CAMPAIGN TOOLKIT

DOCKERS' AI TOOLKIT FUTURE OF WORK SERIES
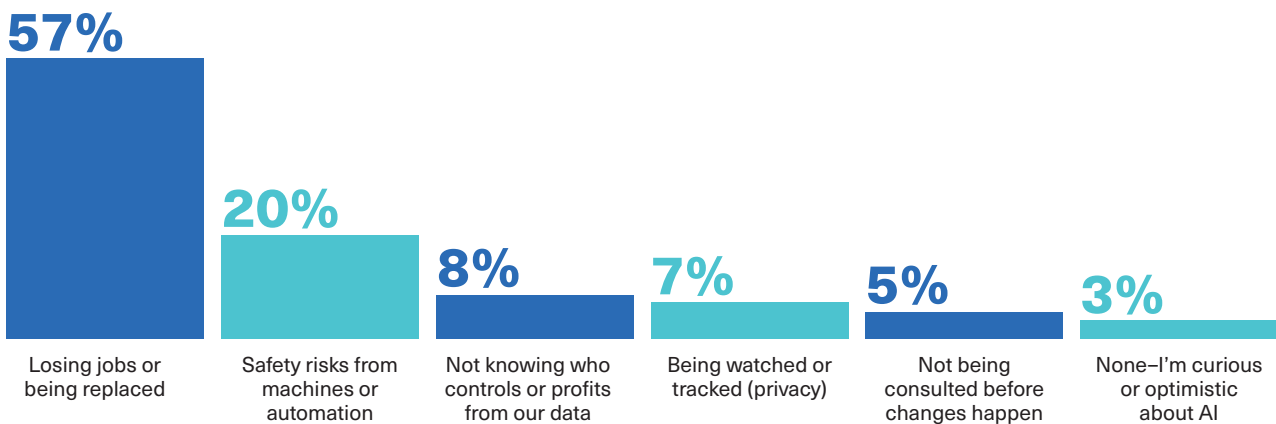
ITF

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FOREWORD

Dockworkers' unions are no strangers to negotiating technological change. From the container revolution to the spread of remote-controlled cranes, workers have seen how so-called 'innovation' on the docks can transform jobs, often reducing crews and reshaping work in ways that weaken collective power. This trajectory of labour reduction explains why, as shown in Figure 1, when union officers hear "AI" their main concerns are immediate and tangible: losing jobs or being replaced.

But artificial intelligence (AI) is more than just a new wave of automation. Unlike earlier technologies that mainly displaced physical tasks, AI brings new layers of control, decision-making and value extraction. It does so with less transparency and often at a much faster pace. AI systems do not simply replace muscle: they reshape authority, change management practices, and even influence how profits and risks are shared across the industry.

That is why this toolkit, developed as part of the ITF's Future of Work pillar, is meant as a practical tool to help inform and guide action taken by dockworkers' unions. It takes real concerns raised by dockworkers and turns them into bargaining strategies. Some proposals are immediately actionable, such as securing binding negotiation or consultation rights before any AI deployment. Others are deliberately bold, such as bargaining over ownership and compensation for worker-generated data. Both tracks matter. The first gives unions tools they can use right away, while the second stretches the boundaries of negotiation to ensure that the gains from new technology are appropriately channelled towards labour without loss of pay or jobs.

The timing is urgent. AI is not the future — it is already here. The sooner unions claim their rights to negotiate and exert influence over the implementation of AI in workplaces and society, the stronger their chances will be of making sure that technological change strengthens, rather than undermines, dockworkers' collective power.

Fig 1. Perceived Primary Concerns of Dockworkers
Regarding AI Introduction in Port Operations

57%	20%	8%	7%	5%	3%
Losing jobs or being replaced	Safety risks from machines or automation	Not knowing who controls or profits from our data	Being watched or tracked (privacy)	Not being consulted before changes happen	None–I'm curious or optimistic about AI

Survey of 60 participants from dockworker unions affiliated to the ITF. Respondents were asked: "When you hear about AI being introduced at the port, what is the first concern that comes to your mind?"

BRIEF INTRODUCTION TO AI

To bargain effectively, unions must have a clear and practical understanding of what AI actually is. We see 'smarter' computers every day— just think about how your smartphone can be unlocked with your face, predict your route to work or translate a text in seconds. But what makes AI different from ordinary computation? At its core, AI refers to algorithms and machine learning systems that can analyse large amounts of data, spot patterns and make decisions in real time.

The difference from traditional software is important: a normal program only does exactly what it was told, step by step. By contrast, AI systems can learn from experience. The more examples or data they see, the better they can get at recognising situations and making autonomous decisions. In simple terms, a regular program is like a calculator that always gives the same answer if you press the same keys. AI is more like an apprentice — it improves over time by watching, practising and adjusting.

