

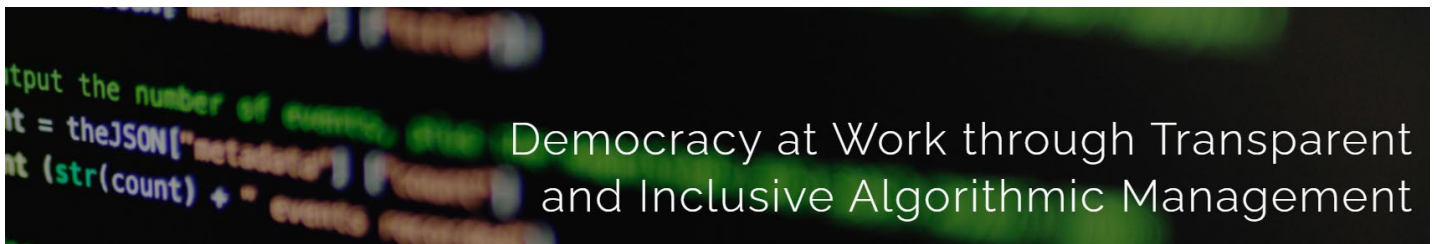


## Policy brief

# ALGORITHMIC MANAGEMENT AND DEMOCRACY AT WORK IN DENMARK

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This paper was developed as part of the [INCODING project – Democracy at Work through Transparent and Inclusive Algorithmic Management](#). The objective of this companion piece is to position the project’s research work and findings within the broader policy context and decision processes.

The content of this policy brief does not reflect the official opinion of the European Union. Responsibility for the information and views expressed in the report lies entirely with the authors.

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## Introduction

Algorithmic management (AM) and artificial intelligence (AI) based technological solutions have sparked new concerns and debates in Denmark, not least following the recent waves of various generative AI technologies and large language models such as ChatGPT. The main themes debated include for example the surveillance of workers, data security and ethics, health & safety risks, the legal implications of introducing and using AM and AI-based solutions as well as such technologies' effects on working conditions. To respond to this recent digitalisation trend, the Danish government, trade unions and employers' organisations have hosted a series of workshops, conferences and seminars on these particular issues and developed different tripartite, bipartite and individual responses.

Their responses range from hard-law initiatives (i.e. legal rulings, new legislation and collective agreements) to soft-law responses covering guidelines, commissioned work, government- and social partner led commissions etc. Recent examples of joint social partner led initiatives are the different sector specific trade unions and employers organisations' discussions of AM and AI-based technologies that formed part of the 2023 collective bargaining round. Subsequently, social partners decided to include and regulate these issues in their individual collective agreements. For example, the trade union 3F (representing food delivery couriers) and the employers' organisation – the Danish Chamber of Commerce – (2023) successfully renegotiated their sector- level agreement on food delivery services – the Just Eat Agreement - in Spring 2023. Likewise, the Danish trade union HK (representing freelance interpreters) and the employer organisations - the Co-operative – negotiated and signed a sector-level agreement for freelance interpreters working via digital labour platforms in February 2023. In the banking sector, social partners agreed as part of their 2023 collective agreement to appoint a working group on data ethics to discuss the development of data-ethics for the benefit of both companies and workers related to the usage of AM and AI-based technologies and surveillance of workers. The Danish government's recent AM and AI-related initiatives involve their announcement to launch of a new Centre for Social Media, Technology and Democracy in 2023 along with the parliamentary consultations on the surveillance of workers, employee rights for transparency and subjectivity to automatic decision-making – debates forming part of the negotiations of EU's directive on platform work. There has also been a range of company-based initiatives on AM and AI-based technologies across distinct sectors on the Danish labour market, but less is known about these responses and their implications.

In this context, the INCODING project has researched the implications of AI-based systems at work and its collective governance in the manufacturing and the food-delivery sectors, focusing on companies, where algorithmic management are relevant and workers representation is present through shop stewards, Collaboration Committees, Health and Safety Committees. Particularly, the study has analysed two cases at company level. First, a leading manufacturing company producing cutting-edge technological products. And secondly, one of the largest platform delivery companies in Denmark. The study emphasizes the importance of negotiations, collective action, and regulation at the company level. The methodology employed required desk research and interviews with key informants, representatives, and workers.

## Synthesis of major findings and highlights

The Danish case studies are illustrative examples of two companies operating on the Danish labour market that are not only at the very forefront of using AM and AI-based technologies to optimise work processes, but they also represent two extreme cases of the Danish industrial relations model. The first case study is a leading manufacturing company, and the second case study is a food delivery platform company. The manufacturing company is strongly embedded within the Danish collective bargaining model with long traditions and possibilities for worker involvement, company-based bargaining and has well-developed institutions of workplace representation in the form of shop stewards, health and safety representatives, collaboration committees, health & safety committees combined with a high trade union density. The platform company operates within the regulatory grey zones of Danish labour laws as well as on the outskirts of the Danish collective bargaining model. It relies exclusively on solo self-employed workers, not employees and is without collective bargaining coverage. The union density within the platform company is patchy if not non-existent and there is no tradition of workplace representation and institutions, such as shop stewards, health and safety representatives, collaboration committees, health & safety committees.

