

CAMPAIGN TOOLKIT



DOCKERS' FUTURE OF WORK TOOLKIT



ITF

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World
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FOREWORD

The introduction of new digital technologies, including those that enable the automation or remote operation of port equipment, is a challenge increasingly experienced by dockworkers around the world.

Even though only some 7% of global container ports worldwide are highly automated, this percentage is growing. And beyond container terminals, we are also witnessing the introduction of new technologies in break bulk and general cargo, as well as in the administrative processes of terminal operators.

International Transport Workers' Federation (ITF) Dockers' Section affiliates demand that our jobs, working conditions and our safety are at the heart of the dialogue on the future of our work. We must stand together to help defeat unsafe and unnecessary technologies which threaten our jobs and which can, if deployed without due concern for our safety, even threaten our lives.¹ To be clear, we oppose union busting automation and see

it as a ploy to remove union labour in a bid to increase corporate profits. This is done despite automation having reduced productive outcomes.

We know that no single approach will work in all ports. This toolkit is intended to help affiliates understand the issues around the introduction of new digital technologies and provide examples of successful campaigning experiences around key technologies of concern, such as automation, remote operations and autonomous vehicles.

At the end of the toolkit, we also provide examples of collective bargaining language from affiliate contracts that deal with new technologies – so that we can learn from the different ways affiliates have met the challenges they pose.

1. Three dockworkers died and many suffered injuries after automation increased work pressures in New Zealand. See the 'Lessons in Failure' report on the failure of automation at the Port of Auckland, New Zealand, May 2023. <https://www.munz.org.nz/wp-content/uploads/Lessons-in-Failure-Automation-at-the-Port-of-Auckland-%E2%80%93-ITF-Report.pdf>

THE CHALLENGE OF AUTOMATION

Tech companies want the shipping industry, port operators and dockworkers to believe that they can fully automate a port, and that ports can run safely and efficiently without human supervision or workers. This is simply not true.

A port's operations are a complex system of interacting processes. Automation can be used to remove people from parts of this system, but we are, as yet, still a long way from the 'full automation' of the system as a whole. Furthermore, even the processes that are successfully automated still require human oversight, correction, maintenance and adjustment. It is a fundamental truth that dockworkers remain key to the successful operation of any port. Automated ports are simply less productive and provide no community benefits.

We should bear in mind some very basic facts about automation and how they relate to the work processes in ports:

01. Automation is best suited to situations of predictability and repetition. In other words, the simpler and more repetitive the process, the easier it is to automate. But on the other hand, the more variables that affect a process, the less easy it is to automate.

In a container terminal the use of standardised boxes makes automation easier than in more varied break bulk and general cargo operations that deal with various steel products, motor vehicles and irregular shaped and sized cargo that often cannot fit in a container. And in break bulk terminals we are now seeing machines

that can pack certain cargoes into standard packages, or which simplify the movement of bulk cargoes. Whether the terminal is a container or breakbulk terminal, operations can still be affected by many issues, such as weather, light conditions, the condition of the boxes themselves, the quality of sensors, the quality of the software, and many more variables.

02. Such variables can only be dealt with by human beings. Automation requires the widespread deployment of sensors such as cameras, location sensors, and weight and wind sensors. These sensors themselves can become a weak link in the work process. Efficient automation also requires effective connection points between automated or highly automated processes and manual processes, between different software systems, and between people and machines.
03. Automation requires changes to port infrastructure. This means that in most cases it is cheaper to build new, highly automated terminals from scratch. These so called 'greenfield' projects are made more difficult by the limited number of suitable sites, and the requirement that they be near existing transportation links. Therefore, most automation takes place within existing ports while surrounding operations continue. These 'brownfield' projects expose workers to the dangers posed by construction, disruption and increased work pressures as remaining infrastructure is expected to take the strain created by some areas being inoperable.

The reduced productivity commences as soon as construction begins.

Autonomous vehicles depend on software, automated decision-making systems (often known as 'AI' – artificial intelligence) that in turn build an image of the environment around the vehicle using sensors such as lidar, radar, cameras and geolocation. These systems are far from perfect and are vulnerable to faults in sensors and mistakes in software or data. They are also potentially vulnerable to hacking, misclassifying images and poor maintenance. The safe operation of autonomous vehicles in ports therefore requires rules for their operation in areas where workers are present.

So, we can clearly see that the introduction of digital technologies, including automation, is a complex process that requires people. And yet we keep hearing about 'fully automated ports'. If we accept this terminology, it could mislead us into vastly underestimating the ongoing importance of dockworkers in the ports of the future.

We therefore need to be careful when we are talking about automation. We should establish our own criteria of what makes a system fully automated, highly automated, or otherwise, so as to base our positions as closely as possible to reality.

A standard container terminal has four main processes:

- Clerical (terminal operating system, AI components, human resources and admin systems)
- Road/Rail/Yard (gate, connection to the hinterland – the broader area served by a port)
- Horizontal transfer (from crane to yard)
- Vessel and vessel operations (cargo planning, stowage, crane and deck work)

Equipment used in these operations also requires maintenance and repair, including of software, which are support functions.

We consider that a terminal is semi-automated when one of these four core functions is automated, and that a terminal is highly automated when more than one of these functions is automated.

AUTOMATION AND REMOTE OPERATION

It is important to underline the distinction between automation and remote operation. In both processes the person disappears from the workstation, usually the machine's operating cabin, but it is only under automation that dockworkers' jobs are eradicated. In remote operations, the worker is moved off the crane to a building on or near the terminal. Remote operations often require fewer workers, but rather than all jobs being lost, they are reduced in number and relocated.

AUTONOMOUS VEHICLES

Another important area of technology deployment is the introduction of autonomous vehicles, which takes place mainly in container terminals but has the potential to be spread into break bulk operations. These vehicles use sensors to build an image of the world around them, and software (often a form of AI) to take decisions about when and where to move. They are usually used to move containers or goods around a port terminal.

Because the technology is still not mature, autonomous vehicles often need to follow signs or painted lines on the ground, and they usually function in areas where the number of pedestrian workers can be minimised. They are usually programmed to stop whenever an obstacle is detected, and they are usually kept to a low speed.

OTHER DIGITAL TECHNOLOGIES

Ports also use digital technologies in security, often through video cameras and microphones, heat and smoke detectors and other sensors. Security can also include 'geotracking' (tracking vehicles, goods and workers around an installation) and 'geofencing' (enabling alerts if unauthorised workers enter particular areas or remotely locking/unlocking gates and doors).

Increasingly, employers are using AI to filter job applicants, and there is great potential for its use in work monitoring, as well as in administrative processes. But there are major concerns around discrimination and unsafe work pressures created by the use of such technologies. These discriminatory impacts must be opposed if employers bring new technology into the workplace.

SUMMARY

ITF dockworkers' affiliates need to be aware of the main challenges being posed by the use of new technologies in ports. These can be boiled down to the challenges of automation, remote operation, autonomous vehicles, and the digitalisation of security, administration and work process control in the context of developing AI processes.

This toolkit is aimed at helping our affiliates to successfully meet these challenges. It will be continuously updated to ensure that we are collecting best practice on and dealing with the latest technologies.

ITF DOCKERS' POSITION

- 01** Automation cannot be used as a union-busting measure. Ports and terminals must ensure that they are an economic benefit to the workers they employ and the communities they serve.
- 02** Proposed automation of ports must be economically transparent. All relevant economic data must be publicly available. The ITF will support affiliates lobbying governments to ensure automation proposals are fully disclosed in terms of capital expenditures, cost of capital, and the economic effects of technologies, their impact on jobs and any shift in tax obligations, and the increased reliance on social welfare programs. Dockers' unions will continue to protect and improve the conditions for their workers and not allow terminal operators to undermine conditions in terminals.
- 03** All measures must be taken to ensure that there are no job losses due to the introduction of new technology, including scheduling, retraining of workers and in-sourcing of all work required to operate the terminal. In countries where weekly or annual hours of work are defined in the industrial system, the ITF supports a reduction of the working week without loss of pay.
- 04** Workers affected by technology must be given relevant work assignments sufficient to ensure their pension and entitlements.
- 05** No existing or future terminal machinery, equipment, terminal operating systems or terminal access and entry gates will be operated by remote control outside of the terminal area to the exclusion of workers covered by the Collective Bargaining Agreement (CBA) signed by the dockers' union affiliated to ITF.
- 06** Full union coverage and respect for union jurisdiction is maintained. There will be no transfer of dockers' jobs, existing or new, to management or non-union labour.
- 07** All roles in connection with terminal operating systems and equipment will be covered by a dockers' union, including the coverage of all new roles, classifications, categories, and/or jobs that are created as a result of automation or technological change – even when the function is carried out as a result of automation or technological changes. Further, full coverage of all maintenance functions through union labour covered by the dockers' union.
- 08** No remote controlling from outside of a terminal area. Central control hubs operating internationally are opposed.
- 09** Outsourcing of dockers' jobs will cease and existing outsourcing arrangements will be brought back into the jurisdiction of the dockers' workforce.
- 10** Economic and social impacts of automation are to be taken into account and must be consistent with community values. No public funds and/or tax rebates should be given to terminal operators to automate, whether fully automated or semi-automated terminals.