A good way to understand how AI has evolved is through the story of chess. Early programs followed simple 'if this, then that' rules, reacting to specific moves with pre-set responses. This changed in 1997 when IBM's Deep Blue beat the then world champion, Garry Kasparov, not necessarily by thinking like a human, but by using raw computational power to calculate millions of possible moves in seconds. It was as if the machine could scan through every chess manual ever written to find the best next move, giving the appearance of learning. Then, in 2017, a new program called AlphaZero took things to a whole new

level. It wasn't given any strategies or examples — just the rules of chess. It learned by playing millions of games against itself and, in the process, came up with creative strategies that surprised even the world's best players. Unlike earlier programs that were carefully programmed by humans, AlphaZero showed how AI could improve entirely on its own.

While AI began in narrow domains like chess, in recent years the technology has expanded into many industrial areas. At the docks, the difference between rule-based automation and AI is clear. The waves of automation that dockworkers already know — such as Automated Guided Vehicles and Automated Quay Cranes — were mainly about mechanising physical tasks: machines following fixed routines to lift, move and place containers. Their behaviour was predictable and their limits were clear.

AI in ports, however, is not just about machines doing the heavy lifting; it is about systems that handle information and decision-making. These systems can predict vessel arrivals, optimise crane and yard operations, allocate labour, monitor performance and even influence how shifts are scheduled. Unlike traditional automation, which could only follow pre-programmed instructions, AI learns from data and worker behaviour to propose — or sometimes impose — new ways of organising work.

This shift takes AI beyond equipment into the governance of work itself, creating new forms of control and oversight that unions must understand, challenge, and negotiate.

AI AT THE DOCKS: WHAT IT REALLY MEANS FOR WORK

As we have established, earlier waves of automation mainly targeted manual labour. Machines were introduced to lift, move and stack containers, replacing physical tasks. Dockworkers on the terminal floor felt these changes most directly. AI, however, goes further. It doesn't just replace muscle, it also starts to take over decision-making. Tasks like vessel planning, yard coordination, and shift allocation, which used to rely on human judgment, are increasingly being handed to algorithms. This means a wider range of workers are affected. Yes, longshore workers still face automation pressures, but AI poses an even greater risk to clerical roles like vessel planners. And this shift is already underway.

Take crane operations. A decade ago, each operator controlled one crane. Today, depending on the terminal, one operator may be expected to supervise four, five, or even six cranes at once. Yet, pushing this boundary further isn't easy. As one engineer told us: "You'd be amazed at the number of decisions a crane operator makes on a simple lift." Factors like container sway, weather and vessel movement make full automation of cranes technically difficult and not always worth the cost.

Planning roles are a different story. Deciding which ship goes to which berth, how to sequence moves, or where to place containers are all data-driven tasks. These are exactly the kinds of problems AI can handle quickly and cheaply. So, employers are finding it more attractive to automate the office than the dock. The implication for unions is clear: if we focus only on protecting manual jobs, we risk overlooking where some of the most significant cuts may occur — within planning and clerical roles.

AUGMENTATION OR SUBSTITUTION?

Employers often describe AI as a tool to support workers, not replace them. The language is always about 'augmentation', 'collaboration' or 'co-piloting'. But the way AI is sold tells a different story. For terminal operators, the people developing or buying these systems, labour savings are a major selling point.

Take DP World's Cargoes TOS+ system. In presentations, every feature is tied to "minimizing human intervention" and "saving on manpower" (See Fig. 2). When technology vendors talk about AI increasing efficiency, they often mean systems built to perform faster and with fewer workers — not necessarily tools that make work easier or better for those who operate them.

Figure 2. Saving on Manpower as Key Metric for AI Product

ZODIAC KEY FUNCTIONS VS. PRODUCTIVITY IMPROVEMENT MATRIX					
#	New Features	RTG Productivity	ITV Productivity	QC Productivity	Saving on Manpower
1	SMART Yard Crane Scheduling	✔	✔		✔
2	Yard Strategy-Auto Yard Planning (No need of yard boundary setting)	✔		✔	✔
3	SMART stowing for Laden Boxes	✔	✔	✔	✔
4	SMART workload distribution for RTG	✔	✔	✔	✔
5	SMART Job Queue Activation				✔
6	SMART CHE Range	✔			✔
7	ITV scheduler against Zone – Ripple Concept	✔	✔	✔	✔
8	Alert Center (Exception Dashboard)	✔	✔	✔	✔
9	Forecast CHE allocations to meet the demand (Increase or Decrease)	✔			✔
10	Generic empty loading and deliver rules	✔	✔	✔	✔
11	VMT Count Down	✔	✔	✔	

Source: DP World's CARGOES TOS+ (Zodiac) presentation (Website, April 2021)

THE REPLACEMENT OF VESSEL PLANNERS: ROTTERDAM

A telling example of how augmentation can mask substitution comes from a terminal in the Port of Rotterdam. Management planned to implement Loadmaster AI, a digital system designed to automate vessel planning and integrate with the Terminal Operating System (TOS). The move was framed as a "supportive upgrade": vessel planners would no longer handle container sequencing or oversee loading and discharge. Instead, these tasks would be taken over by AI, while planners would shift into new roles as "process controllers" focused mainly on communication with vessels. Management presented this as an 'opportunity' — better pay, new skills, less repetitive work. But while a few workers may have benefited, the broader effect was far more disruptive. According to our source, the plan aimed to cut about 60% of planning staff within two years, eliminating 16 jobs and saving roughly €1.6 million annually, based on the company's own estimate of €100,000 per position.

