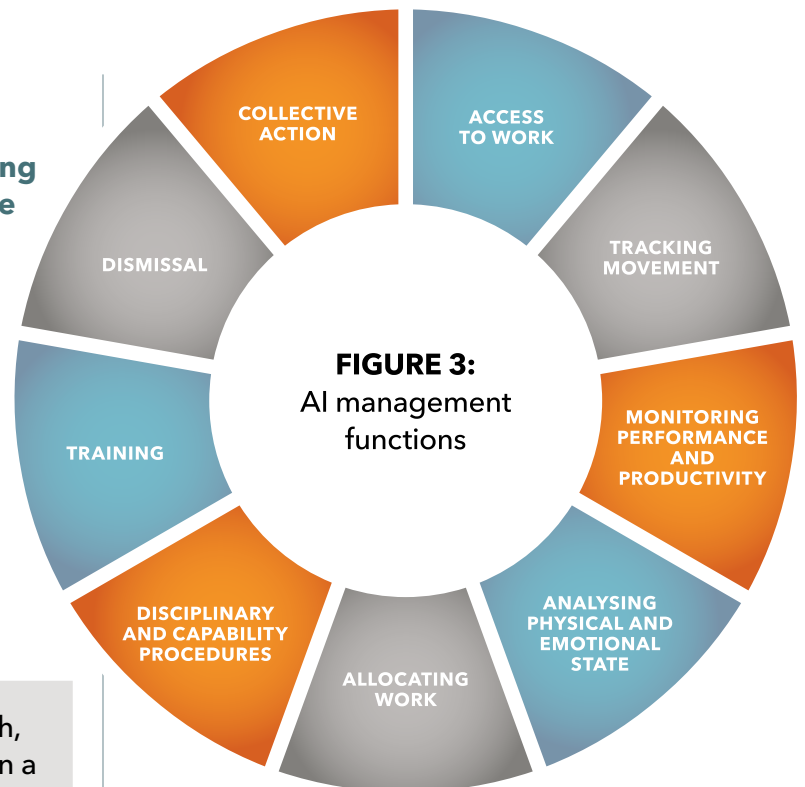
These are some of the management functions that AI might be fulfilling in your workplace:

## **Access to work**

Deciding who gets access to work on an online platform or app (a small software programme often downloaded onto a mobile device), and who is offered a job.

## **Tracking movement**

Tracking physical movement of workers - tracking location and monitoring body movements.



## **Monitoring performance and productivity**

Monitoring keyboard activity, tone of voice and expressions, logging time taken to complete tasks or time at work, monitoring error rates, setting productivity rates, and allocating grades/ratings for performance.

## **Analysing physical and emotional state**

Assessing emotions, monitoring sleep and collecting and assessing health data.

## **Allocating work**

Allocating tasks, deciding on teams and dictating how and when work is completed.





### **Disciplinary and capability procedures**

Triggering disciplinary and capability procedures.

### **Training**

Providing, allocating and assessing training.

### **Dismissal**

Terminating employment - dismissal, making a redundancy selection, withdrawing access to a platform or app.

### **Collective action**

AI might even be used by employers to monitor union activity and put together a union profile. For example, AI might be used to analyse information such as the location of union offices, the activity of

union officials, the use of union-related vocabulary in emails, and even union activity on social media.

**TIP** Think of all the functions of a manager. There is probably an AI-powered tool on the market for almost every function you list.

# WHAT ARE THE PROBLEMS?



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AI at work can result in various problems for workers and unions:

## For workers

### Transparency and consent

Workers might not be aware when AI is being used to make important decisions about them or be asked for their consent beforehand.

### Explainability

Understandable information about how the technology works and how it has been applied to individuals may not be available.

### Consultation

Low levels of consultation before AI is introduced at work results in lack of trust in the technology and increased likelihood of things going wrong.

### Challenging decisions

Workers and their representatives may have difficulty challenging decisions made by AI, especially if they do not understand how the technology operates and cannot access information.

### Data

If the data used to train algorithms is inaccurate or flawed, the AI might go wrong, producing unfair and even dangerous decisions.

Workers have little control over, or knowledge about, their own data and how this is used at work. This data could include, for example, information about their pay, hours of work, performance, productivity and absence records.

This lack of control over data means that workers cannot use the information to gain important insights into their working lives.

For example, if workers could pool information about pay and hours of work, they might gain insights into whether or not there is equal pay between men and women in their workplace, whether they are receiving the national minimum wage and gain information that could be used in trade union campaigning.