Our two illustrative case studies on the application of AM and AI-based technologies in two distinct contexts point to several important research outcomes:

- ☑ *Different digitalisation voyage:* The usage of AM and AI-based technologies appear more visible in the platform company, where such technologies seem central to the platform company's business model and are the key tools for the platform to communicate with its couriers, distribute work tasks and measure individual worker performance. The AM system appears fairly visible throughout the company, where individual platform workers seem well-acquainted with the functioning of the AM system. They have in some instances developed strategies to optimise their earnings through the AM-system when it comes to accessing the "best" orders, gaining bonuses etc. By contrast, the reliance on AM and AI-based solutions seems less visible within the manufacturing company and primarily a tool to optimise work processes and a way for product development than being the very core of their business model. The AM and AI-based technologies tend to be embedded within different technical solutions used by the manufacturing company and have typically been gradually introduced over time, and unlike the platform company, the performance measures are rarely tied to individual workers and their performance, but different digital devices and machines. Distinct company practices characterise the two case companies regarding their reliance on AM and AI-based technologies to automate work processes and digitalise communication, but in neither cases have the work processes been fully automated.

- ✓ *Limited awareness of collection and usage of worker data:* There seems to be limited awareness among the different employee groups as to the collection and usage of their digital data by the two companies. However, workers appear often more critical towards, for example, tracking of individual workers in Danish manufacturing than the platform economy, where it is more widespread to track individual workers.
- ✓ *Social dialogue practices:* The cross-sector variations as to the two companies embeddedness within the Danish collective bargaining model seemingly influence the involvement of workers when implementing AM and AI-based technologies at company level, although the broader regulatory framework offer strong consultative rights, notably on the introduction of new technology, which are embedded within both collective agreements and statutory labour laws. There seems to be stronger formal employee involvement and development of joint guidelines and company-based agreements on various aspects related to AM, AI-based technologies and digitalisation more broadly within Danish manufacturing than the platform economy. However, informal social dialogue between management and especially the workers at the shop floor, appears to be the dominant and most regular form of employee involvement within both case studies, but tends to take place in parallel to the well-established workplace institutions within the manufacturing company. The role of collective bargaining appears thus to play less of a role when it comes to implementing AM and AI-based technologies on a day-to-day basis at the shop floor.
- ✓ *The Institutional framework for employee involvement* serves as an important platform for workers to voice their concern as well as for local social partners to find joint solutions to the different challenges emerging from implementing AI and AM-based solutions. In fact, our case studies suggest that if such company-based institutions for workplace representation are non-existent, workers are more likely to pursue alternative channels to voice their concerns and push for solutions, whereby disputes are more likely to unfold in the broader public than being refined to individual company.
- ✓ *Health & Safety - a good business case:* Health and safety serves in some instances as a good business case for automating or digitizing manual work processes. However, health and safety issues can also in some instances stall the implementation of new technologies, notably if the technologies pose what can be considered a health and safety hazard. This was, for example the case when co-bots were introduced at the shop floor within the manufacturing company but had to be withdrawn due to the health and safety hazards they posed. Further, concerning the studied platform, the couriers conducting food deliveries at street level face numerous health and safety related risks such as bad weather and heavy traffic, which the platform company does not oversee due to digital distance between the platform and the workers.

## Policy recommendations

Some policy recommendations can be formulated in relation to collective bargaining and Artificial Intelligence technologies at work based on the results of the project:

### → Collective bargaining and Data ethics & security

Our study points to the need of new rules and regulations that ensure greater awareness among the workers as to the types of worker data collected, their usage and storage by the AM and AI-based technologies at the workplace. The new EU directive on platform work (2024) offers new employee rights related to data collection and transparency within the platform economy, but our study suggests also more traditional companies are increasingly implementing and applying AM systems and AI-based technologies to optimise work processes, collect worker data to measure worker performance, although in a slightly different way as the data collection is typically not tied to the individual worker, but the more generic digital devices or machines operated by groups of workers. However, the digitalisation trends often differ across sectors and companies in terms of their breath and scope and to ensure flexible implementation, our findings suggest that collective bargaining offers a platform to future proof collective agreements towards these issues that are tailored to the specific needs within individual sectors or companies due to the broad intersectoral or even intracompany variations in the way companies embrace technological advancements.

### → Greater transparency when algorithms are changed or modified

This was one of the issues that had proven highly problematic in the platform company case, where adjustments to AM based compensation model caused much frustration among couriers and subsequently sparked demonstrations and work stoppage. Likewise, within the manufacturing company have proposed changes of measuring worker performance via different machines or digital devices to individual worker accounts sparked criticism and led to threats of industrial actions by the workers. unless this proposal was rolled back.

### → Collective bargaining an important platform for employee involvement

In Denmark, the broader institutional framework offers extensive legislative and collective agreed possibilities for employee involvement within Danish companies, but workers seem unable to enforce these opportunities especially in emerging sectors such as the platform economy with differing traditions of workplace representation, collective bargaining and union density. Thus, our findings call for strengthening not only sectoral, but also company based bargaining institutions to ensure that statutory and collective bargaining consultative rights are enforced across both traditional and emerging sectors on the Danish labour market.