Table 2. Expected Workforce Reduction with Loadmaster

Before AI	After AI	Net Reduction
27 Vessel Planners	5 gangs of 2 = 10	
5 gangs of 5 = 25	+ 1 rotating position	16 jobs (~60%)
+ 2 rotating positions	11 Process Controllers	

According to the company, what used to take a human five to six hours could now be done by Loadmaster in three to four minutes. These claims were likely overstated, since the tool was still in the implementation phase and the estimates largely came from the technology provider, which had an interest in maximising the projected benefits. Yet, the message remains clear: even when AI is introduced under the banner of augmentation, the net effect often means that fewer workers are required to do the same work.

UNION TAKEAWAY

Managers will often claim that AI is necessary to improve productivity and that it is meant to support — not replace — workers. But we must insist on evidence so we know whether the real goal is to increase productivity or down-sizing. Many ports that have introduced automated equipment have seen little or no improvement in key performance indicators like crane move rates. If efficiency means achieving better results with fewer wasted resources, then spending millions just to be labelled the 'most advanced terminal' is hardly a valid justification.

Even if the evidence shows that these technologies do improve productivity, we must ask deeper questions: how is AI actually improving our jobs? Is it making the work more meaningful, or just reducing our skills? Is it making jobs safer, or intensifying the pressure and increasing risks to safety? And if there are real productivity gains, are they helping workers retire earlier and gain more time off? Or are they just helping management justify further cuts?

This is the politics of AI — getting to the heart of who benefits and who bears the costs of these new technologies. Throughout this toolkit, we help you identify the key questions to raise when AI is introduced, and we provide practical examples and collective bargaining clauses to support you in negotiating its implementation, so that technological change serves dockworkers, not just employers.

THE RACE FOR AI

It would be misleading to claim that AI is only about cutting labour costs. While cost savings are indeed a central motivation and often the first figure shown on a business case slide, AI-driven automation also brings other benefits that companies consider vital for competitiveness. This helps explain an apparent paradox: if automation is only about saving on labour costs, why do we see heavy investment in terminal automation outside the Global North, where labour is still relatively cheap?

The answer is that automation, and now AI, is not simply about replacing expensive workers with machines. It is also about process control: standardising operations, reducing dependence on human judgment and ensuring predictable outcomes across global networks. In many Asian ports, for example, billions of dollars are invested in automated terminals not only to cut costs but also to secure reliability, scalability, and seamless integration across supply chains. Shippers, carriers, and logistics firms expect predictable performance everywhere, and AI helps deliver that consistency.

AI AS A SOURCE OF COMPETITIVE ADVANTAGE IN PORTS

AI is becoming a new source of competitive advantage, prompting port authorities to actively promote and invest in it. The ability to collect and control data on vessel movements, cargo flows and worker performance creates value beyond a single terminal. It provides leverage across entire global trade networks.

Recent examples show this strategic shift in action:

- Abu Dhabi Terminals (ADT) partnered with Microsoft in 2021 to deploy AI at Khalifa Port.

- The Port of Rotterdam launched PortXchange to commercialise its digital coordination platform and sell port-data services worldwide.

- Singapore's SGTraDex, backed by IMDA and major logistics players like PSA, was created to securely share port and supply-chain data and enable AI-driven visibility across networks.

These developments signal that control over digital infrastructure is now as important as physical capacity in determining a port's global relevance. Operators that develop their own AI systems can scale them into digital services for other ports and logistics firms. In contrast, those that rely on systems built abroad risk dependency and loss of control over critical infrastructure.

A helpful comparison comes from the car industry. Companies like Tesla are not only valued for how many cars they produce, but also for how effectively they turn driving data into profitable digital services like autonomous driving and predictive maintenance. A similar shift is happening in ports. The real competition is no longer just about who has the fastest cranes or the deepest berths. It is about who controls the data — and who can build accurate prediction systems to turn that data into services that shape the entire logistics chain. Just as Tesla strengthens its AI by collecting data from millions of vehicles, port operators that centralise data on vessels, cargo and workers gain a powerful strategic advantage. Those that do not have access to this data risk becoming dependent on outside providers, with diminished control over the future of their own operations.

This growing race for data is also why governments are starting to treat AI and digital systems in ports as national security concerns. In the USA, for example, Executive Order 14116 (2024) explicitly connects AI and digital port systems to cybersecurity.

The order expands the powers of the US Coast Guard to monitor and respond to cyber threats, mandates reporting from ports and shipping companies, and authorises inspections or interventions when foreign-made software or equipment is seen as a risk. These actions show clearly that the digital infrastructure of ports is now recognised as a site of strategic vulnerability.