AUTOMATION AND WOMEN

Employers and governments must ensure:

- Any measures including the introduction of new technology, automation or digitalisation must benefit and not be to the detriment of women dockworkers.
- Unions are included as key stakeholders in consultation on all new technological developments in ports, which must include gender impact assessments.
- An end to gender-based occupational segregation.
- Equal opportunities for women in all aspects of port work, including training and re-training on any new technology.

Tripartite and collective bargaining mechanisms should include measures to ensure women's representation, so that they can have input into the development of policy and be part of decision-making around new technology.

Unions should campaign for governments to ensure that regulations tackle the root causes of gender inequality by considering women's needs in terms and conditions of employment. For example, by legislating to increase opportunities to access family- friendly working hours, shift patterns and flexible employment conditions while ensuring decent work and equal pay. In addition, by ensuring trade unions representatives and women's advocates are recognised and can receive paid time off.

MAP OF AUTOMATED TERMINALS



AUTOMATION IN PORTS: THE DIMENSIONS OF THE PROBLEM

SUMMARY

According to maritime research consultancy Drewry, 7.3% of container terminals around the world were highly automated in 2022. This equates to 68 out of 800 container terminals around the world.

In most cases, port automation refers to the digitalisation that enables the automation or remote operation of terminal equipment and gates. If shifted to remote operation, fewer workers are needed to operate more machines, leading to job losses.

Port automation is not limited to newly built terminals, which are also known as 'greenfield' operations. 'Brownfield' operations describe a terminal converting all or part of its existing conventional port operations to automated processes. Brownfield automation is becoming increasingly popular as fewer greenfield sites are being built.

While the introduction of new technology might create new types of jobs, the new jobs created do not offset the number of jobs lost by the introduction of new technology. It is now possible that new jobs can be off-terminal and outside of the jurisdiction or coverage of the traditional union representing dockworkers.



TIMELINE OF AUTOMATION IN PORTS

1993

The first highly automated terminal was introduced in the Netherlands in 1993 with the opening of ECT Delta Terminal in the Port of Rotterdam.

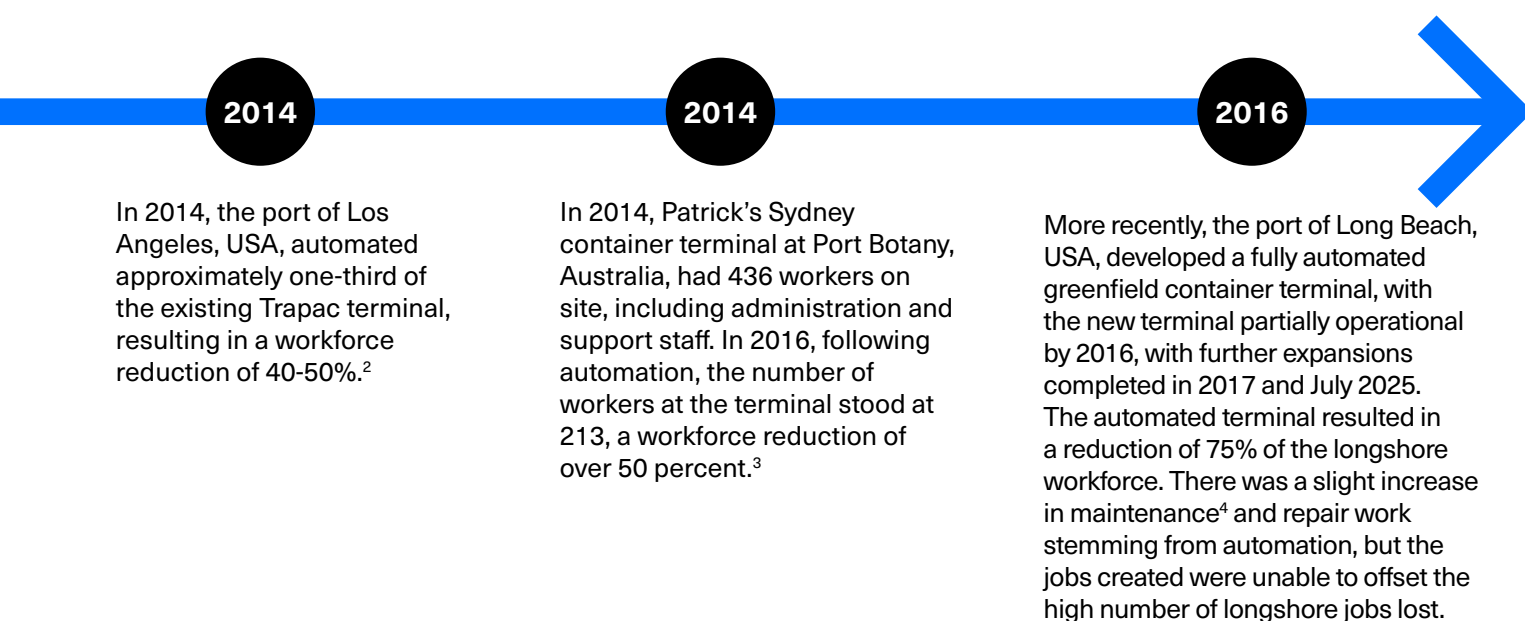
2012

In 2012, DP World introduced automated straddle carriers (ASCs) – freight carrying vehicles – and straddles (human controlled) into its Brisbane, Australia, operation. The shift in mode change from internal transfer vehicles (ITVs) and forklifts to straddles with ASCs to do the road work resulted in a 33% reduction of jobs in the terminal.

Automation is not as reliable or productive as human workers. Automated terminals have consistently been shown to be less productive and have a reduced overall container rate compared to human-operated terminals. Automation cannot operate or adapt to complex or evolving situations, unknown environments, ambiguous data or certain weather conditions.

This analysis is supported by studies undertaken by the World Maritime University, McKinsey⁵ and others. Consequently, there is no valid argument that automation is implemented for purposes of increased productivity or for socially useful purposes.

The need to reduce climate impacts, mainly through reducing energy use, has been cited by employers as a reason for introducing automation in ports. However, the digitalisation of processes can create efficiencies without the automation or remote operation of port cranes, or of quayside vehicles. Technological advances that help the environment are welcome, including the use of human-operated, electric rubber-tired gantry (RTGs), cranes, forklifts and other pieces of equipment in the terminal. But the climate crisis should not be used as an excuse to replace workers: we reject automation of the waterfront as a basis of dealing with the climate crisis.



2. ILWU Canada Prism Study: https://ilwu.ca/wp-content/uploads/prism-ilwu_report-a3-aug14.pdf
3. Transport 2040: Automation, Technology and Employment – The Future of Work https://commons.wmu.se/cgi/viewcontent.cgi?article=1071&context=lib_reports
4. ILWU Canada Prism Study: https://ilwu.ca/wp-content/uploads/prism-ilwu_report-a3-aug14.pdf
5. McKinsey & Company: The future of automated ports <https://www.mckinsey.com/industries/logistics/our-insights/the-future-of-automated-ports>



**ILA WORKERS
OVER
MACHINES:
DEFEND OUR
JOBS AND
RIGHTS**



COMMUNITY IMPACT

By destroying local jobs, the automation or remote operation of terminal operations hurts communities. It not only leads to job losses in the port, but it also affects the hinterland community due to the decreased spending caused by the removal of significant numbers of wage earners.

