The Good Work Algorithmic Impact Assessment

An overview for workplace representatives
Condensed from our full ‘Guide for Unions’, this document outlines for workplace representatives:

**Why** we need Good Work Algorithmic Impact Assessments (GWAIA). p3

**What** the GWAIA process looks like, and what it is designed to do. p4

**Who** should be involved in undertaking a GWAIA. p5

**How** reps should go about creating and using a GWAIA. p6–12
Why we need Good Work Algorithmic Impact Assessments

Artificial intelligence (AI) and other algorithmic systems are transforming work, management and models of business across all sectors. This is not just about ‘robots coming for our jobs’ or freeing people from ‘dull and dangerous’ tasks.

These systems can impact the content, character and conditions of work, the skills and discretion needed to do a job (for example, a driver being told precisely which route to take, or a teacher being prescribed how to teach a topic), or the intensity of work within a role (for example, an algorithm demanding increased task completion rates). AI is increasingly used to automate management decisions which can be more efficient but comes with new risks of ‘automating’ inequality in hiring, pay levels or performance ratings.

Algorithmic Impact Assessments (AIAs) help organisations assess these risks, ideally before a system is put in place, so that negative impacts can be anticipated and addressed. It is a process a bit like a risk assessment, but works best when it engages the whole workforce, involves a process for ongoing evaluation and creates a forum to negotiate appropriate adaptation of the system or its use. AIAs are becoming more common nationally and internationally as tools to help organisations anticipate risks and harms and govern the responsible rollout and use of AI and algorithmic systems.
The overarching goal of the GWAIA is to help employers and unions deliver ‘Good Work in the age of AI’.

A GWAIA can be initiated by employers, workers, technology developers or auditors, but unions are particularly well placed to initiate it as part of a collective bargaining process or as part of consultation on workplace automation. Once begun, the GWAIA is a four-stage process that commits employers to engage with workers and other stakeholders in an ongoing assessment of how an AI or algorithmic system is impacting work and workers, and what should be done about it. The ‘rolling’ nature of this assessment is important, because these systems, and their use and impacts, can evolve as software is updated, new functions are added or impacts surface or change over time. This also means that the GWAIA acts as a framework for responsible, people-centred AI governance in which unions play an important role.

As a means of deciding whether the four-stage GWAIA should be committed to, there is a preparatory stage involving a document review: the Disclosure of Position undertaken by a Position Assessment Team.

Key decision-makers (see Position Assessment Team below) involved in a project (including a workplace representative) convene to hear about the current status of an AI or algorithmic system (proposed or already in use), the human design choices that have gone into it, its purpose and the most significant and likely areas of impact.

Where potential impacts are identified, key decision-makers should commit to undertaking a full review using the full GWAIA process – which follows below. Any impacts found on access to work, pay, terms and conditions should always lead to a GWAIA being undertaken.

If appropriate, the GWAIA process now begins.

Stage 1
Involve – Stakeholder Identification and Engagement

Stakeholders — any individuals or groups who may be affected by the proposed system, now or in the future, or those who may have power to make changes to the design, development, deployment or review of a system — are identified and engaged in a preliminary exercise to anticipate the most likely risks and impacts.

Stage 2
Anticipate – Risks and Impacts

This is the heart of the GWAIA process: a full and detailed evaluation of the risks and impacts that could arise right through the lifecycle of an algorithmic system or AI, from its design through to its development, deployment, and ongoing review. This is a deep dive into both the adverse impacts that the system could have on the rights and interests of members, and the benefits that it could bring. The focus of this stage is pre-deployment where this is possible.

Stage 3
Act – Impact Action Planning

An impact action plan is created. This is a series of carefully recorded actions and processes aimed at preventing or mitigating the adverse impacts identified in the GWAIA, as well as any unidentified harms that could arise once the AI system has been initially deployed. The Plan should also cover positive actions that can be maximised.

