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Global case studies of social dialogue on AI and algorithmic management

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Abstract

Employers are adopting and refining artificial intelligence (AI) and algorithm-based tools in the workplace, with wide-ranging implications for work and employment. This working paper examines case studies of social dialogue on AI at national, regional, sectoral, company, and workplace levels in Europe, North America, Asia, South America and the Caribbean, and Africa. Findings are organized around three distinct 'action fields' in which worker representatives have sought to influence strategies and outcomes associated with the growing use of AI and algorithms in the workplace. These include the employment and skill impacts of AI, algorithmic management practices, and working conditions and rights in AI value chains. Across these action fields, social dialogue is playing a crucial role in encouraging an alternative, high road approach to AI investments and uses, based on complementing rather than replacing worker skills, empowering rather than controlling the workforce, and embedding rather than displacing new jobs in labor and social protections. Comparative findings suggest that these social dialogue initiatives are more effective where there are constraints on employer exit, support for collective worker voice, and strategies of inclusive labor solidarity.

Key words: AI, algorithms, algorithmic management, social dialogue, labor unions, skills, job quality, surveillance, global value chains, outsourcing

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Wen Li Thian is a PhD student in the ILR School at Cornell University. Her research focuses on mechanisms of labor control, the labor process, and technologies at work. She has done research on the lived experiences of factory workers and platform gig workers in Singapore. She holds a master's degree in Sociology from the National University of Singapore.

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▶ Introduction

Employers worldwide are adopting or expanding their use of artificial intelligence (AI) and algorithm-based tools in the workplace, with transformative impacts on work and employment.[1] Labor unions and other worker representatives are responding to both the opportunities and threats of these new technologies with strategies that seek to establish more fair and productive uses of these tools. In this report, we examine case studies of worker representative involvement in social dialogue over AI and algorithms in a range of countries and industries, with the goal of both documenting these cases and learning from them.[2] What models of or experiments with social dialogue are developing in different contexts? What are their goals? How do they seek to pursue these goals, for example, through increasing workers' ability to have a say in adoption and deployment decisions, securing good jobs with decent pay and conditions, or preventing intensified surveillance and insecurity? And where have they shown the most success in meeting these goals: what factors explain those successes?

Our analysis is organized around three distinct areas in which AI affects workers and working conditions, which we argue constitute different 'action fields' for labor unions and other worker representatives. These include social dialogue over: 1) the employment and skill impacts of AI – with the goal of encouraging employers to move from replacing jobs and tasks with technology to complementing worker skills, 2) algorithmic management practices - with the goal of encouraging employers to use new management tools to empower rather than intensify worker control and biased decision-making; and 3) working conditions and rights in AI-enabled fissuring – with the goal of encouraging a shift from displacing jobs from social and labor market protections to embedding them in encompassing collective and social standards.[3] In each area, the tools available differ, as do the main outcomes various stakeholders care about, affecting opportunities for mobilization or coalition building.

First, new AI-based tools are often feared to automate jobs and tasks, in a way that leads to downsizing or 'replacement' of workers and worker skills. There may also be a deskilling effect, essentially replacing skilled workers and allowing the downgrading of jobs to more repetitive or lower valued tasks. Alternatively, these tools can complement workers' existing skills or help them to develop new skills and modes of working - augmenting rather than replacing workers. *We ask how worker representatives have sought to influence these potential impacts of AI on employment and skills, and their success in encouraging 'labor complementing' applications through social dialogue.*

Second, new AI-based tools are used in automated algorithmic management systems to manage workers' performance via monitoring, coaching, and decision-making around dismissals, incentive pay, and promotions; as well as to automate decisions related to hiring, scheduling, and training. This can intensify discipline, reduce workers' individual control over the pace and content of their work, and increase worker burnout. These effects are often experienced unequally

[1] 'Artificial intelligence' refers to computer systems that can perform tasks traditionally requiring human intelligence, including advanced pattern recognition and problem-solving. 'Generative AI' tools such as ChatGPT are a class of machine learning technologies that generate new content based on this analysis of patterns in data.

[2] We use the ILO's definition of social dialogue as including 'all types of negotiation, consultation or simply exchange of information between, or among, representatives of governments, employers and workers, on issues of common interest relating to economic and social policy. It can exist as a tripartite process, with the government as an official party to the dialogue or it may consist of bipartite relations only between labour and management (or trade unions and employers' organizations). Workplace cooperation, collective bargaining at company, sector or cross-industry levels, and tripartite consultation processes are common forms of social dialogue.' ILO (2019) Social Dialogue. https://www.ilo.org/resource/social-dialogue-0

[3] Doellgast, V. (2023). Strengthening social regulation in the digital economy: comparative findings from the ICT industry. *Labour and Industry, 33*(1), 22-38.

by different employee groups, where AI-based tools reproduce biased decision-making embedded in training data or model design. At the same time, AI-based management tools may be a tool for empowering workers, or giving them more control over working methods and practices. These 'labor empowering' uses of AI are more likely where workers have voice in and oversight over how digital and AI-based tools are used to organize, for example, schedules and training; and where negotiations limit invasive forms of monitoring and performance evaluation. *We ask how worker representatives have sought to influence these potential impacts of AI on worker control and bias through social dialogue, and the role of this dialogue in encouraging 'labor empowerment' via strengthened worker voice in algorithmic management decision-making.*

Third, AI-based tools open opportunities for or encourage experimentation with new location decisions and organizational models. Employers used new technologies associated with the first wave of digitalization to consolidate, outsource, and offshore a range of service and manufacturing jobs in the 1990s to 2000s. The combination of cloud computing, faster data speeds, and algorithm-enabled management tools are now expanding location options and permitting a new set of strategies to restructure jobs, which we describe as *AI-enabled fissuring*. One important trend involves developments in the 'AI value chain' to produce and refine AI-based technologies - including the growing number of energy-hungry data centers. New jobs are being created and restructured in data coding, labelling, maintenance, and engineering. These jobs are organized through complex global production networks of lead firms, suppliers, and platforms, with power significantly concentrated at major tech companies. Workers performing the most labor-intensive 'data janitorial' and content moderation work are often low paid and subject to intensive algorithmic control. *Key questions that these trends raise include how worker representatives are responding to the labor displacing impacts of AI-based restructuring - and their success in 'embedding' these new and restructured jobs within collective agreements and national systems of social protection.*

This report examines case study examples of social dialogue in these three 'action fields', across Europe, North America, Asia, South America and the Caribbean, and Africa. Findings draw on stakeholder interviews, archival sources, academic research, and news reports.

In the following sections, we first summarize our analytical framework (Section 1.1) and then discuss our approach to identifying and analyzing our case study examples (Section 1.2). In Section 2, we examine international, national, and regional cases of social dialogue. We then compare company-, workplace-, and industry-level examples of social dialogue between employers and unions (Section 3), organized by the three themes discussed above: labor replacing to complementing (Section 3.1), labor controlling to empowering (Section 3.2), and labor displacing to embedding (Section 3.3.). We conclude with a discussion of the conditions for social dialogue to promote a more equitable and just transition to an AI-enabled digital economy (Section 4).

Analytical framework

Past research suggests that social dialogue will be most effective in establishing a socially equitable approach to new technology investments - including in AI- and algorithm-based tools - where it helps to move employers toward strategies and practices that take a longer-term view concerning the goals of these investments. This means making commitments to creating good jobs with benefits and security, sharing productivity gains with workers, investing in skills and worker discretion, limiting invasive data collection and monitoring, and establishing fair and transparent opportunities for workers to challenge and change technology-enabled decisions. Where labor unions and other worker representatives have engaged in social dialogue over AI, they have sought to institutionalize these goals in collective agreements, laws, and policies.

The social and worker impacts of technological change have been a focus of worker mobilization, consultation, and collective bargaining for over a hundred years.[4] The pace of this change has increased over the past five decades. From lean production and the introduction of micro-computing in the 1980s and 1990s to the first wave of digitalization and widespread adoption of industrial robots and CNC machines in the 1990s and 2000s, labor unions have sought to encourage alternative, high road approaches to integrating new technologies into the workplace.[5] And they have faced the same challenges, as many employers adopted these technologies in ways that cut costs or centralized control through automating and deskilling work, intensifying and individualizing performance monitoring, and 'displacing' work and workers through temp agency contracting, outsourcing, and offshoring - or workplace fissuring.[6]

At the same time, alternative high road approaches were developed by employers who sought to compete based on longer-term investments in skills and high-quality products and services, rather than on short-term cost savings. Comparative research suggests that these alternatives were most consistently pursued where legislated minimum standards and collective bargaining institutions placed 'productive constraints' on employers - effectively closing off low road strategies, while supporting investments in skills and participation.[7]

The case studies discussed in this report can be read as different efforts across world regions and countries to establish a new set of 'productive constraints' that make it more difficult to pursue what Acemoglu and Restrepo describe as the 'wrong kind of AI' - focused on short-term cost savings, with risks of stagnating employment and productivity.[8]

Under what conditions have these efforts been most successful? We apply the framework in Doellgast's book *Exit, Voice, and Solidarity* to consider three factors or conditions that play an important role in supporting more effective social dialogue on AI: constraints on employer exit, support for collective worker voice, and strategies of inclusive solidarity.[9]

Constraints on employer exit. The first condition is negotiated, legal, or skill-based restrictions on employers' willingness and ability to exit internal employment relationships. This can include minimum employment standards and social protections at national level, within industries, in companies, or along firms' supply chains or supplier networks. It can also involve vocational skill and training systems or ecosystems of firms that tie investment to a particular organization and location, or that increase the perceived value of worker skills as a complement to new technology investments.

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4 Knotter, A. (2018). *Transformations of trade unionism: comparative and transnational perspectives on workers organizing in Europe and the United States*. Amsterdam University Press. Ross, P. (1970). Waterfront labor response to technological change: a tale of two unions. *Labor Law Journal*, 21(7), 397.

5 Berggren, C. (1993). *Alternatives to lean production: Work organization in the Swedish auto industry*. Ithaca: Cornell University Press. Kochan, T. A., Osterman, P. (1994). *The Mutual Gains Enterprise*. Cambridge: Harvard Business School Press. Dore, R. P. (2000). *Stock market capitalism: Welfare capitalism: Japan and Germany versus the Anglo-Saxons*. Oxford: Oxford University Press. Freeman, R. B., Shaw, K. L. (2009). *International differences in the business practices and productivity of firms*. Chicago: University of Chicago Press.

6 Doellgast, V. (2012). *Disintegrating democracy at work: Labor unions and the future of good jobs in the service economy*. Cornell University Press. Davis, G. F. (2016). *The Vanishing American Corporation: Navigating the hazards of a new economy*. Berrett-Koehler Publishers. Goldman, D. J. (2024). *Disconnected: Call Center Workers Fight for Good Jobs in the Digital Age*. University of Illinois Press.

7 Streeck, W. (1992). Productive constraints: on the institutional conditions of diversified quality production. *Social institutions and economic performance: Studies of industrial relations in advanced capitalist economies*, 1-40 Hall, P. A., Soskice, D. (eds.). (2001). *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press.

8 Acemoglu, D. & P. Restrepo (2019) 'The Wrong Kind of AI? Artificial Intelligence and the Future of Labor Demand' NBER Working Paper 25682, March 2019, https://www.nber.org/papers/w25682.

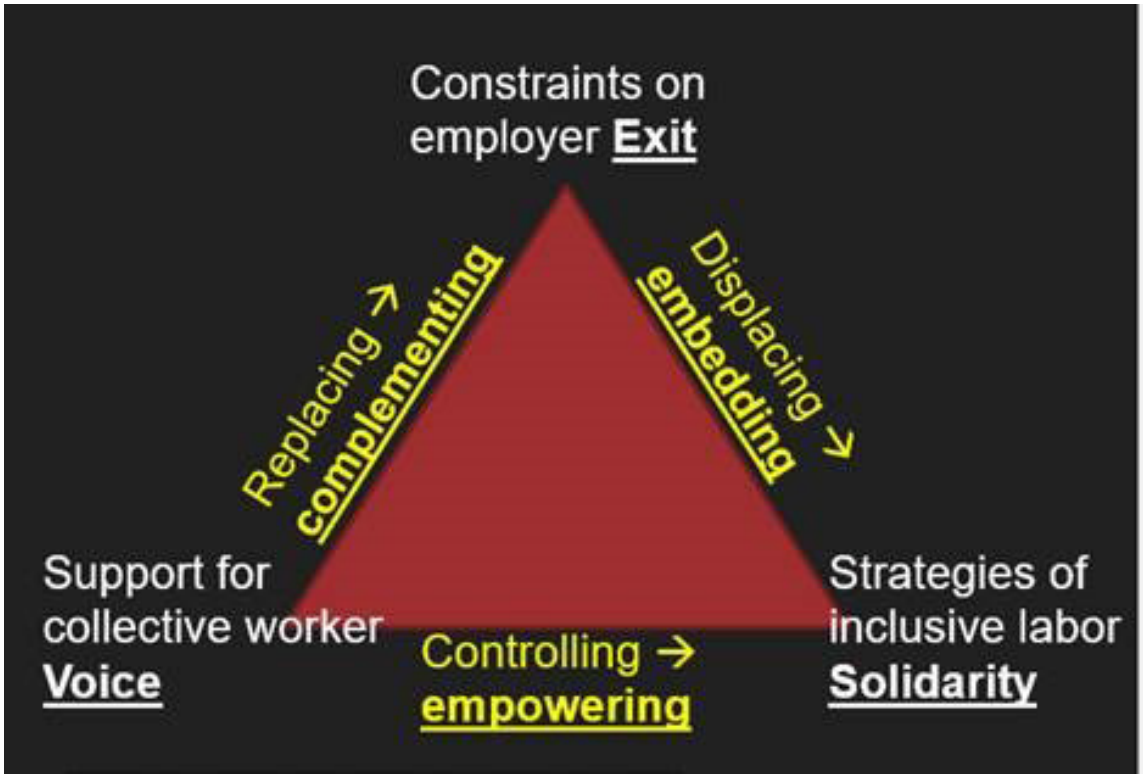
9 Doellgast, V. (2022). *Exit, voice, and solidarity: Contesting precarity in the US and European telecommunications industries*. Oxford University Press

Support for collective worker voice. The second condition is institutions and resources that support collective voice, or the ability of workers to have a say in and influence over practices and decisions in their workplace through democratic or representative structures. These include bargaining or participation rights, which encourage negotiation and consultation over management decisions at workplace, company, or industry level; worker rights to representation on company boards; or state support for tripartite social dialogue and social pacts over social, labor market, and training policies. In the context of AI, strong data protection rights can support worker voice, through providing additional transparency regarding management practices. Workers and their unions can also build strong support for collective voice at company and industry level - and institutional voice rights in their collective agreements - through organizing and mobilizing the workforce to increase countervailing power in consultations or negotiations.

Strategies of inclusive solidarity. The third condition is labor strategies based on inclusive forms of solidarity, which seek to bridge divides in the labor movement and across the workforce. Solidarity is undermined by competition for jobs or investment across groups of workers, within countries or internationally. It is also weakened by historic divides within the labor movement, based on ideology, racism, or narrow construction of interests. Labor strategies that bridge these divides are needed to extend power from core, protected workers to more precarious ones across fissured supply chains and countries with stronger and weaker labor laws and protections.

Many of the social dialogue examples we discuss in this report can be seen as attempts to establish or strengthen constraints on employer exit and support for collective worker voice, while deploying more inclusive strategies of solidarity, in the context of technology-enabled restructuring pressures. Figure 1 illustrates an overlap of this framework with the three 'action fields' we focus on in this report. These include social dialogue over: 1) the employment and skill impacts of AI – from labor replacing to complementing, 2) algorithmic management practices - from labor controlling to empowering, and 3) working conditions and rights in AI-enabled fissuring – from labor displacing to embedding.

▶ **Figure 1: Supporting social dialogue on AI through constraints on exit, support for voice, and strategies of solidarity**



This framework suggests that while the three action fields can involve all three factors (exit, voice, and solidarity), each one relies most heavily on two of the three.

First, social dialogue encouraging a shift from labor replacing to labor complementing uses of AI typically is most effective where unions are able to draw on existing institutions that constrain employer **exit** from employment contracts and social protections, such as job security agreements, high minimum standards, and vocational training commitments, as these raise the costs of rapid automation and disincentivize deskilling. At the same time, strong collective worker **voice** traditions and institutions can encourage more effective agreements over investments in skills and strategies relating to how these skills are deployed as firms invest in new AI-based tools. Where workers are not afraid of losing their jobs, due to job security or social insurance protections, they are typically more willing to cooperate on productivity improvements associated with new technology investments.

Second, social dialogue encouraging management to use algorithmic management tools in a way that empowers rather than controls labor depends most crucially on collective worker **voice**, via either worker representatives' bargaining and data protection rights or their success in building countervailing power to exercise strong voice through worker organizing and mobilization. Inclusive **solidarity** is also important for regulating algorithmic management. While algorithmic management technologies are deployed across the workforce, they are applied most intensively in more routinized and easily rationalized jobs.[10] In addition, the negative impacts of algorithmic

[10] Krzywdzinski, M., Schneiß, D., & Sperling, A. (2025). Between control and participation: The politics of algorithmic management. *New Technology, Work and Employment, 40*(1), 60-80.

bias have a disproportionate impact on women and minority ethnic groups.[11] Successful social dialogue in this area thus depends on a broad and inclusive approach that represents the interests and concerns of the most vulnerable workers in a company, industry, or society.

Finally, social dialogue that targets the social 'embedding' of jobs that have been created or restructured through labor-displacing AI innovations is likely to be most successful where it strengthens constraints on employer **exit** through strategies of inclusive labor **solidarity**. Efforts to improve conditions for workers across the AI supply chain have concentrated on strengthening basic employment rights and protections that make it more difficult to treat workers at the bottom of that chain as a precarious and disposable workforce. Social dialogue is strengthened where these workers act in solidarity with established labor unions and other organizations that can draw on more established institutional or labor market power.

Our analysis of case studies below illustrates a wide variety of approaches to social dialogue in each of these action areas, which draw on different combinations of resources, but also face varied constraints. Overall, we argue these efforts are most successful in encouraging a more socially equitable and sustainable approach to AI adoption and deployment where labor unions are able to draw on stronger constraints on employer exit, support for collective worker voice, and strategies of inclusive labor solidarity. We return to this framework in our conclusion, to structure our discussion of the comparative findings.

Case selection and research approach

National, industry, and company cases and interviewees for this report were identified through conferences and meetings focused on social dialogue over AI, as well as through snowball sampling, via recommendations from contacts working on these topics in industry and policy roles. We provide more in-depth analysis on a subset of national cases, where we conducted multiple interviews with worker representatives. These include: Germany, the United States, South Korea, and India. In other cases, we conducted or draw on a smaller number of interviews or email communications, including France, Spain, Sweden, Canada, Japan, Brazil, the Dominican Republic, and Kenya. In Brazil, we interviewed representatives of employer associations. Examples from other countries discussed in the report are based primarily on archival sources. We also conducted interviews or email communications with academics with expertise in social dialogue over AI, and with union representatives at the global union federation UNI Global Union,[12] which provided context and filled out details on some of the cases. In total, we conducted 19 regular interviews and 7 email communications or email-based interviews between August 2024 and January 2025.[13]

The authors of this report also all participated in a conference at Cornell University on AI and the Future of Work organized jointly with the Communications Workers of America (CWA), the AFL-CIO Tech Institute, and UNI Global Union. Around 30 union representatives and organizers attended from the US, Canada, Germany, Sweden, Spain, and the Dominican Republic. They presented and discussed their experiences organizing around and negotiating over AI and algorithms in different industry and national settings. This conference was organized jointly with an academic conference, and involved exchange between international researchers and unions.

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[11] Kim, S., Oh, P., & Lee, J. (2024). Algorithmic gender bias: investigating perceptions of discrimination in automated decision-making. *Behaviour & Information Technology, 43*(16), 4208-4221. Kordzadeh, N., & Ghasemaghaei, M. (2022). Algorithmic bias: review, synthesis, and future research directions. *European Journal of Information Systems, 31*(3), 388-409.

[12] UNI Global Union represents over 20 million service workers worldwide, including in care, commerce, finance, gaming, graphical and packaging, ICT and related services, media, entertainment & arts, post & logistics, and property services. https://uniglobalunion.org/

[13] See Appendix 1 for details on our interviews

Our knowledge of and insights on many of the case studies discussed in this report benefited from these presentations and discussions.

Reports published by the UC Berkeley Labor Center, UNI Europa, the Friedrich Ebert Stiftung, and the OECD describe and analyze case studies of social dialogue, including collective bargaining, over AI and digitalization, and are recommended for more information on agreements or initiatives.[14] In addition, two databases provide more detailed language from collective agreements addressing technologies and their workforce consequences: the Public Services International (PSI) Digital Bargaining Hub and the UNI Europa Database of AI and Algorithmic Management in Collective Bargaining Agreements.[15]

We now turn to our case study findings.

[14] Kresge, L. (2020). Union Collective Bargaining Agreement Strategies in Response to Technology. UC Berkeley Labor Center. Kresge, L. (2023) Negotiating Workers' Rights at the Frontier of Digital Workplace Technologies in 2023. Berkeley Labor Center Blog. Brunnerová, S., D. Ceccon, B. Holubová, M. Kahancová, K. Lukáčová, G. Medas (2024) Collective Bargaining Practices on AI and Algorithmic Management in European Services Sectors. UNI Europa and Friedrich Ebert Stiftung. Rolf, S. (2024) AI and Algorithmic Management in European Services Sectors: Prevalence, functions, and a guide for negotiators. UNI Europa and Friedrich Ebert Stiftung. Global Deal (2024), Social Dialogue and the Use of Artificial Intelligence in the Workplace. OECD (2023), *OECD Employment Outlook 2023: Artificial Intelligence and the Labour Market*, OECD Publishing, Paris, https://doi.org/10.1787/08785bba-en.

[15] Digital Bargaining Hub - PSI - The global union federation of workers in public services, https://publicservices.international/ digital-bargaining-hub; A database of AI and algorithmic management in collective bargaining agreements - UNI Europa, https://www.uni-europa. org/news/a-database-of-ai-and-algorithmic-management-in-collective-bargaining-agreements/

1 International, national, and regional social dialogue

Union involvement in social dialogue on AI at national and international levels can take different forms. Framework agreements between employers and unions, often with the involvement of government bodies, have established guiding principles concerning the development and adoption of AI-based tools, their employment and skills impacts, psychosocial health impacts, data privacy rights, and consultation or bargaining rights. Labor unions also are involved in consultation bodies or committees that advise on laws and policies establishing clear guidelines and allocating resources to enforcement or innovation and investment. Another form of social dialogue at these levels is via organizing and lobbying, as labor unions build coalitions with other civil society groups, or with employers, to shape policy decisions.

1.1. Europe

1.1.1. Social dialogue at EU-level

The most robust examples of international social dialogue on AI and algorithms can be found within the **European Union**. This is due to the EU's institutionalized forums for tripartite negotiation and consultation, through both the framework agreements signed between social partners and the process of developing and approving EU-level legislation or directives. Chagny and Blanc observe that AI governance in Europe is based on three forms of regulation: by formal laws or directives (for example, the AI Act); through bodies aimed at standardizing market tools, such as the International Organization for Standardization (ISO) and European standardization organizations; and through soft law, or self-regulation through charters, manifestos, or ethics committees.[16]

The 2020 European Social Partners Framework Agreement on Digitalization is an example of social dialogue at the EU level, between the European Trade Union Confederation (ETUC) and the major cross-sectoral employers' associations Business Europe, SME United, and CEEP, with the participation of the European Commission.[17] The agreement addresses four areas: 'digital skills and securing employment', 'modalities of connecting and disconnecting', 'artificial intelligence and guaranteeing the human in control principle', and 'respect of human dignity and surveillance'. Suggested measures include training funds, learning accounts, and competence development plans; as well as schemes such as short-time work. The agreement also recommends that national affiliates should respect a series of principles when deploying AI systems, including

[16] Chagny, O., & Blanc, N. (2024) Social dialogue as a form of bottom-up governance for AI: the experience in France. In *Artificial Intelligence, Labour and Society*. A. Ponce del Castillo (Ed.). ETUI. 197-205. P.200. https://www.etui.org/sites/default/files/2024-03/Artificial%20intelligence%2C%20labour%20and%20society_2024.pdf#page=199

[17] European Social Partners Framework Agreement on Digitalisation. June 2020. https://www.etuc.org/system/files/document/file2020-06/Final%2022%2006%2020_Agreement%20on%20Digitalisation%202020.pdf Framework agreements are non-binding, and thus do not include formal mechanisms for ensuring compliance. However, they provide agreed principles and recommended measures that can be referenced in more formal collective negotiations or policy initiatives. The text of the Framework Agreement states: ' In the context of article 155 of the Treaty [on the functioning of the European Union (TFEU)], this autonomous European framework agreement commits the members of BusinessEurope, SMEunited, CEEP and ETUC (and the liaison committee EUROCADRES/ CEC) to promote and to implement tools and measures, where necessary at national, sectoral and/or enterprise levels, in accordance with the procedures and practices specific to management and labour in the Member States and in the countries of the European Economic Area. The signatory parties also invite their member organisations in candidate countries to implement this agreement.' p.13

'human in control', prevention of harm, and avoiding bias and discrimination through risk assessment, transparency, and fairness.[18] Special provisions are called for where AI is used in human resource decisions and analysis, including workers' rights to request human oversight and to contest the decision.

In 2022, an agreement on digitalization for central governments was concluded by the European Federation of Public Service Unions (EPSU) and European Public Administration Employers (EUPAE) - again, with the participation of the European Commission.[19] It includes rights to training, to telework, to disconnect, to personal data protection, and to health and safety, committing employers to conduct health risk assessments in consultation with labor unions. Similar to the 2020 digitalization agreement, it also encourages a 'human-in-command' approach to AI.

