Algorithmic transparency and accountability in the world of work

A mapping study into the activities of trade unions

Conducted on behalf of the
International Trade Union Confederation (ITUC)

Analysis, February 2023

ALGORITHM WATCH
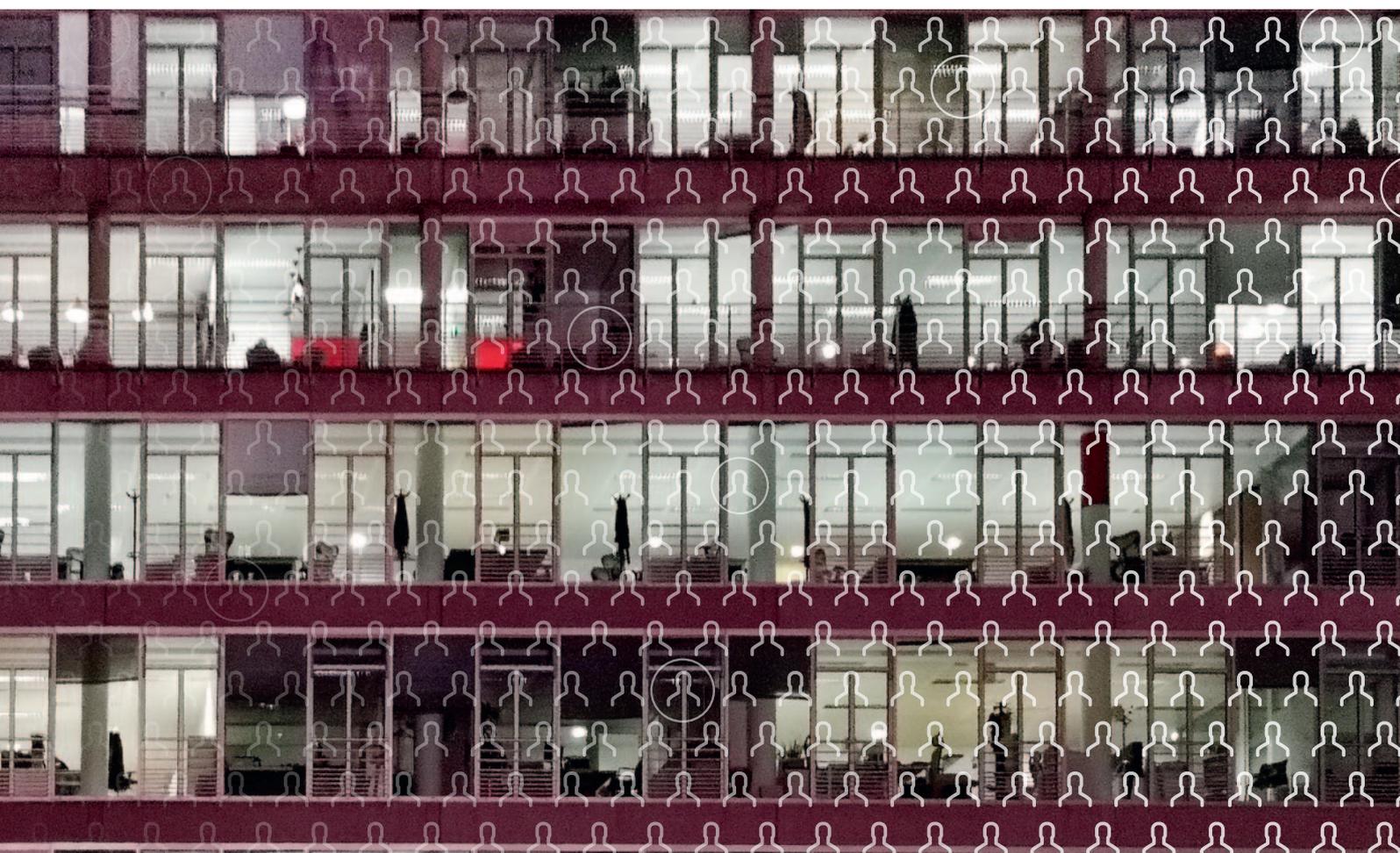
/ TRANSPARENCY AND REGULATION OF ALGORITHMS IN THE WORLD OF WORK

The rapid and pervasive impact of digital technology in the world of work poses many challenges for workers' rights, health and safety, skills and learning. In many instances, it is transforming work faster than at any time in history. It also brings huge opportunities and opens new possibilities to build better and more equal economies and societies, and to tackle existential issues including climate change and public health.

Technological change has historically been a net generator of jobs, however this is not necessarily guaranteed today. It will take the right policy settings, backed up by investment and engagement with the people whose working lives are impacted, to ensure the historical trend of net employment creation can continue. Digitalisation and other technological advances are also affecting the character of jobs, in many cases dramatically.

Central to embedding the potential of technology to enrich people's lives and to build equity and sustainability is the need for humans to be in control. Equally important is ensuring that technology is not simply imposed on working people, but that they have a say in the process. That is an issue of justice and autonomy and it also helps ensure that the full benefits of innovation can be guaranteed. Freedom of association, the right to collective bargaining and social dialogue are fundamental to maximizing the benefits and reducing negative consequences.

While technological advances take many forms in different work settings, a common characteristic in a great many cases, affecting hundreds of millions of workers and the public at large, is the development and deployment of algorithms. Often seen as a modern invention, algorithms trace their origins to 9th century Persian mathematician Al-Khwarizmi (Algoritmi). Recent developments have led to an explosion in their use and ever-greater complexity.

For many, and not just those working for "platform" businesses or in sectors such as transport and logistics, life at work now means acting under the instruction of

algorithms that are designed to exercise often detailed control of workers in order to extract maximum profits. This is often dehumanising work and imposes a feudal employment relationship. Whole business models are now built on this.

Trade unions on both sides of the digital divide are focused on the transformation of work, engaging with their membership, campaigning for digital rights, doing research, setting policies, making demands on governments and including clauses in collective agreements that give workers greater control.

This report, prepared by AlgorithmWatch for the ITUC, looks at examples from around the world of how unions are tackling the crucial issues of transparency and regulation in relation to algorithms. It reveals that while there is a substantial and growing body of trade union knowledge and policy, there is a need to build that into practical information, advice and guidance for union representatives and negotiators. The report includes examples of where unions are doing this, and puts the case for such efforts to be extended and deepened.

The report should be read in the context of many governments failing to properly implement ILO Convention 98 on the right to organise and collective bargaining. That Convention, ratified by 168 countries, requires governments to promote collective bargaining, which is very often not the case. As the ITUC Global Rights Index shows, the fundamental rights to freedom of association and collective bargaining are under attack, either by governments or with their compliance and support.

This report is a valuable addition to the growing body of research and literature on the future of work and the actions of trade unions in particular. We aim to continue this line of work and support the report's key observation on the need to accelerate the transformation of policy into action.

We would like to express our thanks to the lead author, Anne Mollen, and all those whose contributions are noted at the end of the report.

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Photo: Brett Jordan @unsplash

/ EXECUTIVE SUMMARY

Worldwide, workers and their representatives are being confronted with automation in the workplace – through the introduction of specific automated procedures to manage the workforce leading to new forms of workplace surveillance. This report looks at what impact algorithms and automation are having on working life, how it relates to the future of work and what responses trade unions are developing in response to protect workers' interests. It presents the findings of a global mapping exercise aimed at identifying and sketching responses of trade unions – specifically concerning transparency and accountability of algorithms in the world of work.

Trade unions are coming together to address algorithmic transparency and accountability and are starting to respond collectively to strengthen the rights of workers. However, as the results of this report demonstrate, more needs to be done to engage in more hands-on support on the shop floor level. Workers need broader support in challenging new inequalities and power imbalances that algorithmic management brings with it. The discussion on and how to respond to algorithmic management from a worker perspective is still in its infancy. **Algorithmic transparency and accountability are not yet a stand-alone topic on a wide scale**, but are often addressed as side issues by trade unions. Even though trade unions acknowledge that transparency and accountability could solve problems arising from automation in the workplace, starting to **create specific hands-on tools would go a long way to support worker representatives**. First hands-on guides and legislative advances exist. But mostly the activities of trade unions still center around **formulating ethical guidelines and principles and learning about the impact of automation** in the world of work. It is now the time to **focus more heavily on the implementation of such guidelines**.

These findings **demonstrate that trade unions need to shift focus to a more practice-oriented approach** on algorithmic transparency and accountability. As discussions on platform work have been more specific, there might be material here to learn from. But also, it will be essential for trade unions to debunk some of the myths about workplace automation. Even though providers of such systems make far-reaching promises about efficiency gains through seemingly simple cheap technological solutions, **trade unions need to ensure that this must not come at the costs of employees' interests**. Workers' representatives need to be able to make their voices heard. Automation in the workplace affects conditions of employment extensively. In accordance with the ILO Right to Organise and Collective Bargaining Convention (98)[1] efforts need to be made to **undertake collective bargaining within the frame of social dialogue. Governments should be supportive of such efforts**.

This research systematically maps trade unions and their activities concerning algorithmic transparency and accountability in work-related contexts. It provides an overview of ongoing discussions, analyzes trends and scenarios for trade unions, and presents examples. These insights stimulate recommendations on how to respond to challenges arising from automation and algorithms in the world of work from the perspective of trade unions. This report contains a range of findings:

— A summary of the work-related focus that trade unions currently put on algorithmic transparency and accountability in the world of work,

— The scope and actors involved in the discussions and a typology of different actions relating to algorithmic transparency and accountability,

— An analysis of the maturity of discussions and trends across countries and trade unions, and

— Country-specific descriptions of the state of discussion.