Stage 4
Monitor – An Ongoing Process

Because the impacts of a system could build up over time, or only become clear through use, and because there may be new stakeholders missed in the initial process, it is a vital component of the GWAIA that risks, impacts are monitored in an ongoing way. This will also build in accountability to the action planning, and make sure that things actually get done. This could be achieved through a forum for ongoing dialogue, one that identifies different sources of feedback and considers the terms of reference of the GWAIA.
The process of considering whether a GWAIA should be undertaken begins with the formation of a Position Assessment Team made up of the key stakeholders and decision-makers in the organisation.

These people will manage the initial Disclosure of Position that sets out the current status of any system, whether already in use or being proposed. This group might already exist – for example as a Health and Safety Committee, or a Technology Forum – or might be created by repurposing a similar group and/or extending the remit of an existing group.

A collective agreement should specify that a union official is a member of this team that will be central to any commitment to establish a GWAIA process. This workplace representative should help identify those who have responsibility for managing risk in the organisation, and should therefore also be part of the team. This group may include: the Data Protection Officer, Health and Safety Officer, Human Resources, Chief Technology Officer, Internal Audit Officer, and the Chief Compliance Officer.

The team will have responsibility for evaluating the risks posed by an AI or algorithmic system and acting on those risks, so should include members with:

- sufficient technical knowledge about the system being proposed to understand the potential impacts of it,
- sufficient design understanding to be able to modify the system to reduce those risks,
- sufficient management responsibility to be able to make decisions to mitigate those risks.

### Checklist for Position Assessment Team member selection

<table>
<thead>
<tr>
<th>Mandatory members</th>
<th>→ Union official</th>
</tr>
</thead>
</table>
| People who can manage risk. For example: | → Data Protection Officer  
→ Health and Safety Officer  
→ Internal audit officer  
→ Chief Compliance Officer  
→ Equality Officer |
| People with technical knowledge. For example: | → System engineer  
→ System designer  
→ Operating staff |
| People with management decision-making authority. For example: | → Senior manager  
→ HR lead  
→ Director |
The steps that follow below set out how the GWAIA should be undertaken.

**Notify people**

The Position Assessment Team will start by notifying everyone in the organisation of the forthcoming GWAIA.

**Request Documents for the ‘Disclosure of Position’**

The team should now request and collect the documents that they will need for the Disclosure of Position. There should be made available from the employer a statement about the design, development and deployment of the system. This should be a summary description of the system, including its nature, remit and purpose, with a clear explanation of the design choices that have gone into it, who will get to see the data that it produces, how this data will be used and how the system is being trained and tested.

It is possible that some of these disclosure documents won’t be immediately available, so workplace representatives should ask that all reasonable steps should be taken to locate or request the documents from contractors or others involved. It is also possible that the employer – or a third party supplier of the system – might resist handing over some commercially sensitive information about the system. If this is the case, and this may undermine the validity of the GWAIA, the workplace representative should contact their union and seek legal advice on how this should be handled.

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**Document Request checklist**

- Any relevant policies and processes relating to managing organisational change
- Any strategy or plans specifically covering AI, digitisation or the use of automated decision making, with in management of workers or tasks
- Any documents relating to the key design choices that have been made at design, development and deployment of the system
- Any documents relating to the anticipated remit of the system, and any specific applications that are being proposed
- Any estimate or expectations about changes to work, job or task design
- Any documents outlining procurement specifications
- Any documents about how the system will be embedded, what it will do, and who will use it
- Any documents that discuss proposals for access to the system and governance of it

**Other documents that should be part of the disclosure that are relevant to the GWAIA:**

- The anticipated outcomes and optimisation functions
- The programming, training methodologies and datasets used
- The weighting or approximate weighting of different variables selected
- The techniques used to test and validate the system
- The outcomes of any technical audit or other assessment that has already taken place
- Trade-offs made between different measures during processes of audit and rationale given in plain language.
How reps should go about creating and using a GWAIA

Assess Initial Risk Factors

Next, the Position Assessment Team members will use these documents to do a preliminary assessment of any risks concerning the ways in which the design, development, or implementation of the system might impact good work.