Campaigning possibilities exist in small businesses around the local terminals. These small businesses are potential allies against the corporate monoliths in stevedoring which effectively remove the clientele from these shops and service providers.

Local councils are also a good point of campaigning in community interests.

Job losses in ports will affect other industries, including the economic sectors where the industry's workers spend their income.

Shops, supermarkets, retailers and service providers can be negatively affected by terminal automation and the disappearance of customers.

The industrial intensity of a port creates an imposition on a community. While the community may suffer from the effects of noise, pollution, congestion and a toll on infrastructure, it will benefit from well paid employees who contribute to the social fabric, local business and regional tax base. Stevedoring companies and shipowners moving away from diesel to electrified operations would alleviate some of the community impact.

The study commissioned by the International Longshore and Warehouse Union (ILWU) Canada found that if ports on the west coast of Canada were automated it would cause a reduction in tax revenue at national and local levels. The study found that: "Not only would there be a significant decline in wages and salaries for core and supporting jobs, but the decrease in consumer spending would negatively impact local economies."⁶

Whereas job losses lead to decreased tax revenues from employer taxes, decreased consumer spending leads to decreased tax revenues from consumer taxes. When faced with decreases in tax revenues, governments are forced to adjust budgetary allocations, which could lead to:

- Less funding for school systems impacting the education children receive.
- Less funding for healthcare systems, especially in countries with public healthcare.
- Under-funded public services, including, fire, paramedics and sanitation services.
- Less investment in infrastructure, including road repairs and bridges leading to a degradation of current infrastructure.
- Capital expenditure for the introduction of automation often go to offshore corporations in lieu of local communities. At the same time, increased corporate profits will not benefit the community and are often sent to offshore accounts.

6. ILWU Canada Prism Study: https://ilwu.ca/wp-content/uploads/prism-ilwu_report-a3-aug14.pdf



PORT SECURITY AND DIGITAL SOVEREIGNTY

ARTIFICIAL INTELLIGENCE

When workers use powerful new technologies, they create data. This allows employers to monitor every aspect of the workplace, including professional (and personal) performance, resulting in reservoirs of 'big data'. AI or machine learning can then be employed to automate decisions and duties, such as the booking of a shipment or the routing of a tractor through a marine terminal. This technology not only displaces and de-skills workers, but it also poses an additional threat via the erosion of privacy, freedom and the right of workers to think for themselves.

Workers have seen the weaponisation of data as a pretext for companies to seek damages in courts. In the USA, the Supreme Court has set a precedent that corporations may sue unions for economic harm related to work stoppages.⁷ As workers rarely have the opportunity to view or challenge data, this practice can be used as a means to cover-up poor business practices and then charge employees for the consequences. This litigation is also being used to create a chilling effect to curtail workers' freedom of speech and expression – as seen when the University of California sued its workers for their protests over war in Gaza and Israel.⁸

Additionally, the AI algorithms that make decisions, along with the underlying data itself, contain biases and assumptions that can negatively affect workers. For example, in the USA, facial recognition AI has routinely ascribed negative characteristics to black people.⁹ Algorithms used to assess job applicants also routinely embed gender bias against women.¹⁰ Broad use of these algorithms has implications for workers across the world, and regulation is necessary to protect privacy, equity and dignity.

Unscrupulous use or mishandling of personal data can lead to identity theft, surveillance, or unauthorised profiling. Union officials must ensure that AI systems incorporate techniques such as data anonymisation, encryption and robust access controls. Clear consent mechanisms and transparent data usage policies are also essential to protect workers' safety and privacy.

We need national regulations limiting and controlling the use of algorithmic management. These should include privacy standards and enshrine the notion of ultimate human responsibility. They must also require companies to provide a named official responsible for the effect algorithms have on people and the environment.

7. <https://www.reuters.com/legal/government/us-supreme-courts-ruling-strike-case-puts-unions-defense-2023-06-07/>
8. <https://www.cbsnews.com/losangeles/news/the-uc-system-is-suing-a-union-leading-strikes-around-california-heres-why/>
9. <https://dl.acm.org/doi/pdf/10.1145/3531146.3533138>. Cited here: <https://www.forbes.com/sites/arianna-johnson/2023/05/25/racism-and-ai-heres-how-its-been-criticized-for-amplifying-bias/>
10. <https://ojs.aaai.org/index.php/AIES/article/view/31748/33915>. Cited here: <https://www.washington.edu/news/2024/10/31/ai-bias-resume-screening-race-gender/>

PORT SECURITY AND DIGITAL CONTROL

Digitalisation enables control. As ports have rushed to digitise port activity, they have exposed significant vulnerabilities, including a lack of cybersecurity, weak incident response planning and a failure to train and employ cybersecurity professionals. These weaknesses have made ports prime targets for cybercriminals.

Nagoya, Japan, is the country's largest seaport, handling over 10% of the country's cargo each year. On 5 July 2023, cybercriminals unleashed a ransomware attack which caused cargo handling to grind to a halt. It took days to restore operations to normal. Similarly, DP World Australia, which handles about 40% of Australia's imports and exports, confronted a significant cyber incident on 10 November 2023. After detecting unauthorised access to its networks, DP World shut down its cargo operations in Sydney, Melbourne, Brisbane and Fremantle for three days.¹¹

In scenarios like these, automated terminals are unable to operate and adapt to crises. For example, during the NotPetya cyberattack of 2016, APM Terminals Maasvlakte II in the Port of Rotterdam was shut down for more than two weeks. On the other hand, traditional terminal operations were able to maintain productivity.¹² Digitalisation therefore brings the increased risk of disruption to ports around the world as well as the disruption of broader supply chains due to ports sitting idle, unable to move cargo.

Operating systems, AI, and other software cannot easily be substituted, creating the risk that strategic national and international infrastructure can effectively be controlled from abroad. Furthermore, data collected by these systems goes into improving the systems of the owner-operator. Some analysts are calling the risks involved the threat of 'digital colonialism' because of the potentially exploitative nature of this tech relationship.

For governments around the world, foreign digital control of port terminals and the use of foreign software to operate terminals, particularly highly automated ones, should raise national security concerns. Instead, there has been an increase in concessions of ports to foreign corporations, with a mandate that they automate.

OFFSHORE OPERATIONS AND REMOTE CONTROLLING

The move to have some port operations handled overseas – where companies pay workers less than in the country where the port is physically operated – poses another risk to national security. If port operators offshore the remote-control operations of automated equipment, as they have tried in Australia at the Port of Melbourne, there is no local control and regulation. There are fewer workers on the terminals to act as a second set of eyes. This is an increasing threat due to widespread adaptation of 5G technology. It can result in the contracting out of certain operations from the local workforce to lower wage areas. As an equivalent example, think about banking services that at one time were conducted in the local branch but are now contracted out and conducted over the telephone or online via workers located in lower wage economies.

11. <https://www.txone.com/blog/protecting-global-trade-from-rising-maritime-risks/>

12. <https://www.nytimes.com/2020/05/19/world/middleeast/israel-iran-cyberattacks.html>

The possibilities for remote controlling terminal equipment outside of the terminal areas (or even the country) is increased with the development of 5G and AI. We need to resist employers who attempt remote controlling outside of terminals in order to avoid dockers' unions. The potential areas for remote controlling can now include the following areas of terminal operation:

- Security gates
- Clerical and terminal operating system (TOS) functions
- Crane operations
- RTGs
- Planning
- Autostrad operations

CONTROL, SURVEILLANCE AND HEALTH AND SAFETY RISKS

Automation is one aspect of the increasing digitalisation of the workplace. The embedding of sensors and software into vehicles, equipment and infrastructure enables automation. These sensors create data that oversees and describes a process and the environment around a process – so, they describe the various movements of each piece of machinery involved in getting a container off a ship, the movement of containers around the terminal, as well as wind speed, temperature and other parameters that describe the environment around the container (and increasingly, inside it).

Other data from sensors such as radio-frequency identification (RFID) tags or chipped ID cards can tell the system which worker is doing what – and how efficiently – at any one time. For example, a hydraulic ram on a machine can have its own IP address for the collation of data, which can be used by employers in a range of different ways.

Together, all of this data creates the ability for employers to control what is happening in the port. Control is therefore at the heart of both digitalisation and automation.