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1   https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:121 00:0::NO::P12100_INSTRUMENT_ID:312243

Photo: Olga Serjantu @unsplash

/ THE RESPONSE OF TRADE UNIONS TO AUTOMATION IN THE WORLD OF WORK

1) ALGORITHMIC TRANSPARENCY AND ACCOUNTABILITY

In November 2021, riders for Foodpanda, a delivery platform in Hong Kong, were fed up.[2] What started as a group on the Telegram messaging app to let off steam about deteriorating work conditions, automatic account suspensions, reduced earnings, inaccurate journey distance predictions, and ghost orders soon developed into a fully-fledged strike. Riders were frustrated with the way algorithmic management was used by Foodpanda and with how the company responded to complaints about it. With the Hong Kong secur-

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2   https://www.scmp.com/news/hong-kong/hong-kong-economy/article/3156590/foodpanda-hong-kong-couriers-end-labour-dispute?module=inline&pgtype=article

https://www.scmp.com/news/hong-kong/hong-kong-economy/article/3157373/foodpanda-drivers-strike-look-behind-scenes-2-day

https://www.scmp.com/news/hong-kong/hong-kong-economy/article/3157373/foodpanda-drivers-strike-look-behind-scenes-2-day

https://lausan.hk/2021/foodpanda-strike-how-do-workers-organize/

ity law passing into legislation almost a year earlier, riders could no longer rely on the support of unions. Under the new law, the few unions in Hong Kong had been facing tougher conditions, and the Hong Kong Confederation of Trade Unions and its affiliates were forced to cease operations altogether. Riders mostly had to take things into their own hands. Using messenger services, they discussed the everyday cruelty of how their work was controlled by algorithms. Then, they got organized.

As they could not rely on an established trade union structure, they used the aforementioned messenger group to coordinate protests and strikes. This slowly progressed until a core group of riders set out a list of demands and negotiated them with management at Foodpanda. This eventually forced the company to agree to some commitments. **In this report, we present our systematic research into how trade unions and other initiatives have started addressing such issues around algorithmic transparency and accountability in the world of work.** As did the delivery riders at Foodpanda: They demanded more transparency on how the algorithms calculate distances, determine service fees, and how the company automatically suspend riders' accounts.

Generally speaking, demanding transparency and accountability of algorithms is often the first response of workers when they are confronted with a negative impact from an automated decision-making (ADM) system. This appears to be a reaction to the opaqueness that often comes with ADM systems – and it reflects the power imbalance between those affected by ADM systems and those implementing them.

To strengthen, synergize and strategize the manifold activities in the field, this report builds upon systematic research on the activities of trade unions related to algorithmic transparency and accountability in the world of work. **Our analysis shows that the implications of automation are apparent across continents, countries, industries, sectors, and at all employment levels; however, trade unions must move more beyond discussion and analysis of the problem to concrete advocacy relating to ADM systems in the workplace.**

In this report, we describe what trade unions have so far been doing about algorithmic transparency and

accountability. Furthermore, we analyze the commonalities and possible further activities in the responses of trade unions, and we propose ways for trade unions to strengthen the rights of workers in the face of ADM systems in the world of work.

2) AUTOMATION IS PERVASIVE, ANSWERS LESS SO

Trade unions started addressing algorithmic transparency and accountability from 2017/2018 onwards and there was a big increase in interest between 2020 and 2022. During that time, the discussion has moved from abstract fears about automation and concerns about jobs, to more detailed contemplations. **Trade unions now need to transfer these mostly theoretical discussions into concrete tools for workers to implement whenever they are confronted with concerns on automation in the world of work.**

For example, the aforementioned platform workers at Foodpanda in Hong Kong came up with specific responses to their immediate concerns. They launched a Facebook group to document their injuries. This acted as a monitoring system that generated knowledge on the situation of gig workers in Hong Kong to use in negotiations. Other platform workers, mostly in Latin America, started the "Mi Jefe es Una App" campaign to support legislative proposals aimed to strengthen the rights of platform workers. Here, we see trade unions and similar collectives moving forward and making an impact.

While the discussion on platform workers is comparably quite advanced, debates in other sectors related to algorithms and the world of work now need to move forward. On a general scale with concerns about automation emerging, these discussions have yet to dwell on the specifics of algorithmic transparency and accountability. For example, the Screen Actors Guild – American Federation of Television and Radio Artists (SAG-AFTRA) has been concerned about deep fake technology as it raises ethical questions and it could have a severe impact on entertainers, actors, and musicians. Trade unions in the shipping and aviation industries (e. g. The International Longshoremen's Association or The International Air Line Pilots Association) are concerned about safety issues related to autonomous container cargo ships or auto-

mation in single-pilot flights, respectively. While these examples **illustrate specific concerns about automation, what needs to be conducted are analyses on how to tackle them – for instance, by addressing algorithmic transparency and accountability instead of simply rejecting the technology entirely.**

Be it healthcare, education, logistics, retail – automation is impacting almost every sector and it affects workers in a plethora of situations**.** Based on our analysis, we can state that understanding is growing, and more nuanced problem definitions of the consequences of ADM systems for workers are emerging**. However, algorithmic transparency and accountability have not yet been addressed in an implementation-oriented way on a large-scale. But some first initiatives by trade unions are promising.** Hands-on practical guides, for instance Prospect's (UK) "Digital technology – Guide for union representatives"[3], the Trades Union Congress' (UK) "People-Powered Technology"[4] publication on collective agreements and digital management systems or Comisiones Obreras' (Spain) guide on "Negociación colectiva y digitalización"[5], can be considered a starting point for directly addressing worker representatives and how they can ensure that workers' interests are safeguarded when ADM systems become implemented in their respective work environment. **Such initiatives can build the basis for giving workers and their representatives guidance on how to address algorithmic accountability and transparency – as well as orientation for regulatory approaches that are equally needed.** More such hands-on tools are needed.

3) STATUS: ANALYSIS AND CONTEMPLATION

But as our study shows, the current status is still largely marked by analyses and contemplations. Trade unions are currently focusing on raising awareness, gathering knowledge and sketching scenarios about

3   https://prospect.org.uk/about/digital-technology-guide-for-union-reps/

4   https://www.tuc.org.uk/sites/default/files/2022-08/People-Powered_Technology_2022_Report_AW.pdf

5   https://www.ccoo.es/cms/cli/000001/o/af/af6e35ab004a61334480e3b2bcae0e93000001.pdf

what automation might bring for their specific sector – both in countries where the discussion is only starting as well as in countries, where it has been going on for a number of years. More advanced discussions focus on formulating roadmaps and conceptualizing strategies on how to react toward automation in the world of work through transparency and accountability or envisioning different steps to get there. **What is lacking on a large-scale are policy recommendations, capacity-building initiatives, campaigns or even concrete bargaining results.** Broadly speaking, the discussion is currently characterized by research and exchange of information. It now needs to develop into advocating for workers' interests.

4) OUTLOOK: FROM PRINCIPLE TO ACTION

To summarize, the general discussion still remains quite broad, and abstract fears about the consequences of automation in the workplace tend to dominate. **Trade unions should now formulate arguments on how best to address algorithmic transparency and accountability to empower workers when they are confronted with specific ADM systems. What is needed are specific solutions that achieve algorithmic transparency and accountability on a broad scale**.

The most important contribution of trade unions, and a direct outcome of the many past and ongoing contemplations and analyses, are principles or guidelines to be followed when implementing ADM systems in the world of work. These guidelines often include such principles as transparency, fairness, privacy and data protection, a right to be informed, human oversight, correspondence with fundamental rights, high-risk regulations, explainability, etc. (see for instance Syndicom – Switzerland[6], the Trades Union Congress (TUC) manifesto – UK[7], AIITEU – India[8] etc.).

How these principles are implemented is the most relevant question to address, and it should be the next step for trade unions. **There is an urgent need to move from principles and theoretical discussions to implementing these principles in practice.** Trade unions should now demonstrate how workers can be empowered to articulate their interests with regard to specific ADM systems and how they find opportunities to advocate for these. **An inter-union exchange of effective strategies could also be an important tool that until now has not been fully taken advantage of.**

Further, the Right to Organize and Collective Bargaining Convention (No. 98) states explicitly in Article 4 that all ratifying countries need to take measures in accordance with national conditions in order to promote negotiations between employer's and workers' organizations "with a view to the regulation of terms and conditions of employment by means of collective agreements"[9]. **Algorithmic management touches in its core the terms and conditions of employment**. While a recent study finds that currently one in three workers in Europe does not even know if algorithmic management systems are being used on them[10], it is high time that also governments set the right frames to support social dialogue and collective bargaining on automation in the workplace. In the following, we present details of our study.

/ RESEARCH AND METHODOLOGY

This mapping study involved the following three steps:

1. Systematic inductive identification of activities that trade unions engage in regarding algorithmic transparency and accountability in the world of work.

2. Detailed descriptions of activities, including categorizations of their work-related focus, scope, and key contributions for trade unions' advocacy work.

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6   https://syndicom.ch/fileadmin/user_upload/Web/Website/Branchen/ICT/2019_11_01_d_ICT-Sektor_Resolution_KI-Gebote_def.pdf

7   https://www.tuc.org.uk/research-analysis/reports/dignity-work-and-ai-revolution

8   https://www.aiiteu.org/letters/bpo-workers-demand-charter/

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9   https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312243

10 https://www.uni-europa.org/news/algorithmic-management-1-in-3-workers-left-in-the-dark/

3. Analysis of the collected data set – focusing on the state of discussion in each country and on key contributions and trends related to the work of trade unions on algorithmic transparency and accountability.

Our analysis looked at 26 countries across the globe, and it identified over 250 activities by trade unions related to automation in the world of work – including specific references to algorithmic transparency and accountability in some cases, while other references remained vague. The research was carried out between December 2021 and March 2022, with selective additions to the data set until September 2022 when high-profile new publications on algorithmic transparency and accountability by trade unions emerged. Most activities that relate to algorithmic transparency and accountability are fairly recent. The earliest date back to 2017, but the majority of the results are from 2020, 2021 and 2022.

The research was predominantly conducted online and was carried out by researchers with local expertise and/or contacts, who scanned publications, events and reports for relevant information on activities of trade unions related to algorithmic transparency and accountability in the world of work. This online research was partly complemented by interviews with local experts.

The idea of this mapping exercise was not to quantify the activities of trade unions, but rather to identify the broadest possible range of activities on algorithmic transparency and accountability in the world of work that trade unions engage in, and then subject these to a systematic and trend sketching analysis. The research does not claim to be representative. It provides selective insights into the activities of trade unions related to algorithmic transparency and accountability.

With such a diverse sample of countries, trade unions and activities included, the data collection process needs to be adjusted for different settings. Online research works best for countries where there is a high degree of union organizing with professional structures and sufficient funding. In countries with less institutionalized structures for trade unions, local contacts, and other more informal sources of inform-

ation (e. g., alternative media, news reporting, blog posts) were also included in the analysis.

/ WORK-RELATED FOCUS: WHAT ISSUES ARE TRADE UNIONS ADRESSING?

