

# ANTICIPATING THE FUTURE OF WORK: HOW SOCIAL PARTNERS AT HAMBURG HAFEN LOGISTICS ARE HANDLING THE CHALLENGE OF ARTIFICIAL INTELLIGENCE

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## **Artificial Intelligence: What are the challenges for jobs?**

Together with climate change, ageing and globalisation, new digital technologies are one of the megatrends shaping and challenging the future of work. It remains to be seen if a combination of robotisation and artificial intelligence will trigger a significant and economy-wide wave of employment restructuring by destroying not only manual routine jobs, but also non-routine jobs that require higher cognitive skills.

Some experts argue that technological progress will lead to a future with fewer jobs. According to one study, close to 50% of all existing jobs in the US could be at risk of automation within the next 10 to 20 years (Frey and Osborne, 2017<sup>[1]</sup>).

Others, however, take a more granular and nuanced approach. By looking at the specific tasks being executed by workers, and not at occupations as such, the OECD calculates that the average share of jobs across the OECD at a high risk of automation<sup>1</sup> is limited to 14%. Innovation may in fact result in the supply of new products and services. This would work to offset the jobs that are being lost by creating entirely new types of jobs (OECD, 2019<sup>[2]</sup>).

What is clear, however, is that trends such as digitisation and artificial intelligence will likely change job types and how workplaces are organised in important ways. Jobs may remain available but workers will be required to perform new tasks in their existing jobs, or entirely change jobs. It is vital to anticipate and prepare for these changes in order to prevent adverse impacts on workers while maximising the benefits of new technology for both business and workers (Roche and Naedenoen, 2020<sup>[3]</sup>).

Hamburger Hafen und Logistik Aktien Gesellschaft (HHLA) and the German trade union ver.di (affiliated to the Global Deal partner the International Transport Federation) provide a good example of how to anticipate change in the workplace originating from technological innovation and artificial intelligence.

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<sup>1</sup> High risk is defined as a probability of 70% or more.

## Social dialogue on Innovation and Restructuring

### *Background*

HHLA is a leading European port logistics company in the port of Hamburg. One of its subsidiaries is container terminal Altenwerder (CTA). It is a relatively new terminal, in operation since 2002 and largely automated since its opening. It is one of the most efficient terminals in the world (Harbecke and Müghe, 2020<sup>[4]</sup>). Among others, automated vehicles move containers from the crane area to the warehouse while autonomously calculating the fastest route. Workers in a control centre use joysticks and cameras to place containers from the storage block on trucks or tractors with their own chassis for inland distribution.

CTA employs around 850 workers, of which 350 work outdoors in operations and 500 in administration and control. Trade union density in CTA is high, reaching over 90%. Workers are represented by ver.di, the German services trade union, which is HHLA's counterpart in collective negotiations.

Even if CTA is already automated to a high degree, there is a constant focus on new technological developments. In 2017, this led to a renewed business strategy that aims to prepare for the future by improving competitiveness, quality and profitability. Openness to innovation, in particular through further digitalisation and automation of the workplace, is a key pillar of this strategy. As a result, the applicability of new technology is constantly monitored. For example, there are theoretical simulation games being performed to see how the operation of cranes in the railway area can be done remotely without the worker sitting in the crane itself. Other projects being investigated are the inland transportation of containers in high-speed tubes reaching over 600 km an hour, the use of drones to allow for real time planning of construction, 3D printing and the application of artificial intelligence in the writing of invoices.

### *Preparing the future together*

The culture and focus on openness to technological innovation in CTA have triggered several social dialogue actions in response.

First, in view of the high automation potential of the company, the works council has developed the concept of "multiple qualifications". The objective is to offer training and ensure that workers can handle from two to seven jobs in the company. Where the introduction of new technology makes some jobs redundant, or significantly changes existing jobs, workers can shift more easily to other jobs inside the company or keep up with fundamental changes in their existing jobs.