Employers usually use the data they harvest from workers and work processes to reduce costs by:

- Reducing the amount of energy used (by using smart lighting or smart routing, for example).
- Taking workers out of the picture (automation and remote controlling).
- Giving some tasks to machines (de-skilling workers and then paying them less).
- Making workers work harder (by making them work to productivity targets or by reducing 'free time' between tasks on the job).
- Imposing productivity benchmarks and disciplinary outcomes around performance.

In many workplaces, workers are measured against each other in what is known as benchmarking. Carrot and stick incentives are used to make people work harder. This monitoring practice exists in traditional stevedoring operations but is now compounded by the increased scrutiny that machinery, and consequently workers, come under through advanced technological processes.

Monitoring workers comes with the usual employer-imposed political control of a workplace. But these advanced monitoring practices also work to fuel the learning and development of artificial intelligence, as every move made by a worker in any machine is collated and recorded as a basis for teaching the AI systems the best way to operate a machine in a terminal environment.

These forms of control carry serious health and safety implications for workers anywhere digitalisation takes place. 'Big brother' is watching and recording, and the added psychosocial stress placed on workers as a result of this constant, detailed surveillance contributes to these health and safety implications. There is pressure to speed up operations and drive dangerously on the one hand, with the added pressure of someone looking over your shoulder at all times on the other, all creating a serious mix of safety and health concerns.

Main concerns of surveillance include:

- Psychological pressures from being watched at all times.
- Reduced social activity on the job.
- Unachievable productivity yardsticks.
- Imposition of disciplinary based performance measures.

First, the knowledge that everything about a workers' activity is being measured creates additional psychological pressures for the worker.

Second, the reduction in 'social time' on the job (having a coffee with a workmate, walking from one task to another) and the reduction in the number of workers creates symptoms of social isolation (loneliness and higher stress, for example).

Third, productivity yardsticks are often assigned without consulting workers, leading to unrealistic productivity expectations that force workers to labour at a pace that creates health risks.

Fourth, workers are increasingly working alongside automated machines and vehicles that have not been adequately safety tested, or that operate without being synchronised with other operations, creating risks.

The combination of all these factors creates higher risks of workplace injury or stress.

Finally, in automated contexts with higher upfront capital costs, the maintenance and repair of equipment is often postponed. This creates an elevated risk for catastrophic failure and increases the likelihood of significant damage or casualty.

FUTURE RESEARCH

THE IMPACT OF AI AND 5G ON THE PORT SECTOR

The full automation of port terminals does not bring improvements either in the productivity of the concessionary companies or in the ports that host them is the main conclusion drawn from an independent report commissioned by the International Dockers' Council (IDC) and the ITF.

CONTEXT

Communication and information technologies are having an impact on logistics in general. Ports are no exception.

Current communication technology has limitations in terms of the volume of information processed and the information sharing capacity, which represents a limitation in the automation of production processes or in the development of the 'Internet of Things' (IoT), among other examples. Some ports, such as Rotterdam, in the Netherlands, Singapore, or Qingdao, in China, are currently studying the possible applications of this technology in port operations.

The most likely scenario is that 5G will enable a qualitative leap in the automation of procedures, in remote control and in real-time data monitoring, among other aspects. However, there are still important uncertainties about the effects of 5G implementation on work organisation, safety, cyber security or changes in the market power of maritime port and logistics operators in general.



OBJECTIVE

The objective of this research is to analyse the effects of the implementation of 5G technology in all ports from a wide spectrum: from essential production indicators to work organisation, including an assessment of 'global impacts', including potential job losses, job changes and the impact on trade union power.

The research will most likely also lead to an examination of the joint implementation of 5G and AI, since it is their use in combination that creates the potential for autonomous and remote operation. It will also deal with the impacts from an occupational safety and health (OSH) perspective, and the privacy and ethical impacts of the use of facial recognition-biometrics (for example, on automated gates).



HOW UNIONS CAN COMBAT AUTOMATION

It is essential for dockers' unions to educate and inform rank-and-file members and the broader community about the real risks of automation, to debunk the existing myths about it, and explain to the broader community the impact of job losses and the threat the labour movement faces.

Dockers' unions around the world have been combating automation in several ways:

- Industrial action – strikes and bans.
- Developing an international solidarity response.
- Collective bargaining.
- Political campaigns and pressure.
- Community campaigns.
- Educational and organising 'road shows' by unions highlighting automation experiences across different countries and regions.
- Worker's capital strategies.

COLLECTIVE BARGAINING

Unions can negotiate around a range of measures to mitigate against the effects of job-destroying automation or even bargaining to stop it altogether. There is not a one-size fits all approach, and contract language will reflect the political, industrial and legal realities on the ground. The concepts that unions might consider for negotiating and fighting for in collective agreements include:

- All new jobs will be within the union's jurisdiction and coverage.

- Retraining members with new skills required and providing technical familiarity on automated processes.
- Ensuring the union and workers are told and agree on what data is being gathered, and that employees are given the option to opt out of data collection systems. For example, data that is being gathered could include productivity levels, geotracking and mapping of employee locations.
- Ensuring transparency of data being collected and that it is accessible by the employees and union, and that it is not used against workers industrially or for disciplinary purposes.
- Reduced hours of work with no loss of pay (in applicable national circumstances and IR systems).
- No remote controlling of internal terminal equipment.
- No job losses.
- Automation committees involving workers.
- Banning automation for the life of a contract or agreement.

Dockers' unions around the world have been negotiating language into their CBAs. Examples of specific clauses applicable in collective agreements are contained in Appendix 2.

EXAMPLES OF BARGAINING AND CAMPAIGNING SUCCESSES AND CHALLENGES

AUSTRALIA

In Australia, the Maritime Union of Australia (MUA) has been challenged through the Federal Court about the legitimacy of union rights to prevent outsourcing and automation. Under Australian law, it is unlawful to take industrial action in order to prevent either outsourcing or automating. The approach in this area has to be directed legally toward placing limitations on the employer when they decide to automate. For example, there shall be no loss of jobs and that overall hours will reduce if the employer automates.

The MUA was prevented from legally stopping automation and outsourcing in a common law deed with DP World, which consistently uses the courts in its efforts to undermine worker's rights.

USA

On the east coast of the USA, the International Longshoremen's Association (ILA) successfully negotiated language into its six-year agreement that prevents the introduction of new technology and automation in ports under its jurisdiction. At the same time, the ILA agreed that it would work to increase productivity levels in the ports.

GERMANY

Ver.di launched the campaign #DIGITALMUSSSOZIAL with the aim to put dockworkers at the center of the automation and digitalisation processes that are happening in German ports. The goal of this campaign is to ensure that dockers get a share of the benefits that will arise from digitalisation and automation in the ports. Ver.di has fought to achieve collective bargaining language with employers that will require the employer and union to agree on processes to manage

automation, by adapting skills of the current workforce, negotiating the introduction of new technologies and employment levels, and adapting the co-decision system to the new settings.

NEW ZEALAND

A report from the International Transport Workers' Federation (ITF) and the Maritime Union of New Zealand (MUNZ) – Lessons in failure: Automation at the Ports of Auckland (POAL) – demonstrates the risks presented by any automation or privatisation of the Ports of Auckland. The report raises important red flags in the privatisation and automation debate. While the report is focused on the failures of the automation project, it also illustrates how bad privatisation would be for the Auckland economy and for the national economy.

The first issue is the claim that Ports of Auckland is a financial failure. The report shows POAL was one of the best performing ports in the Southern Hemisphere before automation, that it is returning to that level of operation now management has changed, and automation has been stopped.

The second issue is the huge cost of the automation failure to the economy. The drop in throughput and the congestion that it created cost Aotearoa, New Zealand, more than a billion New Zealand Dollars. There is a huge risk attached to further meddling in port operations. Handing over the Ports to offshore owners would give them massive leverage over the entire economy. The third issue is how a private owner could find efficiencies in current operations. The former POAL management tried automation and attacking working conditions, and the result was efficiency went down while deaths and injuries went up. The new port management realises that and is working with the union, and POAL operations are quickly returning to their former levels of throughput.

This report shows there is no 'fat' to cut in port operations. The only way a private operator

could get the kind of return they expect would be to pump up prices and the flow on costs to Auckland businesses and, ultimately, to the people of Auckland and our wider economy.