It is recommended that the Position Assessment Team use the Institute for the Future of Work’s Good Work Charter as a checklist for this exercise in the first instance because it identifies key impact areas. They might start by assessing risks to pay, terms and conditions, then equality, health and wellbeing, then other potential impacts on good work.

This initial assessment – and the activities that follow on from it – should take a ‘proportionate approach.' This means that impact assessment, mitigation strategies, and stakeholder engagement activities are proportionate to the scale, scope and likelihood of risks for adverse impacts on good work. This does not mean that risks should be assessed together, or that net benefits will ‘offset’ risks or that less obvious risks should be ignored. Each risk should be considered separately, prioritising the risks that are most severe and agreeing an appropriate response to those risks first. Collective bargaining explicitly covers recruitment, pay, hours, work allocation and discipline so anticipated impacts in any of these areas need particular attention and could trigger a request for the GWAIA.

Workplace representatives should draw on their knowledge and experience of impacts on good work to facilitate the involvement of other workers in a manner proportionate to anticipated risks and impacts on good work. They should stay in close contact with their union through this process if they are unsure about any of the risks in place, the impact mitigations being proposed by the employer, or the means of engaging stakeholders. Independent advice can be sought.

A decision will then be taken on whether to trigger the four-stage GWAIA.

Risk factor checklist

The Position Assessment Team, and the workplace representative in particular, should look out for any risk factor that could:

- impact access to work, pay, terms and conditions of work
- impact equality
- impact physical or mental health
- impact any other dimensions of good work in the Charter
- impact any other rights or interests relevant to the realisation of good work (see table of examples on page 8).
Examples of how an algorithmic system could impact Good Work

<table>
<thead>
<tr>
<th>Principle</th>
<th>Example Risks and Impacts</th>
<th>Example Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>Algorithmic systems used to substitute for tasks or jobs, changing overall demand for workers, or track time for task completion to allocate shifts.</td>
<td>Algorithmic systems can be used to create new roles in firms, enable wider participation of those with different abilities, or identify ‘unusual suspects’ as candidates for a role.</td>
</tr>
<tr>
<td>Fair Pay</td>
<td>Algorithms used to exploit wage elasticities by dynamic pricing or be introduced as part of new business models which see cost burdens transferred to workers; or undermine the minimum wage.</td>
<td>Algorithmic systems can be used to improve efficiency of production, creating financial gains that can be shared through increasing pay or reducing hours of work.</td>
</tr>
<tr>
<td>Fair Conditions</td>
<td>Algorithmic systems used to transition a workforce from regularised to predictively scheduled work, with a view to increasing insecure contracts and changing terms of work.</td>
<td>Algorithmic systems can be used to track and reveal working conditions and inform the best intervention points to make improvements.</td>
</tr>
<tr>
<td>Equality</td>
<td>Algorithmic systems used to make decisions about workers on the basis of historic patterns of behaviour or resource allocation which may be projected these into the future.</td>
<td>Algorithmic systems can be used to reveal inequalities, monitor impacts more closely and suggest interventions to promote equality.</td>
</tr>
<tr>
<td>Dignity</td>
<td>Algorithmic systems used to monitor workers in ways which lead them to feel they are less trusted, valued or respected.</td>
<td>Algorithmic systems can be redesigned in ways which promote human capabilities and better recognise individual differences.</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Algorithmic systems used to specify exactly how tasks should be completed, with impacts on workers’ sense of agency.</td>
<td>Algorithmic systems can be used to help promote workers’ discretion around when and where they complete tasks.</td>
</tr>
<tr>
<td>Wellbeing</td>
<td>Algorithmic systems creating power asymmetries which lead to feelings of anxiety and vulnerability, driving psychosocial harms or ‘technostress’.</td>
<td>Algorithmic systems can be used to tailor experience of work to individual preferences, such as offering different types of tasks within the working day.</td>
</tr>
<tr>
<td>Support</td>
<td>Algorithmic systems can be used to eliminate management roles in whole or part, reducing worker access to redress for incidents at work or support around workload management.</td>
<td>Algorithmic systems can be used to enable workers to communicate with peers for support, reducing the need for managerial oversight.</td>
</tr>
<tr>
<td>Participation</td>
<td>Algorithmic systems can exacerbate information asymmetry which makes meaningful participation harder.</td>
<td>The introduction of algorithmic systems can be used as a trigger to utilise collective bargaining to introduce new forms of engagement and access to information.</td>
</tr>
<tr>
<td>Learning</td>
<td>Algorithmic systems eliciting work methods and storing information about how work is conducted, can be deployed to reduce the use of independent thought or space for learning.</td>
<td>Algorithmic systems can be used to create roles or tasks which require more critical thinking and analysis by workers. Introduction offers an opportunity to examine and maximise machine-human complementarity.</td>
</tr>
</tbody>
</table>
How reps should go about creating and using a GWAIA