UNION TAKEAWAY

For dockworkers, this shift means that AI is not only a workplace issue but part of a bigger struggle over who controls ports. When data and decision-making tools are managed by outside vendors or foreign platforms, local unions risk losing influence over how work is organised and secured. It also increases surveillance risks and makes jobs more vulnerable to system failures. Unions should therefore demand transparency, consultation and negotiation rights, and oversight mechanisms whenever AI systems are introduced — because in a world where data is the new source of power, workers cannot afford to be left out of the decisions that shape their future.
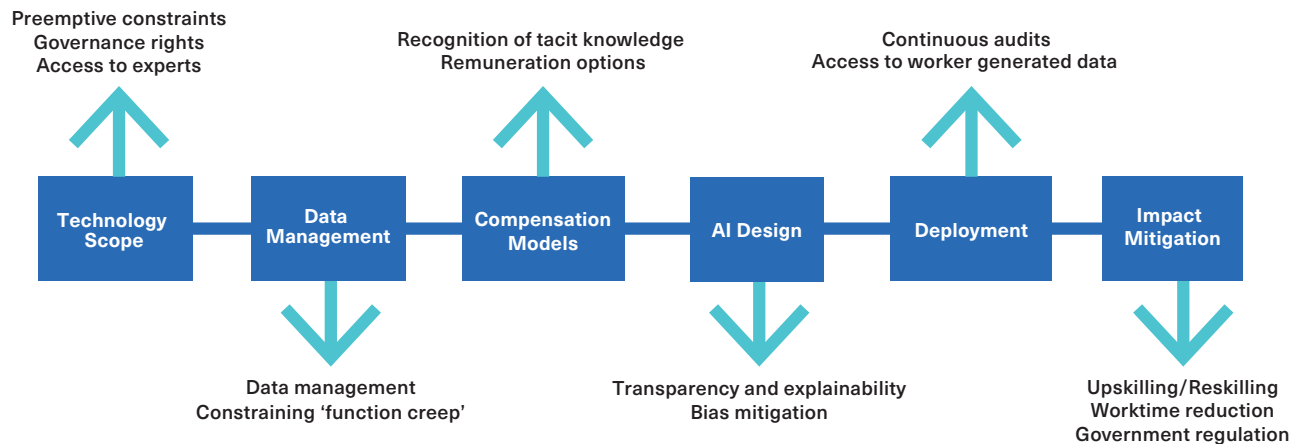
HOW TO USE THIS TOOLKIT

This toolkit is organised into six concrete steps that unions can take to shape the use of AI before, during and after it enters the workplace. Each step is linked to sample clauses in the CBA appendix, allowing you to translate core principles into concrete bargaining demands.

Fig. 3 Six steps to bargain over AI

Preemptive constraints
Governance rights
Access to experts

Recognition of tacit knowledge
Remuneration options

Continuous audits
Access to worker generated data

Technology Scope	Data Management	Compensation Models	AI Design	Deployment	Impact Mitigation

Data management
Constraining 'function creep'

Transparency and explainability
Bias mitigation

Upskilling/Reskilling
Worktime reduction
Government regulation

Step 1. AI Scope – demand governing rights, secure binding commitments and establish red lines around unacceptable uses of AI.

Step 2. Data Management – bargain over the collection and use of worker data and prevent it from being misused.

Step 3. Compensation Models – claim economic and social compensation for the value workers create when their knowledge and data are used to train AI.

Step 4. AI Design – intervene in the design stage to prevent unsafe, unfair or discriminatory AI systems from being deployed.

Step 5. AI Deployment – secure ongoing oversight, accountability and worker power once AI systems are up and running.

Step 6. Impact Mitigation – negotiate retraining, redeployment, shorter work hours or other provisions that soften the potential impact of AI on jobs.

While the steps are presented in sequence for clarity, unions won't always begin with Step 1. The appropriate entry point depends on the situation. If AI is already in use at the terminal, the immediate priority may be securing strong rules on data governance. If the technology hasn't yet been introduced, early action on scope and negotiation rights becomes critical. Think of the sequence as a flexible guide — adaptable to the phase of implementation that you're confronting.

STEP 1. AI SCOPE: SET THE PURPOSE, DRAW THE LINES

Dockworkers know what happens when new technologies hit the terminal floor: change arrives quickly, and too often not in favour of workers. AI is no exception. Unless unions step in early, decisions will be made without them. That's why dockworkers' unions must fight to ensure that formal governance rights over technology are clearly written into collective bargaining agreements (CBAs).[1] The principle is simple and non-negotiable: no implementation of technology without prior agreement between the parties. Without this foundation, consultation becomes a courtesy rather than a right, and workers are left to deal with the consequences after the fact. In the following sections, we outline the minimum elements that unions should negotiate to ensure meaningful oversight and protection when new technologies are introduced.

GOVERNANCE RIGHTS

There are different levels of governance, each providing a distinct degree of influence over technological decisions in the workplace:

- **Consultation** requires employers to provide timely and meaningful information about planned technological changes and to engage in dialogue with unions before implementation. However, under consultation alone, management retains the final say and can move forward unilaterally after hearing union input. This level promotes transparency but does not guarantee influence. Hence, the principle of no implementation of technology without prior agreement between the parties.