One of the report's authors, Professor Nigel Haworth, agrees. "We ran a microscope across port operations and clearly identified the terrible harm the 'go-faster' approach had on safety and the financial impact caused by attempting to automate a port that wasn't suitable for it. There are serious lessons to be learned from this report for other ports considering automating, but also for the future of Ports of Auckland," he said. "Ports of Auckland is critical infrastructure and is effectively a monopoly. Putting it in private hands would give the owner a licence to strip-mine Auckland's businesses and our economy."

For the full report please see Reference Documents section of this toolkit.

COMMUNITY CAMPAIGNING

Mobilising rank-and-file activists in the ports is the first step in any campaign, but unions will also need support from the community members in which they work. It is important that the union undertakes steps to educate the community about the risks of automation, as pointed out earlier in this paper. Building the broadest community and political alliances in support of job security and opposing automation is vital in a successful campaign.

In 2019, the ILWU campaigned against further automation at Pier 400 in Los Angeles, USA. Using the slogan, "People before Robots", the ILWU gained support from unions from all sectors, the general public and politicians alike.

The ILWU spoke with the community about what automation could mean for the community, including:

- The impact and potential closure of small businesses due to job losses/economic spending by longshore workers.
- Cuts in tax revenue for local schools, emergency services, etc.

Wherever automation negatively affects the community, there are potential allies in the struggle. We need to identify our allies and those who will stand by us in struggles opposing automation and mobilise them in our campaigns. Our allies should be brought into the political lobbying process as well to frame the call for change as broad-based and from across a community of like-minded groups.

The effects of unemployment in communities arising from automation include:

- Crime.
- Addiction and substance abuse.
- A weakened local tax base leading to weakened local public services.
- Increased violence: community and domestic.
- Poverty and unemployment.
- Homelessness.
- Family breakdown.

POLITICAL PRESSURE

In some countries, dockers' unions faced with the threat of automation have exerted their political power and lobbied governments about the risks and impacts of automation.¹³ Appendix 2 to this report contains sample questions that can be asked and demands made of politicians during lobbying meetings.

- Political pressure should be used to lobby politicians in their respective countries and gain the support of those who are sympathetic to labour in order to support workers facing automation struggles. Often, politicians have limited knowledge of how the industry works or the true economic impact of automation on the community, as illustrated in the ILWU Canada study.
- Unions should have meetings with all levels of government – mayors, city councils, provincial/state level representatives, federal ministers – to present arguments and data that demonstrate negative social, economic and community impacts.
- Letters/questions should be sent to relevant government ministers to let them know our concerns. There should be follow-up letters and meetings as and when more information becomes available.
- When possible, make submissions to any environmental review process when a terminal operator wants to introduce automation in a terminal.
- Organise rallies and demonstrations opposing job destroying automation.
- Build broad community alliances and opposition through campaigning aimed at politicians and governments – and, where possible and relevant, involve these groups in advocacy as part of a united front for change.
- Advocate for legislation that prohibits public funds, e.g. tax revenue, from being used to automate terminals.
- Require economic and social impact studies to be undertaken before automation of any kind at the terminal shall be considered, including the impact that job losses will have on tax revenue and the local community.

13. <https://www.nzherald.co.nz/business/former-port-of-auckland-ceo-tony-gibson-found-guilty-after-stevedores-death/VSCTTT3Z6BCJHGLNCAOEFGI6CA/>

INTERNATIONAL SOLIDARITY

Dockers' unions must work collaboratively across borders in order to effectively fight back against automation. The ITF Dockers' Section brings together over 100 dockers' unions representing more than 450,000 dockers globally. This network of affiliates can provide both practical solidarity and assistance to unions facing and campaigning against automation. Dockers' solidarity can provide practical assistance in terms of best practices for bargaining language pertaining to the introduction of new technologies, best practices for community campaigning and applying political pressure and a strong network of activists to engage in solidarity campaigning in support of each other's struggles.

EXAMINING THE ROLE FOR WORKERS' CAPITAL STRATEGIES

As part of organising and campaigning strategies, it is important to consider ports' current ownership structures and how planned investments in new technology will be financed. Politicians are important advocacy targets for publicly owned ports and government investment. The private sector is another source of capital, through investment by sovereign wealth funds, global asset managers and pension funds.

01. What is a workers' capital strategy?

Globally, workers contribute to pension schemes that represent trillions of dollars of retirement income, but they often have very little say in how their money is invested. Before the Covid-19 pandemic hit, the total value of assets in retirement savings plans had reached an all-time high of more than US\$50 trillion. More responsible stewardship of this capital could play a powerful role in building a sustainable economy where companies respect human and labour rights, remain financially sustainable and minimise damage to the environment. Trade unions use workers' capital strategies to challenge pension funds and asset managers to take responsibility for improving the practices of the companies in which they invest.

National union confederations can advise on developing capital strategies since trade union influence often depends on national structures. The countries where unions currently have the most influence over pension funds include Australia, Brazil, Canada, Denmark, Finland, India, the Netherlands, Norway, South Africa, Sweden, the United Kingdom and the USA. However, since investment is dominated by international players – in 2020, 75 global asset managers managed more money than the GDP of the USA, China and the European Union combined – trade unions are also developing capital strategies at the global level, for example through the Committee on Workers' Capital (CWC).



The CWC was established in 1999 to promote information sharing and joint action. It brings together trade unions and pension fund board members from around the world to foster a community of practice aimed at upholding strong labour practices and trade union priorities in investments. The CWC is a joint initiative of the International Trade Union Confederation, the Global Union Federations – including the ITF - and the Trade Union Advisory Committee to the OECD. Its work is led by a leadership team composed of a Chair and co-chairs, and is supported by a Networked Secretariat which includes unions around the world and meets on a monthly basis.

02. What makes engagement with investors an effective tool for unions?

Unions are already directly targeting corporate leadership teams and politicians. Investors represent another set of actors who can potentially influence decision-making by company boards on strategic issues such as automation.

However, this requires resources to gather evidence and time to build up relationships with asset managers and investment analysts who may not see trade unions as natural allies. Briefings and reports aimed at investors may need to be framed in a different language so that dockers' demands get a hearing.

For example, many of the approaches and frameworks that investors currently use to evaluate corporate performance are voluntary, not legal, requirements. So, we have to be able to present our case in a way that will be persuasive to an investor audience.

03. How do workers' capital strategies relate to organising and campaigning?

Any workers' capital strategy must support the overall objectives of the union campaign. Effective engagement with pension trustees and asset managers depends on being able to draw directly on the experience of workers and union representatives to show what the company is doing at operational level. Without this, it will not be possible to challenge assertions from corporate leadership about the financial benefits of automation. Some key questions to consider in developing a workers capital strategy in relation to dockers and automation:

- Do we have evidence that a company has not met the existing standards set by target investors and pension funds as part of their investment criteria? To be aware, these standards might not adequately reflect the challenges created by new technologies. Many pension funds will not be aware of the impacts of full automation of terminals.

- Can we demonstrate the risks of automation to investors in a credible way? These could be environmental risks, social risks to dockers' well-being and local communities or reputational risks to the company if it is seen not to pay its fair share of taxes. However, it is essential to show how full automation of terminals creates risks to the company.
- Are there useful links to explore between our coalition-building with communities who would be affected by automation and/or local government and engagement with national pension funds?
- What are the specific actions that we would like pension funds and asset managers to take in relation to automation?

Most capital strategy work is developed alongside organising and other campaign tactics. For example, effective media work by unions to highlight the negative impacts of automation on workers and communities can help to show investors that there are reputational risks for the company.

ANNEX 1: COLLECTIVE BARGAINING CLAUSES

Here are some sample clauses from Collective Bargaining Agreements by dockers' unions that have been negotiated to address automation in ports:

BELGIUM:

CBA between multi-employers and Belgische Transportbond

- When an employer decides to implement a new technology and when the introduction of the technology may have significant collective effects on employment, that employer must notify the "Reconciliation Committee" at the Port of its introduction at least three months in advance and consult about it with the representatives of the port workers.
- The term "significant collective effects" is understood to mean that at least 50% of a particular occupational category or 20% of the total population must be involved in the introduction of the new technology.
- The consultation relates to the prospects for employment, as well as any retraining or additional training of the port workers in question.

UNITED STATES:

CBA between multi-employers and International Longshoremen's Association

- There shall be no fully automated terminals developed and no fully automated equipment used during the term of this Master Contract. The term "fully- automated" is defined in the Master Contract as machinery/equipment devoid of human interaction.