Sectoral agreements between EU social partners address similar themes. A 2020 framework agreement in electricity between EPSU, IndustriAll, and Eurelectric includes commitments to joint actions on training and lifelong learning associated with digitalization, as well as strategies to prevent psychosocial risks.[20] Also in 2020, the EU social partners in the telecom sector, UNI Europa ICTS and ETNO, signed a Joint Declaration on Artificial Intelligence, which outlines agreed principles concerning ethical AI and the need to prioritize investing in digital skills and training within the telecoms industry, in the tech and telecoms ecosystems, and through policy and government action.[21] More recently, EU social partners in the banking sector issued a 2024 EU Joint Declaration on Employment Aspects of Artificial Intelligence, which states that social dialogue, including collective bargaining, is important for managing risks and opportunities associated with AI in the industry.[22] These include AI's employment and skill impacts, occupational safety, and protection of digital rights.[23] The Declaration encourages social dialogue to develop and put in place joint actions to support job transition and to ensure re- or up-skilling opportunities when job profiles are affected by the growing use of AI and other digital technologies.

EU legislation and directives provide important tools for worker representatives in different European countries to have information and bargaining rights concerning new technologies, and have often been developed through or influenced by tripartite consultation. The 1989 Framework Directive on occupational safety and health (OSH) includes provisions requiring that workers or their representatives are consulted in 'the planning and introduction of new technologies to the workplace'; and requires employers to conduct risk assessments prior to purchasing new systems.[24] In addition, the 2018 General Data Protection Regulation (GDPR) includes requirements concerning the collection, storage, and use of personal data, and its provisions are enforced through national data protection authorities. Both areas of legislation have been important tools for worker representatives contesting the use of algorithmic management tools.[25] Using GDPR provisions, union representatives can block employers from processing employees' personal data

[18] Voss, E., & Bertossa, D. (2022). Collective Bargaining and Digitalization: A Global Survey of Union Use of Collective Bargaining to Increase Worker Control over Digitalization. *New England Journal of Public Policy*, *34*(1), 10.

[19] EPSU (2022) EU Social Partners signed new agreement on digitalization for central government. https://www.epsu.org/article/eu-social-partners-signed-new-agreement-digitalisation-central-government

[20] Voss and Bertossa (2022), *ibid*, p.15

[21] The Telecom Social Dialogue Committee (2020) Joint Declaration on Artificial Intelligence. https://www.uni-europa.org/old-uploads/2020/12/20201130_UE-ETNO-declaration-AI.pdf

[22] Joint Declaration on Employment Aspects of Artificial Intelligence by the European Social Partners in the Banking Sector. 14 May 2024. https://www.uni-europa.org/wp-content/uploads/sites/3/2024/05/Joint-Declaration-on-Employment-Aspects-of-Artificial-Intelligence_BankSD.pdf

[23] Email communication, Massimo Mensi, UNI Global Union, December 9, 2024.

[24] Cefaliello, A. and J. Popma. (2024) How can workers protect themselves against the risks of new technologies? HesaMag 29 (Winter): 14-17, pp.15-16.

[25] Aloisi, A. (2024). Regulating algorithmic management at work in the European Union: Data protection, non-discrimination and collective rights. *International Journal of Comparative Labour Law and Industrial Relations*, *40*(1).

to analyze and predict their behavior, including their performance.[26] The GDPR also includes the possibility for Member States to provide, by law or in collective agreements, more specific rules to ensure the protection of the rights and freedoms of employees with regard to the processing of personal data in the context of employment (Article 88).

More recently, the EU's 2024 AI Act and 2024 Platform Work Directive have strengthened worker rights associated with digitalization, AI, and algorithmic management. Ponce Del Castillo observes that both 'are notable examples of successful trade union influence' in the regulatory domain – with improvements in worker rights made through dialogue with and the advocacy of unions.[27]

Provisions in the AI Act support building workers' AI literacy and involvement in development of codes of conduct and design and development of AI systems. The AI Act also requires AI providers (i.e. developers and sellers) to identify and analyze 'known and foreseeable risks', in cases where an AI system is considered high-risk – and then to communicate this information to workers and their representatives.[28] These include algorithmic management applications, such as promotion, dismissal, task allocation, monitoring, and performance evaluation. Certain applications, such as sentiment analysis tools widely used in monitoring systems, are prohibited in workplace and educational settings.

Labor unions such as UNI Europa[29] and IndustriALL[30] have raised concerns with the AI Act's reliance on voluntary compliance, its neglect of general-purpose AI, and exemptions or loopholes concerning certain algorithmic management tools. The European Trade Union Confederation (ETUC) has called on the EU to develop a range of new regulations and protections for workers, including a dedicated directive on algorithmic systems at work that ensures human oversight of AI-driven decision-making, an AI liability directive to ensure that workers operating AI systems are not held liable when AI causes harm, strengthened regulation of global digital value chains ensuring fair labor norms and ethical sourcing practices in AI development, and copyright protections for creative workers that ensure informed consent, transparency, and fair remuneration.[31]

The ETUC is also coordinating the work of national labor unions to develop standards to operationalize the legal obligations in the AI Act, including 'establishing a risk management system, maintaining a data governance programme, drawing up technical documentation, keeping

[26] Le Bonniec, T. (2024) Another Path for AI Regulation: Worker Unions and Data Protection Rights. Italian Labour Law e-journal, 17 (2), pp.115-131. 10.6092/issn.1561-8048/20870. p.126.
According to the text of the GDPR -https://eur-lex.europa.eu/eli/reg/2016/679/oj/eng - Analyzing and predicting employee behavior through data processing is considered 'profiling', and requires additional justification and transparency (Article 4). Union representatives can potentially challenge and potentially block employers from processing employee personal data to analyze and predict their behavior, including performance, by leveraging the 'right to object' provision (Article 21), which allows individuals to oppose processing of their data when it involves 'profiling', especially if such processing is considered excessive or intrusive, and could be seen as disproportionate to the stated business purpose. Article 22 gives the 'data subject' 'the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her.'

[27] Ponce Del Castillo, A. (2024) AI and trade unions: from rapid responses to proactive strategies. HesaMag 29 (Winter): 31-34. Pp. 32-33.

[28] The AI Act relies on providers of high-risk AI systems to self-assess and self-certify their products' compliance, which has been criticized for not allowing for sufficient oversight by external bodies such as labor unions. Özkiziltan, D. and F. Landini (2025) Trustworthy and Human-Centric? The New Governance of Workplace AI Technologies under the EU's Artificial Intelligence Act. *Transfer*, Issue 4.

[29] UNI Europa (2021) AI Act - Our submission to the EU Commission. June 30, 2021. https://www.uni-europa.org/news/ai-act-our-submission-to-the-eu-commission/

[30] IndustriALL (2024) IndustriALL adopts a trade union strategy to tackle AI at work. December 4, 2024.https://news.industriall-europe.eu/Article/1176

[31] ETUC (2025) Artificial Intelligence for Workers, Not Just for Profit: Ensuring Quality Jobs in the Digital Age. Adopted at the Executive Committee meeting of 04-05 March 2025. https://etuc.org/en/document/artificial-intelligence-workers-not-just-profit-ensuring-quality-jobs-digital-age

automatic logs, providing instructions for use and being transparent to downstream deployers and users, and ensuring human oversight, robustness and cyber-security'.[32]

The Platform Work Directive similarly targets algorithmic transparency, empowering workers by requiring platforms[33] to provide information to workers, their representatives, and 'competent national authorities' concerning how and why they are using algorithmic management systems (as well as their limitations).

1.1.2. Social dialogue at national level

There are a number of examples of national-level social dialogue in Europe that target similar issues. The Nordic countries have a wide range of such initiatives.[34] In **Denmark**, government-led commissions on digitalization and AI topics with tripartite representation have included the Disruption Council (2017), the Data Ethics Council (2019), the Sharing Economy Council (2019), and the Digitalization Partnership (2021).[35] The Swedish government similarly established a tripartite Digitalization Commission in 2012, which was replaced by a Digitalization Council in 2017. The **Swedish** prime minister established an AI commission in 2023 with business, academic, media, and union representatives - with a focus on 'assuring AI development that fosters common good' and supporting social mobility and reskilling.[36] In both countries, unions and employers have also been involved in consultations over legislation relating to AI and digitalization, including the recent AI Act.

In **Germany**, the government's AI Strategy was developed through expert bodies that included employer and labor union representatives, such as the German Bundestag's 2018 Commission 'Artificial Intelligence – Social Responsibility and Economic, Social and Ecological Potentials'.[37] This Strategy includes a government pledge 'to put equal emphasis on the workers' and companies' interests, highlighting the importance of skills development, social security, health and safety, societal participation, and co-determination for the workers in the transformation process'.[38] It has been implemented through, for example, a 2019 National Skills Strategy that supports investment in AI-specific skills; the Observatory for Artificial Intelligence in the World of Work to conduct research and inform policy; and the Civic Innovation Platform, which seeks to include representatives from civil society in AI application development 'for social good'.[39]

German unions have also been involved in tripartite initiatives focused on 'AI standardization' to 'develop standards for AI data models, security, criticality and quality criteria'.[40] A working group on algorithmic management (AM) was established in 2023 by the German Federal Ministry of Labor and Social Affairs (BMAS) and the metal workers' union IG Metall.[41] This established four

[32] Ponce Del Castillo (2024), Ibid, p.33.
[33] A digital platform is a software based infrastructure that allows users to interact and conduct transactions over the internet. Platform work is 'a form of employment in which organisations or individuals use an online platform to access other organisations or individuals to solve specific problems, or to provide specific services in exchange for payment.' European Council (2025) EU rules on platform work. https://www.consilium.europa.eu/en/policies/platform-work-eu/
[34] Ilsøe, A., Larsen, T. P., Mathieu, C., & Rolandsson, B. (2024). Negotiating about algorithms: Social partner responses to AI in Denmark and Sweden. *ILR Review*, *77*(5), 856-868.
[35] Ilsøe et al. (2024) *Ibid.* p. 859.
[36] Ilsøe et al. (2024) *Ibid.* p. 863. For the final report of the AI commission, see: Regeringskansliet (2024) AI-kommissionens Färdplan för Sverige https://www.regeringen.se/rapporter/2024/11/ai-kommissionens-fardplan-for-sverige/
[37] Krzywdzinski, M., Gerst, D., & Butollo, F. (2023). Promoting human-centred AI in the workplace. Trade unions and their strategies for regulating the use of AI in Germany. *Transfer: European Review of Labour and Research*, *29*(1), 53-70. Pp.59-60.
[38] Özkiziltan, D. (2024). Governing Engels' pause: AI and the world of work in Germany. *ILR Review*, *77*(5), 846-856. p.849.
[39] Özkiziltan, D. (2024). *Ibid,* p. 850.
[40] Krzywdzinski et al. (2023), *Ibid*, p. 60.
[41] Wotschack, P., Butollo, F., & Hellbach, L. (2024). Algorithmic management and democracy at work in Germany. Incoding Policy Brief, 2024. https://ddd.uab.cat/record/290693

main action areas: 1) integrated AM system planning with worker participation; 2) transparency on data and function of AM systems; 3) building knowledge for assessing effects on work processes and conditions; and 4) knowledge-based change management with goal setting, evaluation, and feedback.[42] A particularly noteworthy legislative development was the 2021 Works Council Modernization Act, which introduced AI-specific revisions to the 'Works Constitution Act' - the major legislation regulating works councils' participation rights at company and workplace level.[43] New provisions extend works councils' consultation rights on new technologies to plans to adopt AI, and clarify that co-determination rights over selection guidelines for hiring, transfers and terminations include situations in which AI is used. Companies are also required to fund an expert (engaged by the works council) to consult on proposed changes or policies involving AI.

In **France**, the 2022 French Digital Council (CNNum) involved consultation with labor unions, employers, citizens, and representatives from business, research, and government.[44] The commission developed 'roadmaps' in three areas: combating online violence, digital transitions at work, and digital inclusion, with recommended legislation in each area. The 2024 national AI Commission included a representative from the French Democratic Confederation of Labor (CFDT). The commission developed recommendations that included the role of social dialogue in supervising digital transformation at work, investments in training, evaluating algorithms, and increasing environmental transparency.[45] Tripartite dialogue in France is also important for translating EU-level agreements and directives into national law, through national interprofessional agreements (ANI).[46] For example, the European Agreement on Digitalization could be implemented through an ANI within France.[47]

One interesting project is the Social Dialogue on AI (DIAL-IA) initiative, which aims to both raise awareness of and resources supporting social dialogue at company and workplace levels in France.[48] It is coordinated by the Institute of Social and Economic Research (IRES), a non-profit organization run by six labor unions, in collaboration with the National Agency for the Improvement of Working Conditions (ANACT). On the union side, it is led by CFDT, CFE-CGC, FO-Cadres and UGICT-CGT (later joined by CFTC). DIAL-IA brought together around 50 participants from unions, employers, and the public sector over 18 months. The project produced a joint manifesto for 'technological social dialogue[49] and a platform with tools to implement this dialogue, launched in January 2025.

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42 Arbeitsgruppe 'Algorithmisches Management' (2023): Arbeitspapier: Daten und Gute Arbeit – Algorithmisches Management im Fokus https://www.denkfabrik bmas.de/fileadmin/Downloads/Publikationen/barrierefrei_BMAS_DF_Mantel_Algorithmis ches_Management.pdf

43 Özkiziltan, D. (2024). Governing Engels' pause: AI and the world of work in Germany. *ILR Review*, *77*(5), 846-856.p.849. BMAS (Bundesministerium für Arbeit und Soziales) 2025.Betriebsrätemodernisierungsgesetz. https://www.bmas.de/DE/Service/Gesetze-und-Gesetzesvorhaben/betriebsraetemodernisierungsgesetz.html

44 Chagny, O., & Blanc, N. (2024) Social dialogue as a form of bottom-up governance for AI: the experience in France. *Artificial Intelligence, Labour and Society*. A. Ponce del Castillo (Ed.). ETUI. 197-205. https://www.etui.org/sites/default/files/2024-03/Artificial%20intelligence%2C%20labour%20and%20society_2024.pdf#page=199 CNR Numérique - Méthode, enseignements et feuilles de route. https://cnnumerique.fr/annonce/cnr-numerique-methode-enseignements-et-feuilles-de-route

45 CFDT (2024) Commission de l'IA : Faire des travailleurs les acteurs de transformations numériques justes et responsables. https://www.cfdt.fr/sinformer/communiques-de-presse/commission-de-lia-faire-des-travailleurs-les-acteurs-de-transformations-numeriques-justes-et-responsables# . Commission de l'Intelligence Artificielle (2024) IA: Notre Ambition Pour La France. https://www.info.gouv.fr/upload/media/content/0001/09/4d3cc456dd2f5b9d79ee75feea63b47f10d75158.pdf

46 National interprofessional agreements (ANI) are tripartite agreements that are signed by the social partners, and cover different areas of employment and social policy. Most ANIs need to be transposed into legislation before they can be implemented. French law requires the government to organize a dialogue prior to introducing a bill to Parliament in certain areas of reform, although exceptions can be made for 'urgent circumstances'. Vincent, C. (2019). France: The rush towards prioritising the enterprise level. In *Collective Bargaining in Europe: Towards an Endgame*. T. Müller, & J. Waddington (Eds.). Brussels: European Trade Union Institute. 217-238.

47 Interview, Franca Salis-Manidier, CFDT, January 13, 2025

48 DIAL IA Platform (2025) http://dial-ia.fr/

49 DIAL-IA (2025) Pour un dialogue social au service des bons usages de l'IA et d'une nouvelle étape de progrès social dans les entreprises et les administrations. https://www.actuel-rh.fr/sites/default/files/article-files/dialia_manifeste.pdf

In addition, European labor unions have been involved in framing national legislation. In **Spain**, the 2021 Riders Law (*La Ley Rider*) was developed through a tripartite agreement between the Workers' Commissions (CC.OO.) and the General Union of Workers (UGT) and the Spanish Confederation of Employers' Organizations (CEOE) and the Spanish Confederation of Small and Medium Enterprises (CEPYME). It was pioneering in recognizing platform-based food delivery courriers ("riders") as employees rather than independent contractors (under certain conditions), and requiring platforms to disclose information to riders on how algorithms and AI are used in hiring decisions, layoffs, worker profiles; and their impacts on working conditions – with requirements that worker representatives are informed of the algorithm's 'parameters, rules, and instructions'.[50]

Tripartite negotiations that lasted 5 months in Spain also contributed to revising of the Workers' Statute Law to incorporate the right to algorithmic transparency, which requires every type of platform to inform works councils about the inner workings of the algorithm 'that may affect working conditions, access to and maintenance of employment, including the creation of profiles.'[51]

In other cases, national agreements have established key principles or guidelines for bargaining on digitalization at lower levels. In Spain, the 2023 Agreement for Employment and Collective Bargaining, negotiated between the unions CC.OO. and UGT and the employer organizations CEOE and CEPYME, includes requirements that sector and company agreements establish procedures for informing workers of digitalization projects and their impacts on employment, skills, and working conditions. It also includes a section on AI with clear requirements that AI systems 'follow the principle of human control' and that companies provide worker representatives with 'transparent and understandable information on processes based on AI in human resources procedures (hiring, evaluation, promotion and dismissal) and ensure that there is no prejudice or discrimination.'[52]

Another example here is the Basic Agreement in **Norway**, negotiated at the national level between the Confederation of Norwegian Enterprise (NHO) and the Norwegian Confederation of Trade Unions (LO). It includes provisions to support worker privacy, bias prevention, and worker representative involvement in decision-making associated with AI tools in the workplace.[53] The agreement also makes reference to national legislation, including the Working Environment Act (on the need to consult with shop stewards on changes) and the Data Privacy Act (on the collection and storage of personal data).

While the **UK** is no longer in the EU, much of its legislation is formally harmonized with EU Directives and Laws, including the UK GDPR. The Trades Union Congress (TUC) set up its own taskforce and drafted the 'AI Regulation and Employment Rights Bill' in 2024, with the stated purpose to regulate 'the use of artificial intelligence systems by employers in relation to workers, employees and jobseekers to protect their rights and interests in the workplace'.[54] It includes provisions supporting union rights regarding employers' use of AI systems and risk mitigation associated with AI value chains. A Special Advisory Committee provided input, including representatives from universities, research institutes, employer organizations, and labor unions, and

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50 Eurofound (2021), *Riders' law* (Initiative), Record number 2449, Platform Economy Database, Dublin, https://apps.eurofound.europa.eu/platformeconomydb/riders-law-105142.

51 European Agency for Safety and Health at Work. (2022). Spain: The 'riders' law', new regulation on digital platform work. In *OSHA Europa*. https://osha.europa.eu/sites/default/files/2022-01/Spain_Riders_Law_new_regulation_digital_platform_work.pdf

52 BOE-A-2023-12870 Resolución de 19 de mayo de 2023, de la Dirección General de Trabajo, por la que se registra y publica el V Acuerdo para el Empleo y la Negociación Colectiva. (2023). Ministry of Labor and Social Economy. https://www.boe.es/diario_boe/txt.php?id=BOE-A-2023-12870

53 Brunnerová et al. (2024), *Ibid*, p. 20.

54 TUC (2024) Artificial Intelligence (Regulation and Employment Rights) Bill. https://www.tuc.org.uk/research-analysis/reports/artificial-intelligence-regulation-and-employment-rights-bill

members of parliament. While the Bill was never formally introduced in parliament, its framing encouraged dialogue on these topics, establishing a common union position and leadership. In **Wales**, the tripartite Workforce Partnership Council, a forum for public services workforce issues, released a set of principles for 'managing the transition to a digital workplace' – including a focus on promoting 'a social partnership approach to the involvement, participation and consultation of trade unions'.[55] Following the recommendation of the Workforce Partnership Council, the Welsh Government adopted new guidelines on algorithmic management and workers rights.[56] The union confederation TUC Cymru also worked in collaboration with the organization Connected by Data to develop a toolkit for empowering worker voice and public sector procurement of data and AI.[57]

1.2. North America

Tripartite social dialogue is less institutionalized in North America compared to in Europe. However, there are many examples of union-led initiatives at national and regional or local (e.g. state, province, city) levels, in which labor unions have sought to formulate models and shape legislation on AI and algorithms. These are often organized in coalition with other civil society organizations or in consultation with employers and politicians or government representatives.

In the **United States**, social dialogue at the national level involves listening sessions, meetings with policy-makers, and lobbying or organizing efforts focused on influencing the content of specific policies or their implementation through agencies. In 2023, the White House conducted a Listening Session with Union Leaders on Advancing Responsible Artificial Intelligence Innovation, which included representatives from the American Federation of Labor - Congress of Industrial Organization (AFL-CIO) Tech Institute, American Federation of State, County and Municipal Employees (AFSCME), American Federation of Teachers (AFT), Communications Workers of America (CWA), Screen Actors Guild–American Federation of Television and Radio Artists (SAG-AFTRA), International Alliance of Theatrical Stage Employees (IATSE), International Brotherhood of Teamsters (IBT), National Education Association (NEA), United Auto Workers (UAW), United Food and Commercial Workers International Union (UFCW), and Writers Guild of America (WGA) East.[58] In 2023, Vice President Harris convened a separate meeting of consumer protection, labor, and civil rights leaders to discuss AI-based risks.[59] These constituted informal consultations with labor unions and civil society organizations, in a context where unions, business leaders, and technology developers were also providing written statements and advice. For example, the White House Office of Science and Technology Policy (OSTP) put out a Request for Information

[55] Workforce Partnership Council agreement: partnership and managing change. 2 December 2021.https://www.gov.wales/workforce-partnership-council-agreement-partnership-and-managing-change-html

[56] Welsh Government (2024) Managing technology that manages people: A Social Partnership approach to algorithmic management systems in the Welsh public sector. https://www.gov.wales/managing-technology-manages-people

[57] Cantwell-Corn, A. (2025) Toolkit: Worker voice in public sector procurement of digital and AI systems in Wales. Feb 12, 2025. https://connectedbydata.org/resources/worker-voice-procurement-guidance-wales

[58] The White House (2023) Readout of White House Listening Session with Union Leaders on Advancing Responsible Artificial Intelligence Innovation. July 3, 2023. https://www.whitehouse.gov/briefing-room/statements-releases/2023/07/03/readout-of-white-house-listening-session-with-union-leaders-on-advancing-responsible-artificial-intelligence-innovation/

[59] The White House (2023) Readout of Vice President Harris's Meeting with Consumer Protection, Labor, and Civil Rights Leaders on AI, July 13, 2023. https://www.whitehouse.gov/briefing-room/statements-releases/2023/07/13/readout-of-vice-president-harriss-meeting-with-consumer-protection-labor-and-civil-rights-leaders-on-ai/

on Automated Worker Surveillance and Management in May, 2023 – and unions responded with formal comments, intended to inform policy making in this area.[60]

Former US President Biden issued a 2023 Executive Order (EO) on the Safe, Secure, and Trustworthy Development and Use of AI, which affirmed the importance of social dialogue in AI adoption and deployment: 'as AI creates new jobs and industries, all workers need a seat at the table, including through collective bargaining.' Federal agencies were tasked with developing principles and best practices that mitigate worker harms and maximize worker benefits.[61] President Trump repealed this and issued a new Executive Order on Removing Barriers to American Leadership in Artificial Intelligence, which directs White House Officials to develop an action plan to 'promote human flourishing, economic competitiveness, and national security'[62]. In April 2025, the White House Office of Management and Budget issued two new memos aimed at providing guardrails concerning how federal agencies use and purchase AI, which include risk management practices where systems are deemed 'high-risk', with significant potential impacts.[63]

Under the Biden Administration, federal agencies, including the National Labor Relations Board (NLRB) and the Equal Employment Opportunity Commission (EEOC) also issued AI-specific guidance or opinions - for example, clarifying labor law protections against the use of surveillance tools by employers in union organizing campaigns, and the scope of liability by third-party AI software providers under anti-discrimination laws. Litwin and Racabi observe that these kinds of initiatives can be overturned by the courts, as well by a new administration.[64] Indeed, these agencies had already rescinded a number of policies at the time of writing; for example, in February 2025, the NLRB Acting General Council rescinded at least 18 memoranda issued by his predecessor, including one addressing the impact of electronic monitoring on employee rights.[65]

Unlike Europe, the US does not have a federal data privacy law; and almost all of the 20 state-level data privacy laws explicitly exclude workers.[66] However, unions have sought to encourage strengthened worker rights in draft bills, with some success.[67] One example is the 2018 California Consumer Protection Act (CCPA), which is unique in giving workers rights of information, access, and opt outs of employer data collection policies, as well as protection from retaliation

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60 The report notes that 211 stakeholders submitted comments, including '91 workers, 19 advocacy organizations, 16 researchers and research organizations, 12 unions, 10 trade associations, eight technology developers, one coalition comprised of advocacy organizations and a union, and 54 unspecified stakeholders'. U.S. Government Accountability Office (2024) Digital Surveillance of Workers: Tools, Uses, and Stakeholder Perspectives. GAO-24-107639. GAO-24-107639, Digital Surveillance of Workers: Tools, Uses, and Stakeholder Perspectives

61 The White House (2023) Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence, October 30, 2023. https://www.whitehouse.gov/briefing-room/presidential-actions/2023/10/30/executive-order-on-the-safe-secure-and-trustworthy-development-and-use-of-artificial-intelligence/ Guidance to federal agencies on best practices included 'centering worker empowerment' (workers and their representatives should be informed of and have genuine input in the design, development, testing, training, use, and oversight of AI systems for use in the workplace), ethically developing AI, establishing AI governance and human oversight, ensuring transparency in AI use, protecting labor and employment rights, using AI to enable workers, supporting workers impacted by AI, and ensuring responsible use of worker data. Section 6 directed the Secretary of Labor to collaborate with labor unions to create best practices for employer use of AI, including addressing concerns with job displacement, protected activity, and data collection transparency.