As the current and future impact of ADM systems and algorithms in the world of work is so diverse and manifold, we differentiated in a first step what trade unions focus on when engaging with the issues. It is important to note that, as of now, questions of transparency and accountability of algorithms in the world of work often appear as one element in a broader context. Many activities of trade unions focus on more general questions, which also touch on algorithmic transparency and accountability. In that regard, we identified the following topics and themes that appear on the agendas of trade unions.

Photo: Rens Dimmendaal / Better Images of AI / Man reversed / CC-BY 4.0

1) AUTOMATION IN GENERAL

Broadly speaking, trade unions across this sample are grappling with digitization, automation, ADM, algorithms and Artificial Intelligence (AI) in the world of work at a very general level. Furthermore, they tend to discuss what role automation and algorithms are already having on workers in an abstract sense and give broad examples to illustrate the issue. By explaining the relevance of algorithms and ADM systems for workers, the workplace and workers' rights advocates, and by voicing concerns, these activities set the

agenda and justify why trade unions should be dealing with the issue. Fundamental concerns and ethical questions regarding algorithms and ADM might be addressed. However, the majority of these activities voice concerns about the impact of algorithms in the world of work. Occasionally, it is also suggested that workers might benefit from their implementation.

2) FUTURE OF WORK

By sketching specific outcomes and scenarios of what algorithms and ADM systems hold in store for workers, activities that focus on the future of work move beyond arguing about the relevance of the issue. These activities are usually based on a more strategic and analytical approach to understand what challenges and concerns workers and trade unions need to worry about now and in the future. As a consequence, they are often the prerequisite for trade unions to articulate more strategic responses. While these activities operate at a general level, they can provide the cornerstone for developing concrete solutions for prospective problems.

Photo: Alex Kotliarskyi @unsplash

3) JOB LOSS AND DE-SKILLING

One specific scenario, that quite a few trade unions are sketching, focuses on job losses due to algorithms and automation. Such activities often also relate to those focused on the "future of work". But due to their prominence in the sample, they qualify as a separate theme. Alongside postulating that people might lose their jobs due to automation, issues of de-skilling and the need to retrain workers for new tasks are also being addressed.

4) PLATFORM WORK

Platform work is a very prominent issue. The activities in this sample pertaining to platform work mostly concern gig work, but also address crowd work or cloud work. Platform work is intrinsically related to algorithmic transparency and exemplifies a very concrete, current and palpable example of what impacts algorithms and ADM systems can have on workers and their rights. The activities in this study articulate specific platform work-related concerns. For instance, on the opacity of algorithmic management (e. g. algorithmic allocation of gigs, calculations of routes, closure of accounts etc.). This study also looks at activities that exemplify how workers represent their interests against platforms or sketch solutions for platform work-related concerns. Specific solutions proposed by worker representatives that address transparency and accountability are represented alongside hypothetical solutions.

5) ALGORITHMIC MANAGEMENT

Several activities that trade unions engage in concern how algorithms and ADM systems are, or might, be overtaking managerial decisions. Some of these activities are so far hypothetical, for example imagining the replacement of human resources departments with algorithmic decision-making. However, some are also concerned with specific current issues, such as the uptake of ADM systems in recruiting processes or in People Analytics procedures, where the lack of transparency and worker involvement is a major concern. Some concerns relate to bias and discrimination in these automated decisions. In addition, trade unions also address legal implications and limitations – for example, the dismissal of workers through solely automated decisions.

In contrast to more general discussions on automation and the future of work, here specific – albeit sometimes hypothetical – cases, are under discussion. Where problems have been identified, the lack of solutions is being addressed. These activities are an important step in clearly outlining concerns to which specific solutions need to be found, for instance, through regulatory proposals or co-determination processes. In these activities, trade unions identify their analytical needs regarding algorithmic

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Platform work	101
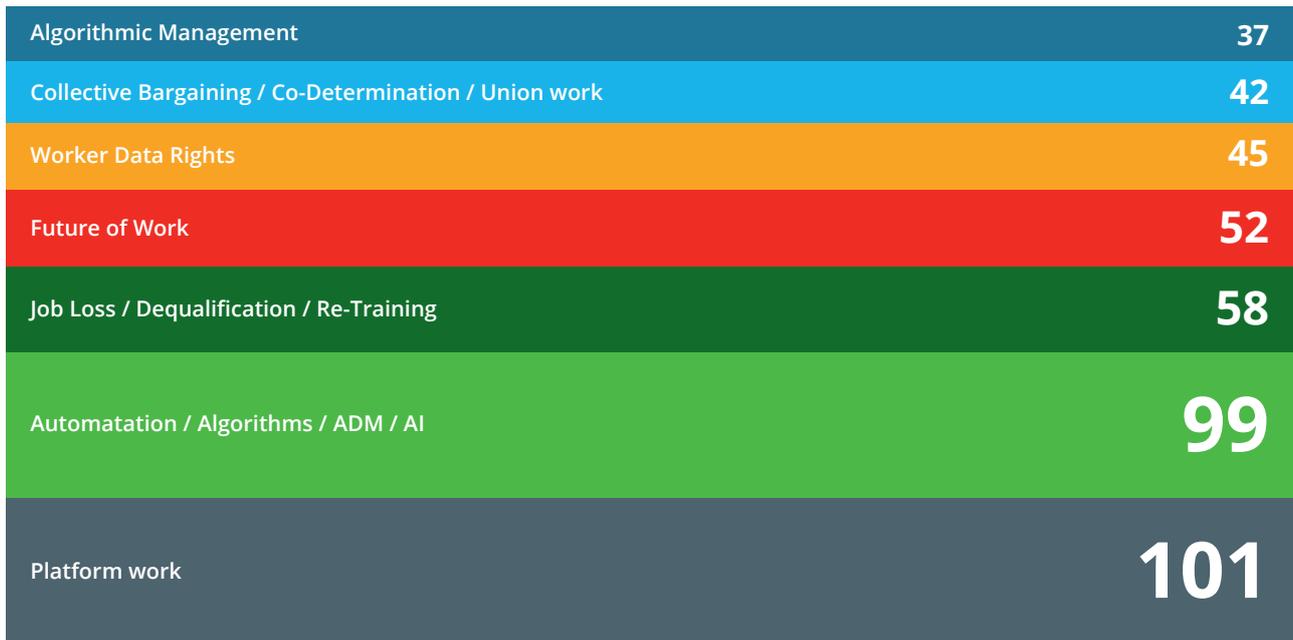
Image 1: Distribution of work-related focus across entire sample in real numbers.

The visualization shows that general and abstract contemplations on automation in general are dominant in the sample, as well as a very specific focus on platform work – an area where the discussion of algorithmic transparency and accountability has progressed furthest. Further general contemplations on "Future of Work" or fears about "Job Loss/Dequalificiation/Re-Training" also appear in the discussion, in slightly higher numbers than topics such as "Worker Data Rights" or "Algorithmic Management".

transparency and accountability in order to produce strategies: How do automated systems take decisions? What are the most relevant decision-making criteria? What models of learning are used? How are databases obtained and used? How do these processes relate to labor law and protection of worker rights? The diagnosis is often a lack of transparency in algorithmic decision-making and the declaration that more transparency is needed. Such questions and conclusions should be further built upon in order to establish specific solutions on how to reach transparency and accountability.

6) WORKER DATA RIGHTS AND WORKPLACE SURVEILLANCE

Opaque algorithmic management, worker privacy, data protection, and workplace surveillance are key concerns related to bias and discrimination. Data are the foundation on which algorithmic management decisions are taken. How databases with information

on workers are collected and used – and the lack of information on this – is potentially a very problematic area.

Related activities of trade unions vary in how abstract they are. At one end of the spectrum, some trade unions tackle broad concerns, such as raising awareness about workplace surveillance, arguing that data on workers needs to be protected, or aiming to find out what levels of privacy exist in the workplace. At the other end, we see trade unions already contributing specific answers to privacy threats in the workplace – for example, in the formulation of workers' privacy rights, data protection charters, data protection impact assessments (DPIA)[11] or data stewards[12] as frameworks for organizing and collective bargaining. Such solutions need to gain more traction and be applied at scale.

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11 https://d28j9ucj9uj44t.cloudfront.net/uploads/2020/12/prospect-dpia-workers-guide.pdf

12 https://library.fes.de/pdf-files/bueros/singapur/17381.pdf

7) COLLECTIVE BARGAINING AND UNION WORK

Several activities of trade unions reflect on the impact that algorithms and ADM systems have on union work, the representation of worker interests and related advocacy work. This is done in a general sense. For example, by addressing what the future of work means for bargaining processes, what role unions can play in creating algorithmic accountability and what obstacles might lie ahead. Trade unions are also trying to produce knowledge on the status of co-determination and bargaining power for worker representatives in current implementations of ADM systems (e. g., through surveys among workers and representatives).

More concrete tools that aid union representatives and negotiators in collective bargaining processes come in the form of recommendations for social dialogue, guiding principles as an orientation in negotiations or specific checklists for negotiations[13]. For example, detailing worker interests regarding privacy, skills development, data security, etc. when workplace agreements need to be developed in case ADM systems are implemented in specific work settings. Next to a check list, one US union even provided a model scenario of how digital workers in Silicon Valley could start to unionize[14].

/ SCOPE AND ACTORS: WHO IS TALKING ABOUT ALGORITHMIC TRANSPARENCY AND ACCOUNTABILITY?

Different organizations, entities and collectives engage in activities on algorithmic transparency and accountability in the world of work. Traditional labor unions and union confederations are by far the most import-

ant actors that we identified in our study. That is why we mostly base our analysis on their activities. There can be slight differences between the activities that trade unions and trade union confederations engage in. In part, trade unions are more likely to be specific when voicing their concerns about transparency and accountability regarding ADM systems and algorithms. In comparison, trade union confederations usually address the same issues in the workplace at a more general level. They tend to identify and analyze underlying and systematic challenges to workers' rights and propose more encompassing and transferable solutions.

Next to trade unions, new collectives are also entering the scene, often in response to platform work. As a result, union building is emerging as a trend. These collectives and new unions, which are often related to gig work, are gaining traction, even if they aren't fully institutionalized. They are a direct response to challenges that arise for workers through algorithmic management and platform work.

Other entities with an interest in worker rights related to algorithmic transparency and accountability are foundations, non-governmental organizations, research institutes, and groups or councils installed through government bodies. Where relevant, also in some countries due to a lack of union organizing or lack of union resources to engage with issues of algorithmic management, we have also included the activities of such entities as part of our analysis.