- **Consent** offers stronger protection. It means that certain decisions — such as the deployment of AI systems that affect employment levels, worker surveillance, or health and safety—cannot proceed without union approval. This gives unions veto power over critical changes and significantly strengthens their bargaining position.

- **Codetermination** goes even further by giving unions a formal seat at the decision-making table. In this model, worker representatives participate in joint committees or supervisory boards that shape key operational or strategic decisions. Codetermination shifts the balance of power, embedding labour's voice into the governance structure itself. This is particularly relevant for AI deployment, where systems require ongoing oversight, adjustment and accountability over time.

Governance rights cannot be treated as informal practices or voluntary gestures. They must be secured in writing, ideally within a CBA or through equivalent legal instruments such as common law deeds. These rights should include enforceable provisions that clearly define when and how unions must be informed, consulted and empowered to shape decisions about new technologies in the workplace.

(See CBA Template - Section 3, 4 and 5).

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1.   In other English-speaking contexts CBAs may also be reffered to as 'Union Contracts' or 'Enterprise Bargaining Agreements'.

ESTABLISHING THE PURPOSE OF AI

AI systems are flexible: they can be used to optimise safety, cut costs, track workers, or all three. That's why unions must demand clarity upfront. No union should consent to the introduction of AI without a full understanding of the system and its implications. Employers must be contractually required to provide timely, written information detailing:

• What kind of AI or digital technologies they plan to introduce.

• How these systems will affect workflows and port operations.

• What impact it will have on jobs — how many roles are at risk, what tasks may change, and what effects are expected on workload, pace, and safety?

• What training or upskilling will be offered, to whom, and under what conditions?

• What the timeline and implementation process will look like.

Without full transparency and written justification, there can be no fair negotiation. Workers have the right to know — not after the fact, but before any AI system is deployed on the job.

(See CBA Template – Sections 3.1, 3.2)

DRAW THE LINE: WHAT AI USES ARE NOT ACCEPTABLE

Once the goals of AI are on the table, unions must be ready to set clear boundaries. Some applications may be acceptable — if they genuinely improve safety, reduce physical strain or make operations more efficient without harming workers. But others should be ruled out entirely, or allowed only after serious bargaining and with strong protections in place.

The European Union (EU) AI Act already classifies certain uses of AI as forbidden, high-risk or low-risk, offering a legal reference point. However, not all countries have such regulations. This makes it even more important for unions to negotiate their own 'red lines' in collective agreements. On the following page are some AI applications dockworkers' unions should flag early.

Table 3. Red Lines for AI in the Workplace: What Unions Should Reject and Why

AI Use Case	Common Applications	Red Line	Rationale
Job-Displacing Automation	Replacing core roles like crane driving or vessel planning with AI systems.	No automation of core tasks without prior union consultation and agreement.	Undermines employment security and violates 'just transition' principles.
Biometric Surveillance	AI tracking of heart rate, eye movement, facial expressions or stress levels to monitor productivity.	Absolutely no biometric or emotion-tracking systems in the workplace.	Violates dignity and creates psychological harm and trust erosion.
AI-Enforced Work Intensification	Optimising workflows to eliminate pauses, speed up task pacing or micro-manage actions.	No AI-driven work acceleration that removes natural breaks or pressures workers to move faster.	Increases injury risk, harms wellbeing, reduces autonomy.
Opaque Algorithmic Decision-Making	Use of AI in hiring, shift scheduling or promotion without explainability or human recourse.	No use of AI in hiring, shift scheduling, or promotion.	Risks bias, discrimination, and undermines procedural fairness.
Wearable-Based Monitoring	Use of smart watches, helmets, vests or tags to track worker location, movement or physiological data.	No wearables for individual-level monitoring or performance evaluation.	Enables covert surveillance, increases stress and risks misuse of sensitive data without transparency or consent.

The earlier these red lines are made clear, the better positioned unions are to defend dockworkers' rights and shape how AI is used on the terminal floor.

(See CBA Template – Section 5)

USE INDEPENDENT EXPERTS TO BACK YOU UP

Unions shouldn't be expected to take the company's word for it when they say, "AI will help everyone". Ensure that, along with your 'negotiation or consultation clause', you can bring in your own experts and that there is a budget for it. Data scientists, legal advisors or AI ethics specialists can help cut through the technical talk and explain what's really at stake.

(See CBA Template – Section 3.3 and 4.5)

STEP 2. DATA MANAGEMENT: DEMAND TRANSPARENCY AND CONTROL

To build AI, you need data. A lot of it. And in many cases, that data comes directly from workers. For instance, if a company wants to develop AI to operate a crane, it needs to be trained on large amounts of data from real crane operations — data mostly produced by dockworkers on the job. Because this data is so valuable, unions must take a clear stance on what types of data collection are acceptable, how that data should be managed and where the boundaries lie. We propose bargaining around two key points:

DATA MANAGEMENT CLAUSES

Unions should push employers to clarify data collection practices, requesting information on:

- What types of worker data are being collected? (E.g., biometric, behavioral, location-based, or performance-related?)

- Why is this data being collected?

- How intrusive are the collection methods? (E.g., surveillance cameras, wearables, biometric tracking?)