62 The White House (2025) Removing Barriers to American Leadership in Artificial Intelligence. January 23, 2025. https://www.whitehouse.gov/presidential-actions/2025/01/removing-barriers-to-american-leadership-in-artificial-intelligence/

63 Alder, M. (2025) Trump White House releases guidance for AI use, acquisition in government. FedScoop, April 4, 2025. https://fedscoop.com/trump-white-house-ai-use-acquisition-guidance-government/

64 Litwin, A. S., & Racabi, G. (2024). Varieties of AI Regulations: The United States Perspective. *ILR Review*, *77*(5), 799-812. p.809.

65 Stanek, T. M. and Z. V. Zagger (2025) NLRB Acting General Council Rescinds Many of Predecessor's Memos, Sets Stage for New Labor Policy. *The National Law Review,* February 15, 2025. https://natlawreview.com/article/nlrb-acting-general-counsel-rescinds-many-predecessors-memos-sets-stage-new-labor

66 Khan, M., A. Bernhardt, L. Pathak. (2024) Current Landscape of Tech and Work Policy: A Roundup of Key Concepts. https://laborcenter.berkeley.edu/tech-and-work-policy-guide/

67 Kang, C. (2024) States take up AI regulation amid federal standstill, New York Times, June 10, 2024.https://www.nytimes.com/2024/06/10/technology/california-ai-regulation.html

for exercising these rights.[68] Labor unions were involved in coalitions with a range of consumer protection and other civil society groups to influence the passage and details of this legislation, against strong opposition by the tech industry.[69] Following passage of the Act, unions have been working with advocates to highlight worker impacts throughout the California Privacy Protection Agency (CPPA)'s rule making process to implement the privacy law - which was ongoing at time of writing.[70]

Unions have also contributed expertise and model language for a range of further State-level bills that have not (yet) been passed, including California's 2022 proposed Workplace Technology Accountability Act,[71] Washington State's proposed Addressing Technology Used by Employers in the Workplace Act,[72] and New York State's 2024 proposed Bossware and Oppressive Technologies Act.[73] These would establish rules concerning how employers use electronic monitoring and automated coaching, and require employers to conduct impact assessments.

Under the Biden Administration, government procurement was used as a lever for strengthening social dialogue over AI. The Office of Management and Budget issued a memo in 2024 that encouraged agencies to consult with federal employee unions, among other impacted groups, on the design, development, and use of AI.[74] States and localities have also adopted guidance on procurement of AI tools with provisions for oversight on their equity and worker impacts.[75] In addition, state governments have used public sector specific legislation and executive orders to address government use of AI.[76]

Existing legal frameworks in **Canada**, including the Personal Information Protection and Electronic Documents Act, Canada Consumer Product Safety Act, Food and Drugs Act, Motor Vehicle Safety Act, Bank Act, Canadian Human Rights Act, and the Criminal Code, can be applied to some uses of AI.[77] For example, the Canadian Labour Code requires at least 120 days notice of technological change for federally regulated employees, which includes workers in Telecom, Rail, Trucking, Shipping, Air, and Ports. It also requires that, upon request from a bargaining agent, employers provide a written statement of the rationale for the proposed change and a list of employees who are most likely to be impacted.[78]

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68 Feng, K. (2023) Overview of new rights for workers under the California Consumer Privacy Act. UC Berkeley Labor Center. https://laborcenter.berkeley.edu/overview-of-new-rights-for-workers-under-the-california-consumer-privacy-act/

69 Rom, T. (2019) Inside the lobbying war over California's landmark privacy legislation, The Washington Post, February 8, 2019. https://www.washingtonpost.com/technology/2019/02/08/theres-going-be-fight-here-weaken-it-inside-lobbying-war-over-californias-landmark-privacy-law/

70 Wu, T. (2024) Unions Look to Sway California Privacy Agency over AI Rules. Bloomberg Law, March 25, 2024. https://news.bloomberglaw.com/daily-labor-report/unions-look-to-sway-california-privacy-agency-on-worker-ai-rules

71 California Assembly Bill 1651. https://legiscan.com/CA/text/AB1651/id/2571012

72 Washington State Legislature Bill HB 1672. https://app.leg.wa.gov/billsummary?BillNumber=1672&Year=2025&Initiative=false

73 State of New York Senate Bill 7623. https://legislation.nysenate.gov/pdf/bills/2023/S7623

74 Office of Management and Budget (2024) Memorandum of Advancing Governance, Innovation, and Risk Management for Agency Use of Artificial Intelligence. https://www.whitehouse.gov/wp-content/uploads/2024/03/M-24-10-Advancing-Governance-Innovation-and-Risk-Management-for-Agency-Use-of-Artificial-Intelligence.pdf

75 See, for example, Local Progress and In The Public Interest (2023) Harnessing the Power of Procurement: Issues, Considerations, and Best Practices to Advance Equity in the Contracting of Public Goods and Services. https://localprogress.org/2023/07/12/harnessing-the-power-of-procurement/; State of California (2024) GenAI Guidelines for Public Sector Procurement, Uses and Training. https://cdt.ca.gov/wp-content/uploads/2024/07/3a-GenAI-Guidelines.pdf

76 Dwyer, M. (2025) State Government Use of AI; The Opportunities of Executive Action in 2025. Center for Democracy & Technology, January 10, 2025. https://cdt.org/insights/state-government-use-of-ai-the-opportunities-of-executive-action-in-2025/

77 Innovation, Science and Economic Development Canada (2023) The Artificial Intelligence and Data Act (AIDA) – Companion document, March 13, 2023. https://ised-isde.canada.ca/site/innovation-better-canada/en/artificial-intelligence-and-data-act-aida-companion-document#s4

78 Canada Labour Code, Notice of Technological Change, R.S.C., 1985, c. L-2 (1985), Section 52. https://laws-lois.justice.gc.ca/eng/acts/L-2/section-52.html

Canada had no regulatory framework specific to AI at the time of writing. The Artificial Intelligence and Data Act (AIDA), initially introduced in Parliament in 2022, has been working its way through the Canadian legislative process as one part of the Digital Charter Implementation Act (DCIA).[79] The AIDA aligns with the EU AI Act by including many of the same definitions and concepts, as well as by taking a risk-based approach that targets 'high-impact' AI systems. AIDA would build on existing Canadian consumer protection and human rights law, empower the Minister of Innovation, Science, and Industry to enforce the Act, and prohibit reckless and malicious uses of AI.[80] In advance of the binding regulations outlined in the AIDA, forty companies involved with the development and managing of generative AI systems have signed the Voluntary Code of Conduct on the Responsible Development and Management of Advanced Generative AI Systems, committing to 'working to achieve' accountability, safety, fairness and equity, transparency, human oversight and monitoring, and validity and robustness.[81]

In an August 2023 brief, the public sector labor union Professional Institute of the Public Service of Canada (PIPSC) shared numerous concerns with the AIDA, including its narrow scope in limiting regulation to 'serious harm to individuals' from the private sector. PIPSC recommends that all harm to both individuals and groups should be regulated, and that the Act should apply to all federal departments and agencies and crown corporations, including national security institutions. The union also demands that the Bill mandate include 'consultation and transparency with all employees affected by employer AI use', one-year advance notice of layoffs due to AI, and a guarantee of a new job with the employer, retraining programs, or long-term unemployment insurance until pensionable age. Algorithmic management and data rights were also areas of concern.[82] The Canadian Labor Congress (CLC) submitted similar concerns, and noted the lack of public consultation with unions and civil society organizations before AIDA was introduced. Criticisms included the lack of requirements for human rights or privacy impact assessments in the development and application of AI systems, as well as how the definition of 'high-impact' system would be left to future regulators rather than being spelled out in the legislation itself. The CLC also recommended institutionalizing public disclosure, consultation, and accountability through an AI Advisory Council that includes representatives from civil society, human right organizations, unions, and the public.[83]

At the regional level, the province of Ontario introduced amendments to its Employment Standards Act in 2022 to regulate algorithmic management. Under the law, employers with more than 25 workers are required to have a written policy concerning electronic monitoring, with details on how and under what circumstances workers are monitored, and how information obtained through monitoring will be used. This should also be made available to workers.[84]

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79 Digital Charter Implementation Act, House Government Bill C-27, 44th Parliament. (2022). https://www.parl.ca/legisinfo/en/bill/44-1/c-27

80 Innovation, Science and Economic Development Canada (2023) The Artificial Intelligence and Data Act (AIDA) – Companion document, March 13, 2023. https://ised-isde.canada.ca/site/innovation-better-canada/en/artificial-intelligence-and-data-act-aida-companion-document#s5

81 Innovation, Science and Economic Development Canada (2023) Voluntary Code of Conduct on the Responsible Development and Management of Advanced Generative AI Systems, September, 2023. https://ised-isde.canada.ca/site/ised/en/voluntary-code-conduct-responsible-development-and-management-advanced-generative-ai-systems

82 Professional Institute of the Public Service of Canada (2023) Brief to the House of Commons Standing Committee on Industry and Technology (INDU) On Bill C-27, August, 2023. https://www.ourcommons.ca/Content/Committee/441/INDU/Brief/BR12565509/br-external/ProfessionalInstituteOfThePublicServiceOfCanada-e.pdf

83 Canadian Labour Congress (2023) The Artificial Intelligence and Data Act (AIDA), November 2023. https://www.ourcommons.ca/Content/Committee/441/INDU/Brief/BR12711885/br-external/CanadianLabourCongress-e.pdf

84 UNI Global Union (2023), *Ibid*. p.10.

1.3. Asia

China stands as an important national case, due to its leadership in AI research and commercialization of AI.[85] Liu et al. observe that China has introduced 'some of the world's earliest and most comprehensive regulations concerning algorithms and platform work, deepfakes, and generative AI, marking it as a frontrunner in AI regulation.' While labor union involvement in this legislation has been limited, there has been labor input during the 'exposure draft phase' in which stakeholders are asked for feedback - including AI and platform companies, labor unions, workers, and the public.

In **Japan**, the government published its Social Principles of Human-Centric AI in 2019. Its stated goal is to realize the principles of human dignity, diversity and inclusion, and sustainability through AI and to aim for Society 5.0, 'a sustainable human-centric society that implements AI, IoT (Internet of Things), robotics and other cutting-edge technologies to create unprecedented value, and a wide range of people can realize their own well-being while respecting the well-being of others.'[86] As there are no specific regulations on AI, many of Japan's soft laws and regulatory policy surrounding AI are based on these social principles. While providing non-binding guidance, the government respects companies' voluntary efforts on AI governance.[87] Legislation does, however, include requirements concerning disclosure policies and data privacy protections. For example, the Digital Platform Transparency Act requires e-commerce businesses to ensure transparency and fairness in transactions with users including disclosure of factors influencing search rankings.[88] The Act on the Protection of Personal Information also puts restrictions on how organizations collect, use, and transfer personal information, which is relevant for the development of AI systems.

The Japanese government has passed enabling legislation that promotes the use of AI, including in automated driving, for assessing credit amounts, and for plant safety.[89] A 2019 amendment to the Copyright Act was particularly controversial, as it established that AI models developed using internet data did not constitute copyright infringement. As a result, together with Singapore, Japan has among the most liberal AI-related copyright rules in the world.[90]

Japan has no major national tripartite initiative focused on digitalization and AI. However, Japanese labor unions have been involved in public consultation initiatives - for example on the draft AI Business Guidelines.[91] These guidelines were published in 2024, with the aim to promote the safe and reliable use of AI across sectors. Government agencies have also incorporated calls for multi-stakeholder governance in their AI-related initiatives. In 2022, the Ministry of Economy, Trade, and Industry (METI) published a report 'AI Governance in Japan (version 1.1)' which recommended that companies that develop and operate AI systems seek feedback from outside stakeholders such as labor unions.[92]

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85 Liu, M., Zhang, H., & Sui, Y. (2024). Workplace artificial intelligence regulation in China: Between efficiency and social stability. *ILR Review*, *77*(5), 813-824.

86 Council for Social Principles of Human-Centric AI (2019) 'Social Principles of Human-Centric AI.'

87 Habuka, H. (2023, February 14). *Japan's approach to AI regulation and its impact on the 2023 G7 presidency*. CSIS. https://www.csis.org/analysis/japans-approach-ai-regulation-and-its-impact-2023-g7-presidency

88 Habuka, H (2023). *Ibid*.

89 Habuka, H. (2023) *Ibid*.

90 Hays, S. (2024) AI Training and Copyright Infringement: Solutions from Asia. Tech Policy Press, October 30, 2024. https://www.techpolicy.press/ai-training-and-copyright-infringement-solutions-from-asia/

91 Japan: Closed Consultation on AI Business Guidelines. Digital Policy Alert, 2024. https://digitalpolicyalert.org/event/16812-closed-consultation-on-ai-operator-guidelines

92 METI. (2022, January 28). *Governance guidelines for implementation of AI Principles*. https://www.meti.go.jp/shingikai/mono_info_service/ai_shakai_jisso/pdf/20220128_2.pdf

In **South Korea**, the Economic, Social and Labor Council (ESLC), formerly known as the Korea Tripartite Commission, was established in 1998 to foster dialogue between the government, employers, and labor representatives on labor market issues. In 2020, the ESLC organized a Special Committee on Digital Transformation and the Future of Labor, which held 40 meetings over two years involving independent experts, government representatives, the Korean Enterprise Federation, the Korea Chamber of Commerce and Industry, and the Federation of Korean Trade Unions (FKTU).[93] These efforts resulted in significant policy changes, including 2022 legislation extending national employment and workers' compensation insurance coverage to platform workers. In January 2025, the ESLC launched the Research Council on Artificial Intelligence (AI) and Labor, which comprises 17 representatives from labor, management, government, and academia. The Research Council aims to analyze the impacts of AI on employment and working conditions, develop policies to create jobs and protect workers, and propose measures for workforce development, such as AI-related training and education.

The Personal Information Protection Act (PIPA) is South Korea's primary framework for regulating AI-related issues.[94] Kim and No observe that PIPA is similar to the EU's GDPR, but personal data is defined more narrowly and private companies are not required to keep a record of data processing.[95] A 2024 amendment to the PIPA Enforcement Decree strengthens protections concerning automated decision-making by granting individuals the right to request explanations or reviews of decisions made through fully automated processes and, in cases where such decisions significantly impact their rights or obligations, to refuse them altogether. Also in 2024, the government released guidelines for the responsible use of AI in the hiring process based on the law. Although these legal changes were not directly driven by labor unions or civil society organizations, interviews with labor activists suggest that worker representatives are beginning to recognize the law's potential and are exploring ways to leverage it in their campaigns (see, e.g. Case study 4 below).[96]

In 2024, the National Assembly also passed the Act on the Development of Artificial Intelligence and Establishment of Trust (AI Basic Law).[97] It is similar to the EU AI Act in that it classifies AI systems according to risk levels. However, the Korean law uses the value-neutral term 'high-impact' instead of 'high-risk' and does not prohibit any AI systems or practices as long as they incorporate legitimate risk-mitigation efforts. Its maximum penalties for violating the law are also significantly lower than those included in the EU AI Act.[98]

The AI Basic Law also establishes a national AI governance structure to formulate and implement an AI development plan. The three key administrative agencies include the National AI Committee, which deliberates and decides on major policies related to AI development and trust-building; the AI Policy Center, which oversees AI policy development and the establishment of international norms; and the AI Safety Institute, which is responsible for safeguarding the public from potential AI-related risks while maintaining a trust-based AI society. Worker representatives are not included in this governance framework.

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93 Kim, S., & No, S. (2024). Workplace AI regulation and worker resistance in Korea. *ILR Review*, *77*(5), 835-846.

94 Personal Information Protection Commission. (2023, December 29). *Amendments to the Personal Information Protection Act in 2023: What's changed?*. Korea Policy Briefing. https://www.korea.kr/briefing/pressReleaseView.do?newsId=156608465

95 Kim, S., & No, S. (2024). *Ibid,* p.839.

96 Interviews with Mingyu Oh, an activist of Seeking Hope for Platform Labor, and a union representative of the Rider Union. (Nov 26, 2024).

97 *AI Watch: Global regulatory tracker - South Korea | White & Case LLP*. (2024, June 18). https://www.whitecase.com/insight-our-thinking/ai-watch-global-regulatory-tracker-south-korea

98 The maximum fine for violations of South Korea's AI Basic Law is 30 million KRW (approximately 19,000 EUR) https://www.ccn.com/news/technology/south-korea-ai-legislation-roadmap-2025/ , whereas the EU imposes fines of up to 35 million EUR or 7% of a company's annual turnover. https://artificialintelligenceact.eu/article/99/

During the legislative process, a group of civic groups and labor unions actively attempted to influence the content of the law.[99] The Korean Confederation of Trade Unions (KCTU) submitted a formal opinion letter to the National Assembly, calling for stronger regulations on AI systems that significantly impact workers.[100] The letter called for regulating businesses deploying such systems to prevent risks, ensuring workers and unions have access to relevant information, and establishing mechanisms for collective bargaining and redress. Despite these efforts, the final law did not incorporate these demands, instead mainly focusing on industrial growth. After the passage of the AI Basic Law, a coalition of civic organizations and labor unions, including the KCTU, People's Solidarity for Participatory Democracy, and the Progressive Network Center, along with 24 other organizations, issued a statement criticizing the law for not banning harmful AI applications, adopting a narrow definition of high-impact AI operators, and imposing insufficient penalties for companies' violations of their responsibilities in preventing the potential negative effects of high-impact AI.[101]

India has not yet passed national legislation governing AI's impact on labor policy.[102] The Ministry of Electronics and Information Technology constituted four committees: Platform and Data for AI; Leveraging AI for Identifying National Missions in Key Sectors; Mapping Technological Capabilities, Key Policy Enablers Required across Sectors, Skilling and Reskilling; and Cyber Security, Safety, Legal and Ethical issues.[103] The Principles for Responsible AI and Operationalizing Principles for Responsible AI documents released in 2021 emphasize the need for regulatory and policy interventions, capacity building and incentivizing ethics by design with regards to AI.[104] We could not find evidence of social partner involvement in these initiatives.

1.4. South America and the Caribbean

In **Brazil**, a key piece of legislation is the Legal Framework for Artificial Intelligence in Brazil, which was passed in December 2024.[105] The labor union Unified Workers Central (CUT) published a letter of support for the draft bill, stating that it provided adequate risk assessment and algorithmic impact mitigations, while also warning of the dangers of AI-powered fake news and the misuse of databases.[106] While CUT supported the final version of the bill, other civil society organizations raised concerns with workers' protection. A letter written by the Brazilian Digital Rights Coalition signed by over 70 civil society organizations pointed out that the legislation did not include fundamental protections such as the prohibition of mass dismissal or extensive replacement of the workforce.[107]

99 Progressive Network Center & People's Solidarity for Participatory Democracy. (2024). *Ibid*.

100 Korean Confederation of Trade Unions. (2024, October 31). AI framework legislation: Industrial development is not enough—The need for thorough impact assessments and remedies for labor and human rights risks [Press release]. https://nodong.org/statement/7869923

101 Progressive Network Center & People's Solidarity for Participatory Democracy. (2024, December 27). *Joint Commentary: Regret Over the Passage of the AI Framework Act Neglecting Human Rights*. https://www.peoplepower21.org/publiclaw/1983459

102 Mohanty, A., & Sahu, S. (2024, November 21). India's advance on AI regulation. *Carnegie Endowment for International Peace*. https://carnegieendowment.org/research/2024/11/indias-advance-on-ai-regulation?lang=en&center=india

103 See https://www.meity.gov.in/artificial-intelligence-committees-reports

104 NITI (2021) Responsible AI Approach Document for India: Part 2 – Operationalizing Principles for Responsible AI, August 2021. https://www.niti.gov.in/sites/default/files/2021-08/Part2-Responsible-AI-12082021.pdf

105 de Freitas Júnior, A. R., Zapolla, L. F., & Cunha, P. F. N. (2024). The regulation of artificial intelligence in Brazil. *ILR Review*, *77*(5), 869–878. The Artificial Intelligence Legislation in Brazil: Technical Analysis of the Text to Be Voted on in the Federal Senate Plenary. (2024). DataPrivacyBR Research. https://www.dataprivacybr.org/en/the-artificial-intelligence-legislation-in-brazil-technical-analysis-of-the-text-to-be-voted-on-in-the-federal-senate-plenary/

106 Artificial Intelligence Policy Observatory for the World of Work. (2024). University of Essex. https://www.essex.ac.uk/research-projects/ai-policy-observatory-for-the-world-of-work/national-and-regional-cases/brazil#report

107 Email correspondence, Jonas Valente, Postdoctoral Researcher, Fairwork Project, Oxford Internet Institute, University of Oxford. February 24, 2025.

The cultural sector in Brazil also has raised concerns around AI regulation regarding the use of generative AI. Organizations affiliated with the Responsible AI Front, including in the audiovisual sector, have advocated for legislation and policy addressing AI issues that affect creative workers, such as basic copyright rules.[108] The Union of Workers in the Film and Audiovisual Industry of seven Brazilian states published a letter to the Federal Senate's president in April 2024 regarding the lack of discussions around AI impacts on the audio-visual industry.[109] Another law, however, may apply in such cases -- Brazil's General Data Protection Law (LGPD), which includes individual and collective data rights. These allow labor unions to make collective claims concerning data rights violations on workers' behalf.[110]

At the same time, the employer associations, the National Confederation of Industry (CNI) and National Service for Industrial Training (SENAI), are optimistic about AI, and are focusing on training and skill development initiatives.[111] In April 2024, about 40 business associations wrote in an open letter to demand that AI regulation ensures socioeconomic development, innovation, and competitiveness. An internal working group on Work and AI was formed in August 2024 by the Ministry of Labor, to discuss challenges of addressing AI policies for workers.[112]

In the **Dominican Republic**, labor unions have not been directly involved in social dialogue over AI or data protection policies, but have sought to influence them through organizing campaigns and broader political action. A national AI strategy, National Innovation Policy 3.0, was launched in 2021. A bill aimed at regulating AI systems was introduced in 2025, which proposes to differentiate between general use AI and high-risk systems, to create a National Council for AI, and to prohibit the use of AI systems for military purposes or in manipulative or exploitative ways.[113]

The Dominican Republic does have legislation on data protection and digital surveillance. The Law for the Protection of Personal Data establishes general principles concerning obligations to gather personal data in appropriate and lawful ways, with requirements for prior consent concerning holding or assigning this data.[114] In 2021, Resolution No.23/2020 on teleworking was passed, which prohibits the use of video surveillance for employees working from home.[115]

Employment relationships are governed by the Labor Code, which was last updated in 1992. The next update is anticipated to occur in 2025, and labor unions have begun organizing to influence the revised legislation.[116] One focus area for these efforts is AI regulation. The labor union Federation of Free Zone Workers and Related Industries (FEDOTRAZONAS) has started organizing focus groups to understand workers' perception towards AI. It is also providing AI training and forming partnerships aimed at getting the Ministry of Labor involved. In 2024, the first meeting on AI implementation in the workplace was conducted with unions, government, and representatives from other organizations. The parties discussed psychosocial labour risks and connections between AI and overexploitation at work.

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108 The Artificial Intelligence Legislation in Brazil: Technical Analysis of the Text to Be Voted on in the Federal Senate Plenary. (2024). *Ibid*.

109 Artificial Intelligence Policy Observatory for the World of Work. (2024). Ibid.

110 UNI Global Union (2023) Algorithmic Management: Opportunities for Collective Action. https://uniglobalunion.org/wp-content/uploads/Algorithmic-Management-Opportunities-for-Collective-Action.pdf

111 Interviews, Pablo Rolim Carneiro, Labor Affairs Manager of the Labor Relations Superintendence of the National Confederation of Industry (CNI), and Felipe Morgado, the superintendent of Professional and Higher Education at SENAI. November 8, 2024.

112 Artificial Intelligence Policy Observatory for the World of Work. (2024). *Ibid*.

113 Vicioso, D. (2025) First artificial intelligence bill presented in Congress. *dr1*, February 20, 2025. https://dr1.com/news/2025/02/20/first-artificial-intelligence-bill-presented-in-congress/

114 Guridi, J.A. (2024). Dominican Republic: Artificial Intelligence Readiness Assessment Report. *UNESCO*.

115 Webster, F. & Rosseau, S. (2021). Dominican Republic: Resolution defines teleworking measures. *Mercer*. https://www.mercer.com/insights/law-and-policy/dominican-republic-resolution-defines-teleworking-measures/

116 Interviews, Hanoi Sosa, organizer and secretary of Workers' Education to Dominican federation of free-trade zone workers, and secretary-general to FEDOTRAZONAS. (2024, November 15)

1.5. Africa

In Africa, we were not able to identify social dialogue examples that directly involved labor unions. However, labor and employment topics have been included in policies and strategy documents. At the international level, the African Union – made up of 55 member states – published a 'Continental Artificial Intelligence Strategy.[117] This white paper mentions the need to identify and bridge regulatory gaps - including standards for the public procurement of AI systems, and regulatory approval of AI for use as medical devices within health systems. It also calls for assessing AI's implications for the African labor market and impact on vulnerable groups, with goals of avoiding exacerbated socioeconomic inequalities and of developing a national policy to address labor transformations.