/ CONTRIBUTIONS: WHAT ARE TRADE UNIONS ACHIEVING?

As can be seen in the chart below (see Image 2) trade unions so far to a large extent deal with ADM in a reflective manner – with contemplations, principles and strategies to, among other things, attain transparency and accountability. While we now see more implementation-oriented guidelines and practical tools emerging, most trade unions still need to take the next step and develop as well as execute ideas for implementations of policies, collective bargaining, as well as for empowering workers and their represent-

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13   https://innovation-gute-arbeit.verdi.de/themen/digitale-arbeit/++co++c152781e-5866-11ea-b06f-525400f67940 / https://www.fagforbundet.no/a/280738/for-tillitsvalgte/omstilling/veiledere-i-omstillingsprosesser/veileder--digital-omstilling/

14   https://www.code-cwa.org/
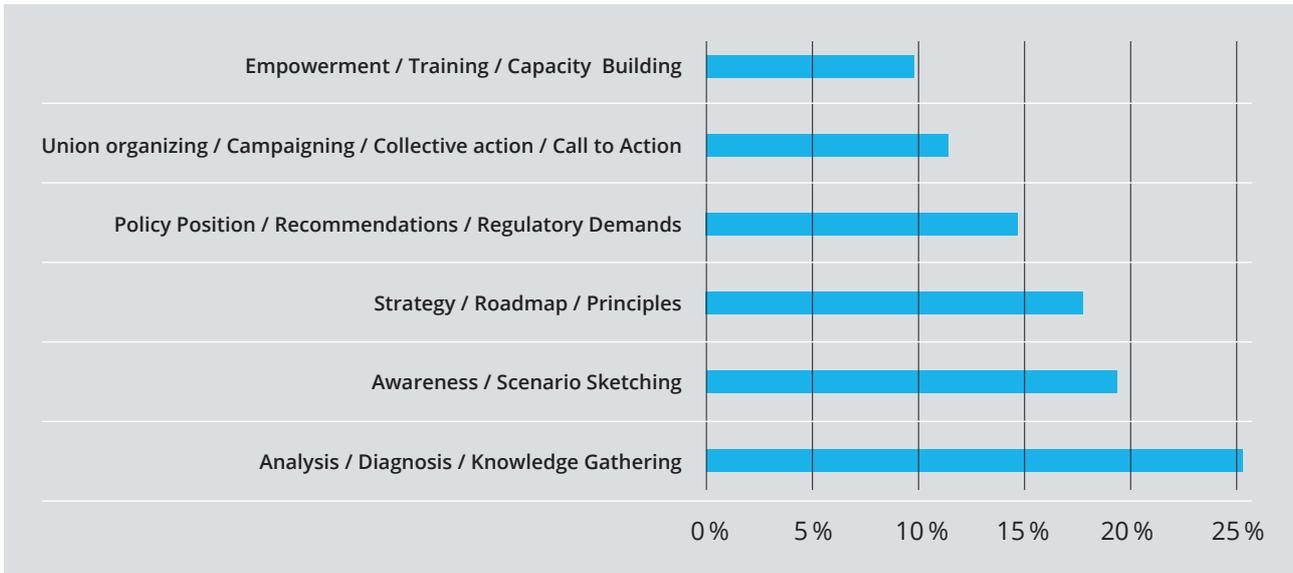
Image 2: Percentage distribution of the contributions that trade unions achieve in their activities on algorithmic transparency and accountability in work-related contexts,.

Reflective contributions dominate in this sample. The highest numbers in this sample can be identified as contributions on doing analyses, raising awareness, and formulating strategies and principles. More concrete and implementation-oriented contributions like formulating policy position, campaigning on algorithmic transparency, and accountability or empowering worker and worker representatives through specific capacity-building initiatives happen at a much lesser scale. There is a need to promote the more hands-on implementations over the more reflective contributions.

atives. These efforts can be advanced by **engaging more in empowerment, capacity-building, campaigning, advocacy, and formulating regulatory demands**.

1) AWARENESS AND OUTLOOK

Trade unions engage in many activities to raise awareness about automation in the world of work. Questions about transparency and accountability are included in these activities and often relate to the future of work. Also included are questions about what will be expected with increasing automation in work-related contexts, the predicted challenges, what trade unions should focus on, etc. In that way, trade unions are researching the situation on a very large scale. They organize conferences and workshops, publish reports and engage with many different stakeholders to explain what is at stake. To broaden the discussion, they also reach out by writing blog posts and newsletters, making podcasts, and organizing information campaigns.

— **Country**: Argentina
— **Trade union:** Friedrich-Ebert Stiftung
— **Type of Activity:** Podcast
— **Title:** ¿Sueñan los androides con obrerxs electricxs?
— **Description:** The Friedrich-Ebert Stiftung in Argentina publishes the regular podcast series *¿Sueñan los androides con obrerxs electricxs?*. It provides information about how the world of work is changing with digitization, and it also covers questions about automation, transparency and accountability. It aims to strengthen the ability of trade unions to address digitization, including automation, and help with capacity-building and increasing resources. The organization recognizes that there is a digital gap in the unions that does not allow them, for the moment, to embrace discussions on algorithmic transparency, so work is needed to strengthen the sector to achieve this.
— **Contribution:** Awareness/outlook
— **URL:** https://argentina.fes.de/e/podcast-suenan-los-androides-con-obrerxs-electricxs/

2) ANALYSIS AND DIAGNOSIS

More specific research endeavors go beyond simply describing the situation. Under the umbrella of 'analysis and diagnosis', trade unions gather knowledge and experience about automation from workers. These analytical and diagnostic activities address experiences with automation in the world of work, bring actors with different expertise together, and connect groups from fields such as academia, civil society, governments, etc. Gathering knowledge and diagnosing where problems lie with algorithmic transparency and accountability are crucial steps in finding answers to specific concerns around automation in work-related contexts.

— **Country:** United States of America
— **Trade union:** American Federation of Labor and Congress of Industrial Organizations
— **Type of Activity:** Launch of a research institute
— **Title:** Technology Institute
— **Description:** In the US, the American Federation of Labor and Congress of Industrial Organizations met the need for analysis by launching a technology institute. The institute aims to investigate the problems posed by technology (including automation) in the workplace. It wants to give a voice to working people at the forefront of the conversation about the future of work.
— **Contribution:** Analysis/diagnosis
— **URL:** https://aflcio.org/press/releases/afl-cio-launches-technology-institute

3) STRATEGIES AND PRINCIPLES

Gaining knowledge and insight are often the prerequisites to planning strategic actions. Trade unions focus on what needs doing at a general level and what general principles should guide future action. More often than not, ADM systems are simply rejected and, in order to advocate for the interests of workers, trade unions commonly grant no space to negotiate about these systems. **As a consequence, transparency and accountability are not even considered options for pursuing worker interests**.
In other cases, we however see quite detailed principles on how to deal with ADM systems in the world of work. Examples can be found in many different countries and trade unions.

— **Country:** Norway
— **Trade union:** The Norwegian Society of Engineers and Technologists and others
— **Type of Activity:** Joint declaration
— **Title:** Erklæring om ansvarlig bruk av kunstig intelligens i arbeidslivet
— **Description:** Several trade unions and enterprises addressed a joint declaration on the responsible use of AI in the workplace at the Norwegian Minister of Digitization, Nikolai Astrup. The declaration – signed by the trade union for private sector employees, Negotia, together with Telenor Group and Norwegian companies such as IBM Norway and Schibsted Media Group – focused on data quality and the importance of transparency and accountability in ADM systems. It states that ADM processes must be comprehensible and individuals retain the right to challenge the accuracy of a decision. In addition, responsibilities must be defined, and the companies that design, sell or use AI are responsible for the decision-making process and results of those decisions. Relevant control mechanisms must be in place to offer a sufficient degree of transparency, and the privacy of employees must be safeguarded. Arrangements should also be made for internal risk reporting, and routines implemented for measures and follow-ups.
— **Contribution:** Strategies/principles
— **URL:** https://www.nito.no/contentassets/72800175dcc745d98e328f35eb72f1f2/ansvarlig-bruk-av-kunstig-intelligens-i-arbeidslivet-erklaring.pdf

4) POLICY POSITIONS AND REGULATORY DEMANDS

Trade unions have recently started to put forward more detailed policy recommendations and demands on how to react to the increasing use of automation in the workplace. More such policy positions are urgently needed and especially more advocacy by trade unions to see regulatory frameworks to safeguard workers' interests succeeding. Still so far trade unions have mostly been calling quite broadly for the need to regulate ADM systems in the workplace – without providing specific ideas – or they have been reacting to legislative proposals put on the table by regulatory bodies. In the process, trade unions are now starting

to produce more detailed policy positions – specifically geared towards addressing the challenges of automation in the workplace in broader frameworks to regulate Artificial Intelligence. For instance, in Europe, several trade unions reacted to the European Union's proposed AI Act by focusing on labor issues and questions around transparency and accountability. And in Latin America, we see reactions to legislative proposals regarding the rights of platform workers.

As trade unions react, further policy demands and recommendations emerge in response to specific problems. Also, as governments in many countries work on so-called 'national AI strategies', trade unions have started to address how these strategies impact employee rights. Unions should cease the opportunity to make specific demands as these policies are still being rolled out to concretize their policy goals.

— **Country:** Philippines
— **Trade union:** Kapatiran ng Dalawang Gulong (Trade Union)
— **Type of Activity:** Position statement
— **Title:** Food delivery riders are employees, not freelancers
— **Description:** Riders' advocacy group Kapatiran ng Dalawang Gulong comments on how delivery platform workers are confronted by algorithmic management systems that lack transparency. Platform workers want to change their status from independent contractors to employees. This would support them in their demand for more transparency on how algorithms manage their gigs. The same demand can be seen in many other countries, and a few laws are now in place (e. g., the Riders' law in Spain).
— **Contribution:** Policy positions/regulatory demands
— **URL:** https://opinion.inquirer.net/142783/food-delivery-riders-are-employees-not-freelancers

5) EMPOWERMENT AND CAPACITY-BUILDING

More implementation-oriented contributions include educational resources to enable workers and their representatives to pursue their interests when confronted with ADM systems. Apart from educational

Photo: Javier Allegue Barros @unsplash

resources, there are also concrete technical tools that support workers in their advocacy work. All these empowerment and capacity-building initiatives help support worker representatives when they are confronted with a specific ADM-related process.