- There shall be no implementation of semi-automated equipment or technology/ automation until both parties agree to workforce protections and staffing levels

AUSTRALIA:

CBA between DP World and the Maritime Union of Australia

- In the event that the Company elects to introduce a significant change to the mode of operation at Port Botany terminal during the life of the Enterprise Agreement, the process outlined below will apply.
- When the Company has made a definite decision to make a change to the mode of operation (Board approval for mode change), the Company will communicate the decision to both the Employees and their representatives in accordance with the Enterprise Agreement.
- The Company will provide the Union with appropriate information in relation to the ongoing operation of the Terminal to assist the Parties to attempt to reach agreement around prospective working arrangements and rostering.
- Appropriate information shall include, however is not limited to a prospective berth schedule, forecast idle shifts and data relating to working within/above or below grade and roster option data. The Company will not provide commercially sensitive or confidential information. The Company will provide to the Union the labour modelling inputs and outputs in a protected format (that is we will not provide the labour model).

- The Parties will then immediately commence discussions regarding the Mode Change. The discussions will commence no later than nine (9) months in advance of the scheduled go live date.
- The Parties, in the first instance will seek to reach agreement regarding roles, rosters, labour arrangements and requirements. The Parties agree that the hours of work shall be 32 hours per week, unless otherwise agreed by the Parties.
- The Parties will make themselves reasonably available for intensive discussions between nine (9) months and six (6) months in advance of the scheduled go live date.

CBA between Hutchison Ports and the Maritime Union of Australia

TECHNOLOGICAL CHANGE

- 8.1 When the Company has made a definite decision to implement automation and/or technology or mode change, the Company will communicate the decision to the Parties to this Agreement in accordance with Clause 7 of this Agreement.
- 8.2 The Parties will then immediately commence discussions regarding the implementation of automation and/or technology or mode change. The discussions will commence no later than twelve (12) months in advance of the scheduled go live date. If any form of automation and/or technology or mode change is implemented over a period of less than twelve (12) months, the timeframe of twelve (12) months may be shortened by agreement between the Parties.

8.3 The Parties will:

- 8.3.1 Negotiate in good faith with respect to the application of any roles, tasks and classifications to be included in the Agreement arising out of the implementation of automation and/or technology or mode change.
- 8.3.2 Refer not agreed matters as to the coverage of the Agreement to the HPA CEO and MUA National Secretary who will make a final decision on nonagreed matters.
- 8.4 No Employee shall be made redundant due to the implementation of automation and/or technology or mode change. This undertaking will apply to Employee numbers at the time of the implementation of automation and/or technology or mode change and will not exceed:

SICTL

- 8.4.1 Ninety-six (96) SICTL R1 Employees.
- 8.4.2 Ninety-six (96) SICTL R2 Employees.
- 8.4.3 Two (2) SICTL Employees on the Allocator Roster.
- 8.4.4 Twenty (20) SICTL 12 Hour General Maintenance Employees.
- 8.4.5 Five (5) SICTL Day Maintenance Employees.
- 8.4.6 One (1) SICTL Employee on the Storeperson Roster.

BCT

- 8.4.7 Fifty-six (56) BCT Permanent Fixed Roster Employees.
- 8.4.8 Forty-eight (48) BCT Permanent Part Time Roster Employees.

- 8.4.9 One (1) BCT Employee on the Allocator Roster.
- 8.4.10 Twenty (20) BCT 12 Hour General Maintenance Employees.
- 8.4.11 One (1) BCT Employee on the Storeperson Roster.
- 8.5 To ensure ongoing work for all existing Employees, hours of work will be reduced for each Employee to such an extent that all Employees shall be sustainably employed on adjusted hours and salaries for those reduced hours of work without reduction of the Ordinary Rates of Pay applicable in Clause 16.6.
- 8.6 Notwithstanding the obligation of Clause 8.4 and Clause 8.5 above, the Parties acknowledge that changes may be needed to address the requirements of the business. To facilitate this process, the Parties shall refer to Clause 40.
- 8.7 Automation and/or technology or mode change will be implemented in a cooperative and transparent fashion.
- 8.8 Nothing in this Clause shall prevent the Company from developing, preparing and/or implementing technological change once a definite decision has been made as long as the processes in this clause have been fully applied and adhered to.

CBA between DP World and the Maritime Union of Australia

Appendix 4 – Automation

01. In the event that the Company elects to introduce a significant change to the mode of operation at a terminal during the life of the Enterprise Agreement, the process outlined below will apply.
- a) When the Company has made a definite decision to make a change to the mode of operation (Board approval

for mode change), the Company will communicate the decision to both the Employees and their representatives in accordance with the Enterprise Agreement.

- b) The Company will provide the Union with appropriate information in relation to the ongoing operation of the Terminal to assist the Parties to attempt to reach agreement around prospective working arrangements and rostering. Appropriate information shall include, however is not limited to a prospective berth schedule, forecast idle shifts and data relating to working within/above or below grade and roster option data. The Company will not provide commercially sensitive or confidential information. The Company will provide to the Union the labour modelling inputs and outputs in a protected format (that is the Company will not provide the labour model).
- c) The Parties will then immediately commence discussions regarding the Mode Change. The discussions will commence no later than nine (9) months in advance of the scheduled go live date.
- d) The Parties, in the first instance will seek to reach agreement regarding roles, rosters, labour arrangements and requirements. The Parties agree that the hours of work shall be 32 hours per week, unless otherwise agreed by the Parties.
- e) If automation results in the creation of a new role(s) covered by the scope of this Agreement then where practicable the Company will offer Employee(s) whose jobs are made redundant as a result of the automation, training to enable

them to be employed in the new role(s) provided that the Employee possesses the necessary aptitude to attain the required skill set within a reasonable time.

- f) The Parties will make themselves reasonably available for intensive discussions between nine (9) months and six (6) months in advance of the scheduled go live date.
- g) An Independent Panel will be formed and finalised at the commencement of intense discussions or no later than nine (9) months before the scheduled go live date.
- h) In the event that the Parties are unable to reach agreement the Parties will refer the outstanding points/issues to the Independent Panel for consideration.
- i) The outstanding matters must be referred to the Independent Panel as early as six (6) months and as late as three (3) months in advance of the go live date of the new mode of operation.
- j) The Independent Panel may conciliate if they determine it, is an appropriate approach. The Independent Panel will be empowered by the Parties to arbitrate the outstanding issues. The Parties agree to be bound by the decision of the Independent Panel.

02. Constitution of the Independent Panel

The independent panel will consist of three (3) panel members. Each party will nominate one member with one agreed presiding panel head.

03. Transition

It is the intention of the Parties, that three (3) months out from go live the Parties will have agreement or a binding decision from the independent panel and will be focused on implementation and transition in the lead up to the introduction of the new mode.

04. Mode Change Payment

In addition to the Redundancy payment set out in the Enterprise Agreement at clause 43.5 in Part A, further "One off" Redundancy/Mode change payment will be made to any Employee made redundant as a result of the mode change.

The "One Off" Redundancy/Mode change payment consists of an additional fifteen (15) weeks at the rate determined for in the standard redundancy Clause 43.5 as per Part A of the Enterprise Agreement.

CANADA:

Auxiliary document to CBA between British Columbia Maritime Employers Association and International Longshore and Warehouse Union Canada

- The purpose of the Committee is to review and minimize, to the extent possible, the impact of Technological Change including automation and semi- automation on members of the workforce in any Local Area
- Technological Change means:
 - a. The introduction by a member of the Association of automation or semi-automation involving equipment or material of a different nature or kind than that previously utilized by the employer in the operation of the work, undertaking or business; and
 - a. A change in the manner in which the employer carries on the work, undertaking or business that is directly related to the introduction of that equipment or material.

- Commitment: The parties agree that technological change in no way alters the jurisdiction of the ILWU
- When a member of the Association covered by this agreement intends to implement a Technological Change that is anticipated to affect the employment of a significant number of members, that Employer shall provide the applicable Local at least 120 days written notice of the proposed changes.