GWAIA Stage 1
Involve – Stakeholder Identification and Engagement

Once the Disclosure of Position has been completed and a preliminary assessment has been done, if it is decided that a four-stage GWAIA process is required, the Position Assessment Team will initiate the first stage and work to identify and engage all stakeholders.

This means including anyone who may be affected by the system being proposed, either now or in the future, and anyone who may have power to impact the success of the implementation of the system being proposed.

If the numbers of those affected are large, it may be necessary to select worker stakeholders. If this needs to be done, it is important that people are selected in a fair way, using one of the following methods.

Methods for choosing stakeholders

- **Representative**
  (Only workplace representatives, or those nominated by workers who are not workplace representatives are included in the process)

- **Elective**
  (The employer may support the process of randomised and calibrated selection of the total population)

- **Direct**
  (All those identified as coming into contact with a system are included (only suited to smaller workplaces)

- **Purposive**
  (Workplace representatives select individuals on the basis of their relevant characteristics and contribution)

Stakeholder checklist

Stakeholders should include the workplace representative and union members, and those who are:

- Representatives of groups most likely to be affected by the system
- Anyone who has an identifiable right, freedom or interest in the system or use of it
- Anyone who has data gathered about them by the system (purposefully or incidentally)
- Anyone who may be subject to automated or semi-automated decisions by the system.

Stakeholder Engagement Plan

All of this should be recorded in a Stakeholder Engagement Plan. This is important for building trust that the GWAIA is a proper process, with established and documented methods and objectives, and is one that has effective participatory methods. The Stakeholder Engagement Plan is also important for the ongoing process of review, as new stakeholders may emerge over time who need to be included.
How reps should go about creating and using a GWAIA

GWAIA Stage 2
Anticipate – Risks and Impacts

At this point, the GWAIA begins as a deep dive into the risks and impacts of the proposed system. The Position Assessment Team now become the Project Team overseeing the GWAIA will use a detailed template (ask your union to provide one if you are not sure) to guide this process, building on the insights from the initial disclosure and consideration of the potential risks. The stakeholders who have been identified will be engaged and empowered to provide clear insights into the potential impacts of the system being proposed. The employer – and all stakeholders – should commit to honestly and openly sharing information so that impacts can be anticipated, better outcomes shaped and trust built. The employer can be challenged by the union if it is felt that this duty is not being upheld.

At this point there will also be a careful review of any relevant documentation and other information obtained to support the GWAIA.

There should also be a chance to add any additional questions for the project team.

It is vital that the adverse impacts identified in the process so far are not treated as the only possible harms. The re-examination and re-evaluation of impacts during deployment as monitored in Stage 4 of the process should be seen as an opportunity to detect unforeseen risks and provide an opportunity to further evaluate and contextualise impacts – and to promote good work.

Impacts checklist

- Identify actual and potential adverse impacts
- Assess the severity of potential impacts identified
- Assessing the proximity of potential impacts identified

Risk and Impact Assessment Report

Scenarios, potential user pathways, scenario narratives, and any constructive design commitments proposed to respond to known risks identified through the review of key design choices, should be documented and compiled.
How reps should go about creating and using a GWAIA

**GWIA Stage 3**

**Act – Impact Action Planning**

Once all the GWAIA questions have been answered and documented, the next step is to agree an Impact Action Plan. The first priority in the plan will be to **avoid or stop adverse impacts**. The next priority will be to **mitigate and minimise impacts** that can’t reasonably be stopped, paying particular attention to vulnerable persons or groups that may be disproportionately affected. It could be that **compensation** will need to be part of this plan, or **restoration** of roles previously removed. Attention can then be turned to identifying and maximising areas of potential benefit, such as new training opportunities, opportunities to redesign jobs to maximise use of workers’ skills and agency, or spreading benefits from increased efficiency with pay or time.