Some training courses run by trade unions could be more practical and informative instead of being theory based. This would help workers advocate for their own interests in respect to ADM systems[15]. Other capacity-building measures assist workers and their representatives in articulating demands regarding ADM systems at all stages of development and implementation. For example, by spelling out which precise transparency measures are needed so that workers can gain some oversight on algorithms.

— **Country:** Spain
— **Trade union:** Comisiones Obreras, Trade Union
— **Type of Activity:** Guide
— **Title:** Guía negociación colectiva y digitalización 2020
— **Description:** This guide helps collective bargaining when dealing with the digital transformation of work. The guide calls for workers to participate directly in the implementation of ADM systems. It also calls for the regulation of data collection and processing through collective bargaining and to give workers the "right to explanation" when AI is used in HR departments. Workers should also be able to access, manage, and control any data that AI and algorithms generate about them.
— **Contribution:** Empowerment and capacity-building

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15 https://anejudchile.cl/2020/10/13/escuela-sindical-luis-cerda-castro-de-anejud-invitan-a-webinar-teletrabajo-automatizacion-e-i-a-en-el-poder-judicial/

— **URL:** https://www.ccoo.es/cms/cli/000001/o/af/af6e35ab004a61334480e3b2bcae0e93000001.pdf

The Foodpanda Facebook group previously mentioned, where gig workers in Hong Kong collected information on their working conditions, including work-related injuries, demonstrates how technology can support workers in representing their own interests. The Fair-work initiative equally offers several tools and evaluative frameworks to help assess the algorithmic work landscape in specific local contexts. These tools are supposed to successfully assist workers and trade unions by advocating for their interests[16].

— **Country:** Australia
— **Trade union:** United Workers Union
— **Type of Activity:** App
— **Title:** Unions mobilize AI to turn the tables on wage theft in hospitality
— **Description:** Unions are using AI to mobilize younger workers against wage theft. The union announced the development of an app that uses AI to answer workers' questions about wage theft and working conditions among those who work in hospitality.
— **Contribution:** Empowerment and capacity-building
— **URL:** https://unitedworkers.org.au/media-release/unions-mobilise-ai-to-turn-the-tables-on-wage-theft-in-hospitality/

6) UNION ORGANIZATION, CAMPAIGNS AND COLLECTIVE ACTION

As previously described, the most prominent examples of successful union organization, campaigns and calls to action so far stem from platform workers. Across continents, we can see platform workers gain more transparent wage calculations by algorithms, less arbitrary account suspensions and even a strengthened contractual position, by acknowledging their status as employees and not freelancers. For example, in Italy, in 2021, we saw an agreement between three main Italian trade unions and the online food delivery service JustEat, in which both

Photo: Stephen Dawson @unsplash

sides agreed that riders will be treated as employees. The agreement aims at ensuring that salaries, safety and rights are better protected[17]. In other cases, established trade unions have assisted self-organized worker groups from the platform economy in advocating for better transparency and accountability of ADM systems within their respective platforms – for instance in Hong Kong[18], China[19] or India[20].

It remains important to acknowledge meta effects of automation on the workforce – as can be seen in Chile, where there have been ongoing strikes at Walmart's Líder supermarket company over the introduction of automated checkouts and robots. Unions are asking the company to be transparent and take responsibility for massive layoffs and the effect of automation on the labor market[21].

But there is quite a bit to learn from the platform economy, where workers are already able to voice specific demands. While there remain overarching red lines regarding the use of automation, trade unions need to find specific answers. Automation is not only about job loss and dequalification, but especially about shifting power relations. Here, it becomes necessary to strengthen worker negotiating power in algorithmic decision-making processes.

16   https://fair.work/en/fw/engage/resources-and-tools/

17   https://www.nidil.cgil.it/rider-accordo-tra-cgil-cisl-uil-e-just-eat/

18   https://www.scmp.com/news/hong-kong/hong-kong-economy/article/3157373/foodpanda-drivers-strike-look-behind-scenes-2-day

19   https://clb.org.hk/content/acftu-beijing-issues-guidelines-unionizing-gig-workers-what-comes-next

20   https://www.thenewsminute.com/article/transport-workers-union-approaches-sc-seeks-social-security-benefits-gig-workers-155624

21   https://www.lemondediplomatique.cl/2019/08/la-otra-batalla-de-los-trabajadores-del-gigante-del-retail.html

— **Country:** Spain
— **Trade union:** Asociacion Española de la Banca, CCOO, UGT.
— **Type of Activity:** Collective bargaining agreement
— **Title:** Convenio de Banca
— **Description:** This latest revision of the collective bargaining agreement in the Spanish banking sector includes the right of workers not to be subject to decisions solely based on algorithms and not to be discriminated against based on algorithmic decisions. Companies are obliged to inform workers' representatives about the data and algorithmic systems used by "digital models with no human intervention". Reportedly, this is the first time such rights have been written into a collective bargaining agreement in Spain. The agreement also recognizes workers' rights to digital disconnection and privacy.
— **Contribution:** Union organizing, campaigning and collective action
— **URL:** https://www.federacionfine.es/recursos/secciones/FINE/documentos/20210422_RESUMEN_CONVENIO_BANCA.pdf

Across this sample we could not identify many specific successes, such as collective bargaining agreements that explicitly reference algorithmic transparency and accountability. However, as the topic increasingly appears on the agenda, more examples might follow soon.

/ TRENDS: WHAT TO TAKE FROM THE ANALYSIS?

Algorithmic transparency and accountability are not yet stand-alone topics
Algorithmic transparency and accountability are so far addressed by trade unions largely under the umbrella of broader discussions on automation and digitization. Analysis and advocacy could be improved by addressing transparency and accountability as individual key issues, which would lead to more detailed and nuanced solutions and implementation-oriented approaches.

Transparency is still the problem, not the solution
Generally speaking, the focus so far is on problems and not as much on solutions. Across this sample, it is apparent that transparency of ADM in the world of work, or the lack of it, is a major problem. That is why trade unions need to move forward by providing specific ideas on how transparency could be improved in a hands-on way.

Threshold for campaigning not passed
Except in the case of platform workers, we largely see that the threshold for campaigning does not seem to have been reached. There are many abstract and almost theoretical concerns about what automation might mean for workers, and transparency and accountability measures might be called for in order to address these. However, there is a lack of shop floor experience of ADM systems that would support broader campaigns.

New initiatives have taken the lead in the form of groups created by the platform worker community, organized from the bottom-up. Their grievances come from their lived experiences with algorithmic management and the lack of transparency and accountability of ADM systems. Including unions could bring structure and experience to these new passionate movements and help them achieve their goals.

Differing attributions of relevance
Raising awareness is an important activity that trade unions should be engaged in. There seems to be a difference in attributing relevance to the issue of automation in the world of work between union leaders and workers[22]. This is possibly due to a lack of direct experience of and knowledge about automation on the shop floor. Thus, information and awareness campaigns are key.

However, feedback from trade union representatives in our study suggests that – even for trade unions – automation often needs to be de-prioritized as other, presumably more urgent, matters have to be dealt with. While the general importance of automation for worker rights is recognized, there is in some cases simply a lack of resources on the side of trade unions to deal with it. This is supported by the finding

22   https://aflcio.org/2017/10/24/highlights-day-three-afl-cio-2017-convention

that where trade unions are very active on the topic, there are key individuals who are pushing the agenda – and who have the necessary resources at their disposal.

Self-organizing and union building
Where we see workers organizing around specific issues related to algorithmic transparency and accountability, it is often outside of traditional trade union structures. For example, the platform workers regularly self-organize and form their own union and own structures rather than making use of existing structures. The situation is similar in the US where so-called 'digital employees' (people in the tech industry and specifically Silicon Valley) organized unions and gained support from existing unions as they did so. Platform and tech workers are possibly targeted by algorithmic management tools more than employees in other industries. Their self-organization can be seen a consequence of this.

/ RECOMMENDATIONS FOR STRATEGIC ACTION

Sketching practice-oriented analytical needs
It is crucial to gather and analyze knowledge on algorithmic management and the extent to which transparency and accountability can help safeguard workers. Also, analyses of the national legislative framework will help address challenges concerning ADM systems in the world of work – for example, regarding data collection and management practices, the legal basis used when a decision is made automatically without human intervention or oversight, the right to information for employee and worker representatives, etc.

There is an urgent need to move toward more practice- and shop-level-oriented analysis – addressing the research gap between ethical principles and tools that promote algorithmic transparency and accountability and how they are integrated into processes of co-determination and labor representations. Such insights will help reassess tools that support worker representatives at all stages of implementing ADM processes into organizations.

Focusing on implementations
Along with this need to re-focus the analytical perspective, trade unions should concentrate more on the implementation level, and better address specific ADM systems and processes in terms of their actual planning, development, implementation and use.

Translating principles and ethical guidelines for the implementation of ADM systems into concrete tools that can be applied to individual cases will generate case-specific knowledge. This knowledge can then be used to build the basis for broader capacity-building measures and more in-depth knowledge on algorithmic transparency and accountability in specific work-related contexts.

Focusing on the implementation of ADM systems would also help identify what kind of transparency is more specifically needed to best represent the interests of workers. For example, what are the limits of transparency? How can meaningful accountability be achieved? It must also be recognized that there are limits to addressing ADM systems at the technological level. In addition, it is important to address the context of an individual organization. This would enable worker representatives to formulate demands and claim positions in ADM-related internal processes.

Moving to the shop floor level
Generating knowledge and a focusing on implementation should complement more awareness-raising activities on the shop floor. In general, it seems like workers place less relevance on automation than trade unions and their representatives do. This is probably due to the complexity of the issue and a lack of experience of the injustices and problems that often come with these systems. The consequence is that campaigning on automation in the workplace remains very difficult. Algorithms and automation at work is so far a topic for experts, but this situation should not continue. More awareness-raising measures are therefore equally needed.

Learning from platform workers
Platform workers have quite advanced demands regarding algorithmic transparency and accountability, and worker representatives from other sectors can learn from them. At the same time, one needs to be aware of the limits. The case of platform workers cannot be compared to all other scenarios, because

their employers (e. g. the ride-hailing platform) are usually the ones also developing the algorithms that manage platform workers. Those companies thus not only have direct insight into the algorithms, they could also quite easily change them. However, this is not the case for most companies that use ADM systems to manage their workforce. Usually, People Analytics software is being bought by external providers, which means a human resource department has a lot less insight into how the software really works or takes decisions and even less power in changing its automated decision-making procedures.