Seven African nations (Benin, Egypt, Ghana, Mauritius, Rwanda, Senegal, and Tunisia) have drafted national AI strategies.[118] In their analysis of regulation of labor in AI in East and Southern Africa, Bischoff et al. argue that most regulation in the region has focused on the support and development of AI-based industry.[119] At the same time, they give examples of national legislation providing consumer and worker protections, including a Data Protection Act in **Botswana**, efforts to limit race-based credit profiling in **Eswatini**, and legislation promoting transparency in collection and use of individual data in **Namibia** and **South Africa**. In South Africa, a new industry association, the South African Artificial Intelligence Association (SAAIA), brings together representatives from commerce, government, NGOs, academia, and start-ups - but, as Bischoff et al. emphasize, labor unions are not included. It discusses ethical concerns in the areas of privacy and bias and seeks to encourage more responsible AI practices.

In **Kenya**, with the introduction of the M-Pesa, a money transfer service, there has been a boom in the Fintech sector. This has also opened doors to further innovation and rapid infrastructural development around the use of AI to address concerns like food security, affordable housing, manufacturing, and affordable health care.[120] Kenya has also become a popular location for sourcing content moderation and data labelling.[121] Kenya passed a Data Protection Act in 2019, addressing concerns around data subject rights, privacy and data minimization.[122]

1.6. Summary

Labor unions have been involved in a range of social dialogue initiatives to influence policy or develop framework agreements and principles on AI and algorithms. Our analysis above suggests two broad conclusions.

First, union involvement in social dialogue at the national or international levels differs significantly across countries and world regions. Europe has the largest number of well-documented examples of tripartite committees and consultation bodies focusing on AI and digitalization

[117] African Union (2024) Continental Artificial Intelligence Strategy. https://au.int/en/documents/20240809/continental-artificial-intelligence-strategy

[118] Okolo, C. T. (2024, March 15). Reforming data regulation to advance AI governance in Africa. Brookings. https://www.brookings.edu/articles/reforming-data-regulation-to-advance-ai-governance-in-africa/

[119] Bischoff, C., Kamoche, K., & Wood, G. (2024). The Formal and Informal Regulation of Labor in AI: The Experience of Eastern and Southern Africa. *ILR Review,* 77(5), 825-835.

[120] Mgala, M.. 2020. The extent and use of Artificial Intelligence to achieve the Big Four Agenda in Kenya. Multidisciplinary Journal of Technical University of Mombasa 1(1):1–7

[121] Graham, M., I. Hjorth, & V. Lehdonvirta. 2017. Digital labor and development: Impacts of global digital labor platforms and the gig economy on worker livelihoods. *Transfer: European Review of Labor and Research* 23(2):135–62.

[122] Mary Kageni and Yvonne Odhiambo. Strengthening data protection in Kenya: Opportunities and the way forward – KIPPRA. (n.d.). Retrieved January 14, 2025, from https://kippra.or.ke/strengthening-data-protection-in-kenya-opportunities-and-the-way-forward/

topics, and of framework agreements signed between employers and unions on these issues. The agreements or recommendations of these bodies have fed directly into laws and policies at EU-level and within EU member states. South Korea is another case where there has been more formal, national-level social dialogue that has had direct influence on policies addressing AI, digitalization, and platform work.

However, social dialogue also takes a range of forms that can be difficult to compare across countries. Labor unions are involved in shaping AI policy and standard-setting through more informal information sharing, consultation processes, and stakeholder meetings. They also influence policy through lobbying and campaigning efforts that develop model language for bills or regulations and that seek to mobilize members and the public in support of more labor-friendly provisions. In the US, for example, unions have worked in coalition with other groups to influence executive orders and legislation at state and local levels that strengthen data protection and government procurement policies relating to AI tools. Thus, an analysis of policies strengthening labor rights or establishing ethical principles can also provide comparative insight into the 'collective voice' or influence of labor unions.

Several of our country cases, including India, the Dominican Republic, and Kenya, stand out for not yet having national AI or data protection policies that address labor and employment concerns. However, there have been efforts in these countries by labor organizations and NGOs to use leverage from existing laws to strengthen or extend employment protections to new or poorly protected worker groups. Many of these focus on the BPO industry, which includes both traditional call center and back office workers and newer data labelling and content moderation workers - with both groups often subjected to algorithmic surveillance.

Second, we find some degree of cross-national convergence on common principles widely held to be 'best practices' for the ethical development and deployment of AI. These are repeated across framework agreements, policy statements, and executive orders. Their positions, summarized below, can be organized under the three main themes in our report:

1. **From labor replacing to complementing**: AI should contribute to enhancing and complementing worker skills, and workers should have discretion over how they use these tools in their jobs and workplaces. Employers should invest in digital skills while securing employment or sharing productivity gains with workers. As stated succinctly in a report by the German Trade Union Confederation (DGB): 'The focus must be on expanding human capabilities through AI, and not replacing people with machines.'[123] ***Laws and policies encouraging employers to adopt AI-based tools in a way that is 'labor complementing' include those that***:
   - ***strengthen employment or job security***
   - ***invest in training and digital skills***
   - ***include clear rules concerning uses of generative AI to reproduce art, writing, voice, or images that protect copyright and transparency, and that ensure fair compensation for creators.***

2. **From labor controlling to empowering**: AI should be adopted based on a 'human-in-command' approach, with human decision-makers having oversight on how algorithm-based

[123] DGB (2019) Künstliche Intelligenz und die Arbeit von morgen: Ein Impulspapier des Deutschen Gewerkschaftsbundes zur Debatte um Künstliche Intelligenz (KI) in der Arbeitswelt. Cited in:Özkiziltan, D. (2024) *Ibid*, p.851.

management tools are adopted and used. Workers should have recourse to contest decisions made by algorithms that affect their work and employment, particularly where these decisions may be biased or based on opaque models. Workers should have rights to personal data protection, and to health and safety safeguards that include protections against psychosocial risks.[124] Human dignity should be respected. ***Laws and policies encouraging employers to adopt AI-based tools in a way that is 'labor empowering' include those that***:

- ***require human oversight of AI-based decisions***
- ***prohibit uses of AI tools with significant risks of bias or psychosocial harm***
- ***strengthen data protection rights***
- ***develop AI-specific health and safety guidelines and protections***

3. **From labor displacing to embedding**: AI-based technologies, including algorithmic management tools, should not be used by firms to expand worker precarity and undermine job quality through intensified subcontracting, relocation of jobs, or casualized contracts. AI-related labor in AI and digital value chains should be ethically sourced, and workers should be protected from exploitative conditions. ***Laws and policies that encourage the social 'embedding' of AI-enabled fissured labor include those that***:
   - ***extend employment rights and protections to subcontracted and temporary workers***
   - ***strengthen regulation of global AI and digital value chains***
   - ***support union organizing and bargaining rights for data and content moderation workers***

Most fundamentally, where labor unions are involved in social dialogue, they have sought to support ***provisions in policies and framework agreements that establish worker representatives' information, consultation, and bargaining rights, concerning how AI is being used and its effects on work and workers***. This includes the ability to carry out risk assessments, but also to have a substantive voice in decisions concerning how these technologies are used in the workplace. A union representative involved in a national social dialogue body explained that even where unions play more of a consultation role, their impact can be significant: 'It is important when you are in such a commission to bring your point of view, because otherwise it could be a dead issue, nobody would be talking about social dialogue.'[125]

In the following section, we ask to what extent and in what ways worker representatives have been able to leverage different laws, policies, and framework or collective agreements to negotiate or consult over specific uses of AI and algorithms. How is social dialogue at the workplace, firm, and sector level being adapted to the new challenges of AI?

[124] Work-related psychosocial risks or hazards are defined as 'factors in the work environment that can cause stress, strain, or interpersonal problems for the worker' and are a major contributor to workplace injury and disability. Schulte, P. et al. (2024) An urgent call to address work-related psychosocial hazards and improve worker well-being. *American Journal of Industrial Medicine*, *67*(6), 499-514.

[125] Interview, Franca Salis-Manidier, CFDT, January 13, 2025.

▶ 2 Sectoral, company, and workplace social dialogue

Labor unions have sought to use social dialogue at the sectoral, company, and workplace levels to influence how companies use AI and algorithm-based technologies, as well as the impacts of these technologies on workers and working conditions. In this section, we organize our discussion around our three themes – first, social dialogue over the employment and skill impacts of AI (from ***labor replacing to complementing***); second, social dialogue over algorithmic management (from ***labor controlling to empowering***); and third, social dialogue over work location, employment status, and value chain monitoring (from ***labor displacing to embedding***). Some collective agreements cross-cut these three categories, and so are discussed in multiple sections.

2.1. Social dialogue over employment and skill impacts of AI: from labor replacing to labor complementing

Labor unions around the world are responding to the potential threat to jobs associated with AI-based automation with job and location security agreements, restrictions on permitted uses of AI, and rules concerning ownership of and control over creative work and images. They also support institutions that promote skill upgrading and adaptation, and that enhance worker control over how they apply their skills when using AI-based tools in their jobs. These efforts seek to encourage employers to use AI in ways that complement and upskill rather than replace and deskill work.

The backdrop to these efforts is the potential for algorithm and AI-based tools to support significant changes in work organization, skills, and productivity. In manufacturing, AI-enabled robots and smart machines associated with 'Industry 4.0' enable new efficiency and productivity gains on the shop floor. In services, robotic process automation, speech analytics, and generative AI-enabled digital assistants permit automation of an increasingly broad range of back- and front-office tasks, from call centers to HR, marketing, accounting, and even coding or advanced diagnostic work. The most controversial impacts are being seen in creative industries and occupations, as generative AI tools from ChatGPT to Dall-E are being applied to automate aspects of creative writing, translation, visual art, modeling, and acting.

A large body of research, much of it in economics, has established the potential employment risks associated with the accelerating adoption of AI. Originally, the term 'task-biased technological change' referred to the potential for automating tasks lacking creative and social intelligence, as well as tasks that require manual manipulation–with researchers debating the potential number of jobs at risk of automation.[126] However, following recent advances in generative AI, nonroutine tasks in high skilled jobs are also seen to be at risk of automation, from professional services such as accounting, law, health care, and translation to journalism and art.[127] While this suggests a grim future characterized by mass technologically-induced unemployment, the ways in which firms use these tools is a matter of strategic choice. AI can also be used in ways

[126] Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation? Technological forecasting and social change, 114, 254-280.

[127] Susskind, D. (2020). A world without work: Technology, automation and how we should respond. Penguin UK. Eloundou, T., Manning, S., Mishkin, P., & Rock, D. (2023). GPTs are GPTs: An early look at the labor market impact potential of large language models. arXiv preprint arXiv:2303.10130.

that 'augment' labor and complement skills - for example, through emphasizing worker choice in using tools to improve the quality of services, or restructuring production in a way that creates new, high-productivity tasks.[128]

Economists Acemoglu and Restrepo observed in 2019 that corporate deployment of AI in the US was biased towards automation applications focused on short-term cost savings, generating risks of increasing unemployment and inequality as well as stagnating productivity.[129] They also encouraged organizations and policymakers to take a different path - to capture the promise of the 'right' kind of AI associated with improved economic and social outcomes.

A key question these trends raise is how social dialogue can best be deployed to encourage firms to adopt AI-based tools in a way that complements human creativity and innovation–or to pursue longer-term, productivity enhancing strategies that produce mutual gains for workers, firms, and societies rather than driving up unemployment.[130] An OECD survey examined the role of social partners and social dialogue in interacting with artificial intelligence.[131] It assessed social partners' awareness of what AI entails, their assessments of the risks and benefits relating to AI adoption in labour markets and workplaces, and their responses to AI adoption. Results showed that employer associations were mostly interested in skill enhancement and productivity gains, while labor unions focused on high job quality and trustworthy usage. This suggests that social dialogue can play an important role in bridging these goals, which together can be the basis for more broadly shared social gains from AI investments.

Our case study findings indicate that successful efforts by labor unions in the areas of employment and skills often build on existing institutional protections through laws, policies, and collective agreements. We also see creative new agreements and organizing efforts that mobilize workers to win AI-specific rules. These seek to strengthen constraints on or disincentives for employers to use new technologies to 'exit' employment relationships with their workforce through downsizing, outsourcing, or deskilling jobs. They also often draw on, while also further developing support for, collective worker voice in how AI- and algorithm-based tools are used in different jobs and professions.

2.1.1. Europe

In Nordic countries, many union-led social dialogue initiatives on employment and skills aspects of technological change have focused on the sectoral level. This may be attributed to their traditions of voluntarist, multi-level bargaining with local bargaining power supported through high union density and bargaining coverage. The Nordic countries are also 'some of the most digitalized societies in the world', and their companies have often been early adopters of AI technologies.[132] In general, Nordic labor unions have focused on strengthening investments in skills while ensuring worker participation in decision-making related to employment adjustments. In **Sweden**, joint initiatives and agreements across sectors have often focused on ensuring the expansion of

[128] Zysman, J., & Nitzberg, M. (2024). Generative AI and the Future of Work: Augmentation or Automation?. Available at SSRN 4811728. Johnson, S., & Acemoglu, D. (2023). Power and progress: Our thousand-year struggle over technology and prosperity. Hachette UK.

[129] Acemoglu, D. & P. Restrepo (2019) 'The Wrong Kind of AI? Artificial Intelligence and the Future of Labor Demand' NBER Working Paper 25682, March 2019, https://www.nber.org/papers/w25682.

[130] McElheran, K., Li, J. F., Brynjolfsson, E., Kroff, Z., Dinlersoz, E., Foster, L., & Zolas, N. (2024). AI adoption in America: Who, what, and where. Journal of Economics & Management Strategy, 33(2), 375-415.

[131] OECD (2023) *OECD Employment Outlook 2023*. Chapter 7. https://www.oecd.org/en/publications/oecd-employment-outlook-2023_08785bba-en.html

[132] Ilsøe, A., Larsen, T. P., Mathieu, C., & Rolandsson, B. (2024). Negotiating about algorithms: Social partner responses to AI in Denmark and Sweden. *ILR Review*, *77*(5), 856-868.

high quality jobs to replace those lost through automation through industrial policy, as well as supporting life-long learning opportunities to prepare workers for changing skill demands.[133] In **Finland**, a collective agreement for salaried ICT employees (2023-2025) established a working group to examine AI's implications for employment conditions and worker roles. In **Norway**, a 2017 collective agreement in the government sector included a commitment to social dialogue and worker participation to digitalize public services in a more inclusive way. Specific reference was made to joint committees focused on digitalization or digital agents.[134] And in **Denmark**, the 2023 agreements covering creative industries included a commitment by unions and the employer association to discuss the potential impacts of AI, and to assess adjustments needed in response.[135]

Germany has the largest number of, and best documented or studied, collective agreements that address AI's employment and skill impacts. German labor unions and works councils are supported in these efforts by strong job security rights at national level and in collective agreements; as well as by recent revisions to the Works Constitution Act (discussed in Section 2.1) that extended works councils' information, consultation, and co-determination rights on new technologies and their employment impacts to plans to adopt AI.

A number of early agreements on digitalization resulted from a project dubbed 'Arbeit 2020', organized jointly by the Industrial Union of Metalworkers (IG Metall), the Mining, Chemicals, and Energy Industries Union (IGBEC), and the Food, Beverages, and Catering Union (NGG).[136] They first studied the change process associated with Industry 4.0 in 28 selected plants, together with outside consultants, with the goal of understanding digital change and concluding agreements on how to jointly influence that change. This project resulted in 13 initial agreements, all of which included provisions strengthening plant-level skills development.

One prominent manufacturing example is a framework agreement for implementation of Industry 4.0 projects at Airbus, which established a process for works councils to participate in strategy-building, rules for introducing new technologies, and guidelines for training workers engaging with those technologies.[137] Managers produce project profiles describing the process and impacts of new technology introduction on employment and work processes, and a joint management-works council steering committee jointly decides on the process for technology introduction.

Several agreements in service firms also address employment and skills impacts of new technologies. An agreement from 2018 between Deutsche Bahn and the Railway and Transport Union (EVG) establishes a process for worker participation in decisions associated with the planning, development, or introduction of new digital tools.[138] The agreement includes provisions committing the employer to conduct an assessment of how digital innovation will affect employment and worker protection.[139]

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133 Email communication, Victor Bernhardtz, Unionen, January 21, 2025.

134 Voss and Bertossa (2022), *Ibid*, p.7.

135 Ilsøe et al. (2024) *Ibid.* p. 861.

136 Bosch, G. and J. Schmitz-Kießler (2020). Shaping Industry 4.0–an experimental approach developed by German trade unions. *Transfer: European review of labour and research*, *26*(2), 189-206.

137 Harbecke, T. and G. Mühge (2020) Digitalisierungsstrategien im Portrait. 34, Mitbestimmungspraxis. Düsseldorf: Hans Böckler Foundation. Krzywdzinski, Martin, Detlef Gerst, and Florian Butollo. (2023) Promoting human-centred AI in the workplace. Trade unions and their strategies for regulating the use of AI in Germany. *Transfer: European Review of Labour and Research* 29(1): 53-70.

138 Voss, E., & Bertossa, D. (2022). Collective Bargaining and Digitalization: A Global Survey of Union Use of Collective Bargaining to Increase Worker Control over Digitalization. *New England Journal of Public Policy*, *34*(1), 10. p.8.

139 Tarifvertrag zur Zukunft der Arbeit im Rahmen der Digitalisierung im DB-Konzern. https://www.evg-online.org/fileadmin/Tarif/Tarifvertraege/Tarifvertraege_DB_Konzern/TV_Arbeit_4.0_EVG_2018_internet.pdf

At the clothing retailer H&M Germany, the United Services Union (ver.di) negotiated an agreement, which addresses declining worker commissions due to online sales and potential downsizing or deskilling due to the introduction of new digital tools in stores.[140] Store workers receive new bonuses, training investments, and dismissal or demotion protections–including a guarantee that temporary workers will not replace permanent employees. The agreement also establishes a digitalization advisory board made up of union and management representatives, which collects worker feedback, advances proposals relating to technology impacts on work, and extends works council participation rights on digitalization.

In addition, in February 2025, ver.di and the German actors' union (BFFS) negotiated an agreement with the German film producers' association (Produktionsallianz) on the use of generative AI (GAI) in film production. It includes provisions requiring actor consent for the use of digital replicas, transparency concerning how GAI is used on an actor's performance, fair compensation for AI-generated scenes, and restrictions limiting the use of AI-generated replicas to the project they were created for.[141] This agreement will be used as a starting point for negotiations concerning GAI impacts on film crews, with a joint study on this impact currently commissioned.[142]

Deutsche Telekom has among the most comprehensive agreements establishing job security and upskilling connected to digitalization and AI (See also case study 2).[143] A 2010 agreement states that automation should first be used to reduce subcontracting, while committing the employer to train internal employees affected by automation for new jobs. In the mid-2010s, the works council organized an 8-month project to analyze the impact of new digital, algorithm, and AI-enabled tools on worker skills, jobs, and performance. Based on findings, a series of agreements was negotiated, establishing a process for ongoing consultation and negotiation over new technologies and their workforce impacts. Management committed to drawing up a 'digi-road map' laying out digitalization measures planned for the next few years, and then discussing with the works council the impacts of these measures on employment numbers, service quality, and work content. This feeds into strategic planning on new agreements for specific technologies. Deutsche Telekom's agreements gave workers a baseline of job security to encourage joint labor-management efforts on AI adoption and deployment, which focused on improving service quality and productivity through investments in worker skills.[144]

A recent provisional works agreement at the insurance provider Provinzial is distinctive in including specific guidelines on the use of generative AI, specifically Chat GPT, for service employees.[145] These include requirements that the tool should be used to facilitate work, not to 'dismantle employment', that machine-generated content should be marked as 'generated by Provinzial Chat GPT' until it has been checked and changed by a responsible human, and that only the users of the AI tool can access their own chat histories. The agreement also states that the model test 'is also intended to gain experience with how the use of generative AI systems affects training needs, employment, and the value and skill level (or deskilling) from the perspective of users and those affected.' The agreement was the basis of a partnership between the works council

140 UNI Global Union. (2022) H&M Workers Protected Under First Digitalization Agreement with ver.di. https://uniglobalunion.org/news/hm-workers-protected-under-first-digitalization-agreement-with-ver-di/

141 Ver.di (2025) Erster Tarifabschluss zum Umgang mit KI in der Film- und Fernsehproduction. February 10, 2025. https://filmunion.verdi.de/und-action/nachrichten/++co++0a0e1f88-e78f-11ef-81ee-f5ae95fe3e8f

142 UNI Global Union (2025) First collective agreement on the use of AI in film and TV production in Germany, March 14, 2025. https://uniglobalunion.org/news/first-collective-agreement-on-the-use-of-ai-in-film-and-tv-production-in-germany/

143 Doellgast, V., and T. Kämpf (2023) Co-determination meets the digital economy: works councils in the German ICT services industry. *Entreprises et histoire* 4: 32-43. Haipeter, T., M. Wannöffel, J-T Daus, and S. Schaffarczik (2024) Human-centered AI through employee participation. *Frontiers in Artificial Intelligence.* 7

144 Multiple interviews, works councilor and management representatives, 2021-2024.

145 Works Agreement 'Provinzial GPT Chat'.

and management. The goals of this partnership included developing use cases where AI could improve productivity and quality, and sharing best practices more broadly across the organization; but under the control of the Provinzial workers. As with Deutsche Telekom, an important starting point was a job security agreement.[146]

Although we were able to find the largest number of examples of company- and workplace-level agreements focusing on employment and skills aspects of AI and digitalization in Germany, these do not represent a universal practice. IG Metall conducted a survey in 2019 showing that a minority of works councils in the German metal sector were involved in digitalization projects at an early stage.[147] A more recent 2023 survey of 385 managers and 224 works councilors found widespread adoption of AI tools among surveyed companies, with the main goals to automate work and increase efficiency.[148] Survey results suggested divided labor relations experiences, with half of surveyed companies and works councils reporting cooperative relationships on AI, and the other half describing conflictual co-determination. Consistent with the findings from the case studies discussed above, more cooperative co-determination on AI was associated with greater employee involvement in AI adoption and higher acceptance of AI technologies among the workforce.

Other European countries have weaker participation rights on technologies but also overall strong institutional protections for job security, which can be a tool in social dialogue over technology-related restructuring. In **France**, the introduction of AI has often involved conflict, due in part to the lack of clarity concerning the role and rights of unions and works councils to consult on these technologies. In one example, the French public employment service (France Travail– formerly Pôle Emploi), sought to introduce an AI-based tool to answer emails more quickly.[149] Chagny and Blanc describe how only one out of seven unions voted on the initiative, but it also demanded a study of the impact on employment, working conditions, and service. The union also called for an ethical charter, which was eventually adopted three years after management announced the AI project.

Other French employers have addressed concerns with AI use through similar 'ethical charters'. The telecom provider Orange France established a Data and Ethics Council, composed of academics and chaired by Orange's Chief Technology Officer, which drew up an Ethical Charter in 2022 establishing principles that include respecting human autonomy, operating under human supervision, and respecting equality, diversity, and privacy.[150] In 2024, the Le Monde group adopted an ethical charter on the use of AI by its newsrooms, which states that AI cannot replace humans in journalistic production, generative AI can only be used to assist editorial production 'under strictly defined conditions', and generative AI use to create images is prohibited.[151] However, both of these appear to be unilateral initiatives that did not directly involve labor unions.

Recent developments suggest the potential for strengthened social dialogue over AI at company level in France. A 2022 court decision held that 'companies should accept that workers'

146 Interview, Provinzial Works Councilor, October 2, 2024

147 Gerst, D. (2020). Geschäftsmodelle mitentwickeln– ein neues Handlungsfeld der Betriebsräte. WSI-Mitteilungen 73, 295–299. doi: 10.5771/0342-300X-2020-4-295

148 Krzywdzinski, M. (2024) Zwei Welten der KI in der Arbeitswelt Wie Management und Betriebsräte die Einführung und Nutzung von KI-Anwendungen gestalten. Weizenbaum Discussion Paper #39, June 2024. https://www.weizenbaum-library.de/server/api/core/bitstreams/dd69f1ed-98ce-4b64-a996-d44521919ba3/content

149 Chagny and Blanc (2024), ibid, p.198

150 Orange (2022) Orange adopts a Data and Artificial Intelligence Ethical Charter. November 15, 2022. https://newsroom.orange.com/orange-adopts-a-data-and-artificial-intelligence-code-of-ethics/

151 van Kote, G. (2024) Le Monde adopts a charter on artificial intelligence. *Le Monde,* March 13, 2024.https://www.lemonde.fr/en/about-us/article/2024/03/13/le-monde-adopts-a-charter-on-artificial-intelligence_6615286_115.html

representatives (the social and economic committee [i.e. works council]) must be consulted and have recourse to an expert when new technology (in this case an AI system) is introduced, even if it has no identified impact on working conditions' based on existing labor code provisions.[152]

Several sectoral agreements in other European countries focus on skill and employment topics. In **Belgium**, social partners in the commerce sector agreed on a 'Memorandum for a Sustainable and Competitive Retail Sector' in 2024.[153] The document stresses the importance of social dialogue to support e-commerce and work organization concerns, and includes seven 'strategic axes' for policy - including training in digital skills and guaranteeing a level playing field. The **Italian** Banking Association (ABI) collective agreement created a joint committee to monitor the impacts of digitalization, focusing on work reorganization and new roles.

Finally, worker representatives are beginning to address employment concerns at international level connected with digitalization. The **Spanish** multinational retail firm Inditex – famous for its Zara clothing brand – agreed a 'Strategic Digital Transformation Plan' with its European works council[154] in 2020.[155] This included commitments to 'maintain a stable staff' during restructuring through digitalization and online integration, with a process launched with labor unions to relocate and retrain employees.