**Right to review**

There should also be a ‘right to review’ embedded in the action plan. This means that every worker has the right for any decision made by an algorithmic system, or decision informed by an algorithmic system, to be reviewed by a human being who knows the context well and has the power to make changes.

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**Example Impact Action Plan checklist**

- What workplace rights and entitlements need to be affirmed?
- What ‘right to review’ needs to be embedded?
- What changes to pay need to be made?
- What investment in upskilling needs to be made by the employer?
- What changes need to be made to the system (e.g. excluding certain source of information or changing weightings given to certain criteria)?
- What changes need to be made to reflect the personal choices of the stakeholders?

**Impact Action Plan**

Decisions reached about which risks are prioritised for action (if not all are); how these will be addressed; and ongoing monitoring architectures should be recorded. This should be shared with the whole workforce as best practice.
Once the impact action plan has been created and acted on, these must be monitored and revisited in an ongoing way to check that actions are being taken and have been effective. This is vital, because if the system is implemented, hidden impacts or cumulative impacts might become clear once it is deployed. Workplace representatives may be able to use this revisitation stage to review and expand the terms and scope of collective bargaining.

It will also be best practice for a company to share evidence that a GWAIA has been used so that a list of firms employing algorithmic impact assessments can be monitored by trades unions and other bodies.

### Ongoing Revision checklist

- Is there a team in place to conduct the ongoing monitoring?
- Are real-world impacts being measured?
- Is the ‘right to review’ being upheld?
- Has the employer been as open as possible, and sought information from others’ if needed?
- Are there dates or milestones by which revisitation needs to be completed?
- Are there triggers for early revisitation (e.g. changing circumstances)?
The following pages provide some further information for reps:

Diagram summarising the GWAIA process. p14

Algorithmic systems and impacts. p15

Case studies of how challenges to algorithmic systems have worked in practice. The victories are significant – but using the GWAIA will strengthen the voice of employees as new systems are put in place because it will help pre-empt impacts on jobs and give a formal framework for sustaining good work. p15–16
Summarising the Good Work Algorithmic Impact Assessment

**Stage 1: Involve**
- Identify individuals of groups who may be impacted.
  - a) Identify total population
  - b) Chose sampling approach

**Prepare: Disclosure of Position**
- Conduct a document review.
- Identify key design, development and deployment decisions.
- Start to identify risk factors.
- Produce a Disclosure of Position Report

**Stage 2: Anticipate**
- Undertake an ex ante (pre-emptive) risk and impact assessment.
- Review key design choices and document key risks. Identify risks and impacts on Good Work.
- Produce a Risk and Impact Assessment Report

**Assess: Commit to the process**
- Once the Disclosure of Position report is completed, the group of accountable agents should make a series of commitments about completing the process of Good Work AIA.

**Stage 3: Act**
- Identify mitigations
  - → Rights and entitlements
  - → Distributed rewards
  - → Universal design changes
  - → Tailored design changes
- Produce an Impact Action Plan

**Stage 4: Monitor**
- Ongoing review to ensure assessment and appropriate action is ongoing and responsive.
  - a) Establish forum for ongoing dialogue
  - b) Consider terms of reference
  - c) Identify different sources of feedback

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Further information
Further information

Examples of algorithmic systems and impacts

When we hear about algorithmic systems or AI tools, we might think first of ChatGPT or management software. But AI tools can track and analyse physical performance and digital behaviour at work in lots of ways.