### Unfairness and discrimination

AI can produce very unfair results for workers. This can include discrimination, inaccurate ratings, unjustified sanctions and even unfair dismissal.



**TIP** Workers might experience unfairness at work, but not realise that AI is the cause - often the role of AI in decision-making is hidden. Not only this, but the decision might be based on irrelevant or unfair requirements that the worker cannot challenge or does not know about.

There is a danger that left unchecked and directed only by employers and commercial interests, AI at work will entrench existing inequalities and systems of control. This is because of the way in which AI tends to repeat existing human bias shown in the data that is being processed.

## **DISCRIMINATION**

### **Some examples of how AI might discriminate:**

- ▶ A female job applicant does an online job search and is shown advertisements for nursing and hairdressing. A male applicant is shown advertisements for mechanics and the fire service.
- ▶ Access to an online platform giving access to driving work is denied to Black people because the technology does not recognise Black faces.
- ▶ A disabled person is given a low score in an interview because the technology in an online interview interprets a facial disfigurement as a negative expression.

## **Work intensification**

AI can be used to allocate work and optimise efficiency, but without proper safeguards can impose unreasonable targets and result in unsafe working conditions.

Targets set by AI might not take into account basic human needs like toilet and rest breaks, or even the freedom to move and think without being tracked and monitored.

## **Health and wellbeing**

Constant monitoring, unreasonable targets, a lack of human connection and freedom can cause workers stress and unhappiness and take a toll on their mental and physical health.

## **Privacy and always-on culture**

Remote working, portable devices (such as mobile phones and tablets), wearable devices (that may, for example, track location, monitor muscle movements, emotions and state of health) have all resulted in work-related AI being present not only in the workplace, but in our homes as well. This can result in invasions of privacy and homelife, as well as an always-on culture in which working hours cease to have boundaries.

## **INVASIONS OF PRIVACY**

### **Workers report monitoring of their activities while they are working from home:**

"It was creepy," says Chris. "One of my managers was watching people's personal computers to monitor what we were doing at home - all the time, not just when we were working. It was a bizarre way to carry on."



### **Insecure, low-paid work**

AI can facilitate insecure and low paid work, in particular work through platforms. Data analytics, for example, used for scheduling purposes combining sales data with workforce data, could be used to allocate work in such a way that full-time, well-paid work is eliminated. Similarly, platform work can facilitate the allocation of 'gig' work on a one-off basis, undermining secure employment.

### **Damaging relationships**

Using AI to manage people can result in less contact between workers, managers and union reps, leading to weaker ties and human relationships, along with a sense of isolation and loneliness.

AI that is being used to monitor service users such as students or patients could damage the relationship of trust workers build with those they support, which can make it more difficult for them to do their jobs.

## **For unions**

### **Communication and expertise**

The growth of AI requires unions to provide new forms of training, education and collaboration to ensure that reps and workers can communicate about and understand AI.

### **Collective action**

AI can be used to monitor and suppress collective action.

### **Relationships**

The use of AI to manage people can disrupt established relationships and communication channels between union reps and human managers.

### **Recruitment**

Remote management may also change the structure of the workplace. It is harder for unions to contact workers if they are no longer in a central workplace.

# WHAT ARE THE OPPORTUNITIES?

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As well as problems, AI also presents great opportunities for unions and workers.

## Worker-led AI

Unions and workers could develop AI-powered tools that help evidence trade union campaigning for better terms and conditions at work or identify bias and discrimination.

### WORKER AI

WeClock is a self-tracking app that collects data about your working life so that you can use it to challenge unreal expectations, the 'constant on' culture, lack of time off and other forms of unfairness at work.

[Read more about WeClock](#)

## Collaboration

This new age of work presents an opportunity for unions to reach new groups of people through collaboration. Collaborating with technologists is of particular importance.

## Recruitment and organising

AI can offer unions insights and tools to assist with recruitment and organising of members.

Recruiting technologists is a crucial step towards ensuring more understanding of technology within trade unions, but also ensuring that worker voice and worker interests are recognised in the workplaces where technology is being developed. This in turn should contribute towards more ethical technology.

**TIP** Think about how pooling worker data on subjects like pay, commuting time, hours of work, overtime, could help union campaigning.





## WHAT CAN UNIONS DO FOR WORKERS?

There are many different options open to unions when it comes to dealing with the problems caused by AI. Here are some possibilities.

### Investigation

- › Find out what technology is being used, how it operates and what the impacts are on workers.

### Consultation

- › Encourage and participate in consultation at the development, procurement and application stages of the AI value chain.