GERMANY:

CBA between Hutchison Ports World and ver.di

Definition automation: The automation of a plant or machine has the consequence that it works completely or partly without human participation as intended. The term automation in the sense of this collective agreement therefore covers changes in work technology and/or work organisation induced by the employer by transferring functions from human beings to artificial systems, which may lead to a reduction in manpower requirements, a change in work requirements or a change in working conditions for 10% of the workers directly or indirectly affected by the automation measure. Artificial systems are technically supported machines, machine links and digitisation processes. An artificial system exists in particular and inter alia in the following cases:

- Straddle carriers without persons;
- Remote-controlled container gantry cranes;
- Automated twist-lock systems;
- Automated check-in and check-out registration;
- Introduction of new software.

In order to ensure the trusting cooperation in the implementation of the automation and the mutual information in this regard, an automation commission (hereinafter

referred to as the Commission) with equal representation shall be established. The Commission shall consist of four employee representatives and four employer representatives. Employee representatives are appointed by the Group Works Council.

NETHERLANDS:

CLA between ECT and the FNV Havens

The work is arising because of the introduction of automation / new technologies and shall form part of the ECT Collective Labour Agreement (ECT CLA).

Employment / jobs

- Every six months details shall be provided to the Works Council and the employees' organisations relating to the total level of staffing per function group, covered by the CLA.
- In case of proposed decisions that may have important consequences for employment, the Works Council and employees' organisation shall be informed. The information shall be provided promptly, so that consultation about the proposed decisions is actually possible.
- At least once a year the employees' organisations are invited to an informative meeting about the general situation of the enterprise, as well as about the prospects, in particular in the area of employment and technological developments in the enterprise. It shall be determined on a case-by-case basis how far the information provided must remain confidential and if so, for how long.

CLA between APMT MV II and the FNV Havens

Employment

1. APM Terminals Maasvlakte II has no plans to have the cranes (SQCs and barge cranes and rail cranes) operated from a site outside the Terminal. This is also not

considered possible for technical and safety reasons. During the term of the CLA, the operations of the cranes shall not be moved to outside the terminal site.

2. If during the term of the CLA technological developments affect employment in support services and/or work not covered by point 1, the management of APMT MVII shall at all times consult the trade unions about the way in which the effects shall be absorbed for employees of APMT MVII. The principles for that consultation are:

Compulsory redundancies must be avoided as far as possible; upon moving the work to another site within the Netherlands the employment conditions for the employees shall be maintained or replaced by a package of employment conditions that is equivalent overall; In the case of unforeseen and unavoidable redundancy the agreement, referred to in point two of the Result of negotiations (Annex 12 to this CLA) relating to compensation upon dismissal shall apply.

Employment / jobs

- Every six months details shall be provided to the Works Council and employees' organisations relating to the total level of staffing covered by the CLA.
- In case of proposed decisions that may have important consequences for employment, the Works Council and the employees' organisations shall be informed. The information shall be provided promptly so that consultation about the proposed decisions is actually possible.
- At least once a year the employees' organisations are invited to an informative meeting about the general situation of the enterprise, as well as the prospects, in particular in the area of employment and the technological developments in the enterprise. It shall be determined on a case-by- case basis how far the information provided must remain confidential and if so, for how long.

Article 2.5 Introduction of automation and new technologies

This text shall apply for all functions and for all work referred to in the CLA relating to the loading and unloading process of goods and maintenance work:

- Parties acknowledge that the introduction of new technologies, including fully mechanised and robotised terminals, is replacing traditional port work and port workers, including operational, managing and monitoring work;
- CLA parties acknowledge that robots and other technologies will replace a certain number of jobs of port workers including operational, managing and monitoring work;
- CLA parties also acknowledge that the shift from operational work to monitoring work with screens will involve a different stress; for this reason rotation and/ or sufficient breaks must offer a solution within the existing H&S Act (ARBO-Wet);
- The operational work that arises from the automation and application of new technologies and possibly leads to new functions shall continue to be covered by the operational CLA;
- Automation also offers advancement/ development opportunities.

CLA between EECV CAO (Bulk Terminal) and the FNV Havens

Technology Protocol

1. This protocol applies to all (proposed) changes/ renewals of production and/ or information processes that require an investment of at least € 453,780.21; have a turnaround time of at least 1 year; And/or result in relevant changes for employment and/or employment conditions.
2. EECV and the trade unions acknowledge the importance of the changes and renewals referred to under point 1 that can ensure continuity of the enterprise.

3. EECV is aware that the changes/renewals referred to under point 1 may affect the number of functions and jobs in the enterprise and their quality.

It is also aware that, for a successful and socially responsible introduction of the changes and renewals referred to, the cooperation and involvement of employees is required.

4. EECV shall inform the trade unions about the changes and renewals referred to under point 1 as soon as possible, in any case before the final decision has been taken, where the following areas of concern are applied:

the reason that necessitates the changes and renewals referred to under point 1; the intention to make a particular choice and the arguments on which this choice is based; the consequences for the content of functions (qualitative and quantitative); The indication of the names of outside advisers or implementers to be called in.

5. The trade unions may, having regard to point four, put forward any additions to the plans presented.
6. The changes/renewals referred to under point 1 may be associated with economic, technical and social aspects. Since these aspects cannot usually be looked at separately, EECV considers it is its responsibility to set out these aspects in an integrated approach. If CLA-related matters are on the agenda, consultation shall be carried out with the trade unions promptly.
7. EECV shall inform the trade unions about the progress of the changes and renewals referred to under point 1.
8. This protocol shall not affect all relevant rights that the Works Council has by virtue of the provisions of the Works Councils Act (WOR).

EECV CAO (Bulk Terminal) Proposal for new Article 2.1 as introduction to new Automation Section 2

Current Article 2.5: Introduction and application of new technologies

This text shall apply for all functions and for all work referred to in the CLA relating to the loading and unloading process of goods and maintenance work. New technologies are understood to mean: new work methods in all mechanised, automated or robotised forms.

- Parties acknowledge that the introduction and application of new technologies are replacing traditional port work, including operational, managing and monitoring work;
- CLA parties acknowledge that the introduction and application of new technologies will replace a certain number of jobs of port workers who do this traditional port work, including the operational, managing and monitoring work;
- CLA parties acknowledge that the shift from operational work to monitoring work with screens will involve a different stress for port workers;
- CLA parties agree that by rotation of tasks and/or incorporating extra breaks damage to the health of port workers due to the extra or different stress can be avoided;
- CLA parties acknowledge that the introduction and application of new technologies also offers advancement/development opportunities for port workers; and
- CLA parties agree that the operational work arising from the introduction and application of new technologies and possibly leading to new functions shall without exception be covered by the operational CLA;

New Article 2.1: Introduction of automation and new technologies

- a. This text shall apply for all functions and for all work referred to in the CLA that involves the loading and unloading process of goods and maintenance work;
- b. Parties agree that changes in the market make it necessary to investigate how the organisation can adapt to demand. Agreement will have to be reached on how to handle peaks and troughs in the demand for labour. All influences (commercial, planning, procedures etc.) shall be taken into account here.
- c. In the context of automation and automation-based technologies, such as robotisation, Parties acknowledge:
 - i. that introduction of new technologies, including fully mechanised and robotised terminals, is replacing traditional port work and port workers, including operational, managing and monitoring work;
 - ii. that robots and other technologies will replace a certain number of jobs of port workers including operational, managing and monitoring work;
 - iii. that the shift from operational work to monitoring work with screens will involve a different stress; for this reason parties acknowledge that rotation and/or sufficient breaks will have to offer a solution within existing legislation and regulations or by agreements made by CLA parties;
 - iv. that automation and new technologies offer employees further advancement/development opportunities.
 - v. that the operational work arising from the automation and application of new technologies and possibly leading to new functions shall continue to be covered by the operational CLA.

- d. Parties attach great importance to workers being able to go on working on their continued employability and that they can prepare themselves for (new) operational work.

Working on their continued employability is also a joint responsibility of employee and employer. Particular attention shall also be paid to the development of the competencies of employees. Competencies are understood to mean here the set of knowledge, technical and social skills.

- e. In the context of automation and automation-based technologies, such as robotisation, Parties provide:
 - i. that the transition to a new organisation in terms of quantitative and qualitative change in functions is a development process;
 - ii. that implementation of new technologies requires social policy aimed at development of employees and where necessary provisions and measures to absorb negative social consequences for the employees as far as possible;

Employer shall in addition inform the trade union at least once a year or on the request of the trade union about developments in the area of new technologies and any wishes and plans for introducing these into the business. If and insofar as the implementation process is put into effect (proposed decision) the trade union shall be given the opportunity at as early a stage as possible to make known its view so that this can have an influence.