- Who has access to the data, and under what conditions?

- Does the collection process comply with laws and ethical standards?

(See CBA Template – Section 6)

LOCK IN THE PURPOSE OF DATA USE

One common issue is 'function creep' — when data that was collected for one purpose ends up being used for something entirely different. For example, a logistics company could install AI tracking to optimise delivery routes, but later use it to discipline workers for minor delays, without informing or consulting them.

To prevent this:

- Employers must notify union reps about any changes in data collection practices.

- This includes what new data will be collected, how it will be used, and who will have access. This should include a notification period before any changes take effect.

- Information should be provided in plain language — no technical jargon or legal confusion.

Unions should also negotiate the right to independent audits — to ensure the company is following the rules, respecting the agreements and staying compliant with any national data protection regulations.

(See CBA Template - 6.2 Disclosure and Explainability Requirements)

LIMIT DATA COLLECTION TO WHAT'S BEEN EXPLICITLY BARGAINED.

In Sweden, the union at Boliden successfully negotiated exactly such limits. When the company introduced an AI-enabled positioning system to track underground workers, the union agreed — but only after securing binding rules: the system could be used for emergency response only, with all data anonymised by default and accessible only in exceptional cases and with prior union approval. This agreement not only protected workers' privacy but it also pushed the vendor to include the anonymisation feature in its global product. The lesson is clear: if data is part of the system, it must be part of the bargaining.

STEP 3. COMPENSATION MODELS: ENSURE THAT 'TRAINING THE MODEL' GETS RECOGNISED AS LABOUR

When dockworkers operate cranes or other smart equipment, every movement, correction and decision is recorded as data. That data is then used to train AI systems to perform the very tasks you carry out. But this is not just raw information. It encodes your skill, experience and judgment. It captures your tacit knowledge: the kind of know-how built through years on the job. Each time you override an error or demonstrate the correct way to operate, you are transferring expertise. In effect, you are training the system without being asked, acknowledged, or paid.

This dynamic intensifies the extraction of surplus value, as the worker's knowledge is appropriated by the company into automated system built to reduce future labour demand. The 'datafication' of the workplace (the process of turning workers' actions, behaviors, and interactions into quantifiable data for monitoring, analysis or automation) marks a new phase of accumulation, one in which the living labour process becomes a continuous source of value extraction.

To see the unfairness clearly, imagine a company asked you to train a new recruit: you would reasonably expect a premium on your wage, not necessarily because you worked extra hours, but because you transferred your knowledge and experience to someone else. The same principle should apply when the recruit is a machine. Across the world, AI firms pay thousands of data annotators — often in Kenya, the Philippines, and India — to correct errors and guide algorithmic learning, because such training work has value in the market. On the docks, we do much the same by interacting with smart systems, yet our data is taken without consent, acknowledgment or compensation.

Every crane adjustment, forklift movement or system override generates operational data that trains AI systems to mimic your skills. This isn't voluntary. It's not part of our job description. And yet, it happens every day. Our tacit knowledge is being converted into machine learning inputs and then sold back to the workplace in the form of 'smart' systems, often with the potential to deskill or displace us. Our position as unions must therefore be clear: the use of worker-generated data without consent to develop AI and automation systems constitutes a form of unpaid labour, as it extracts value from our work, our decisions, our timing and our judgment, without compensation or acknowledgment. We are paid to move containers, not to train our replacements. And if our expertise is powering the next generation of AI technologies, then that contribution must be recognised and fairly compensated.

HOW UNIONS CAN BARGAIN FOR COMPENSATION

There are innovative proposals that dockworkers' unions can put on the table to ensure fair compensation when workers' skills and experience are turned into data.

- **Ownership model.** One approach is to treat the data itself as something that workers own. Under this model, employers would need formal permission to use that data through clear agreements that guarantee fairness, transparency and forms of revenue sharing. This could include data stewardship agreements or royalty systems, where workers receive ongoing payments whenever their data is reused or monetised in AI systems.

- **Premium work.** Another approach is to push for the recognition that contributing to AI development, by generating training data through your daily work, is an added responsibility. If dockers are helping to build these systems, that effort deserves compensation. Unions can push for updated job descriptions that reflect AI-related tasks, and negotiate for wage premiums, bonuses or even reduced working hours to account for the value added by their data. Whether it's a one-time payment or a bonus linked to productivity gains, the principle remains the same: if your data improves the system, it should be acknowledged and fairly rewarded.

- **Transition funds.** Unions can also push for union-controlled AI transition funds. These funds would capture a share of the value created by AI (or other forms of technology) and redirect it back to the workforce through training and upskilling programs, pension or superannuation boosts, or direct payments to workers. This approach recognises that dockers' labour doesn't just move goods — it's also helping to build the digital systems that shape the future of work.

Whatever model you choose, the message is the same: if your work helps build the technology, you deserve a fair share of the added value your labour creates.

STEP 4: AI DESIGN: INFLUENCE THE GOALS AND GUARD AGAINST BIAS

Remember how we said AI can serve different purposes? Well, it's not just about optimising machinery or speeding up container flows. AI can also step into management roles — deciding how dockers are scheduled, supervised or even evaluated. That's why dockworkers' unions need to be involved in how AI models are being trained.