Having said that, insights from platform work can still help formulate demands regarding what information should be available about ADM systems. It also raises awareness of the role of a company as the purchaser of ADM systems, and of third-party producers.

/ COUNTRY DESCRIPTIONS

In the following we will provide exemplary insights into the kinds of activities that trade unions engage in on algorithmic transparency and accountability in the world of work within select countries across the globe.

/ AFRICA

SOUTH AFRICA

There has been some union activity related to algorithmic transparency in South Africa. For example, by establishing the Vulnerable Workers Task Team, the Congress of South African Trade Unions demonstrated a desire to bring the concerns of vulnerable, part-time and gig workers to the table. As transparency issues tend to emerge from digital workers who are often part-time or self-employed, this could have promoted useful mechanisms. However, the Task Team was seemingly derailed due to internal issues. At the same time, the Nation Union of Metal Workers of South Africa – a significant South African union – has included the rights of temporary workers within their mandate. These are early signs of a slow shift in the "traditional" membership of unions and are

an opportunity to make algorithmic transparency in the world of work a part of the mainstream labor agenda.

Photo: Arno Senoner @unsplash

In South Africa, some organisations exist outside unions. For example, the South African Informal Traders Alliance (SITA) represents street traders. The participation of SITA, and other forms of informal worker mobilization, within the National Economic Development and Labour Council (NEDLAC) has contributed to NEDLAC's policy utterances on the role of algorithms in the future of work. The recent nationwide 3-day e-hailing strike in South Africa, which took place from 22 to 24 March 2022, demonstrated the capacity to organize workers across platforms, with drivers across e-hailing platforms – Uber, Bolt, InDriver and Didi – making demands for fair compensation and better security under the umbrella of "Unity in Diversity". Although nothing in their demands seems to have addressed algorithmic transparency and accountability directly, it is clear that such issues could become actioned through their association.[23]

KENYA

In Kenya, there are informal worker associations that attempt to advance transparency concerning work-related algorithms. For instance, the Awesome Transcribers in Kenya Facebook Group acts as a crowd-sourced transparency initiative. Although perhaps better understood as an informal form of trade union, (private) Facebook Groups such as this – self-organized by gig workers transcribing in Kenya – act as a mechanism for the voluntary sharing of information

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23   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=southafrica

among members to combat some of the risks of algorithmic opacity for gig workers, such as fee structures and task allocation.

While there are significant civil society activities concerning algorithmic transparency and justice in Kenya, they largely relate to fintech and microlending and less to the world of work. However, the significant amount of research and activist work in this area might be an opportunity to align worker activism in-country. The Fairwork Project collaborates with civil society to produce a Ratings Report on gig work conditions in Kenya (and in South Africa). The report includes standards on algorithmic fairness and transparency, aimed at ensuring for example that if algorithms are used to determine access to work or remuneration these do not result in inequitable outcomes for workers belonging to disadvantaged groups. More broadly, and much like in South Africa, there is generally a strong policy focus on improving digital capacities in response to AI and automation in Kenya.[24]

/ THE AMERICAS

ARGENTINA

In Argentina, initiatives that promote algorithmic transparency and accountability are strongly linked to the "future of work". Among the most common civil society, union and academic initiatives are awareness-raising, training, research/surveys, and analysis of the future of work and the impact of digitization in the world of work. Thanks to its editorial products – a newsletter and podcast – and projects such as SinDigital, aimed at sharing perspectives, experiences and capabilities on the impact of digitization in the world of work, the Friedrich Ebert Stiftung Argentina (FES Argentina) is a key actor in pushing the unions to strengthen their focus on algorithmic management. There are a variety of studies and investigations on the implications of work on delivery and care platforms. These are particularly concerned with labor rights and algorithm programming that promotes gender inequality. A first strike by platform workers led to the creation of the union "Asociación de Personal de Plataformas". However, it should be noted that initiatives in Argentina are geared predominantly toward algorithmic management. There is still much to be developed in the debate on algorithmic transparency. In 2018, the general strategic framework concerning the use of AI in Argentina was defined with the publication of its Digital Agenda for 2030. The agenda aims to take advantage of digital technologies for development and inclusion. It also established the construction of the National Artificial Intelligence Plan that looks at the ethical aspects of AI and the impact of technology in the world of work.[25]

BRAZIL

In Brazil, the initiatives that look at algorithmic transparency in the workplace are linked to publications and analysis of national regulations and laws. In addition, the Brazilian government has carried out various consultations to build strategies on the ethics and impact of AI. These strategies target both the private and public sectors. Non-governmental organizations take part in the consultations and come up with recommendations on promoting algorithmic transparency and accountability. In addition, other actors seek to raise awareness and inform different audiences on the topic by creating and sharing specialized content in popular formats. Discussions on algorithmic transparency in the world of work are mostly centered on research and analysis of regulatory frameworks. There is still room to develop the discussion further within civil society, particularly with unions. The general outlook of AI regulation in Brazil is marked by the Brazilian Artificial Intelligence Strategy and the national data protection law (Law N° 13,709 / 2018). While they attempt to foster the use of AI by taking data protection and transparency into account, commercial secrets so far limit the transparency of algorithms in the private sector.[26]

CANADA

Trade unions in Canada address many concerns around automation in the world of work. Instead of a focus on algorithmic transparency and accountability, we can see many sector-specific theories about

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24   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=kenya

25   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=argentina

26   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=brazil

what automation entails for a specific industry or a particular line of work (e. g., retail, education, aviation, shipping industry). However, this does not lead to an in-depth contemplation about how to address automation in the workplace. It often results in a call to reject and resist AI and automation. Discussions are dominated by fear of job losses due to automation. As a result, a discourse around how algorithmic transparency and accountability might support workers and their representatives to mitigate risks associated with automation and ADM should be explored. There are occasional references to the need for up-skilling and re-training in reaction to the risks posed by ADM systems in the world of work.

The Canadian Union of Public Employees (CUPE) is particularly concerned about automation in the public sector, highlighting issues around workplace surveillance. In a submission to Canada's Office of the Privacy Commissioner, the union raised concerns about the expansion of AI in the public sector workplace. The concerns particularly focused on the capacity of AI to assess or monitor workers, both in the workplace itself, and in HR/recruitment activities. In reaction the CUPE introduced a "New Technology Committee" to generate more union participation and insight in decision-making on digitization and automation. Generally, trade unions are concerned with the possibilities of collective bargaining and action in relation to ADM systems in the world of work and theorize about the role of unions in the future struggles that are foreseen.[27]

CHILE

Several academic publications about the gig economy already exist in Chile. These include descriptive studies and evaluations of the experiences of delivery and ride-hailing app workers that look at the opacity of their algorithms. There are also associations, or groups of digital platform workers, such as Sindicato Cornershop Chile, Riders Unidos Ya Chile, Mancomunal de Repartidores de App de Chile (MAREA), and Agrupación de Repartidores Penquistas. Bills seeking to regulate on-demand delivery apps are advancing through the National Congress. Activities are also observed with regard to the use of algorithms

in the judicial system – for example, in the 'Artificial intelligence and the judiciary. Chile and its pending challenges' report written by researchers at the Pontificia Universidad Católica de Chile. Unions are rather working to stop the precarious labor situation related to ADM systems in the retail and delivery sectors. Broader discussions on AI and algorithmic transparency seem to be advancing quickly thanks to the publication of a national strategy on AI by the Ministry of Science in 2021. In civil society, the discussion has mainly been promoted in initiatives developed by university academics and the Chilean Transparency Council. But so far, discussions on algorithmic transparency have focused heavily on the use of algorithms by the state.[28]

UNITED STATES OF AMERICA

Questions of transparency and accountability do not figure very prominently in the discussion on automation in the world of work in the US. Instead, the focus lies much more on risks associated with automation within specific industries (e. g., in retail, aviation, the entertainment industry), on automation as a threat to jobs in general or as a major challenge for trade unions in representing employee interests. The discussion in the US still seems to be very much centered around trying to understand the impact of automation in work-related contexts. This is reflected in the creation of a research institute by the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) to investigate problems posed by technology in the workplace, including algorithmic bias and data privacy. The challenges of automation are widely addressed by other organizations, including the UC Berkeley Labor Center Report that has developed a framework for "Worker Technology Rights", which includes a framework for collective organizing and bargaining.

Specific support for strengthening worker rights comes from the Communication Workers of America (CWA) and their Campaign to Organize Digital Employees (CODE-CWA). They have developed a model through which tech, game, and digital workers in Silicon Valley are supported in unionizing. This way, workers who are subject to automation and AI, pos-

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27 https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=canada

28 https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=chile

sibly to a larger extent than in other industries, have the tools and knowledge to organize themselves.[29]

URUGUAY

While Uruguay is home to several technology-oriented civil society organizations – such as, DATA, CAINFO Uruguay and Datysoc – these have predominantly focused on promoting open data, e-government and access to public information, and other issues, rather than on events or publications that address algorithmic transparency. The Friedrich Ebert Stiftung (FES) Uruguay has promoted activities and fostered publications close to algorithmic transparency in the labor field, and these mainly focus on the financial sector and gig work. There are also associations and organized groups of digital platform workers, such as the Asociación de Conductores Uruguayos de Aplicaciones, Unión de Conductores Trabajadores de Aplicaciones del Uruguay (UCTRADU) – grouped within the PIT-CNT trade union center – and Sindicato Único de Repartidores (SINUREP). More broadly, there are no formal regulations on AI and algorithmic transparency in Uruguay. However, there is an incipient discussion on algorithmic transparency. This is mainly promoted by governmental entities, specifically by the Agency for the Development of e-Government and the Information and Knowledge Society (AGESIC) and its AI strategy for digital government. This strategy incorporates transparency as one of its principles in the use of AI solutions in the public sector. The idea of transparency in such principles includes the provision of information on algorithms and data used for training and implementation, as well as tests and validations carried out, and the explicit visibility of all processes that include AI in the state.[30]