Tracking behaviour

Information about workers’ whereabouts can be obtained so that location, movement and action are recorded, analysed and ‘nudged’ towards certain conducts. This is relatively easy when ICT-related technologies are used to perform work, for instance the tracking of keyboard strokes and web history, but this is not limited to desk work. Facial scans and eye scans, as well as fingerprints and keyboard strokes, can be used to process workers’ biometric data (see IFOW’s report ‘The Amazonian Era: The gigification of work’ (2021)).

‘Wellness’ and confidentiality

Workplace technologies can provide access and track workers’ health, fitness and mental status by inferences based on biometric data. These include wearable work instruments equipped with sensors that measure workers’ biometrics and other health data, such as heart rate. Some employers may offer devices, such as Fitbit or access to sleep-tracking platforms, as part of ‘wellness’ programmes. Sometimes, the confidentiality of these data may be compromised when employers gain access, or use can go beyond agreed remits.¹

Case studies

BT Group

Members of the Prospect union at BT Group have agreed additional workplace consultation when technology is introduced. To implement this, a sub-committee on data rights has been established. This gave a new, specific forum where attention could be given and expertise convened on the data driven processes and technologies being introduced by BT. The outcome of this has been assurances for workers and clearer rules around how the company uses monitoring data and machine learning to analyse and modify workflows.²

Environment Agency

The Environment Agency wanted to roll out telematics technology into its fleet of leased cars. Unions sought to negotiate a ‘privacy switch’ for when a vehicle is not being driven on Environment Agency business.³

Just Eat

In 2021, UGT (France) and CCOO (Spain) negotiated the formation of an Algorithm Commission in their agreement with Just Eat. This saw the creation of a joint commission through which information could be collated and disseminated, so that workers remained informed of any substantial changes made to the algorithms that Just Eat were using, and to any AI systems that similarly would have impacts on their work. Importantly, the commission could request the appearance of the person responsible for the supervision of the algorithmic system under review to meet with them and provide the information that was needed.⁴ A similar agreement was reached with Just Eat in Italy.⁵

² https://library.prospect.org.uk/download/2022/00121
⁵ https://www.nidil.cgil.it/ridere-accordo-tra-cgil-cisl-ul-just-eat/
Maritime and Coastguard Agency

The Maritime and Coastguard Agency implemented a Survey and Inspection Transformation Programme which – through expanded ICT use – created new expectations of “contactability” to enable more flexible and remote working. This resulted in savings on operations costs, and more continuous operation. Prospect was able to negotiate an agreement that tied these changes to ways of working to significantly enhanced pay for professional staff.6

Works Councils – Germany

The German Works Council Modernisation Act obliges employers to pay for an expert to help works councils assess the impacts of the introduction of AI systems that measure worker behaviour and performance. Works Councils were also given the right to agree to having a permanent expert advisor. But so far, AI has not been clearly defined which has limited the effectiveness of the Act.7

Parcelforce Worldwide

Agreement on specifying limits of remit, and the positive role of CWU in realising benefits.

In the UK, the 2018 Four Pillars Agreement between the Communication Workers Union (CWU) and the Royal Mail Group required consultation on the ‘aims and objectives’ of proposed technologies, alongside a trial period. Meanwhile, Unite representatives at Rolls Royce Motors (BMW Group) have secured agreement on the creation of a Joint Working Group on new technology. This establishes that representative interest groups are to be involved at an early stage in the ‘planning, development or introduction of digital innovations’, and requires ‘an assessment of the effects of digital innovation’ against defined criteria.

“The operation of the Trimble technology [a monitoring system] will be entirely in line with terms described in this joint statement. No other system capabilities or monitoring categories will be utilised unless expressly agreed by the National parties.”


“The CWU will have full involvement at all levels to realise the full benefits of telemetry, and it is agreed the CWU will be involved in any monitoring, assessment and profile adjustment activities where agreed necessary. Parcelforce will provide training opportunities to the local CWU representatives to give them the same system overview as the depot managers.”


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The Institute for the Future of Work is an independent research and development institute exploring how new technologies are transforming work and working lives. Our mission is to shape a fairer future through better work, and we work at the intersections of governance, civil society and industry to build, through good work, a good society in which everyone can flourish through this new technological revolution.

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