WHY THIS MATTERS AT THE PORT

Every AI system is built to 'optimise' something — but optimise for what? That's not a neutral decision, it's a political one. A company might use AI to speed up cargo handling. Dockworkers, meanwhile, may want it to reduce accidents and prioritise safety. These goals can conflict. If trade-offs exist, unions must be at the table to shape how they're handled.

Key questions unions should raise include:

- What does the AI system define as 'success'?

- How much autonomy does the model have?

- What data is used to train it?

- Whose performance is it modeling?

- Are objectives like speed and safety in tension?

(See CBA Template – Sections 3.2, 6.2)

WHAT DOES 'TRAINING THE MODEL' MEAN?

Training an AI model means teaching a system how to make decisions by feeding it large amounts of data, so it can spot patterns and 'learn' how to make similar decisions in the future. Take recruitment as an example. If a company trains an AI tool using data from past hiring decisions, like resumés, interview notes and who was hired, the system starts to recognise what kind of candidates were typically selected. Over time, it begins recommending similar profiles. But here's the problem: an AI system only learns from what it's shown. If the training data is biased, the AI will be biased too. One famous case involved Amazon's attempt to build a recruitment AI. The system ended up discriminating against women because it was trained on ten years of hiring data that favoured male candidates. The AI simply copied those patterns, even downgrading resumés that mentioned the word "women's".

TRANSPARENCY AND EXPLAINABILITY

AI is often described as a 'black box'. It makes decisions, but no one can fully explain how. That's a major problem for unions. Why? Because if you don't understand the system, you can't challenge it. If an AI system assigns shifts, monitors performance or flags workers for 'low productivity', management can easily say: "It's the algorithm's call." That's simply not acceptable.

Unions must demand transparency and explainability from day one. This includes:

- Clear explanations of how AI decisions are made.

- Use of explainable AI tools (e.g., LIME, SHAP) to trace model logic.

- Guarantees that workers can contest AI-driven outcomes — and that management, not machines, remains responsible.

If the process becomes too technical, don't hesitate to bring in outside expertise. You wouldn't be expected to fix a crane's hydraulics on your own — AI systems are no different. Unions should have access to (paid) independent technical advisors who can help unpack what's happening behind the scenes.

(See CBA Template – Sections 6.1, 6.2)

FIX AI BIAS BEFORE IT HURTS WORKERS

AI systems learn from data. As we stated, if that data is biased, unbalanced or incomplete, the system will be too, and that can have real consequences on the job. For example, if the AI was trained mostly on crane operations in clear weather, it might fail during storms. Or if most of the data comes from a narrow group — say, experienced day-shift workers — it could set unfair benchmarks for others, such as new hires or night-shift crews. This can lead to unfair evaluations, pressure to meet unsafe targets and discrimination in scheduling or promotions. That's why employers must provide proof that the system is fair before it goes live. That means evidence that:

- The training data reflects diverse worker profiles, job roles, and working conditions.

- The system has been tested across different shifts, crews, and operational environments.

- Independent experts have audited the model for hidden biases before deployment.

If workers are going to be judged by AI, they deserve to know how the system was built. If it's flawed, biased or opaque, it shouldn't be used. Period.

(See CBA Template – Section 6.1)

STEP 5. AI DEPLOYMENT – KEEP THE SYSTEM IN CHECK

So, the AI system is going live. Now what? This is when things get real. Once deployed, the system begins interacting with live data, reshaping task flows, influencing decisions and embedding itself into everyday operations. And just because it worked in a test lab doesn't mean it will perform the same on the terminal floor. In fact, performance often drops in real-world conditions — a well-known issue called the training–test gap.

Without strong union oversight, AI systems can quickly:

- Drift from their intended goals.

- Accelerate work in unsafe ways.

- Shrink teams through silent attrition.

- Undermine accountability — letting management hide behind, "the AI made the call".

To prevent that, we recommend unions take the following steps:

Keep AI Aligned with the Goals You Negotiated

Every AI system is introduced for a stated purpose — improving safety, reducing errors or streamlining logistics. Those goals often shift once the system is live. If the AI starts speeding up workflows, misclassifying workers or operating beyond the agreed-upon parameters, it must be paused or rolled back.

- Demand regular performance reviews with clear benchmarks. If new risks or deviations arise, unions must have the right to suspend or renegotiate use.

- Watch for silent automation, where jobs disappear through attrition or non-replacement. The effect is the same as layoffs.

(See CBA Template – Sections 3.2, 6.3)

Keep Humans in Command

Once embedded, AI systems often become the *de facto* authority — unless workers retain control. Can a worker override the system? Who is accountable when it fails: the employer, the vendor or the worker caught in the middle?

Accountability cannot be automated. If a worker is penalised due to an algorithmic error, someone must answer — and it cannot be the worker. These are not technical details but governance questions. Address them before deployment or risk being told later that, "it's out of our hands".