Furthermore, in 2013 a collective agreement on "Protection of Innovation and Restructuring" (Tarrifvertrag Innovations - und Rationalisierungsschutz) was signed. It sets a framework on how to cooperate as social partners when introducing future technological projects. It specifically aims to avoid detrimental effects of the introduction of new

technologies on workers, while at the same time maintaining the company culture of openness to innovation. This is stated as such in the introductory part of the agreement:

*“At CTA, there is a positive culture for change, openness to technological developments and a high willingness on the part of employees to get involved in these issues. (...) The aim of this collective agreement is to create a set of rules that will enable such projects to continue to be implemented while preventing any restructuring or possible work intensification triggered by such projects from causing unilateral or inappropriate costs for workers.” (ver.di and CTA, 2013<sup>[5]</sup>)*

The collective agreement in particular arranges for an early involvement of the works council when new technological projects are being considered, with a joint working group to be set up if necessary.

The agreement also specifies “impact thresholds”. These are based on the number of workers in the department concerned, the numbers of jobs that are undergoing change and the expected increase in productivity. When a first threshold is exceeded, the following steps are to be taken:

- Early consultation with the works council
- Analysing the expected impact of the project
- Informing workers of the results of this analysis
- Training of workers concerned

In case a higher threshold is exceeded, additional steps are defined:

- Training of workers in the form of project-related qualification measures
- Measures to safeguard or increase health
- Ensuring job security
- Offering an alternative job

In 2016, this agreement was followed up with a letter of intent between management and the works council of CTA. The letter of intent reaffirms the common goal of shielding workers from the negative effects of the introduction of new technologies by adjusting the organisation of work, in particular through the reduction of working hours:

*“HHLA and the operating parties are pursuing the goal of reducing negative effects on employees through further automation or, ideally,*

*avoiding them as far as possible. The existing manual activities are distributed in the best possible way to safeguard jobs. The signatories agree that the means of reducing working hours will be used to secure jobs.”*

### **What are the experiences?**

The social dialogue instruments described above were put in action in 2017 when a new working method for the remote checking of arriving freight was introduced.

Previously, containers coming in by train at the CTA terminal were manually recorded by staff physically present in the railway facility. This process is now digitalized by using 16 cameras. These record the data on the container and allow entire trains to be displayed digitally on remote computer screens. Train-checkers were thus no longer needed as the work shifted to offices from where workers behind screens are processing train container traffic.

In line with the collective agreement, the works council got involved with the aim of avoiding workers being made redundant. Social partners succeeded in doing this by offering former train-checkers the training they required to be re-employed as “screen-checkers”. Moreover, considering that workers who used to walk around long distances every day were now doing office jobs, compensatory measures to safeguard health, such as an additional break of 15 minutes, were also taken. Other health risks continue to be inspected and can lead to further negotiations with worker representatives on how to remedy these risks (better desks, screens etc.).

A second experience is that the overall attitude towards continuous learning was profoundly impacted, but in a positive way. Investment in worker skills is logically a “win-win” situation: From the business point of view, the company has more skilled and productive workers at its disposal and increases the potential for internal functional flexibility. For workers, having a wider set of skills protects workers from job loss and brings more variety into their work. The latter may also benefit workers’ health as a lower number of routine or stressful tasks are to be performed.

In practice however, some groups and in particular those workers who do not have good experiences with past formal learning, may see continuous learning not as an opportunity but more as something that management imposes. Developing learning initiatives through social dialogue helps to change this perception and removes this obstacle to the effective take-up of training. In this case, the training initiative is the result of a process of social dialogue and negotiation whereby worker representatives are involved. This ensures “ownership” of the initiative by workers. This is in fact what happened at HHLA: Social dialogue succeeded in establishing acceptance by workers of the concept of multiple qualifications.

## Conclusion

Providing information, opening a dialogue and pursuing consultation and cooperation between management and employee representatives gives workers voice in the process of change. Workers see that their perspective is being integrated. Social dialogue thus eliminates fears and scepticism about change processes, in particular by ensuring job or workplace or, alternatively, general employment security. Social dialogue also allows to identify and resolve emerging conflicts early on and to generate additional ideas and suggestions that come directly from the work floor.

This good practice case has shown that social dialogue does not only benefit workers, it is also good for business. Involving workers and anchoring this involvement in an institutional framework of social dialogue has created a culture of openness to innovation and new learning by HLLA's workforce. Concrete social dialogue has transformed possible resistance to the introduction of new technologies at work into cooperation, thus preserving and possibly even intensifying the company's competitive advantage.

## References

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