2.1.2. North America

European labor unions have mobilized their comparatively strong bargaining and job security rights to encourage employers to commit to investments in training and to limits on top-down employment restructuring associated with AI technologies. However, **United States** unions have been on the forefront of negotiating specific provisions in collective agreements that address the employment and skills aspects of generative AI-based tools. This is due to the leadership of labor unions in the entertainment and creative sectors. A common theme across these contracts is the principle of creative worker control over how AI is used and rules safeguarding employment to prevent narrow 'labor replacing' uses of these tools. While the US does not have the same tradition of sectoral collective agreements as in many of the European case study examples, there continues to be sectoral bargaining in the 'gig based' entertainment industries – including for screenwriters, actors, and musicians.

The Writers Guild of America (WGA) was a trailblazer in the area of AI agreements. Following a 148 day strike, in which the potential threats of AI to screenwriters' job security and control figured prominently, the union negotiated specific restrictions on the use of AI for script writing in the 2023 Theatrical and Television Basic Agreement. These included provisions stating that AI cannot be used to write or rewrite literary material, AI-generated material cannot be considered 'source material', writers cannot be required to use AI, and AI-generated material must be

[152] Chagny and Blanc (2024), ibid, p.199 – citing TJ Pontoise, 15 April 2022, no. 22/00134.

[153] Mémorandum pour un secteur de la distribution durable et compétitif. https://www.ccecrb.fgov.be/p/fr/1208/memorandum-pour-un-secteur-de-la-distribution-durable-et-competitif/11

[154] European works councils (EWCs) are bodies that represent the European employees of companies with at least 1000 employees in the EU and the European Economic Area, and with at least 150 employees in each of two Member States. The process of creating an EWC is triggered through a request by 100 employees from two countries or an employer initiative. EWCs have information and consultation rights at transnational level. See: European Commission (2025) European Works Councils. https://employment-social-affairs.ec.europa.eu/policies-and-activities/rights-work/labour-law/employee-involvement/european-works-councils_en

[155] Inditex (2020) Joint statement by the Inditex group and the European Works Council about the Digital Transformation Strategic Plan https://www.uni-europa.org/old-uploads/2020/12/EN_-DECLARACION-CONJUNTA-INDITEX-Y-CEE-ANTE-EL-PLAN-ESTRAT%C3%89GICO-DE-TRANSFORMACI%C3%93N-DIGITAL.pdf

disclosed. Additional provisions asserted the union's role in enforcing copyright and legal prohibitions on using writers' material to train AI.[156]

The 2023 SAG-AFTRA collective agreement similarly addressed the use of generative AI – in this case to produce digital replicas of a performer's voice or likeness. Case study 1 details the labor conflict leading up to this agreement and outcomes concerning AI regulation, as well as ongoing conflicts involving SAG-AFTRA represented actors in the game development industry.

▶ Case study 1: SAG-AFTRA – US actors mobilize to establish AI guidelines in film, television, and game development

In 2023, the Screen Actors Guild-American Federation of Television and Radio Artists (SAG-AFTRA) went on strike for 118 days, resulting in a collective agreement with the Alliance of Motion Picture and Television Producers (AMPTP) that included first-of-its-kind protections against the use of AI-generated replicas of human performers.[157] Provisions were based on two fundamental principles. First, digital replication of a performer's voice and/or likeness was prohibited without advance notice and written informed consent. Second, in order to reduce economic incentives to replace human performers with replicas, it required that performers be paid the same amount for the use of their digital replica as they would be for a human performance.

At the time of the agreement, generative AI was not sufficiently advanced to fully replace human performers, and instead was mainly being used to de-age actors, modify lip movement for more realistic dubbing, and produce audio books. Voice actors are especially vulnerable to generative AI because voice cloning technology is already 'good enough' at believably simulating a human voice.

Knowledge of AI proved to be a key source of leverage for SAG-AFTRA. The union met with around thirty AI companies specializing in digital replication, including OpenAI, to see demonstrations of the technology, to find out how easily and how well the technology could simulate human performance, and to get a sense of where the industry was heading in the near future. An AI working group formed in early 2023, made up of staff with expertise in voice, likeness, and intellectual property law. The group continued to meet regularly to share stories and discuss contract language, articles, and case studies. An AI task force was also formed, where rank-and-file members with above-average knowledge of technology could interact with union staff and discuss AI-related issues in their workplaces. SAG-AFTRA's extensive and proactive information gathering have supported its campaigning, bargaining, and representation activities; as well as union representatives' capacity to advise the studios, which now view the union as a resource in their AI investment and deployment decisions.

Policymakers are also drawing on SAG-AFTRA's AI expertise. The union was instrumental in drafting the No Fakes Act, which would guarantee a federal right to voice and likeness; and ensuring it was introduced in both the House and the Senate. Studios, record labels, broadcasters, tech companies, artists, advocacy groups, and the AFL-CIO supported the bill, which also has bipartisan support. SAG-AFTRA is also directly involved in similar legislative

156 Writers Guild of America (2023) Summary of the 2023 WGA MBA.
157 Interview with SAG-AFTRA Executive VP and General Counsel, November 6, 2024.

initiatives at the state level. A California bill that requires explicit consent for the use of a performer's digital replica was approved by the state's Senate in August 2024.[158]

SAG-AFTRA leadership stresses that the union would not have been able to win these AI contract provisions without going on strike and receiving national media coverage. According to union leaders, the studios 'made zero movement on AI' until the strike began, and AI became a central part of SAG-AFTRA's messaging to the public. However, the union was not able to win as many protections for the use of synthetic performers, which are characters that are created purely through generative AI. Synthetic performers were not yet being used by the studios, so the union was taking a wait-and-see approach. The new agreement does require bargaining with the union if the studios want to generate synthetic performers by training AI systems on their content libraries.

Other initiatives seek to establish alternative forms of worker voice in or ownership over the use of their images and voices. In October 2024, an agreement was signed between SAG-AFTRA and Ethovox, an AI voice company owned and managed by voice actors. It requires minimum session fees and revenue sharing 'for the life of the foundational model' – which the union sees as critical for ensuring that digital voice replicas are produced in a way that is based on informed consent and fair compensation.[159] The revenue sharing clause requires compensation for 'each Performer whose data is extracted from their Recordings and embedded in the Foundational Voice Model.'[160]

The Ethovox agreement is an innovative solution to the difficult problem of ownership and compensation rights for the products of AI models that are trained on creative workers' images, voices, and art – through writing or visual art. However, key questions for artists also concern their insertion into the creative process: or who is in control of decisions concerning when and under what conditions AI is used to complement rather than substitute for creative labor.

SAG-AFTRA also has an ongoing conflict with major game development studios over their use of AI for tasks traditionally performed by voice and motion capture actors. The union's Interactive Media Agreements expired in 2022, and a strike was announced in July 2024. The union's key concerns were similar to those in the AMPTP conflict – including rules concerning consent, fair compensation, and transparency when using AI-based tools to replicate actors' voices and images.[161] In September, SAG-AFTRA announced that the producers of 80 video games had signed interim agreements with the union. However, the strike remained ongoing at the major studios as of March 2025. A recent article noted that SAG-AFTRA and the video game companies' bargaining committee had agreed on 24 out of 25 proposed items, but that they were still unable to come to agreement on the use of generative AI.[162]

158 Maddaus, G. (2024) SAG-AFTRA Wins Passage of California Bill to Limit AI Replicas.https://variety.com/2024/politics/news/sag-aftra-limit-ai-digital-replica-california-bill-1236120379/

159 SAG-AFTRA (2024) New SAG-AFTRA and Ethovox Agreement Empowers Actors and Secures Essential A.I. Guardrails. October 28, 2024. https://www.sagaftra.org/new-sag-aftra-and-ethovox-agreement-empowers-actors-and-secures-essential-ai-guardrails

160 Ethovox Foundational Voice Model Agreement (2024) https://www.sagaftra.org/sites/default/files/2024-10/Ethovox%20Foundational%20Voice%20Model%20Agreement.pdf

161 SAG-AFTRA (2024) Comparison of Union and Employer Proposals on Artificial Intelligence. https://www.sagaftra.org/sites/default/files/sa_documents/ima_comparison_chart.pdf

162 Stephan, K. (2025) SAG-AFTRA Video Game Performers Hold Picket Outside WB Games as Strike Continues: 'We Are Still Fighting', *Variety*, March 5, 2025. https://variety.com/2025/biz/news/sag-aftra-video-game-strike-picket-1236328677/

The experience of SAG-AFTRA illustrates the important role that worker mobilization and appeals to public support can play in negotiating collective agreements that protect worker rights vis-à-vis new technologies. This is particularly the case for rapidly developing and often untested applications of generative AI in creative industries. In addition to a mobilized membership, union representatives' own AI expertise can help to support productive social dialogue, protective legislation, and alternative worker-led models for addressing control and fair compensation concerns.

The International Alliance of Theatrical Stage Employees (IATSE) has also negotiated a contract with AMPTP covering their members in film and television, which was ratified in 2024. It establishes a committee to facilitate AI skills training, requires that the employer negotiate over employee impacts of AI systems, protects employee rights to refuse scanning their image, protects employees from liability for outputs if they are directed to use AI, and requires that AI use cannot be outsourced to non-union labor.[163] One provision holds that 'the Producer will not require an employee to provide prompts furnished by the employee in the performance of bargaining unit work in a manner that results in the displacement of any covered employee.'

A number of company-level agreements address similar concerns with AI use in creative work. The idea of establishing a commitment to a more human-centered approach to AI adoption can be seen in an agreement between the Microsoft game development subsidiary ZeniMax and the CWA in December 2023. It commits ZeniMax 'to uses of AI that augment human ingenuity and capacities, to ensure that these tools enhance worker productivity, growth, and satisfaction without causing workers harm.' This includes a commitment by the employer to give the union notice where AI may impact union members' work and to bargain those impacts when requested. It also establishes six principles that should guide AI implementation.[164]

Other agreements focus on similar issues in journalism and editorial work. A 2023 agreement between Writers Guild of America East (WGAE) and FT Specialist, an editorial division of the Financial Times, includes a clause requiring management to discuss the introduction of new technology, with bargaining rights for the union over the effects of changes.[165] Members of The NewsGuild-CWA negotiated a collective agreement with the Associated Press that prevents any use of generative AI except by working journalists and prohibits job cuts driven by AI.[166]

The Ziff Davis Creators Guild (ZDCG), an affiliate of the NewsGuild of New York representing 62 editorial workers at Lifehacker, PCMag, and Mashable, negotiated AI protections in their 2024 contract.[167] These include prohibitions against layoffs due to generative AI (GAI) and the use of GAI to reduce base salaries. A new AI subcommittee was also established to oversee, receive advance notice of, and evaluate planned AI use. A key requirement is human editorial review and conspicuous disclosure of any AI-generated content, to ensure editorial integrity. ZDCG leadership stressed that they would not have won these provisions without constant rank-and-file

163 IATSE (2024) Summary of Basic Agreement Negotiations. https://iatse.net/wp-content/uploads/2024/06/2024-SUMMARY-OF-BASIC-AGREEMENT-NEGOTIATIONS_6.28.24-FINAL.pdf

164 CWA (2023) ZeniMax Workers United-CWA Collective Bargaining Yields First-of-Its-Kind Tentative Agreement with Microsoft Over Use of AI in the Workplace. https://cwa-union.org/news/releases/zenimax-workers-united-cwa-collective-bargaining-yields-first-its-kind-tentative

165 WGAE (2023) WGA East Members at FT Specialist Ratify First Union Contract. August 23, 2023. https://www.wgaeast.org/wga-east-members-at-ft-specialist-ratify-first-union-contract/

166 Memorandum of Agreement between the News Media Guild and the Associated Press, page 15, https://newsmediaguild.org/wp-content/uploads/2024/05/Contract-2024-Editorial-Unit.pdf;

167 New York NewsGuild (2024) Prime Day Walkout Averted at Ziff Davis July 15, 2024, https://newsguild.org/prime-day-walkout-averted-at-ziff-davis/;

organizing and a pledge signed by 92 percent of the bargaining unit to strike on Amazon Prime Day. A tentative agreement was ultimately reached four days before the strike deadline. Since ratification, there have not been any AI issues or grievances.[168]

The above cases involve collective agreements that address specific uses of generative AI in creative industries or jobs. US labor unions in other service and manufacturing sectors are also responding to potential threats to jobs or skills, often through modifying contract provisions developed to address earlier waves of technological change. For example, the 2023 National Contract at UPS includes language prohibiting the implementation of new technologies that would eliminate significant parts of the workforce until 2028, including drones, driverless vehicles, platooning of semis, and other AI.[169] The contract also required UPS to reconfigure its sorting technologies so that outsourced packages were redirected to UPS workers.

The International Longshoreman's Association (ILA) raised concerns with automation of port operations in their 2024-25 negotiations over their collective agreement covering East and Gulf Coast workers. Increasingly, ports are adopting AI-powered driverless vehicles, cranes that lift and move cargo without human operators, and 'auto gates' that process trucks.[170] The ILA's expiring contract with the United States Maritime Alliance barred equipment 'devoid of human interaction'. Following a short strike in October 2024, an agreement was finally reached in February 2025 that maintained this bar on fully automated machines, while increasing wages by 62 percent over six years. It also included a job guarantee that when employers introduce technology that permits the autonomous moving of cargo, they will assign at least one worker for each additional autonomous crane.[171]

National Nurses United (NNU), the largest union of registered nurses in the United States with over 225,000 members, has sought to connect worker control and safeguarding worker skills to service quality concerns. AI is increasingly used in health care for clinical prediction, remote patient monitoring, and automated charting and nursing care plans. However, union representatives observe that these systems can potentially drive up costs while endangering patient care through further exacerbating understaffing problems, providing inaccurate assessments that endanger patients, and potentially worsen inequality in care quality due to racially biased training data. Moreover, they can take nurses away from patient care due to additional time spent correcting errors made by AI systems. A survey of nurses conducted by the union established that these concerns were widespread.[172]

NNU has already established technology committees in their hospitals, to address earlier waves of technological change. These are being repurposed to improve worker voice in decisions on AI investment and deployment. In 2024, the union released a Nurses and Patients' Bill of Rights: Guiding Principles for AI Justice in Nursing and Health Care. This includes seven areas of nurse and patient rights - including the right to high-quality person-to-person care (which should not be compromised by uses of AI contributing to worker displacement or deskilling), the right to safety (developers and deployers should demonstrate the safety of new technology and technology

168 Interview, ZDCG representative, November 7, 2024

169 Kresge, L. (2023). Negotiating Workers' Rights at the Frontier of Digital Workplace Technologies in 2023. *UC Berkeley Labor Center.*

170 Evis, P. (2024) Will Automation Replace Jobs? Port Workers May Strike Over It. *New York Times,* September 2, 2024. https://www.nytimes.com/2024/09/02/business/economy/port-workers-robots-automation-strike.html

171 Eavis, P. (2025) Dockworkers Vote to Accept New Labor Contract. *New York Times,* February 25, 2025.https://www.nytimes.com/2025/02/25/business/dockworkers-union-contract-vote.html

172 National Nurses United (2024). National Nurses United survey finds A.I. technology degrades and undermines patient safety. https://www.nationalnursesunited.org/press/national-nurses-united-survey-finds-ai-technology-undermines-patient-safety_National Nurses United (2024) A.I.'s impact on nursing and health care. https://www.nationalnursesunited.org/artificial-intelligence ; Bonnie Castillo (2023). Written Statement for Third Bipartisan Senate Forum on Artificial Intelligence.

should not substitute for appropriate staffing levels), and the right to collective advocacy for workers and their patients ('Health care workers have the right to be consulted and engaged on all policies, procedures, and best practices surrounding the implementation of A.I.').[173] In January 2025, thousands of nurses participated in marches, protests, and rallies in the lead up to collective agreement negotiations, in which the impacts of AI technologies on safe staffing and patient care were anticipated to be important bargaining topics.[174]

In one prominent example of social dialogue between a major tech employer and labor unions, Microsoft and the AFL-CIO formed a partnership to 'create an open dialogue to discuss how artificial intelligence (AI) must anticipate the needs of workers and include their voices in its development and implementation.'[175] The goals include information sharing on trends in AI technology, incorporating worker perspectives and expertise in the development of that technology, and helping to shape public policy in a way that supports frontline workers' technology skills and needs. A key stated policy focus in the agreement is in the area of skill development, including expansion of apprenticeships in tech occupations and funding for Career and Technical Education. Microsoft also agreed to remain neutral in union organizing campaigns, respect worker rights to form or join unions, develop positive labor-management relationships, and negotiate collective bargaining agreements 'that will support workers in an era of rapid technological change'. This builds on Microsoft's labor neutrality agreement with the Communications Workers of America (CWA), which was signed following an upsurge in union organizing by video game workers at a company it acquired.[176]

We found fewer examples from manufacturing of agreements directly addressing AI, although there are a number of historic agreements negotiated by the United Auto Workers (UAW) and other unions concerning the use of robots and other automating technologies, which support investment in worker training and job security or transfer rights.[177] UAW-Ford's 'Letters of Understanding' include provisions under which 'The NJCHS (National Joint Committee on Health and Safety) will research AI technology for worker safety and how it applies to facility operations' and provisions that require 'advanced written notification to Local Unions at locations planning the introduction of new or advanced technology so as to permit meaningful discussion of its impact'.[178]

In **Canada**, collective agreements address many similar issues to those in the US. Unifor built on existing language surrounding general consultation on workplace innovation and technical change in 2020 Master Agreements with GM and Ford, by explicitly clarifying that those collective agreement provisions also apply in the context of AI.[179]

In its 2024 Independent Production Agreement (IPA), the Writers Guild of Canada (WGC) negotiated strong generative AI (GAI) contract language, modeled on provisions in the US WGA agreement discussed above. GAI-generated material cannot be considered Animation Development or

[173] National Nurses United (2024). Nurses and Patients' Bill of Rights: Guiding Principles for AI Justice in Nursing and Health Care. https://www.nationalnursesunited.org/sites/default/files/nnu/documents/0424_NursesPatients-BillOfRights_Principles-AI-Justice_flyer.pdf

[174] National Nurses United (2025) Nurses march nationwide in support of safe staffing, patient protections against A.I. January 14, 2025. https://www.nationalnursesunited.org/press/nurses-march-nationwide-in-support-of-safe-staffing-and-patient-protections-against-ai

[175] AFL-CIO (2023) AFL-CIO and Microsoft Announce New Tech-Labor Partnership on AI and the Future of the Workforce. December 11, 2023. https://aflcio.org/press/releases/afl-cio-and-microsoft-announce-new-tech-labor-partnership-ai-and-future-workforce

[176] CWA (2022) CWA and Microsoft Announce Historic Labor Neutrality Agreement. https://cwa-union.org/news/cwa-and-microsoft-announce-historic-labor-neutrality-agreement

[177] Kresge (2023) *Ibid*.

[178] UAW Ford Contract (2023) – provisions on pp. 108 and 250. https://uaw.org/2023fordcontract/vol-4a/#p=1

[179] Master Agreement between General Motors of Canada Company and UNIFOR, Memorandum of Understanding Health and Safety, Section 3(c), pg. 348, November 5, 2020. https://negotech.service.canada.ca/eng/agreements/01/0194612a.pdf
Agreement between Ford Motor Company of Canada, Limited and UNIFOR, pg. 301. https://negotech.service.canada.ca/eng/agreements/01/0193212a.pdf

Script Material, and producers must disclose when they provide AI-generated materials to writers as Source Material and cannot use AI-generated content to erode a Writer or Story Editor's rights to compensation or credit. On the subject of Guild-written material being used to train AI systems, WGC followed in WGA and SAG-AFTRA's footsteps by taking a 'wait-and-see' approach. In a Letter of Understanding, both sides recognized that 'this remains a rapidly evolving issue and is likely to continue to be impacted by legal, regulatory, and global market development during the term of the 2024-2027 IPA' while also agreeing to meet semi-annually 'to review and discuss developments related to the use of GAI in independent production'.[180] WGC is also involved in lobbying policymakers on a range of GAI issues, including limiting the use of public funding for culture to human creators, ensuring that industry awards only go to content created by humans, making sure that only human beings are considered 'authors' for copyright purposes, and requiring that AI systems are transparent concerning their source material.[181]

The Canadian Media Guild (CMG) signed a Memorandum of Agreement with the Canadian Broadcasting Corporation/Radio-Canada (CBC) to make AI a standing item for discussion at each National Joint Committee meeting and require that subject matter experts be in attendance for any such discussion, as well as to 'require the express permission of employees to recreate or alter their likenesses using AI for any purpose'.[182]

One interesting case is an agreement between the union MoveUp and its unionized staff, represented by USW Local 2009 - involving negotiations over the use of AI within a union.[183] MoveUp is Local 378 of the Canadian Office of Professional Employees Union (COPE SEPB), representing members at public and private sector companies. The 2022 contract included a technological change provision that defined technological change as having the potential to result in 'displacement or layoff of any employee', and set out parameters for re-training where technological change occurred. These included training provided by the employer for operation of new equipment, use of new material, or performance of a new procedure, to qualify for new jobs created by such changes, and for other internal vacancies for which the employee is qualified. In the lead up to 2024 negotiations, USW took a proactive approach to AI, which had yet to seriously impact the bargaining unit. Intended as a placeholder for ongoing collaborative conversations between USW and MoveUp, the 2024 collective agreement added new provisions allowing the use of 'AI assistants' to enhance work, but requiring that they could not be used as 'standalone entities' in content creation, or to replace the 'essential role of human creativity or decision-making'.

2.1.3. Asia, South America, and Africa

We found fewer examples outside of Europe and North America of collective agreements or other forms of social dialogue at company and industry level targeting AI's impacts on employment and skills. However, labor unions have taken some leadership on these issues.

In **Japan**, collective agreements between AEON and the Federation of AEON Group Workers' Unions (a member of the industrial union UA Zensen) have focused on supporting investments in skills and productivity improvement associated with AI adoption. The AEON group owns a diverse

[180] WGC/CMPA Independent Production Agreement (IPA) 2024-2027, Appendix T. https://www.wgc.ca/sites/default/files/2025-01/2024%20IPA%20Final%20WGC_CMPA.pdf

[181] Writers Guild of Canada (2024) Nice try AI... Writers Guild of Canada champions writers not robots! AI tries (and fails) to improve best-written Canadian film/TV lines, November 25, 2024. https://www.wgc.ca/whats-new/news/nice-try-ai-writers-guild-canada-champions-writers-not-robots-ai-tries-and-fails

[182] Canadian Media Guild and the Canadian Broadcasting Corporation (2024) Final Agreed to Negotiations Package, MOA re:Artificial Intelligence, pg. 159. https://cmg.ca/wp-content/uploads/2024/03/Final-Package-CMGCBC-202324-Negotiations-Signed.pdf

[183] Interview with USW Canada Staff Representative, November 6, 2024.

business portfolio of retail, healthcare, and finance subsidiaries. The federation of AEON Group Workers' Unions includes 51 labor unions representing 300,000 members.[184] AI has been used in multiple areas, from self-checkouts systems and pricing optimization to AI-driven scheduling and tasks allocation systems. AEON established the AEON Digital Academy to provide training on digital transformation, and AEON Smart Technology to streamline digital initiatives across the group.

Due to labor shortages caused by an ageing population and declining birth rates, Japanese companies tend to prioritize optimizing the workforce through AI. However, there is no job loss in AEON caused by AI or digitalization in principle. Instead, employees have often been redeployed to other jobs or focus on more value-added tasks, which secures employment. For example, in supermarkets, self checkout has led to declining checkout staff, but displaced workers have moved to online supermarket order picking, product preparation, or new customer service roles.

Both the labor union and the company are focused on labor-management collaboration, and leveraging digital tools to enhance efficiency and productivity. In October 2022, the Federation of AEON Group Workers' Unions and AEON signed a collective bargaining agreement that emphasized treating and investing in employees as human capital. They also established a productivity improvement subcommittee under a labor-management council to evaluate and discuss AI and digital transformation initiatives and to ensure joint decision-making. The union's focus has also been on redistributing productivity gains to employees, through negotiating wage increases. These have been particularly important for the part-time workforce, which make up the majority of employees. The union has also focused on supporting the company's ability to recruit new workers, initially by raising starting salaries for full-time employees, and on balancing generational equity through a base-pay increase.

In **South Korea**, call center unions have been at the forefront of resisting the labor replacing effects of AI adoption. In December 2023, KB Bank, which outsources its customer service tasks to approximately 1,000 agents working for five different contractors across various cities, announced its intention to terminate contracts with two of these contractors in Daejeon city, resulting in the layoff of 240 call center workers. In response, the DeunDeunHan Call Center Union, which organizes 500 outsourced workers across four BPOs under the Korean Public Service and Transport Workers' Union (KPTU), immediately organized a tent protest in front of KB Bank to publicize the issue.[185]

The union determined that KB Bank's layoff decision was due to a 30% decrease in customer interactions following the adoption of AI chatbots. Through press conferences and media coverage, the union successfully mobilized public support, both within the Daejeon community and nationwide, exerting significant pressure on KB Bank. This public support enabled the union to engage with representatives from the National Assembly and the regional Labor Office, further increasing political pressure on the company. The Korean Financial Industry Union, representing the bank's regular workers, showed solidarity by issuing a statement condemning the layoff decision. Following this sustained media attention and political pressure, KB Bank decided not to terminate the contracts with the two call center contractors. Following this victory in preventing AI-based layoffs, the DeunDeunHan Call Center Union shifted its focus to advocating for direct employment of call center workers by the bank, or 'insourcing' their jobs. To achieve this, the union is working in a coalition with other organizations to change financial regulations in such

[184] Interview, Koki Ueyama, Secretary General, AEON Labor Union Federation, December 25, 2024 - conducted by Eriko Teramura. All information in the AEON case study is based on this interview.
[185] Interview with the president of the DeunDeunHan Call Center Union, December 26, 2024

a way as to mandate direct employment for call center workers in the financial sector, ensuring better protection of customers' financial information.