/ ASIA

CHINA

The Chinese government has been proactive in regulating AI, including its deployment in the world of work. Draft rules, released by the Cyberspace Administration of China in 2021, seek to regulate "algorithm-empowered recommendation activities on the internet". These rules include provisions on transparency and the use of AI for recommendations, data protection, and independent audits. Separately, the government has also initiated protections for gig workers, such as ensuring that unions are consulted before making changes to an algorithm, assigning tasks, and fixing wages. However, this power will largely be devolved to the All-China Federation of Trade Unions – a government-controlled union – that has been criticized for not doing enough to protect the rights of workers. Furthermore, the protections in the draft rules on algorithmic transparency that will apply for gig workers are not yet clear, since the rules are largely focused on protecting the interests of consumers and users. This is also in the context of pervasive use of electronic surveillance aimed at maintaining the absolute control of the ruling party.[31]

HONG KONG

China's imposition of the Hong Kong national security law has stoked concerns over stifling civil society. The law has direct consequences for gig workers trying to address their deteriorating working conditions by demanding more algorithmic transparency. Several labor groups were forcibly disbanded since the law was introduced, most notably Hong Kong's largest trade union body – the Hong Kong Confederation of Trade Unions. Prior to the imposition of the security law, freelancers in the gig economy had begun to unionize in the wake of rising exploitation mostly as a result of algorithmic management in the world of work. More recently, food delivery workers have achieved success outside of traditional unions, by using digital channels such as messaging platforms to take collective action with the support of experienced labor activist-volunteers. At least three strikes have been organized by Foodpanda delivery workers, demanding more transparency of the algorithmic management systems that determine their working conditions. Many of the concerns of food delivery workers relate to falling income because of the automatic way gigs are allocated. In addition, there is a lack of grievance redressal to the way in which delivery times are automatically calculated; in fact, algorithms use aerial maps (instead

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29   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=usa

30   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=uruguay

31   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=china

of street maps) to calculate distances. Governmental bodies have begun assessing the relevance of self-employed platform workers in the Hong Kong economy, but the government has signaled that it will not bring gig workers within labor protection mandates.[32]

PHILIPPINES

Various government bodies in the Philippines have been active in regulating or commenting on AI and its impact on workers. Critically, the Data Privacy Act 2012 provides a right to explanation. The National Privacy Commission (NPC) that was set up under the Act also provides guidelines on the data privacy of workers. For example, the NPC stated that employers are allowed to monitor employees using surveillance software in work-from-home setups. This was permitted providing such monitoring balances with the rights and freedoms of employees and adheres to general data privacy principles – such as being transparent about when employees are being monitored. On protections for gig workers, a resolution called for an investigation in aid of legislation into the provision of employment benefits and other social protections for gig workers, which would also impact algorithmic allocation of wages and tasks to workers.[33]

SINGAPORE

The Government of Singapore is focused on promoting the growth of its digital economy. An integral part of it is the trade agreements it stipulated with other countries, for example Australia and Chile. These agreements do not focus on workers' rights, and instead push for growth of the digital economy through regulatory sandboxes. Generally, the supposedly positive role of digital technologies and automation seems to be promoted in current labor-related discussions in Singapore. Digital tools and automation are seen for their ability to improve efficiency and productivity for workers. It is acknowledged that these might result in changes for the workforce – and these are addressed through re-skilling and training initiatives for employees to adjust to digitization and automation in a work context. A labor focus on automa-

tion thus mostly lies on employees working alongside digital and automated tools, rather than addressing concerns over automation in the world of work and its impacts on employee rights. In the field of platform work we see some reports about gig workers organizing and unions looking to work with platforms to achieve more transparency on their algorithmic management systems. Union and worker demands include fair compensation, insurance, income protections, and transparency about incentive structures within platforms.[34]

THAILAND

Like other countries in the region, Thailand has developed policy frameworks that enthusiastically adopt Industry 4.0 and related technologies. The 'Thailand 4.0' model pushes for the adoption of technologies such as automation and 'the Internet of Things' across many sectors, including agriculture, manufacturing, and services. Similarly, the 'Thailand Digital Economy and Society Development Plan' sees digitization and the digital economy as the panacea to solving problems around leakages and corruption in state institutions, income inequality, and lack of capacity/productivity in agriculture, manufacturing, and services.

These frameworks reflect an uncritical push to grow the digital economy. However, some researchers criticize the approach due to the lack of focus on the interests of workers. The gig economy has been a critical area of intervention for trade unions and collectives, with public demonstrations and strikes gaining significant media attention. This is in conjunction with similar protests organized by Grab drivers in other Asian countries.

Algorithmic management is central to the demands of workers, due to the impact it has on the amount of pay per task, allocation of work, and how it can suspend accounts automatically (due to factors such as low acceptance rates). Other actors, including international and national think tanks and NGOs, have also looked at the ride-hailing sector in the gig economy. So far, only the gig economy has protested against algorithms and automation in the workplace. Mean-

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32   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=hongkong

33   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=philippines

34   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=singapore

while, various think tanks and academic institutions have produced reports that try to understand the macro impact of AI in the workplace. These stakeholders have also provided recommendations and developed principles for the governance of AI and data rights, given their current and predicted impact on workers.[35]

/ EUROPE

CZECH REPUBLIC

The impact of algorithms on the labor market is extensively described in the Czech Republic's 2019 AI development strategy. However, the main focus of the strategy is on the challenges of changing the market structure and the need for re-training demanded by ADM systems and less on algorithmic transparency and accountability. The risk of discrimination is only mentioned incidentally and is not connected to algorithmic transparency – it is instead seen as a result of the country's demographic structure and challenges for older people. Admittedly, the authors of the strategy claim to be monitoring the ethical implications of AI, but these have not been linked directly to employment relationships.

Several studies have looked at the impact of algorithms on the gig economy, the labor market and the economy. One study devoted to the transport services market used the example of the ride-hailing platform, Uber. Following the study, laws were introduced to force Uber to operate under the same principles as other registered transport. Academics are also looking at the impact of AI on the labor market, e. g., in relation to re-training needs. While the trade union movement could be more engaged with the topic of algorithmic transparency and accountability, the action of one of the unions present at Amazon's Czech branch is noteworthy. It started a Facebook page to inform members – including Amazon employees in the Czech Republic – about collective agreement negotiations, health and safety in the workplace, and issues around algorithmic transparency that manage the work of Amazon employees. The action raises questions relating to the lack of transparency

of algorithms that supervise the work of Amazon employees in both the Czech Republic and Poland and the consequences for the rights of workers.[36]

ESTONIA

In Estonia, discussions on automation in the world of work do not put much weight on algorithmic transparency and accountability. Different trade unions reflect on how a decreasing workforce ultimately forces organizations to use more automation. However, no initiatives that focus specifically on how automation and AI will affect work or how far transparency and accountability might safeguard worker rights were identified. Discussions tend to concentrate on the overall possibilities and problems of using AI and ADM in the world of work. When gig work is addressed, the discussion tends to focus on the legal status of gig workers. Some organizations emphasize the need to develop human-centered AI-based on the protection of individual rights. However, this discussion does not focus on issues affecting the workplace – reinforcing the argument that increased automation and AI in the workplace has yet to raise sufficient concern.[37]

GERMANY

In 2018, the Federal Ministry of Labour and Social Affairs set up the "Denkfabrik Digitale Arbeitsgesellschaft" (Think Tank Digital Labor Society). The aim of this think tank – and the associated "future lab" – is to help the Ministry identify new fields of action as a result of digitization and related trends and to develop new approaches to solutions for the working society of the future. Automation is prominent among these topics, therefore algorithmic transparency and accountability are being addressed. The think tank is mostly engaged in project funding, knowledge distribution, and awareness-raising through public events and networking initiatives. Equally, researchers in the trade union movement have looked at AI and automation. They have focused on how increased transparency and accountability of algorithmic management can help protect the rights of workers. In addi-

35   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=thailand

36   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=czechia

37   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=estonia

tion, trade unions have also looked at the broader picture of automation in the workplace and the fundamental principles associated with it. The German Trade Union Confederation (DGB) has conducted comprehensive work on this topic. For example, their "political work program for shaping good work in the digital world" introduced a process-oriented perspective on transparency which highlighted the importance of involving workers and their representatives in processes concerning the planning, implementation, and use of AI systems in the workplace. Their transparency requirements touch upon decision-making criteria, but also on data quality, use of data, discrimination, and accountability procedures. The United Services Union (ver.di) equally highlighted the importance of transparency in workplace ADM systems by supporting employees in their co-determination activities. The union issued practice-oriented guidelines intended to form the basis of discussions between worker representatives and employers and ADM system developers, programmers, and decision-makers.[38]

HUNGARY

Trade unions tend to focus on the challenges that digital transformation and automation pose (e. g., regarding large-scale job losses) and on what action needs to be taken to tackle these. Heightened competitiveness is also a focus, due to the idea that a significant share of jobs can presumably be automated – making Hungary vulnerable in the light of digital transformation. Trade unions seek to protect the position of workers by calling for structural changes to make the workforce ready for the digital age. However, the unions lack the resources to collaborate with the necessary stakeholders. One major obstacle is the deterioration of democratic processes in the country and the lack of social dialogue that would be inclusive and provide meaningful participation. Therefore, Hungarian trade unions value international and EU-level discussions, as these are the main platforms for meaningful exchange and collaboration.[39]

ITALY

In Italy, algorithmic transparency and accountability in the world of work are increasingly under debate. The "working group" on the algorithmic governance of work created within the Labor Ministry of the Draghi government was a signal of interest in providing clear rules for both the gig economy and automated/digitized labor. The active role taken by the country's data protection authority – which issued landmark fines to gig economy platforms – is a signal that clarity is badly needed. Trade unions have actively shaped the discussion by providing training material and counsel to gig workers, co-organizing events on digital labor and microwork with progressive research centers and foundations. Furthermore, the unions want to give platform workers better tools and knowledge to "negotiate the algorithm".

This approach has led to an important – if contested – agreement between unions CGIL, CISL, UIL, and JustEat. While this agreement makes riders equal to employees, this has not prevented riders and gig economy workers from going on strike from Turin to Florence and Bologna, and frequently with the backing of trade unions, including Nidil CGIL.

Platform work is still the main point of contention in Italy. However, a broader debate on the dangers of the unregulated use of automation and how to build fairer alternative cooperative models is increasingly common. This move is thanks to a handful of internationally renowned researchers who popularized notions such as "microwork" (Antonio Casilli) or "inhuman work" (Valerio De Stefano and Antonio Aloisi) both in mainstream media and during high-level policy debates.[40]

NORWAY

In January 2020, the Norwegian Ministry of Local Government and Modernization – with input from several labor unions – published a national strategy for AI. Regarding digitization in the workplace, the biggest concerns were issues with privacy and integrity. Unions identified worries such as the threat to jobs from automation, but it is thought that a combination of

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38   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=germany

39   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=hungary

40   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=italy

education and the creation of new digital jobs will mitigate these concerns. However, due to algorithmic bias, there is an awareness that caution must be applied when algorithms are built and then implemented in the workplace.