- f. Parties shall, taking into account the provisions of the Works Councils Act (WOR), cooperate on a (long-term) Social Covenant to support a careful implementation of new technologies.

- g. If new technologies are introduced, the Board of EMO¹⁴ shall first have given FNV Havens sufficient information on the benefit, need and consequences of the introduction of these new technologies. A copy of the request for advice or agreement that complies with the legal requirements and which is submitted to the Works Council must be sent to the trade union for this purpose. The trade union shall in any case have the right to information about the expectations of the employer with regard to the following points: reduction in working hours on a daily, weekly or annual basis, the saving of labour costs, the consequences for productivity, investment costs. Based on the information an agreement can/must be reached between the CLA parties on the absorption of any consequences of the introduction and application of new technologies.

The following are important areas of concern upon the introduction of new technologies:

- h. Retention or improvement of pay and employment conditions
- i. Shorter working time with retention of pay, also for the reduced hours
- j. Job security
- k. Negative effects, such as not passing on reduced productivity as a result of automation on to the workers
- l. Function rotation is desirable
- m. Composition and availability of Technical Service (TD) must move with the increase in automation/ robotisation.

CBA between DP World and the Maritime Union of Australia

Appendix 4 – Automation

1. In the event that the Company elects to introduce a significant change to the mode of operation at a terminal during the life of the Enterprise Agreement, the process outlined below will apply.
 - b. When the Company has made a definite decision to make a change to the mode of operation (Board approval for mode change), the Company will communicate the decision to both the Employees and their representatives in accordance with the Enterprise Agreement.
 - c. The Company will provide the Union with appropriate information in relation to the ongoing operation of the Terminal to assist the Parties to attempt to reach agreement around prospective working arrangements and rostering. Appropriate information shall include, however is not limited to a prospective berth schedule, forecast idle shifts and data relating to working within/above or below grade and roster option data. The Company will not provide commercially sensitive or confidential information. The Company will provide to the Union the labour modelling inputs and outputs in a protected format (that is the Company will not provide the labour model).
 - d. The Parties will then immediately commence discussions regarding the Mode Change. The discussions will commence no later than nine (9) months in advance of the scheduled go live date.

14. Europees Massagoed Overslagbedrijf

- e. The Parties, in the first instance will seek to reach agreement regarding roles, rosters, labour arrangements and requirements. The Parties agree that the hours of work shall be 32 hours per week, unless otherwise agreed by the Parties.
 - f. If automation results in the creation of a new role(s) covered by the scope of this Agreement then where practicable the Company will offer Employee(s) whose jobs are made redundant as a result of the automation, training to enable them to be employed in the new role(s) provided that the Employee possesses the necessary aptitude to attain the required skill set within a reasonable time.
 - g. The Parties will make themselves reasonably available for intensive discussions between nine (9) months and six (6) months in advance of the scheduled go live date.
 - h. An Independent Panel will be formed and finalised at the commencement of intense discussions or no later than nine (9) months from the scheduled go live date.
 - i. In the event that the Parties are unable to reach agreement the Parties will refer the outstanding points/ issues to the Independent Panel for consideration.
 - j. The outstanding matters must be referred to the Independent Panel as early as six (6) months and as late as three (3) months in advance of the go live date of the new mode of operation.
 - k. The Independent Panel may conciliate if they determine it, is an appropriate approach. The Independent Panel will be empowered by the Parties to arbitrate the outstanding issues. The Parties agree to be bound by the decision of the Independent Panel.
2. Constitution of the Independent Panel
- The independent panel will consist of three (3) panel members. Each party will nominate one member with one agreed presiding panel head.
3. Transition
- It is the intention of the Parties, that three (3) months out from go live the Parties will have agreement or a binding decision from the independent panel and will be focused on implementation and transition in the lead up to the introduction of the new mode.
4. Mode Change Payment
- In addition to the Redundancy payment set out in the Enterprise Agreement at clause 43.5 in Part A, further "One off" Redundancy/Mode change payment will be made to any Employee made redundant as a result of the mode change.
- The "One Off" Redundancy/Mode change payment consists of an additional fifteen (15) weeks at the rate determined for in the standard redundancy Clause 43.5 as per Part A of the Enterprise Agreement.

ANNEX 2

SAMPLE QUESTIONS FOR POLITICIANS

Note: Some questions are more relevant for publicly owned ports, others are universal

01. Why do processes need to be automated?
02. At the time of the initial business case and investment decision:
 - 2.1. What was the budgeted cost of the automation project?
 - 2.2. What was the timeframe for information and consultation?
 - 2.3. What are the lead times associated with the introduction of automation?
 - 2.4. Has the budgeted cost of the automation project changed?
 - 2.5. Has the timeframe for implementation changed?
03. What has been/will be the capital outlay on:
 - 3.1. Straddles?
 - 3.2. Cranes?
 - 3.3. Communications (wi-fi etc.)?
 - 3.4. Changes to wharves and other infrastructure?
 - 3.5. Other equipment such as the existing manual operated straddles etc.?
04. Has a community impact assessment been undertaken?
05. Has a tax loss analysis been undertaken?
06. What impact will this have on the environment, i.e., will new construction impact wildlife - has an environmental impact assessment been undertaken?
 - 6.1. What research has been undertaken to address the health and safety risks of automation - has a health and safety impact assessment been undertaken? I.e. intensification of work, social isolation.
07. Has a union discussion with government, employers, policymakers, technologists, and the public/local community around significant ethical, legal and social questions been undertaken?
08. How is the government/employer addressing data privacy, intellectual property, and security concerns when implementing AI?
09. Please outline how relevant parties – including government and the employer – will manage and mitigate risks such as harmful content from generative AI?
10. What impact will AI/automation have on the global carbon footprint?
11. Has a gender/equality/equity impact assessment been undertaken?

SAMPLE QUESTIONS FOR EMPLOYERS

01. What is the rationale for change?
02. What is the cost impact and breakdown of those costs?
03. What are the consequences for customers and is there evidence of how these align with customer needs?
04. What are the consequences for the working arrangements of the staff directly affected?
05. What are the consequences for integrated working across the organization.
06. Software
 - 6.1 What is the total cost of software expenditure?
 - 6.2 Who owns the software?
 - 6.3 How many vendors have been used?
 - 6.4 What is the nature of the software products?
 - 6.5 What are the ongoing licensing costs?
 - 6.6 (All ports) Maintenance: Who will complete it?
 - 6.7 What will be the extent and cost of training?
 - 6.8 What are the anticipated onward costs?
 - 6.9 (For publicly owned ports) What service agreements are there, and if they exist, what is the total cost?
07. Debt
 - 7.1 What was the original debt budget?
 - 7.2 What is the current budgeted debt?
 - 7.3 What are the servicing costs of the debt?
 - 7.4 What is the repayment plan for the debt?

08. Dividends:
 - 8.1 What is the amount that dividends have been reduced to, to date, to meet capital expenditure?
 - 8.2 What is the extent to which dividends have been borrowed as a result of capital investment?
 - 8.3 What are the anticipated dividends for the next five years?
 - 8.4 What is the basis of the dividend calculation?
09. Productivity: Box rate
 - 9.1 How is the hour's box rate currently calculated?
 - 9.2 Are there any changes in the method of calculation?
 - 9.3 What was the box rate before the automation work commenced?
 - 9.4 What is the current box rate?
 - 9.5 What is the anticipated box rate?
10. Budget for Labour:
 - 10.1 What is the anticipated reduction in numbers, both permanent, fixed-term and casual?
 - 10.2 What is the projected reduction in paid hours for stevedoring?
 - 10.3 What is the projected reduction in earnings?
11. Health, Safety and Environmental factors
 - 11.1 What impact will this have on the environment? I.e., will new construction impact wildlife.
 - 11.2 What research has been undertaken to address the health and safety risks of automation? I.e. intensification of work, social isolation.

REFERENCE DOCUMENTS/ FURTHER READING

01. International Transport Workers' Federation (2023). Lessons in Failure: Automation at the Port of Auckland.
02. International Transport Forum (2018). Container Port Strategy Roundtable.
03. International Transport Forum (2021). Container Port Automation: Impacts and Implications.

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