In **Brazil**, the banking sector has also been the focus of worker mobilization and collective bargaining on AI, but with an emphasis on investments in equity in training and job opportunities. The proportion of women working in the Brazilian banking sector was declining due to the automation of customer service work and the shift to online banking, while new jobs were expanding in more technology-intensive IT jobs. CUT's National Confederation of Financial Workers (CONTRAF-CUT) thus began an initiative to expand training to women to become specialists in this area, to encourage them to move into more specialized positions.[186] This was organized in partnership with training colleges and banking employers, with the goal of making scholarships to IT courses available to women.

In 2024, CONTRAF-CUT signed a national collective agreement with the National Confederation of Banks (FENABAN), introducing clauses on AI and workers' training.[187] The agreement includes commitments to support retraining and promotion of opportunities 'in the face of technologies such as AI', providing information to workers on initiatives and disruptive technologies (including AI), and mitigating unequal pay – with a focus on gender equality. It establishes a monitoring process for retraining initiatives, which the agreement states will be carried out through the 'National Negotiation on New Technologies, such as AI, and Banking'.[188] The banking employers also agreed to finance 3,000 scholarships for women to take IT courses focusing on data analysis, programming languages, and web design. Priority will be given to women 'in situations of socio-economic vulnerability', and inclusive of trans women, black women, and people with disabilities.[189]

In **South Africa**, again banks have been the focus of union organizing on AI-related restructuring. The Congress of South African Trade Unions (COSATU)-affiliated South African Society of Bank Officials (SASBO) has argued that AI is potentially disruptive to jobs and careers.[190] SASBO has challenged restructuring in the South African Banking Sector, arguing that employers have used AI to justify unnecessary branch closures.[191] In September 2019, SASBO called a nationwide strike to protest mass retrenchments by the ABSA group, Nedbank and the closure of 91 branches by Standard Bank. The union demanded that the banks come to the negotiating table, consult the union on workforce changes, and redeploy laid off employees into new roles.[192] The strike was enjoined by the labor court. Negotiations following the strike led to a voluntary severance package for employees, a salary increase and redeployment of employees who did not wish to leave their jobs to new positions by December 2019. However, union officials were unable to bargain directly over the introduction of new technology.[193]

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186 Presentation, Juvandia Moreira, President CONTRAF-CUT, U.S.-Brazil Commercial Dialogue: Digitalization & Workforce Development Webinar. August 21, 2024.

187 Convenção coletiva de trabalho - FENABAN & CONTRAF https://contrafcut.lumis.com.br/data/files/7F/A5/5D/44/BB102910A7809E19820808A8/Fenaban%20-%20CCT%20Geral%202024-2026.pdf

188 Translation and information on the agreement was provided by Jonas Valente, Fairwork Project, University of Oxford - email communication, February 24, 2025.

189 SindBancarios (2025) Mais mulheres na TI: abertas inscrições para cursos reivindicados pelo movimento sindical, March 12, 2025. https://www.sindbancariospetropolis.com.br/noticia/mais-mulheres-na-ti-abertas-inscricoes-para-cursos-reivindicados-pelo-movimento-sindical/12103

190 Bischoff, C., Kamoche, K., & Wood, G. (2024). The formal and informal regulation of labor in AI: The experience of Eastern and Southern Africa. *ILR Review*, 77(5), 825–835.

191 Kulkarni, P. (2019). South African labor court interdicts country-wide strike by bank officials. People's Dispatch. https://peoplesdispatch.org/2019/09/27/south-african-labor-court-interdicts-country-wide-strikeby-bank-officials/

192 SASBO The Finance Union (2019). Sasbo is challenging the banks on 4IR issues. *SASBO News*. November, 2019. https://www.sasbo.org.za/wp-content/uploads/2020/04/SASBO-News-v41n4-Proof-27-Nov.pdf

193 Maake, S. (2022). *Exploring SASBO'S response to the challenges of artificial intelligence in the banking industry in Gauteng* (pp. 70–74) [Thesis, University of Johannesburg; Master of Arts (MA)]. https://hdl.handle.net/10210/499894

2.2. Social dialogue over algorithmic management: From labor controlling to labor empowering

Management itself is being transformed by tools that automate scheduling, work allocation, monitoring, and performance management. The term 'algorithmic management' describes the use of software algorithms to enable different forms of automated or semi-automated management decision-making.[194] AI is increasingly integrated into coaching software, and is used in predictive or 'human resource' analytics to hire new workers, determine training needs, and allocate work. More conventionally, AI is used to recognize patterns recorded or gathered via diverse electronic data sources to evaluate performance. This includes, for example, AI-enabled cameras applying machine vision, which allows for automating employee monitoring through 'anomaly detection'; wearable devices that apply AI algorithms to analyze patterns in biometric information, employee movements, and location; and voice monitoring technologies that apply AI-based speech analytics and sentiment analysis to identify adherence with scripts, evaluate customer service quality, and direct or coach employees during service interactions.

There are distinct risks to workers associated with algorithmic management, including privacy of personal data, bias, and discrimination, but also work intensification, increased surveillance, and reduced discretion or control at work. One concern is that these tools gather and use employee data. Thus, data privacy may be at risk, particularly if there are no or weak guidelines concerning which kinds of employee data the software can access and how it will be used.[195] Second, these technologies can encourage intensification of management control. Tools like speech analytics or computer vision require constant monitoring of employee performance to recognize patterns and detect 'anomalies'. Biometric or GPS-based tools used in warehouses, retail, or housekeeping can tightly control worker movements and remove their discretion over the order and manner in which they perform tasks.[196] AI-based coaching technologies in customer service settings often are adopted in a context in which employees are required to follow tight scripts or to receive constant feedback about their performance.[197] Third, these tools can remove certain decisions from humans, so workers have limited ability to complain or contest unfair decisions.[198]

Together, these add up to substantial risks to worker health and well-being. Past research has shown that management practices based on intensive monitoring, restricted control over work, and perceived lack of transparency and fairness in work allocation or performance evaluation decisions are connected to worker stress and burnout.[199] Labor unions have sought to reduce these risks in social dialogue with employers through securing stronger rights for collective worker voice over how algorithmic management tools are used at work. These efforts often draw on existing data protection and participation rights, or focus on establishing them in collective agreements. Unions have also sought to establish more equitable policies concerning workplace applications of algorithmic management tools, through campaigns organized in solidarity with

194 Wood, AJ (2021) Algorithmic management consequences for work organisation and working conditions. *JRC Working Papers Series on Labour, Education and Technology,* No. 2021/07.

195 Ajunwa, I. (2023). *The quantified worker: Law and technology in the modern workplace.* Cambridge University Press. Aloisi, A., & De Stefano, V. (2022). *Your Boss Is an Algorithm: Artificial Intelligence, Platform Work and Labour*. Bloomsbury Publishing.

196 Delfanti, A. (2021). *The Warehouse. Workers and Robots at Amazon*. Pluto Books. Kassem, S. (2023). *Work and Alienation in the Platform Economy: Amazon and the Power of Organization*. Policy Press. Vallas, S.P., Johnston, H. & Mommadova, Y. (2022) Prime suspect: mechanisms of labor control at Amazon's warehouses. *Work and Occupations,* 49(4), 421–456.

197 Doellgast, V. (2023). Strengthening social regulation in the digital economy: comparative findings from the ICT industry. *Labour and Industry*, *33*(1), 22-38.

198 Dupuis, M. (2025). Algorithmic management and control at work in a manufacturing sector: Workplace regime, union power and shopfloor conflict over digitalisation. *New Technology, Work and Employment*. 40(1): 81-101

199 O'Brady, S. and Doellgast, V. (2021) Collective Voice and Worker Well-being: Union Influence on Performance Monitoring and Emotional Exhaustion in Call Centers. *Industrial Relations: A Journal of Economy and Society* 60(3): 307-337. Pfeffer, J (2018) *Dying for a paycheck: How modern management harms employee health and company performance —and what we can do about it.* HarperBusiness.

those workers most negatively impacted by them. We outline examples of these efforts in this section, with a focus on 'traditional' workplaces. We do not discuss examples of agreements or social dialogue over algorithmic management in platform and app-based work, as these are covered in section 2.3 below.

2.2.1. Europe

Europe has led the way on agreements focusing on algorithmic management, with many negotiated provisions limiting the use of AI- or algorithm-based tools for worker surveillance and performance management. At EU level, as discussed above, the General Data Protection Regulations (GDPR) has been in force since 2018, with requirements concerning the collection, storage, and use of personal data. More recently, the AI Act establishes some further protections, including prohibitions of automated decisions that affect employees without human oversight; and on the use of AI for sentiment analysis or 'emotion recognition' – effectively banning a controversial AI application that is increasingly used in AI-based hiring and coaching tools.

Nordic unions have negotiated most publicly over broader training or partnership initiatives related to AI at industry or national level, as discussed in previous sections. However, several case studies show company-level bargaining over specific issues around algorithmic management. In **Norway**, a major telecommunications provider negotiated a series of agreements with its unions restricting the use of video monitoring and speech analytics, following a conflict over increased digital surveillance in the company's call centers.[200] The union escalated its complaints over video monitoring to the Norwegian Data Protection Agency, which found that this violated employee privacy rights. After this, the unions and management reestablished more cooperative negotiations, including consultation on the use of a training platform applying real-time analytics to identify skill gaps, and participation in a taskforce to consult on an AI-based speech analytics tool, which restricted its use for identifying individual performance data.

In **Sweden**, unions' strategies have focused on applying existing regulations and protections to local negotiations on AI-based issues. A Unionen representative observed, for example, that occupational health and safety regulations include rules concerning negotiations over new work tools and risk assessment that can be used to support worker voice in algorithmic management tools.[201] Similarly, the Co-Determination Act requires employers to negotiate where there is any significant change to an operation or to employees' working or employment conditions. As negotiations must be called well in advance of changes being implemented, trade unions could use their rights under this legislation to influence the implementation of AI systems ex ante.[202] The union's strategy (and challenge) was thus to strengthen local capacity to use these rights in negotiations.

A case study from Sweden documents an example of this local involvement, or what Bender and Söderqvist describe as 'technological co-determination', in the mining and smelting company Boliden.[203] Here negotiations between the employer and its unions focused on a wifi positioning system. Local collective agreements formalized an agreement worked out through consultation: workers were to be given anonymous identification numbers that could only be de-anonymized

[200] Doellgast, V., Wagner, I., & O'Brady, S. (2023). Negotiating limits on algorithmic management in digitalised services: cases from Germany and Norway. *Transfer: European Review of Labour and Research*, *29*(1), 105-120.
[201] Email correspondence with Victor Bernhardtz, Unionen, November 14, 2024
[202] Email correspondence with Victor Bernhardtz, Unionen, January 21, 2025
[203] Bender, G. and F. Söderqvist (2024) Human-Centered or Biorobotized Automation? Technological Codetermination in an Innovative Mining Company. Draft Paper.

under emergency procedures – in which case a union representative was required to remove the anonymization feature using a password.

Germany again is the exemplary case, with numerous agreements regulating the use of AI- or algorithm-based tools for performance management, the direction of tasks, and workforce analytics. In Case study 2 below, we discuss in more detail two agreements negotiated in the German ICTS industry, which have strengthened worker voice in how algorithmic management tools are used in service workplaces. A key focus in both has been establishing AI Ethics Committees to oversee the ethical adoption of AI tools, as well as to establish and enforce clear rules prohibiting certain uses of AI that pose significant risks to workers and working conditions.

▶ **Case study 2: Negotiating 'labor empowering' agreements in the German ICTS industry: Deutsche Telekom and IBM[204]**

Germany has very strong worker rights both to data protection and participation in decisions concerning technology at work, as discussed above.[205] In addition, the federal Works Constitution Act gives works councils strong co-determination rights over the use of technologies for 'performance and behavior' control. These rights have been a key tool in negotiations over algorithmic management.

In the information and communications technology services (ICTS) industry, German works councils – supported by the labor unions ver.di and IG Metall – have negotiated agreements strengthening worker voice over how technologies are used in algorithmic management, particularly for monitoring worker performance but also for a range of algorithmic management applications.

Deutsche Telekom in Germany negotiates collective agreements with ver.di and works agreements with its elected works councils. Together, these have established a series of rules and provisions (discussed above) that encourage 'labor complementing' use of AI, through committing management to job security and retraining as jobs are cut due to automation; and committing management to drawing a roadmap of digitalization measures with employment impacts. In addition, a central focus of negotiations has been to support worker privacy, mitigate bias, and discourage the use of AI tools that intensify surveillance and top-down management control of workers.

A works agreement on *IT systems* establishes a process through which management consults with the works council before purchasing new technology. Based on an evaluation of the risk to employees, a joint labor-management committee decides whether formal negotiations are needed. An important criterion for evaluating 'risk' is whether the software can record or track data on individual employees – as all performance metrics must be aggregated to groups of five employees or more.

An agreement on *workforce analytics* states that analytics tools should be used to improve the working environment and support management decisions. It prohibits using analytics to monitor individual employee performance or behavior or to make automated decisions

[204] Some of the text in the summary of the Deutsche Telekom case is taken from pp.48-49 the report: Doellgast, V., O'Brady, S., Kim, J., & Walters, D. (2023). AI in contact centers: Artificial intelligence and algorithmic management in frontline service workplaces. Cornell University. https://hdl.handle.net/1813/113706

[205] Germany has had a federal data protection act since 1978. The current Federal Data Protection Act (BDSG) was revised to conform with the EU's General Data Protection Regulation (GDPR).

without human oversight. Databases must be designed so that all data are anonymous, and no conclusions can be drawn about individual employees. Transparency under data protection laws must be ensured, particularly regarding mathematical-statistical (or algorithmic) processes. Special measures are required for certain categories of personal data, with reference to the GDPR. The agreement establishes a 'Workforce Analytics Expert Group' with equal works council and employer representation. It reviews the use of employee data and AI-enabled analytics tools, holding regular evaluation workshops and including provisions for training employees (with works council involvement) to use workforce analytics responsibly.

The works council also drafted an *AI ethics manifesto* stipulating how AI would be used and recommending that an expert group be established to ensure adherence to the manifesto's principles. It has several key provisions: Interactions with 'learning machines' must be designed so that workers know that they are interacting with AI, and human decision-makers (not AI) must make significant personnel-related decisions. Certain uses of AI are prohibited, including gathering personal information about employees' political opinions, philosophical beliefs, union membership, or sexual orientation; or seeking to analyze or influence employees' emotions or mental state. Technologies that ascribe personality traits or use biosensors are not allowed.

Works agreements at Deutsche Telekom have historically limited the use of remote monitoring technologies, and newer agreements prohibit the use of speech analytics to monitor employee emotions as well as the direct implementation of AI-enabled coaching apps. An important provision is that individual performance data can be gathered only for groups of at least five employees. Employees can see their own performance data but choose whether to share this with team leaders, who are prohibited from requesting it.

Further workforce management tools have been regulated under the above agreements. For example, managers cannot access employees' Outlook calendars, only information that is important for projects. WebEx videoconference tools cannot measure working time. Employees are not required to turn on their cameras for meetings, and there can be no recording of team meetings and training. Agreements regulate when team leaders listen to employee calls and for how long.

IBM Germany also has negotiated both collective agreements with ver.di and works agreements with its elected works councils. Similar to Deutsche Telekom, past agreements established that employers could not carry out 'behavior and performance reviews' of individuals using data collected through the IT system. A works councilor observed that the integration of AI into these management systems was the starting point for a 2020 agreement on the use of AI systems.[206]

Similar to what occurred at Deutsche Telekom, this AI Framework Agreement was first discussed in joint labor-management workshops, which applied design thinking methods.[207] The agreement classifies different AI applications according to their risk and defines standards for evaluating the workforce impacts of AI. Thus, for example, the use of AI for personnel measures or automated decisions with immediate effects on employees, without human oversight, are classified as 'high risk' and prohibited. Algorithms that provide

[206] Interview, IBM works councilor, November 8, 2021.
[207] Gergs, H.-J., L. Schatilow, B. Langes, T. Kaempf (eds) (2023) *Human Friendly Automation: Arbeit und Künstliche Intelligenz neu denken*. Frankfurter Allgemeine Buch.

information that is visible only to the employee and direct supervisor, such as training recommendations, are classified as 'low risk' and permitted. In the middle are applications, such as career planning, which may have risks for employees and thus require additional oversight or negotiation.

The agreement also establishes an AI Ethics Council made up of AI experts and employer and employee representatives, which evaluates AI applications and oversees implementation of the agreement. The Council's role is to further develop the framework agreement and advise the human resources department and the works councils on current and planned AI applications. It also discusses and debates any objections or complaints from employees concerning AI tools in the workplace. Finally, it reviews AI recommendations and corrects them, if necessary.

Works councilors at both Deutsche Telekom and IBM felt that these agreements had improved workplace health and safety, while encouraging more positive workforce views of the AI-based systems that were adopted. Employees were protected in their existing agreements from invasive monitoring or privacy abuses associated with algorithmic management. The new agreements established a process for co-determination and oversight over the future adoption of workforce analytics and other tools based on clear principles and an expert-based review process. This also reduced the risk of works council opposition to expensive IT systems, standardizing the co-determination process and improving workforce trust in how managers were using potentially controversial tools, such as employee call recording and speech analytics.

Together, these cases demonstrate the potential for bipartite negotiations, in a context of strong data protection rights and workers' bargaining rights over technology, to encourage 'labor empowering' applications of algorithmic management in the workplace.

Other cases in Germany have placed some similar limits on AI use in algorithmic management. A 2020 agreement between Amazon Alexa and its works council restricts the use of algorithm-generated performance data for HR decisions, ensuring this data is not used to promote or dismiss workers.[208] This followed a dispute which was brought to an arbitration board. At Siemens, the works council established guidelines on data protection, data storage, and basic ethical considerations.[209] It also developed an informal agreement with management to develop 'AI cards' outlining the uses of different AI technologies in the company.

A number of anonymized case studies have examined works council involvement in negotiating or consulting over algorithmic management in different industry settings in Germany. For example, Wotschack et al. examine co-determination in a mechanical engineering company and a large food-delivery company.[210] They find that works councils in both cases faced challenges in understanding, monitoring, and shaping the use of algorithmic systems. At the same time, they found strong union support on legal issues or questions related to technology - including bringing in external experts, using provisions in the Works Council Modernization Act that supports hiring an external AI expert. Another case study by Krzywdzinski et al. in a logistics company examines negotiation in different phases of algorithmic management, as the employer deployed

[208] UNI Global Union (2023) *Ibid*, p. 14.
[209] Haipeter, T., Wannöffel, M., Daus, J. T., & Schaffarczik, S. (2024). Human-centered AI through employee participation. *Frontiers in Artificial Intelligence*, *7*.
[210] Wotschack, P., Butollo, F., & Hellbach, L. (2024). *Ibid.*

software automating storage, picking, control, and inspection processes in partnership with the software developer.[211] They found that negotiations with the works council established agreements that prevented management from using the new tools to reduce employment and increase performance targets. However, they did not find ongoing worker involvement in implementing the system, which they explain as a result of 'information asymmetries created by the algorithmic management system'.[212]

Sectoral collective agreements in Southern Europe have established worker rights regarding algorithmic management, with a focus on ensuring recourse to human decisions or clear limits on specific software applications. A 2022 agreement between **Italian** unions and the telecommunications companies Wind and TIM places limits on the use of Afiniti Advanced Routing, a tool that uses AI to match customers with call center agents.[213] Companies are not permitted to use the software to monitor individual performance data or for worker surveillance.

In **Spain**, a 2021 collective agreement in the banking sector between the Spanish Banking Association (AEB) and the labor unions CC.OO.-Servicios, FeSMC-UGT and the FINE Banking Federation includes a section on AI rights, which makes specific reference to algorithmic management.[214] It establishes worker rights not to be subject to decisions based solely and exclusively on automated variables; rights to non-discrimination; and the ability to request human oversight and intervention. It also requires management to inform worker representatives about the use of data analytics or AI systems when decision-making in HR and labor relations is based on digital models. Some similar rights are in the chemical sector agreement, which requires management to provide information to worker representatives on the objectives of AI systems; an analysis of their impacts on working conditions; and the parameters, rules, and instructions on which AI algorithms or systems are based that affect decision-making in ways that may impact working conditions or access to and maintenance of employment. AI system adoption should also involve updating occupational risk assessments, as well as ensuring there is no prejudice or discrimination and that the guiding principle is human control.

In the **UK**, the Royal Mail Group (RMG) and the Communication Workers Union (CWU) negotiated a 2020 agreement titled the Key Principles Framework Agreement (The Pathway to Change), which established principles on union involvement in the introduction of new methods, technology, or automation. The agreement first recognized that technology was crucial to the company's growth, innovation, efficiency, and manageable workload. It set up a series of principles for new technology introduction, with the Local Manager and Representative responsible for operational decision-making and respect for individual privacy rights. Consultation between the CWU and the RMG is required at the concept design stage. Trials cannot exceed 90 days and are set up with strict terms of reference covering content, location and success criteria. Once success criteria are demonstrated as met, this will trigger deployment, subject to business case approval.[215]

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211 Krzywdzinski, M., Schneiß, D., & Sperling, A. (2024). Between control and participation: The politics of algorithmic management. *New Technology, Work and Employment*.

212 Krzywdzinski et al. (2024), *Ibid,* p.16.

213 Guaglianone, L. (2024) Collective bargaining and AI in Italy. In *Artificial Intelligence, Labour and Society*. A. Ponce del Castillo (Ed.). ETUI. 207-215.

214 Resolución de 17 de marzo de 2021, de la Dirección General de Trabajo, por la que se registra y publica el XXIV Convenio colectivo del sector de la banca. https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-5003

215 Communication Workers Union. (2020). Key Principles Framework Agreement. December 20, 2020. https://www.cwu.org/news/rmg-cwu-key-principles-framework-agreement-the-pathway-to-change/

This agreement was followed by another agreement in 2021 negotiated between Parcelforce (a subsidiary company of RMG) and the CWU.[216] It establishes that delivery drivers have a right to privacy and to the data collected by Telemetry tools; and that new technology will not be deployed for use as a disciplinary tool, or as a source of information to enhance the ability of managers to take disciplinary action. The focus should be on correction and improvement, not punishment. The Table of Success Transport Working Group will monitor key measures captured by the tools–for example, accelerating, braking and cornering–to ensure fuel efficiency and incident reduction. And training will be provided to all employees who are required to use the telemetry technology. An important provision holds that local CWU representatives will receive the same training as Depot Managers on monitoring and reviewing telemetry technology, thus supporting knowledge and capacity building within the union to negotiate over these tools and represent workers in the case of grievances.

While other unions have not been able to achieve inroads into the review of algorithmic management systems to such a degree, there has been significant progress. A collective agreement between the GMB union and the delivery company Hermes required that the company reprogram its automated payment system to ensure that workers receive at least the minimum wage and that they are automatically paid any bonuses they have earned, rather than having to claim them retrospectively.[217]

2.2.2. North America

In the **United States**, there are a number of examples of agreements that limit algorithmic management in service workplaces. Many of these are based on adapting past collective agreements developed for earlier monitoring technologies that are now being supplemented with AI. The CWA has negotiated agreements at major telecommunications and airline companies that restrict the use of performance data to discipline employees if they do not meet certain time-based measures such as adherence to schedule or average call handling time in call centers and that require the use of this data primarily for training purposes.[218] This protects workers from unfair discipline as work volume and content changes – for example, due to expanded use of chatbots and agent assistance tools.

The UPS Teamsters 2023 National Contract addresses some similar challenges concerning worker surveillance using AI tools for drivers; for example, the increasing use of infrared sensors to track driver eye movement.[219] UPS is not permitted to install new driver-facing cameras or to record in-cab activities, while previously installed cameras must be disabled. In addition, GPS, telematics, and forward-facing cameras cannot be used as the sole basis for discipline. UPS also committed to providing workers with data from a new payroll system they plan to develop in 2026, so that they can have oversight over the basis for these decisions and management adjustments. A union

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[216] Communication Workers Union. (2021, August 25). *LTB 354/21 - National Agreement between Parcelforce Worldwide and the CWU- Pilot deployment and use of driver behaviour technology*. CWU. https://www.cwu.org/ltb/ltb-354-21-national-agreement-between-parcelforce-worldwide-and-the-cwu-pilot-deployment-and-use-of-driver-behaviour-technology/

[217] Collins, P., & Atkinson, J. (2023). Worker voice and algorithmic management in post-Brexit Britain. Transfer: European Review of Labour and Research, 29(1), 37–52. https://doi.org/10.1177/10242589221143068

[218] CWA (2014) CWA Contract Provisions to Promote Good Working Conditions for Customer Service Workers, https://cwa-union.org/sites/default/files/6-cwa-issue-briefs.pdf. For background on call center workers' experience of AI, see CWA, How AI is Impacting Customer Service Professional, 2024, https://cwa-union.org/sites/default/files/2023-11/call_centers_and_new_technology_fact_sheet.pdf drawing from V. Doellgast, S. O'Brady, J. Kim, D. Walters (2023) *AI in Contact Centers: Artificial Intelligence and Algorithmic Management in Frontline Services.* https://ecommons.cornell.edu/server/api/core/bitstreams/a0ac9f50-5a22-4b3d-a9d9-2cc06824e31d/content. For a detailed summary of (and links to) CWA contract provisions, see: Kresge, L. (2020) *Ibid*, pp. 15-18.

[219] Kresge, L. (2023). Negotiating Workers' Rights at the Frontier of Digital Workplace Technologies in 2023. *UC Berkely Labor Center*.

representative observed that these provisions have lessened the amount of micromanaging and use of discipline, encouraging more focus on training and proactive coaching.[220]

The use of algorithmic management in hotel catering and cleaning has been particularly widespread, and associated with intensified surveillance as well as decreased worker control over how they carry out often physically intense work - contributing to work intensification.[221] In Case study 3 below, we discuss in more detail campaigns by the Las Vegas Culinary Union to protect these workers' privacy and expand their control over algorithmic management tools.