One influential actor is the Norwegian Society of Engineers and Technologists (NITO), which issued a declaration on the responsible use of AI in working life – highlighting transparency as one of the core principles. It states that individuals must be able to understand the decision-making process of an ADM system and must be able to challenge the accuracy of a decision. Furthermore, NITO recommended that relevant control mechanisms must be in place and offer sufficient transparency. In addition, arrangements should be made for internal reporting of risks and routines for measures and follow-ups should be implemented.

Also, the Confederation of Norwegian Enterprise and the Union for energy, electrical engineering, telecommunications, and IT workers have been at the forefront by making AI a negotiating item in a collective agreement. This resulted in the inclusion of a section on safeguarding the privacy and integrity of employees and protecting their rights when confronted with discrimination or prejudice because of AI systems.[41]

POLAND

At the end of 2020, Poland adopted a strategy to develop AI. It contained many references to the need for transparency of algorithms and the development of ethical principles to reduce the risk of discrimination. However, it is difficult to find a direct reference to this guarantee in the world of work. It is worth noting that a committee was created in the Polish Parliament to deal with algorithmic transparency, and one of the committee's meetings was devoted entirely to the use of algorithms in the labor market. This topic is also under discussion within some trade unions. For example, the All-Poland Alliance of Trade Unions often discusses the subject and it is mentioned in its 2018-2022 strategy document. Furthermore, in a package of proposals for amendments to the Trade Unions Act, the alliance has advocated for inclusion of algorithmic

transparency. However, it is withholding its submission until the government starts work on amendments to the Act.

Protests by workers at companies that use algorithms are also increasingly visible. Amazon employees and workers at the Glovo platform have been particularly vocal in demanding more transparency of the algorithmic management systems. Some tools have been specifically created, from the bottom up, to inform workers about such issues and provide documentation on the algorithmic systems that have been implemented.[42]

RUSSIA

Researchers and trade unions in Russia pay little attention to algorithms in work-related contexts. However, the trade union of Moscow taxi drivers have made intensive efforts to increase the transparency of the algorithm developed by the authorities to determine how they work. In addition, the association of bicycle couriers and their supporters conducted a campaign to draw attention to the non-transparent and discriminatory operations of the algorithms of one of the largest internet delivery platforms. In 2019, Russia adopted a strategy to develop AI that claims transparency as a core principle and aims at protecting basic rights, including in the workplace. It also guarantees a process to build competency among workers to adapt to the gig economy. The strategy is seen as a way to disseminate knowledge on how AI-based products operate, rather than letting workers know more about algorithms in their workplace.[43]

SPAIN

Even before Spain adopted its National AI Strategy in December 2020, the increasing use of AI and algorithmic systems in managing the workforce had been researched by trade unions, academia, and some civil society actors. Within the trade union movement, the two main unions, Comisiones Obreras (CCOO) and the Unión General de Traba-

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41 https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=norway

42 https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=poland

43 https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=russia

jadores, founded by the Socialist Party (UGT), both with around 900,000 members, have produced reports and guides to be used in collective bargaining and to educate and equip works councils and workers' representatives to deal with issues connected with algorithms and data protection.

When a new collective bargaining agreement was adopted in the banking sector in 2021, it stated that workers had the right to be excluded from decisions taken solely by algorithmic systems – reportedly, this is the first time such an agreement explicitly mentions this issue.

In civil society, the Eticas Foundation, a research and advocacy organization, is becoming very active. It collaborated with CCOO and UGT to produce a report on how trade unions can better protect the rights of workers in the face of digitalization and technological change, including the use of algorithms. In addition, Eticas is also developing an external audit methodology that can be used by trade unions and other entities to examine algorithms in the workplace.

However, the key event in Spain regarding algorithms and labor was the adoption of the so-called Riders' Law in 2021. The main point of the law is to force delivery companies to hire riders (who used to be self-employed). However, the law also enforces transparency and explicability in the use of algorithms used in workplace and workforce management: this is now an obligation extended to all companies operating in Spain.

The Riders' Law generated a lot of public debate both before and after being passed, and the mainstream and specialized media, as well as law and consultancy firms, published articles explaining not only this particular law but how AI and algorithms have been getting more and more common and pervasive across all sectors in many companies when managing employees.[44]

SWEDEN

In Sweden, trade unions discuss work and ADM systems from an efficiency and safety point of view – specifically how to make the workplace more efficient and safer. However, concerns have been raised about privacy, algorithmic bias, and a lack of transparency regarding ADM systems. There are active discussions about ADM systems in the workplace, and most labor unions have touched upon the subject in articles, blog posts, and at conferences. Akademikerförbundet SSR, the union for professionals or academics in social sciences, is a vocal critique of ADM systems in the public sector. It has produced reports, articles, a podcast, and, most notably, reported the town of Trelleborg's automated social service allocation system to the parliamentary ombudsman. Their main criticism concerns the lack of transparency within ADM systems in the public sector and, among other things, the lack of involvement of public sector employees in the development process. These reflections by the SSR resulted in specific demands, e. g., the need for a government framework ensuring transparency through a public register of ADM systems in the public sector, a red list of cases where ADM systems should not be used, and a higher level of data security.[45]

SWITZERLAND

In Switzerland, automation in the world of work comes up in general discussions on digitization and the labor market, but it is often seen from a sector-specific perspective (e. g., automation in the retail sector and healthcare). Trade unions seek to understand how automation impacts the rights of employees in the job market and to share knowledge.

Specific discussions on algorithmic transparency and accountability are still on a small scale. For example, the Swiss Federal Railways (SBB) and railroad staff unions have jointly set up a digitalization fund to support studies that will develop the basis for a socially responsible design of the digital transformation at SBB.

The need for instruments of social partnership in the face of increasing automation in the workplace is recognized. For example, the trade union representing private sector workers in Switzerland, Unia, put forward the idea that employees should receive

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44 https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=spain

45 https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=sweden

training to adapt to changes caused by digitization and automation and implement this in collective labor agreements.

Furthermore, Syndicom, a trade union in the telecommunication and IT sector, came up with nine principles to guide when implementing automated systems. Two of these principles include transparency and accountability and ask that ADM systems are transparent, understandable, and recognizable and that results should be reproducible as well as traceable. Organizations implementing ADM systems should analyze and evaluate the systems and must account for them. In addition, there should be regulated access for government bodies and researchers to monitor AI systems externally.[46]

UNITED KINGDOM

In the UK, AI and automation have gained the attention of policy-makers, union-supporting think tanks, and researchers in the trade union movement. Significantly, the Trades Union Congress (TUC) launched a manifesto that sets out plans for campaigns and a strategy in this area. This manifesto offers guidance to unions as they begin to encounter workplace disputes because of AI and automation. The manifesto and also a soon-after published guide on collective bargaining and digital management systems pushes for the promotion of workers' voices through collective bargaining, and argues for a duty to consult when high-risk ADM systems are implemented in work-related contexts. Also, legislation should ensure access to information and a universal right to explainability regarding high-risk systems – to better ensure transparency and accountability. The TUC encourages member unions to pledge support for the manifesto.

Prominent campaigns concerned with matters of automation in the world of work focus on the legal aspects of data gathering in the workplace. For example, the Prospect Union's work on digital technologies and data protection impact assessments (DPIA) provide guidance for worker representatives encountering automation in the workplace to mitigate some of the potential problems for employees in the datafied workplace. This legal approach was

shaped by the UK's departure from the European Union, which meant that areas of the law previously covered by GDPR are now under the jurisdiction of the UK government. Prospect Union campaigns to ensure that worker's rights are protected as the principles of GDPR are brought into UK law under the Data Protection Act 2018.

The lack of documentary evidence at the grassroots level suggests that union action in this area has not yet reached a high level of importance; however, a critical mass, whereby union action becomes an organized campaign that the union needs to build support and solidarity, can still be reached. There are likely to be highly individualized cases in various workplaces that require workplace representation, but these are not a matter of public record yet.[47]

/ OCEANIA

AUSTRALIA

In Australia, trade unions focus on the impact of automation in specific industries (e. g., education, retail, health). This leaves a gap, where algorithmic transparency and accountability could be considered on a general scale. Noteworthy is a submission by the Australian Services Union to the Australian Human Rights Commission acknowledging that the world of work has drastically changed as a result of technological developments such as automation. The union states that principles formulated as part of a just transition toward technologically transformed labor markets in the future must include social dialogue and democratic consultation of social partners and stakeholders. The union also emphasizes the need for research and early assessment of social and employment impacts. Even though algorithmic transparency and accountability are not mentioned directly, they are likely to align with the formulated principles.[48]

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46   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=switzerland

47   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=uk

48   https://algorithmwatch.org/en/algorithms-and-the-world-of-work/?country=australia

/ RESEARCHERS

/ INTERNATIONAL TRADE UNION CONFEDERATION (ITUC)

The ITUC represents 200 million workers in 163 countries and territories and has 332 national affiliates. As the world's main global confederation of national union centres, its' mandate is focused on the protection of workers' rights, social and economic justice, anti-discrimination, Just Transition to a zero-carbon future, development, peace and democracy. Shaping the future of work is one of its key areas of activity.

https://www.ituc-csi.org/

/ ALGORITHMWATCH

AlgorithmWatch is a non-profit research and advocacy organization that is committed to watch, unpack and, analyze algorithmic/automated decision-making (ADM) systems and their impact on society. While the prudent use of ADM systems can benefit individuals and communities, they come with great risks. In order to protect human autonomy and fundamental rights and maximize the public good, we consider it crucial to hold ADM systems accountable to democratic control. Use of ADM systems that significantly affect individuals' and collective rights must not only be made public in clear and accessible ways, individuals must also be able to understand how decisions are reached and to contest them if necessary. Therefore, we enable citizens to better understand ADM systems and develop ways to achieve democratic governance of these processes – with a mix of technologies, regulation, and suitable oversight institutions. With this, we strive to contribute to a fair and inclusive society and to maximize the benefit of ADM systems for society at large.

https://algorithmwatch.org/en/