- › Consider statutory consultation and information rights, including consultation rights under data protection laws.

**TIP** To be effective in influencing the different stages of the AI value chain, union reps need in-depth training.

### Employer accountability

- › Hold employers to account by highlighting their legal and best practice obligations, for example, in relation to worker consent, data protection, health and safety and equality requirements.



## Assessment

- › Influence the development and application of AI through existing assessment procedures. For example, data and equality impact assessments are a useful tool. These are procedures that enable an analysis of the impact that AI might have on individuals and are a requirement of data and equality law in specific circumstances. Please see the Further Reading section for more guidance on this.
- › Gain experience in algorithmic assessments - a procedure that would involve an assessment of the impact of the algorithm on individuals and could facilitate worker influence in the design and application of AI. This is a very new and developing area and there is not any standard agreed process for this yet, but as time goes on there may be opportunities to attend training courses on this or take part in pilot schemes.

## Collective bargaining

- › Negotiate collective agreements with provisions on the use of AI to recruit and manage people at work. The TUC's AI manifesto<sup>4</sup> sets out values (part 1) and proposals (part 2) that may be of use in collective bargaining.

**TIP** There are not yet many examples of collective agreements with provisions on management by AI, but the CWU has negotiated an agreement with the Royal Mail Group with provisions on management by technology - *look in the Further Reading section of this guide*. Think about terms that could keep humans in the decision-making process, prevent work intensification, secure a right to trial, stop unfair decision-making, protect union/employer relationships, and ensure everyone understands how the tech works.



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## Legal advice

- › Provide timely legal advice and assistance to members if they have been subject to unfairness by an AI system, in order that workers can potentially access compensation or other forms of redress for harms caused by AI.
- › Depending on the circumstances, these legal issues may be relevant:
  - discrimination under the Equality Act 2010
  - unfair dismissal
  - data protection
  - human rights, in particular the right to a private life
  - health and safety
  - contract law.

**TIP** If a union member has been subject to unfairness by an AI system, there might be a potential legal claim on which the worker needs timely legal advice.

## Training, education and collaboration

- › Provide training programmes for reps, union officials and workers.
- › Collaborate with employers, technologists, academics, regulators and others.
- › Work with other stakeholders to agree a set of employment-focused ethical principles in the form of comprehensive and practical guidelines, to normalise ethical behaviour and agree acceptable uses of AI.

## Campaign

- › Campaign for better regulation of AI, including reforms to fill gaps in employment law and guidance as set out in the TUC's AI manifesto.<sup>5</sup>
- › Take a stand against certain types of harmful technology, but support helpful and ethical AI.

## Innovate

- › Help workers share their data with each other and develop worker and union-led AI-powered tools.

# THE FUTURE

Our vision is of a world of work where technology works for everyone, not just employers and big tech companies. Working together, we hope that we can ensure worker interests are taken into account in the development and application of technology at work, and that workers gain a fair share in the rewards of innovation.

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- 2 TUC (2020) *Technology Managing People - the worker experience*, p16.
- 3 Riom, C. and Valero, A. (2020) *The Business Response to Covid-19: the CEP-CBI survey on technology adoption*, Centre for Economic Performance, and Riom, C., Valero, A. and Oliveira-Cunha, J. (2021) *The Business Response to Covid-19 One Year On: findings from the second wave of the CEP-CBI survey on technology adoption*, Centre for Economic Performance.
- 4 TUC (2021) *Dignity at Work and the AI Revolution*.
- 5 *Ibid.*

# FURTHER READING

## Reform

[Future of Work APPG report](#)

[My Boss the Algorithm Acas paper](#)

[The Amazonian Era IFOW report](#)

[TUC AI Manifesto](#)

## Research

[TUC research report](#)

## The law

[TUC legal report](#)

## Collective agreements

[CWU/RMG framework agreement](#)

[IndustriAll collective agreement database](#)

[Spanish banking sector collective agreement](#)

[TUC AI Manifesto](#)

[Wales TUC consultation](#)

## Union guidance

[ETUI digitalisation publications](#)

[ETUC digitalisation work](#)

[Guidance and training for unions](#)

[UNI Global future of work information and training programmes](#)

## Innovation

[WeClock app](#)

[Reasons to be Cheerful podcast](#)

## Data protection impact assessments

[ICO guidance](#)

[IFOW guidance](#)

[Prospect guidance on data protection impact assessments and the right to disconnect](#)

## Equality impact assessments

[House of Commons guidance](#)

[IFOW proposals](#)

## Annex

[TUC AI Manifesto](#)



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