▶ Case study 3: Regulating algorithmic management in Las Vegas casinos and hotels: the Culinary Union[222]

The Las Vegas Culinary Union – UNITE HERE Local 226, representing over 60,000 casino workers, was able to transform labor controlling technology into an opportunity for labor empowerment. In the Culinary Union's 2018 contract negotiations with 34 casino resorts, technology was a top three issue that the membership was willing to strike over. As a result, the union won historic language in its collective agreement that included a mid-cycle process to bargain over the implementation of new technology. This has been used in negotiations over a variety of technologies, including algorithmic management tools.

When one of the employers implemented algorithmic management software in housekeeping, the union was ready. Housekeepers had always been able to pick the order in which they cleaned their assigned rooms. A new smartphone app was then introduced that set the order for them, which many workers experienced as both limiting their own discretion over how they performed their jobs but also work intensifying, as they were required to work in often inefficient ways.

Whenever housekeepers interacted with the app, they generated data about their workload, location, and room status. Thus, as part of the bargaining process, the union requested that backend data. One union member's son used his programming knowledge in SQL and Python to write a script that scanned through the data to identify instances where a housekeeper had cleaned more rooms than the room quota specified in the collective agreement – which constituted contract violations. Within a couple of months, hundreds of instances were found, each with a corresponding date and timestamp.

At the same time, housekeepers began keeping paper records of where the smartphone app sent them. These records were meticulously compiled and turned into maps that showed the inefficiency of the zig-zagged, algorithm-generated paths. Housekeepers then demanded that the app's developers attend bargaining sessions. They showed the developers the maps they had made, explained what a union contract is, and told them, 'if your technology is going to be a contract violation machine, it's going to be a big problem. So, let's fix that.'

Through worker mobilization and innovative data analysis, the workers and the employer agreed to collective agreement provisions that restored worker autonomy and discretion and made it easier for the union to monitor workload violations. In the words of one

220 Interview with Principal Officer and Secretary Treasurer, Teamsters Local 2, November 5, 2024.
221 Rho,H-J & C. Riordan (2024) Beyond algorithmic control: exploring self-sequencing of tasks in hotel housekeeping work. Draft paper presented at the 'AI and the Future of Work Conference', Cornell University, October 11-18, 2024.
222 Interview with CU Researcher, November 18, 2024.

Culinary Union researcher, 'inside every worker is a nerd and inside every IT person is a worker. If people just let the IT nerds talk to the worker nerds, good things would happen'.[223]

Some workers in the hospitality sector have limited digital literacy. With the support of their parent union and a team of academics from four research universities, the Culinary Union formed a partnership with the app developer and the Culinary Academy of Las Vegas, a worker training center that is funded through the CWU collective agreement, to provide substantial training on the software as part of the Academy's housekeeper training program.[224]

Direct contact between Culinary Union members and technology companies, as well as the use of information requests to access, organize, and analyze data generated by bargaining unit work, are innovative tactics that suggest the need for union-built technology that can enable contract enforcement. Whether it is notes jotted down on paper, photos taken by workers, or proprietary software, systematized documentation of the workplace is not the sole purview of employers. Unions can also provide resources for those who have experience with software design and data visualizations, whether they are staff, members, or other union supporters.

In 2023, the Culinary Union built on the technology provisions from the previous contract and won rights to privacy from tracking technology, to bargain over technology that tracks the location of employees, to notification and bargaining over data sharing with a third party, to health care and severance pay for workers laid off due to new technology, and the right to compensation for tipped employees if tech failure makes it impossible to do their job.[225]

This case illustrates the important role that three-way social dialogue between labor unions, app developers, and employers can play in developing AI technologies that empower workers, with potential shared benefits in terms of improved worker autonomy and productivity. It also demonstrates the value to unions of negotiating rights to information on how workforce data are collected and used, and then to using that data to study the worker and organizational impacts of new technologies. In the US context of weak legislated data rights, the Culinary Union negotiated their own framework of these rights in a multi-employer agreement strengthening collective worker voice in algorithmic management.

Several agreements in US professional sports address employer collection and use of biometric data. In basketball, the NBA established a joint advisory committee to review the use of wearable technologies and data derived from wearable sensors.[226] The 2020 agreement between the NFL and NFLPA established a 'Joint Sensors Committee' to oversee the use of sensors and biometric data in professional football, and requires player approval before biometric data can be

[223] Interview with CU Researcher, November 18, 2024.

[224] Guillot, A. (2024) The Culinary Academy of Las Vegas and Amadeus Join Forces to Expand Hospitality Employment and Job Training. Amadeus. https://www.amadeus-hospitality.com/insight/the-culinary-academy-of-las-vegas-and-amadeus-join-forces-to-expand-hospitality-employment-and-job-training/

[225] UNITE HERE Local 226, press release, Culinary Union celebrates historic wins for workers in the best contract ever won with MGM Resorts, Caesars Entertainment, and Wynn Resorts, November 10, 2023, https://culinaryunion226.org/news/press/culinary-union-celebrates-historic-wins-for-workers-in-the-best-contract-ever-won-with-mgm-resorts-caesars-entertainment-and-wynn-resorts.

[226] NBA-NBPA Collective Bargaining Agreement (2017), pp.359-361. 3c7a0a50-8e11-11e9-875d-3d44e94ae33f-2017-NBA-NBPA-Collective-Bargaining-Agreement.pdf Cited in: Kresge, L. (2020). Union Collective Bargaining Agreement Strategies in Response to Technology. UC Berkeley Labor center Working Paper. Pp. 16-17.

commercialized.[227] NFL clubs use a range of wearable technologies to measure players' health and performance – for example, agility, speed, heart rate, sleep, fatigue, and hydration. The collective agreement contains detailed provisions on many of these specific uses. For example, clubs are permitted to perform sleep studies – but they are required to hire a qualified third-party company to conduct the study and only conduct them during training activities or camps. In addition, player participation must be voluntary; players own the individual data collected on them; the data and information collected may not be shared with the club unless the player has provided written approval; information can only be used to support player health and performance through improving sleep habits; and clubs must notify the NFL of all details associated with the study. The Joint Sensors Committee reviews all use of sensors collecting bio-data, and is responsible for approving or prohibiting the use of any sensor, as well as monitoring developments in sensor technology and evaluating data outputs 'for accuracy and potential for manipulation'.

2.2.3. Asia, South America, the Caribbean, and Africa

Several cases in **Japan** have also addressed algorithmic management. One prominent agreement was negotiated in 2024 between the Japan Metal Manufacturing, Information and Telecommunication Workers' Union (JMITU) and IBM Japan, following a drawn-out conflict over AI-driven wage assessments and personnel evaluations.[228] In August 2019, IBM Japan manufactured and introduced AI software to evaluate employees' performance and work attitudes based on 40 items, which were then used in salary reviews and decisions. The union stated that the new AI tool created a number of problems, including invasion of privacy, discrimination and automation bias, and demanded that the company disclose all factors used by the tool. IBM first refused, and in 2020 JMITU filed a request to the Tokyo Metropolitan Government Labor Relations Commission, stating that the company had violated Article 7 of the Labor Union Act based on employer intervention.[229] The 2024 collective agreement resolved this conflict and, included provisions that require IBM Japan to disclose to the union how AI is used in salary reviews, and the relationship between this use and evaluation items in wage regulations.[230] If there are questions on the evaluation method in the future, IBM must also negotiate with the union.[231]

The AEON group was discussed in section 2.1 above: the conglomerate has a tradition of labor-management cooperation over new technology and of using AI to improve efficiency and create better working conditions for employees.[232] AEON Retail operates the largest supermarket chain in Japan, which has become the first company to use AI to monitor their customer-facing workers' tone and demeanour.[233] In 2024, AEON implemented the tool 'Mr Smile' to gauge and standardize employees' smiles across its 240 stores, following a three-month trial. It draws on more than 450 elements, including facial expressions, voice volume and tone of greetings.[234] The system involves gamification, allowing employees to accumulate points and 'level up'.[235]

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227 Deubert, C. R., & Caputo, A. (2021). Improving the Game: The Football Players Health Study at Harvard University and the 2020 NFL-NFLPA Collective Bargaining Agreement. *Harv. J. Sports & Ent. L.*, *12*, 73.

228 Kitagawa, K. (2024). *IBM Japan to disclose how AI is used to evaluate its work force | The Asahi Shimbun: Breaking News, Japan News and Analysis*. The Asahi Shimbun. Retrieved 21 December 2024, from https://www.asahi.com/ajw/articles/15375025

229 JMIU日本アイ ビーエム支部. (2024). AI不当労働行為事件勝利和解. *JMITU*日本アイ ビーエム支部. https://www.jmitu-ibm.org/2024/08/9302.html

230 Kitagawa, K. (2024).Ibid

231 JMIU日本アイ ビーエム支部. (2024). Ibid.

232 Interview with AEON Retail Workers Union, February 2, 2025. Conducted by Eriko Teramura.

233 Interviews, Koki Ueyama, Chief Secretary, Federation of AEON Group Workers' Unions. December 26, 2024. Conducted by Eriko Teramura

234 Interviews, Koki Ueyama, Chief Secretary, Federation of AEON Group Workers' Unions, December 26, 2024. Conducted by Eriko Teramura

235 Interview with Federation of AEON Group Workers' Unions, February 2. 2025. Conducted by Eriko Teramura.

Mr. Smile was introduced alongside greeting training to restore the warmth of face-to-face interactions following the COVID-19 pandemic. The union reported that the tool had been effective in increasing the rate of smiling, and that there had been no issues or complaints from union members. While the union did not oppose the introduction of this tool, it was monitoring its implementation to ensure that it enhances service quality and working conditions. The tool was not meant for personnel evaluations, and union representatives indicated that they would intervene if it was misused as a surveillance tool or to create an environment where employees felt pressured to smile.[236]

In **South Korea**, unions have sought to negotiate over the use of new technologies for workforce surveillance across industries. One example at Hyundai, discussed in Case study 4, shows the importance of worker solidarity in contesting the use of a facial recognition system that targeted subcontracted workers.

▶ **Case study 4: Challenging facial recognition technologies: HD Hyundai Heavy Industries versus various unions in South Korea**

In April 2024, management at HD Hyundai Heavy Industries got into a conflict with its unions over the installation of a system to verify the entry and exit of in-house subcontracted workers. The company had installed a 'safety access system' using facial recognition technology without first consulting the workers. According to management, the automated access system was installed due to high turnover rates among subcontracted workers and weak safety and security measures. As a result, biometric information was collected constantly from around 18,000 subcontractors employed by the company.[237]

In response, in April 2024, the Hyundai Heavy Industries Branch of the Korean Metal Workers' Union (KMWU), initiated efforts to dismantle the access system. In June 2024, the union, together with KMWU's In-House Subcontractors' Branch, Ulsan Solidarity for Human Rights, and the Ulsan Regional Headquarters of the Korean Confederation of Trade Unions (KCTU), held a press conference in front of the Ulsan District Office of the Ministry of Employment and Labor in Nam-gu. They also filed a complaint with the Ministry of Employment and Labor against the company's CEO and other executives, citing alleged violations of the Labor Standards Act and the Act on the Promotion of Workers' Participation and Cooperation (Worker Participation Act).[238]

The first alleged violation pertained to Article 94(1) of the Labor Standards Act, which prohibits employers from making changes to work rules that disadvantage employees (e.g. extended working hours, wage reductions, or vacation cuts) without obtaining the consent of a majority of employees. The second alleged violation concerns Article 20 of the Worker Participation Act, which requires employers to consult with employee representatives when making changes to working conditions that may significantly affect workers' health and safety. This includes changes such as the introduction of new equipment or technologies and adjustments to work practices.

The unions and workers also submitted a Group Dispute Mediation Request to the Personal Information Protection Commission (PIPC), alleging that the company violated provisions

236 Interview with Federation of AEON Group Workers' Unions, 2 February 2025. Conducted by Eriko Teramura.
237 Eun, E. (2024). The Introduction of Facial Recognition Devices is Illegal – HD Hyundai Heavy Industries Executives Reported to Authorities. Labortoday. https://www.labortoday.co.kr/news/articleView.html?idxno=221891
238 Eun, E. (2024). Ibid

of the Personal Information Protection Act (PIPA). According to an interview with Labour activist Oh Mingyu, traditional unions did not previously use privacy law as part of their strategies but have learned to pivot to bring in privacy issues of AI and used data protection law.

HD Hyundai Heavy Industries' subcontractors had been implementing consent procedures for the introduction of a facial recognition system, with 100 percent of the 191 subcontractor companies agreeing and 93 percent of individual subcontracted workers signing the documents. However, the union argued that due to the precarious nature of their employment, many subcontracted workers signed the documents under pressure from their managers. They were told that refusing to consent could jeopardize the renewal of their contracts, which amounts to an unfair change to the employment rules under the Labor Standards Act. In opposition to this, over 4,000 subcontracted workers participated in a union-led signature campaign in June 2024 to protest the surveillance measures.[239]

At the same time, the union continued to obstruct installation of the 'access system'. In response, HD Hyundai Heavy Industries filed a petition seeking an injunction, but the court ruled against the company, dismissing the request.[240] According to the unions' newsletter, on December 5, 2024, the Ulsan Regional Labor Relations Commissions ruled that the disciplinary action taken by the company against the Hyundai Heavy Industries Branch for their efforts to block the installation of facial recognition technology was unjust.

This case study illustrates the important role that both legal data protection rights and solidaristic worker mobilization can play in campaigns to limit surveillance associated with algorithmic management tools. Labor unions were able to draw on institutional support for collective voice from Korea's Personal Information Protection Act, and the mediation process it established, to contest the use of facial recognition technologies for subcontractors.

In **India**, different government departments have used surveillance technologies to track low-income government workers, including sanitation workers, accredited social health activists (ASHA) and rural childcare workers. For example, in March 2020, sanitation workers in the city of Panchkula were asked to wear smartwatches equipped with cameras and microphones so supervisors could hear and watch them work. The wristbands, which ensured the workers stayed within their assigned areas, have also been rolled out to other cities including Chandigarh and Nagpur.

In another state, Haryana, the government deployed ASHA workers, who often collect door-to-door survey information, to survey high risk persons during the 2020-2022 COVID-19 pandemic. However, these workers were not allowed to take physical records, and were instead required to buy or borrow a smartphone to conduct the survey on an app called ASHA Survekshan. They recorded their daily and monthly activities and received pay and incentives on another app called ASHA pay. Most ASHA workers could not afford the smartphones, and the Haryana ASHA workers union demanded that the government provide workers with phones. In 2022, the government issued smartphones to all ASHA workers in the state.

The government then introduced a new app called Shield360 that ASHA workers were required to download. The app could remotely monitor workers' smartphone usage. Managers could add

[239] Lee, J. (2024). Introducing CCTV and Facial Recognition Devices is an Illegal Human Rights Violation – Union Files Complaint Against HD Hyundai Heavy Industries. *Ulsan Journal.* https://m.usjournal.kr/news/newsview.php?ncode=1065589840144988

[240] Kim, G. (2024). Court Finds Union's Argument That Facial Recognition Devices May Violate Personal Information Valid. Yonhap News. https://www.yna.co.kr/view/AKR20240704114000057

or delete applications, block the usage of external applications, and track data on the phones. The ASHA worker would have no control over the data generated on her device. ASHA workers saw this as a complete violation of their privacy as well as excessive monitoring of their work. If workers protested the use of this app, they would be asked to return their smartphones, and thus unable to continue their work. The ASHA workers union organized a large-scale protest joined by 15,000 workers across multiple locations in Haryana, demanding that the government take the smartphones back if it would not remove Shield360. The protest was successful, and government officials no longer force ASHA workers to install the app.

In addition, the All India IT and ITES Employees' Union has sought to improve transparency of data collection in the business process outsourcing (BPO) industry. In 2021, the union released a Charter that included a list of BPO worker demands, including lower working hours for no reduction in pay, break times separate from washroom breaks, removal of salary withholding, and setting up workplace gender committees to reduce harassment.[241] The Charter also states that BPO workers should receive information on the data that is collected from them and how it is being used; and calls for a limit on the kind and extent of tracking mechanisms used.

In the **Dominican Republic**, labor unions have begun organizing around the use of sentiment analysis and other algorithmic management tools in the BPO call center industry. Workers are subject to tight controls, with constant electronic monitoring and strict requirements on call length and time between calls. Employers use metrics to justify termination of contracts or to withhold severance payments. These firms are now beginning to integrate AI-based technologies into monitoring and coaching systems, such as speech analytics and sentiment analysis, which can potentially be applied to further intensify surveillance of worker time and calls.[242]

The union FEDOTRAZONAS organized focus groups to understand workers' perceptions of the increasing use of AI in monitoring technologies, as well as other AI-based tools. According to a representative from the union, workers generally found the impacts of AI to be positive, as a tool helping them to perform their jobs.[243] This has made organizing around specific abuses connected with AI-enabled surveillance challenging. However, the union is seeking to help workers understand potential risks associated with new technologies, while monitoring the situation to ensure workers remain safe.

2.3. Social dialogue over working conditions and rights in AI-enabled fissuring: From labor displacing to labor embedding

The widespread adoption of AI, combined with growing data storage and analysis capacity from cloud computing, has changed location costs and demands.[244] A rapidly expanding global industry supports the development and refinement of AI models and tools, creating growing demand for data annotators, content moderators, and AI or data engineers.[245] A new spatial division of AI labor is emerging, in which jobs are being created or restructured across AI value chains, many

241 Vipra, J. (2021, November 9). BPO workers' demand charter. All India IT & ITeS Employees' Union. https://www.aiiteu.org/letters/bpo-workers-demand-charter/

242 Presentations by FEDOTRAZONAS member and union official, AI and the Future of Work conference, Cornell University. September 14, 2024.

243 Interviews, Hanoi Sosa, Ibid.

244 Butollo, F., Gereffi, G., Yang, C., & Krzywdzinski, M. (2022). Digital transformation and value chains: introduction. *Global Networks*, *22*(4), 585-594.

245 Muldoon, J., Graham, M., & Cant, C. (2024). *Feeding the machine: the hidden human labour powering AI*. Canongate Books.

of which are remote, outsourced and often with low pay and tight controls.[246] AI data and engineering work is organized through a mix of direct tech company or contractor employment at a physical workplace, remote full-time jobs, and an increasing variety of microwork administered by vendors through cloud-based platforms.

These trends are one important part of *AI-enabled fissuring*. Weil coined the term 'workplace fissuring' to describe the process through which large companies devolve responsibility for parts of their operations onto smaller companies or workers themselves, through subcontracting, franchising, or contract and platform work.[247] While fissuring as an organizational model is not new, it is being deployed in new ways, as firms develop more sophisticated AI-based tools to monitor performance and distribute work across a spatially dispersed workforce. Employers have expanding options for restructuring tasks and production in a way that permits outsourcing them to vendors, platforms, or freelance employment contracts. This, in turn, can result in the disembedding or displacement of jobs from existing social protections and collective agreements.

Labor unions have sought through different forms of organizing and social dialogue to re-embed jobs in labor and social protections that have been displaced from those protections through AI-enabled fissuring. We focus here on efforts to re-embed work in the AI value chain, as a critical case study that connects workers in industries using AI technologies to those producing and refining them.

2.3.1. Re-embedding the AI value chain

The development, testing, and improvement of AI products and services constitutes a large and rapidly growing global industry. Autonomous driving systems, facial recognition technologies, sentiment analysis, generative AI text generation tools like ChatGPT, and image generation tools like DALL-E all rely on 'data enrichment' - managed by data scientists but implemented by workers performing data cleaning and labeling work. Social media and gaming platforms require related content moderation work. And technicians, maintenance, and security personnel are employed at the growing number of data centers that store the servers, storage, networking equipment, and other infrastructure needed to handle the huge computational demands of AI - necessary for training and deploying machine learning models and algorithms.

These jobs are organized in complex global production networks of lead firms, suppliers, and platforms, with power significantly concentrated at major tech companies such as Meta, Alphabet, and OpenAI/Microsoft. The 'fissuring' of AI labor has both an organizational and spatial dimension, as lead firms outsource data enrichment and content moderation work to domestic and international vendors.

A growing body of research and journalistic accounts has documented the often exploitative and precarious working conditions experienced by workers in fissured AI jobs at the bottom of these AI value chains.[248] These include low pay and job security, variable hours, and high levels of physical and emotional stress, due to both exposure to graphic content and long and inconsistent

[246] Tubaro, P., Coville, M., Le Ludec, C., & Casilli, A. A. (2022). Hidden inequalities: the gendered labour of women on microtasking platforms. *Internet Policy Review*, *11*(1), 1-26.

[247] Weil, D. (2014) The Fissured Workplace: Why Work Became so Bad for so Many and what Can be Done to Improve It. Boston: Harvard University Press.

[248] Graham, M. (Ed.). (2019). *Digital economies at global margins*. MIT Press. Metz, Cade. A.I. Is Learning From Humans. Many Humans. The New York Times. August 16th 2019. https://www.nytimes.com/2019/08/16/technology/ai-humans.htm

working hours.[249] Gray and Suri refer to this work as 'ghost work'. Their description captures a sense that these jobs represent an extreme example of 'labor displacement': 'This new digital assembly line aggregates the collective input of distributed workers, ships pieces of projects rather than products, and operates across a host of economic sectors at all times of the day and night. In fact, the rise of this shadow workforce is part of a larger, more profound reorganization of employment itself.'[250]

There are a number of initiatives focusing on improving conditions in the AI value chain - from industry efforts to establish best practice standards and promote responsible sourcing[251] to third party monitoring initiatives. The Fairwork Project - an international research project aiming to set and measure fair standards for the future of work - has developed a set of Fairwork AI principles, in partnership with the Global Partnership on Artificial Intelligence. These are applied in Fairwork AI reports and ratings on specific companies, which can in turn improve the transparency of labor conditions - or directly encourage contract firms to improve these conditions in response to public or client pressure.[252]

Labor union organizing and social dialogue efforts in this area have taken two - sometimes connected - forms. The first relies on solidarity from unions in lead firms, as 'core' tech professionals with more secure contracts seek to build and use bargaining power to seek improvements in conditions for outsourced workers. The second is 'bottom up' organizing by workers doing data and content moderation work. Successful campaigns typically rely on a combination of both.

Below we summarize two examples of these campaigns and resulting social dialogue with employers aimed at improving working conditions along the AI value chain - one from the **US**, organized by the Alphabet Workers Union, the second from **Kenya**, organized by the African Content Moderators Union.

In the US, unions have begun having more success in organizing workers at major employers in the tech sector.[253] The CWA's Campaign to Organize Digital Employees (CODE-CWA) has been the most active. The union won voluntary recognition at Glitch in 2020, with further organizing successes at Blue State Digital, NPR Digital Media, Change.org, Catalist, New York Times Tech workers, Meow Wolf, ActBlue Technical Services, and other tech, media, and game development firms. In 2021, 200 workers across Alphabet, including Google and its subsidiaries and vendors, formed a non-contract or pre-majority union[254] with CWA Local 1400. The Alphabet Workers Union (AWU) has since organized over 1,000 workers across Alphabet.

One key area AWU has focused on is equity and security for workers across Alphabet's fissured value chain. Alphabet has shifted away from employing its workers directly in favor of a fragmented system of temps, vendors, and contractors (TVC) who are paid at a significantly lower pay scale than traditional employees. In 2018, contract staff became a majority of Alphabet's global workforce. However the company argues that it is neither liable for their treatment nor obligated to collectively bargain with them if they choose to unionize because it does not have

[249] Rani, U., M. Williams, & N. Gobel (2025) The human cogs in the AI machine: Experiences of data annotation and content moderation workers in the BPO sector in India and Kenya. ILO Working Paper (forthcoming)
[250] Gray, M. L., & Suri, S. (2019). *Ghost work: How to stop Silicon Valley from building a new global underclass*. Eamon Dolan Books. pp. ix-x
[251] Partnership on AI (2021) Responsible Sourcing of Data Enrichment Services. Available at: partnershiponai.org/responsible-sourcing
[252] Spilda, F.U., L. Brittain, C. Cant, M. Graham.(2024) The Unmagical World of AI: Workers at the bottom of the AI Supply Chain. Friedrich Ebert Stiftung, February 26, 2024. https://futureofwork.fes.de/news-list/e/ai-value-chain.html
[253] Tan, J. S., Nedzhvetskaya, N., & Mazo, E. (2023) Unlikely Organizers: The Rise of Labor Activism Among Professionals in the US Technology Industry. Working Paper.
[254] For an explanation of pre-majority unionism in the US context, see: Perold, C. and E. Dirnbach (2025) What is pre-majority unionism? https://workerorganizing.org/premajority-unionism/defined/

enough control over contract staff to be considered a 'joint employer'. The NLRB has rejected this line of reasoning twice already, however Google is appealing both rulings in federal court.[255]

In 2021, the AWU organized support for a worker fired from a Google data center in South Carolina, who was employed by the subcontractor Modis, part of the Adecco Group. She worked in a job that involved fixing servers - alongside permanent Google employees - and was suspended for speaking out against unequal conditions. Following pressure from AWU, her suspension was overturned.[256]

In April 2023, forty-one Youtube Music workers hired via Cognizant Technology Solutions Corp. joined AWU-CWA in a unanimous vote. Less than a year later, the entire team was abruptly laid off in what both Google and Cognizant claimed were 'pre-planned contract expirations'. However, workers stated that their contracts had been routinely renewed for years prior and that they believed they were being retaliated against for union activities.[257]

Similarly, when Google Help workers contracted through Accenture launched their own unionization campaign, they were quickly met with waves of layoffs. Some workers were forced to train their overseas replacements before their jobs were cut. Staff had been reduced from 120 to less than 30 since the beginning of the unionization efforts in June 2023.[258] Nevertheless, AWU secured its first, historic, contract with Accenture in December 2024, which included provisions guaranteeing fully remote work, 30-days' notice and six weeks of severance pay for layoffs, just-cause protections, and a prohibition on keystroke or mouse monitoring software.[259] AWU's Executive Board Secretary stated: 'As subcontractors for Google we have been a canary in the AI coalmine calling out the precarious labor conditions we face being the human workers standing between large language models and their end users'.[260] The President of AWU observed that this agreement was a victory that underscored 'the importance of solidarity across the artificial barriers which corporations increasingly rely on to lower labor standards and reduce worker power'.[261]

255 Eidelson, J. & Alba, D. (Nov 6, 2023) Google Content Writers at Accenture Vote to Join Union. Bloomberg. https://www.bloomberg.com/news/articles/2023-11-06/google-tech-support-contract-workers-vote-to-join-union

256 Clayton, J. (2021) The woman who took on Google and won. BBC, April 7, 2021. https://www.bbc.com/news/technology-56659212

257 Davis, P.M. (April 30, 2024) Contract tech workers unionize in hopes of job security in a precarious industry. Texas Standard. https://www.texasstandard.org/stories/contract-tech-workers-unionize-in-hopes-of-job-security-in-a-precarious-industry/

258 Council, S. (March 5, 2024) Second group of contracted Google workers laid off after forming union. SFGate. https://www.sfgate.com/tech/article/youtube-music-union-google-layoff-18703954.php

259 Alphabet Workers Union, CWA Local 9009 (Dec 18, 2024) Google Help Workers Ratify Contract With Accenture, First in Alphabet Workers Union-CWA History. https://www.alphabetworkersunion.org/press/google-help-workers-ratify-collective-contract-with-accenture-first-in-alphabet-workers-union-cwa-history

260 Taylor, J. (Jan 23, 2024) Precarious conditions of AI 'ghost workers' revealed by Google termination of Appen contract, union says. The Guardian. https://www.theguardian.com/australia-news/2024/jan/23/precarious-conditions-of-ai-ghost-workers-revealed-by-google-termination-of-appen-contract-union-says

261 Alphabet Workers Union, CWA Local 9009 (Dec 18, 2024) Google Help Workers Ratify Contract With Accenture, First in Alphabet Workers Union-CWA History. https://www.alphabetworkersunion.org/press/google-help-workers-ratify-collective-contract-with-accenture-first-in-alphabet-workers-union-cwa-history

A more recent campaign has focused on a change in Google's policy to mandate a minimum wage of at least $15 at its suppliers and contractors.[262] AWU attributes this change to concerns with avoiding joint employer liability, as their interference in wage setting practices could be used to argue that they are a 'joint employer' in this case. AWU is organizing to demand improvements in pay and benefits for these workers - focusing on quality raters for Google Search, Gemini, and other Google products. Another campaign focuses on winning pay parity for all Temps, Vendors, and Contractors.

The Alphabet Workers Union case is an example of solidarity among tech workers, with explicit support for improving conditions across fissured AI value chains. It shows the importance of both bottom-up organizing and solidarity from workers with greater institutional power - and also illustrates the way in which insecure contract employment is expanding alongside more permanent jobs within the same 'Global North' country.

Alphabet, together with other leading tech firms, also subcontracts work in its AI value chain to lower wage countries in the Global South. In Case study 5 below, we examine a case of 'bottom up' labor organizing in **Kenya**, through the Kenyan Content Moderators Union.

▶ Case study 5: Embedding AI labor in Africa: the Kenyan Content Moderators Union

With the rise in AI models, demand has increased for 'data janitorial services' to structure and classify large amounts of data.[263] The work is labor intensive and requires human intelligence. Workers identify and tag objects in images, or label audio and video messages known as data annotation. Other tasks include content moderation and matching information for better search engine optimization. Companies such as OpenAI and Meta are outsourcing their data annotation projects to firms such as Sama and IMerit that hire people in Global South countries like Kenya, South Africa and India. OpenAI had contracted with Sama to label tens of thousands of snippets of text that sometimes described disturbing situations in graphic detail. This work would contribute to a tool OpenAI was building to detect toxic content, which was eventually built into ChatGPT.[264] Journalistic coverage of this kind of work has found that workers often experience long term mental health issues and report anger or anxiety responses due to constant exposure to disturbing images. Some workers quit due to suffering from post-traumatic stress disorder. Many are unable to receive an official diagnosis due to the inability to afford mental health care. While Sama offers on site counselling services, workers do not trust counselors or have been refused breaks. In response to these poor working conditions, many Sama workers quit in 2019. Others attempted to unionize.

Early Strikes and Legal Action. In the summer of 2019, content moderators at Sama threatened to strike unless they were given better pay and conditions within seven days. The company responded by firing one of the leaders of the strike, Daniel Motaung, who was attempting to register the union. The company told other participating workers that

262 Allen, T. (2024) I'm paid $14 an hour to rate AI-generated Google search results. Subcontractors like me do key work but don't get fair wages or benefits. Fortune, May 3, 2024. https://fortune.com/2024/05/03/google-search-raters-wages-benefits-contractors-tech-ai-employment/

263 Bischoff, C., Kamoche, K., & Wood, G. (2024). The formal and informal regulation of labor in AI: The experience of Eastern and Southern Africa. ILR Review, 77(5), 825–835.

264 Perrigo, Billy. (2023, January 18). OpenAI Used Kenyan Workers on Less Than $2 Per Hour: Exclusive. Time. https://time.com/6247678/openai-chatgpt-kenya-workers/

they could quit if they felt the conditions were unsatisfactory. The strike ended and there was no pay increase.[265]

However, Motaung sued Facebook and Samasource Kenya EPZ Ltd, for alleged workers' rights violations, including exploitation, union busting and pay discrimination. Motaung claimed the work violated his basic human rights due to mental health and exposure to depictions of violence. Meta challenged the court's jurisdiction in this case, saying it could not be a party since it was not registered in Kenya. This appeal was struck down by the Kenyan Employment and Labor Relations court in 2023, however, which found Meta could be sued in Kenya.[266]

In a related case, 183 content moderators sued Meta and its contractor Sama over unlawful and unfair termination of employment contracts. The Kenyan Human Rights Commission, the Ministry of Labor and the Central Organization of Trade Unions were named as interested parties. The workers alleged that they had been engaged by Meta and were recruited to work for the company by Sama; and that they were terminated because Motaung filed a constitutional petition challenging the gross violation of the moderator's rights.

The petition is unprecedented. It makes a case for holding Sama responsible for labor violations, but also Facebook and its parent company Meta, as they are in reality the employer of the moderators. The petition explains that Meta is 'in charge of all factors of production including Content Moderation which takes place at the workplace [...]. The digital workplace is fitted with Surveillance features which keep track of all the work done, the time spent on each assignment and movements of the Facebook Content Moderators. The amount of time spent at the digital workplace together with other metrics is computed and billed for each content moderator. Their performance is reflected on their payslip which shows there is a direct connection between their work and their pay.'[267]

The petition asked for orders declaring the terminations to be unlawful, and that the moderators were engaged through inadequate pay and working conditions. It seeks compensatory damages worth $1.6 Billion. In addition, the moderators demanded that Meta cover the lifelong costs of mental health services for any mental health issues moderators may have developed from their work.

Forming the African Content Moderators Union: The petition demanded that Meta and Sama recognize the workers' right to form a union and talk about their work. Mophat Okinyi, the Chairperson of the African Content Moderators Union since 2023, observed, 'One of the biggest challenges has been the use of non-disclosure agreements (NDAs) and out-of-court settlements that silence workers from sharing their experiences. Additionally, the lack of recognition for unions by some tech companies and the dispersion of remote workforces make organizing and negotiating more difficult.'[268]

In May 2023, 150 content moderators voted at a landmark Nairobi meeting to register a Content Moderators Union.[269] Initially, the union's attempt to register was rejected by

[265] Perrigo, Billy. (2022, May 11). Meta Accused Of Human Trafficking and Union-Busting in Kenya. Time, May 11, 2022. https://time.com/6175026/facebook-sama-kenya-lawsuit/
[266] Petition E071 of 2022. (2023, February 6). Kenya Law. https://kenyalaw.org/caselaw/cases/view/250879/
[267] Constitutional Petition E052 of 2023, 2023
[268] Mophat Okinyi, Email Interview, December 22, 2024
[269] Perrigo, Billy. (2023, May 1). 150 African Workers for AI Companies Vote to Unionize. *Time*. https://time.com/6275995/chatgpt-facebook-african-workers-union/

the Labor Department since there were other collective bargaining bodies that represented the same kind of workers. In Kenya, two unions are not allowed to represent the interests of the same industry of workers. To solve this issue, the ACMU allied with the Communication Workers Union of Kenya (COWU-K) and is transforming into the African Content Moderators Association. It represents about 300 workers across contractors like Teleperformance (previously Majorel), Sama, Cloud Factory, NextState Foundation (called Stepwise in Kenya) and CCI. COWU-K is a traditional labor union, with established organizing strategies. Through this partnership, the Content Moderators Union is also educating established union leadership about new jobs like content moderation. However, the union has not negotiated collective agreements at the time of writing.

Okinyi has also been part of developing other civil society platforms that help support the Content Moderators Union. He is the founder of Techworkers Community Africa, which educates young people on the benefits and threats of AI at the workplace. He is also involved in initiatives with the Partnership on AI, UNI Global Union, Solidarity Center, Siasa Place, and other advocacy groups working to create ethical standards for AI deployment. These initiatives aim to influence policies at national and international levels, including pushing for transparency, fair compensation, and protections against algorithmic exploitation.

Okinyi observed that the success of these campaigns was built through both bottom up organizing and building coalitions with labor unions with organizational capacity at national and international level:

'Building trust and advancing solidarity were key strategies. I used worker-to-worker communication, storytelling, and highlighting shared challenges to create a sense of unity. Utilizing digital platforms to connect dispersed workers and partnering with organizations like the Communication Workers Union of Kenya and UNI Global Union helped to build collective power and provide resources for organizing.'[270]

He also outlined the union's broader goals: 'Unions should advocate for worker representation in the design and governance of AI systems to ensure fair and ethical practices. They should also educate workers about their rights in AI-driven workplaces and push for legislative frameworks that protect labor rights in the digital age.'

This case demonstrates the challenges faced by data workers and unions who are seeking to establish social dialogue with their employers, in fissured AI value chains that involve unequal power relationships between lead tech firms and their subcontractors. Their organizing and legal campaigns are helping to raise public awareness and pressure to improve conditions, which organizers hoped will lead to more formal collective bargaining in the longer term.

These two cases illustrate both possibilities for and challenges to strengthening collective worker voice and building inclusive solidarity in the rapidly growing AI industry. The industry is organized by and through major tech firms. But employment conditions are determined by a decentralized network of contractors and platforms that face strong pressures to cut costs, necessary to compete for and keep contracts. The focus of unions' organizing and social dialogue efforts

[270] Mophat Okinyi, Email Interview, 22 December 2024

has been on improving conditions across these fissured AI value chains through re-embedding jobs in labor and social protections - with some (if still limited) successes.

2.4. Summary

Labor unions and other worker representatives have sought to influence employer decisions concerning how they deploy AI and algorithms in the workplace through a range of social dialogue and organizing strategies. Our analysis above has divided these activities into three categories, based on 'action fields' with distinct social dialogue topics and goals: skills and employment (from labor replacing to complementing); algorithmic management and monitoring (from labor controlling to empowering); and working conditions and rights in AI-enabled fissuring (from labor displacing to embedding).

Case study findings show different patterns of social dialogue practices and outcomes across world regions and countries. We find the largest number of examples in Europe of more formal, organized social dialogue through collective bargaining across these three action fields. Unions and works councils have negotiated comprehensive agreements establishing job security or dismissal protection rights, strengthening investments in skills and training, and articulating clear guidelines concerning how employers use AI tools. They have used stronger data protection and co-determination or bargaining rights to win broad provisions limiting the use of algorithmic management software for worker surveillance and establishing a 'humanin-command' approach in a growing number of industries and firms. AI ethics committees and other joint labor-management committees are also being established to oversee the fairness of algorithmic management tools most notably in Germany. Both union organizing and social dialogue institutions have been mobilized to counter the use of untransparent algorithms to direct and evaluate workers.

At the same time, the focus of agreements differs significantly across the European countries we have examined. Nordic unions have the most organized social dialogue over 'labor complementing' uses of AI, and there is more widespread emphasis on limiting 'labor control' via algorithmic management in France, Italy, and Spain. The German case shows the most comprehensive agreements in both areas, with unions and works councils seeking to pursue a combination of partnership-based investments in productivity improvement complemented by skill investments and limits on algorithmic control - mobilizing strong co-determination rights in this area.

Despite their weaker labor laws, bargaining rights, and data protection rules, US and Canadian unions have also engaged in creative social dialogue on AI with employers, negotiating innovative agreements that encourage employers to invest in worker skills and discretion, while restricting invasive monitoring and control through algorithms. Creative workers - artists, writers, and actors - have won original protections that address worker control over decisions concerning how their work is complemented or replaced by generative AI, including ownership of their own images and art. While the European cases we have discussed in this report often involved a combination of conflict and cooperation, in many of the US cases, unions organized more protracted strikes or threatened industrial action to win AI protections. The case of tech worker organizing in the US shows a distinctive example of pursuing social dialogue outside of formal collective bargaining - including within Alphabet, one of the lead firms developing and deploying AI.

Between our two main East Asian cases, we observe an interesting contrast between predominantly cooperative social dialogue in Japan, focusing on productivity improvements and upskilling in a context of structural labor shortages, and labor militancy in South Korea, focused on reinstating workers laid off due to automation. However, in the area of algorithmic management,

case studies in both countries show some degree of labor conflict, resolved through worker mobilization or legal challenges.

In India, Brazil, the Dominican Republic, and Kenya, social dialogue on AI topics was more nascent. In Brazil, established unions were organizing broader projects focused on regulating AI and encouraging skill upgrading in traditional industries such as banking - where gender equity was also a focus. One of the most visible of these have focused on addressing precarious and unsafe conditions associated with AI-based fissuring in data labeling and content moderation work in Kenya.

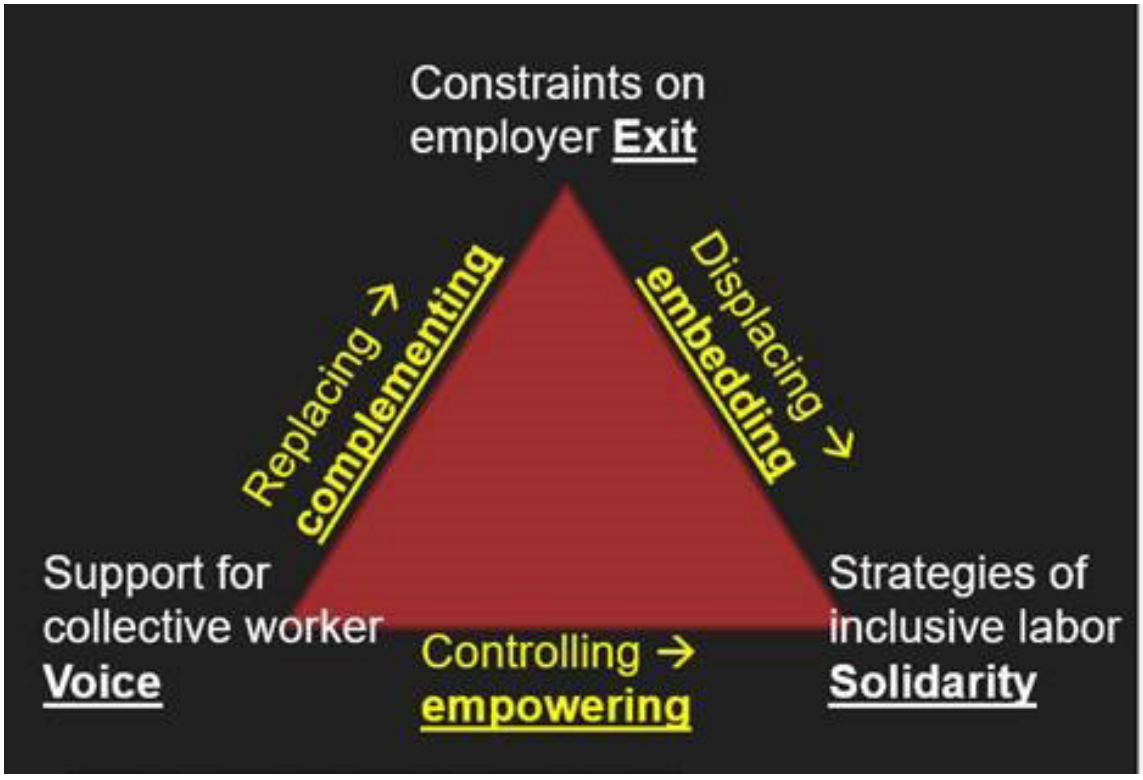
Overall, our findings from this comparison of social dialogue over AI at industry, company, and workplace-levels demonstrate a range of creative strategies and agreements across the three action fields. These seek to encourage more socially beneficial and economically just applications of these new technologies - but also to ensure that they are produced and deployed under fair conditions. Social dialogue on AI has been most successful in achieving these goals where it institutionalizes protections in new laws, policies, and collective agreements or is grounded in an existing framework of institutionalized protections. However, newer organizing and mobilization efforts are an important first step to establishing these more encompassing institutions.

▶ Conclusion

In this report, we have presented case studies of social dialogue over AI and algorithmic management in different countries and world regions. We attempted to identify cases that represent a cross-section of global developments; but our analysis is by no means comprehensive or complete. It does, however, illustrate the important role that social dialogue is playing internationally in supporting the transition to a more just and ethical 'digital economy'.

In this conclusion, we attempt to draw some broader lessons concerning the conditions that support effective social dialogue across the three 'action fields' we have examined in our report: from labor replacing to complementing, labor controlling to empowering, and labor displacing to embedding. We return here to our framework, developed in Section 1.1 above, which outlined three factors or conditions that we argued play an important role in supporting more inclusive and effective social dialogue on AI: constraints on employer exit, support for collective worker voice, and strategies of inclusive solidarity.[271] Figure 1 - reproduced below - illustrates the overlap of this framework with the three 'action fields' we have organized this report around.

▶ Figure 1: Supporting social dialogue on AI through constraints on exit, support for voice, and strategies of solidarity



The social dialogue examples we have discussed in this report can be seen as attempts to establish or strengthen constraints on employer exit and support for collective worker voice, while deploying more inclusive strategies of solidarity. While all three play an important role across

[271] Doellgast, V. (2022). *Exit, voice, and solidarity: Contesting precarity in the US and European telecommunications industries*. Oxford University Press

social dialogue and union campaigns, our case studies suggest that each action field relies most centrally on two of the three factors.

First, social dialogue encouraging a shift from **labor replacing to labor complementing** uses of AI requires a combination of **constraints on employer exit** and **support for collective worker voice**. In the cases we reviewed, strong employment protections and skill investments were central goals - and these made it more difficult or less desirable for firms to **exit** their internal workforce. Laws establishing clear rules and copyright protections on the use of generative AI to reproduce art, voice, or images are one example. Collective agreements across countries provided job security, commitments to decrease subcontracting, or support for retraining and redeploying workers. The most widely publicized cases of negotiations in the US over AI use in film, television, and game development all involved clear negotiated constraints on companies' ability to use AI to 'exit' from artists' and writers' past rights and contractual protections.

In addition, successful social dialogue across these examples would not have been possible without strong support for collective worker **voice**. In Europe, this support came from strong participation rights and laws, as well as traditions of strong unions and tripartite social dialogue. Across countries, worker mobilization, in some cases via strikes, were crucial for winning strong agreements on job security or that limited how employers could use AI at work. Strengthening worker voice - or establishing its central role in AI decision-making - has also been a key demand of unions in social dialogue at national and European levels. And joint projects mapping needed investments in skills and training, such as in the Brazilian banking industry, as well as on increasing productivity while returning these gains to workers, as in Japan's AEON agreements, certainly relied on worker voice via worker representatives to establish needs and opportunities.

Second, social dialogue encouraging a shift from **labor controlling to labor empowering** uses of AI requires a combination of **support for collective worker voice** and **strategies of inclusive labor solidarity**. Institutions and laws supporting collective **voice** have been a central tool but also key labor demand. In Germany, for example, laws providing co-determination rights in cases where technology was used for performance and behavior control, or in Sweden, requirements that firms negotiate over technology's impacts on health and safety, were crucial for successful social dialogue limiting the invasive use of algorithmic management and protecting worker discretion in the workplace. Across countries, and particularly in Europe and South Korea, data protection laws were important tools for contesting worker surveillance and for providing worker representatives with information on what data was being collected on workers or how it was used. And bright line prohibitions of certain uses of AI to automate HR decisions or use sentiment analysis tools in the workplace could support establishing more fair and transparent workplace rules. In addition, unions worldwide have sought to encourage provisions in laws and collective agreements granting worker representatives stronger rights to consult or negotiate over these tools.

Strategies of inclusive labor **solidarity** are particularly important for regulating algorithmic management because these tools are more intensively and invasively deployed across a contracted or fissured workforce. We presented cases that showed how traditional unions and newer worker organizations have focused on limiting the use of algorithmic management and performance monitoring systems in outsourced BPO call centers and AI data coders and content moderators. The case of Hyundai Heavy Industries in South Korea shows the importance of solidarity between unions, in that case for challenging the discriminatory use of facial recognition for in-house subcontractors. Establishing better safeguards against bias in large language models, and their application in the workplace, also requires a solidaristic movement, centering on injustice for workers who also tend to hold more precarious contracts.

Third, social dialogue encouraging a shift from **labor displacing to labor embedding** in AI-enabled location and organizational changes was most successful where it combined **constraints on employer exit** with **strategies of inclusive labor solidarity**. In our discussion of the Alphabet Workers Union and the Kenyan Content Moderators Union, we saw the central importance of inclusive **solidarity** in these campaigns. Labor solidarity was necessary to build a strong movement of tech workers in precarious jobs at the bottom of the AI value chain. It also was important in extending bargaining power from more protected tech professionals, to build new agreements and institutions that constrain employer **exit** from these protections through strengthening employment standards and protections for temps, vendors, and contractors.

In sum, social dialogue can and is playing a crucial role in encouraging an alternative, high road approach to AI investments and uses in workplaces around the world. In the end, we find more similarities than differences across the case studies we have presented in this report: together they illustrate the shared goals of workers and their unions to move their employers and governments toward AI strategies that complement, empower, and embed their labor. Efforts to promote more socially and economically sustainable approaches to new technology adoption should focus on establishing complementary institutions and practices that are designed by the workers most directly affected by these changes.

Annex 1. List of interviews and email communication

Interviews

Name and/or position	Organization	Country	Date
Works councilor 1	Deutsche Telekom	Germany	14 August 2024
Works councilor 2	Deutsche Telekom	Germany	14 August 2024
Works councilor	IBM	Germany	26 July 2024
Works councilor	Pronvinzial	Germany	24 October 2024
Franca Salis-Manidier, National secretary of the CFDT, responsible for European and international affairs, digital and artificial intelligence	French Democratic Confederation of Labor (CFDT)	France	13 January 2025
Principal Officer	Teamsters Local 2	USA	5 November 2024
Researcher	Culinary Union, UNITE HERE Local 226	USA	18 November 2024
Executive Vice President, General Counsel	SAG-AFTRA	USA	6 November 2024
Unit Chair	Ziff-Davis Creators Guild-WGA	USA	7 November 2024
Jayson Little, Staff Representative	United Steel Workers	Canada	6 November 2024
Mr. Koki Ueyama, Chief Secretary			
(Interview conducted by Eriko Teramura)	Federation of AEON Group Workers' Unions	Japan	26 December 2024
Representatives			
(Interview conducted by Eriko Teramura)	Federation of AEON Group Workers' Unions	Japan	2 February 2025
Hyunju Kim, President of the DeunDeunHan Call Center Union	DeunDeunHan Call Center Union	South Korea	26 December 2024
	Hanoi Sosa, organizer and secretary of Workers' Education to Dominican federation of free-trade zone workers, and secretary-general to FEDOTRAZONAS.	Dominican Republic	15 November 2024

Name and/or position	Organization	Country	Date
Pablo Rolim Carneiro, Labor Affairs Manager of the Labor Relations Superintendence of the National Confederation of Industry (CNI)	CNI, SENAI	Brazil	8 November 2024
Satyavrat KK	All India Gig Workers Union and All India IT and ITES Employees' Union	India	23 December 2024

Email communications and interviews

Name and/or position	Organization	Country	Date
Birte Dedden, Director ICT & related services	UNI Europa ICTS & Related Services	N/A	Email information exchange, 25 November 2024
Massimo Mensi, Director, UNI Global P&M and Policy Advisor on Digital Technology	UNI Global Union	N/A	Email information exchange, 9 December 2024
José Varela, Head of AI and Digitalization	UGT - Union General de Trabajadoras y Trabajadores	Spain	Email information exchange, 2 December 2024
Victor Bernhardtz, Ombudsman for Digital Labour Markets	Unionen	Sweden	Email information exchange, 14 November 2024
Jindu Kim, PhD candidate from Hanyang University	Hanyang University	South Korea	Email interview 26 November 2024
Seri No, Research Fellow at the Korea Labor Institute	Korea Labor Institute	South Korea	Email Interview
Mophat Okinyi, Union Organizer	Communication Workers Union of Kenya (COWU-K), African Content Moderators' Union and CEO, Techworker Community Africa	Kenya	Email Interview

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