(See CBA Template – Sections 6.1, 6.2, 6.3)

Influence What Gets Deployed — Even from Vendors

Many systems aren't built in-house but bought from external vendors, meaning less transparency and weaker guarantees. But 'off the shelf' AI doesn't get a free pass. If it shapes your work, it must meet your standards.

Unions should be involved in procurement and demand answers to key questions:

- Who trained the system, and on what data?

- What assumptions and values are built into its design?

- Will it continue learning from workers?

- What happens to the data it collects?

- Can it be stopped, adjusted, or audited once in place?

(See CBA Template – Sections 4.2, 6.3)

Build Oversight Structures That Last

AI doesn't stay static — it evolves and expands. Risks can surface long after deployment. Workers need more than a suggestion box or a forgotten survey: they need real channels to raise concerns and guaranteed action when problems emerge.

Unions should push for:

- A Joint Technology Review Committee (JTRC) with equal union representation.

- Audit rights for regular and on-demand reviews.

- Annual reports detailing technologies in use, identified problems, and corrective actions.

- Safe reporting mechanisms and protections for those who speak up.

Oversight isn't about flagging issues — it's about having the power to fix them. Without enforceable mechanisms, even the strongest AI clauses risk becoming paper promises. AI keeps learning. The systems that govern it must keep up, too.

(See CBA Template – Sections 4, 6.4, 8.2)

STEP 6. IMPACT MITIGATION – BARGAIN FOR SECURITY AND SUPPORT

Even with strong safeguards, AI will transform work. Some roles will change, others may shrink or disappear, and new ones will emerge. Unions must make sure these shifts don't come at workers' expense. Mitigating impact isn't about accepting job loss — it's about redistributing opportunity, protecting income and ensuring that technological progress benefits everyone.

NEGOTIATE A JUST TRANSITION

Employers cannot treat technological disruption as an accident of progress. When they choose to deploy AI, they choose to restructure jobs. That decision must come with obligations — to retrain, redeploy and protect affected workers. Furthermore, if AI improves productivity, workers should share in the gains — not lose their jobs. Reducing hours while maintaining pay is one of the most effective ways to spread work and protect livelihoods.

Unions should demand:

- Advance notice clauses — AI-related restructuring must be disclosed early, with consultation before any job changes take effect.

- Retraining and redeployment guarantees — no worker left behind without a pathway to a new role.

- Transition funds, jointly managed by unions and employers, to finance upskilling, pensions, or income bridges.

- Gradual shorter work hours with full-time pay.

- Voluntary retirement schemes for senior workers.

A just transition means that no one bears the cost of innovation alone.

(See CBA Template – Section 7)

DEMAND GOVERNMENT ACTION

Bargaining at the workplace must be backed by demands at the policy level. Technological change is a political choice — and governments must play a proactive role in ensuring it does not deepen inequality. Unions should pursue two complementary strategies: securing public investment in worker-led innovation, and pushing for strong legal protections and oversight mechanisms.

1. Public Investment in Worker-Led Innovation

Governments must channel public funds into infrastructures that empower workers to shape technological change — not just adapt to it. Unions should push for:

- **Public investment in continuous education and union-led training institutes**, with a focus on reskilling, upskilling, lifelong learning and advancing AI and digital literacy. These programs should be designed with active union participation to ensure they reflect the needs and priorities of workers — not just employers.

- **Targeted fiscal incentives for companies** that (a) adopt worker-centred technologies — including tools that reduce physical strain, enhance safety and are co-designed with unions — and (b) implement negotiated job security measures, such as upskilling pathways, reduced working hours without loss of pay and voluntary early retirement schemes.

- **Taxation on labour-substituting technologies**, such as automation systems that eliminate jobs without negotiated alternatives. Revenues from this tax should be used to offset the decline in payroll and income taxes, and redirected toward pensions, training programs, social protections and broader forms of wealth redistribution.

- **Guaranteed union representation in public research bodies**, to ensure labour perspectives help shape which technologies and forms of innovation receive public support. Too often, publicly funded R&D is dominated by employer associations and industry – university alliances, with little accountability to the broader workforce. When the money comes from taxpayers, workers must have a voice in how it is spent and what kind of future it builds.

2. Regulatory and Legal Reform for AI in the Workplace

Governments must treat AI not only as an economic driver but also as a source of structural risk to workers' rights and democratic governance. Unions should advocate for:

- Just Transition legislation, requiring employers to negotiate AI-related job impacts, with enforceable rights to retraining, redeployment and income continuity.

- AI transparency and audit laws, including mandatory disclosure of AI systems used in employment decisions, performance tracking or scheduling.

- Restrictions on high-risk and prohibited AI, in line with international frameworks (e.g., EU AI Act), including bans on biometric surveillance, union suppression tools and algorithmic discipline.

- Collective bargaining rights over data and algorithmic systems, explicitly written into national labour codes or industrial relations frameworks.

- Stronger labour inspection regimes, with authority to suspend unsafe or discriminatory AI deployments and ensure union access to technical audits.

- Whistleblower protections for workers who report algorithmic abuse, data misuse or unsafe digital systems.

- Digital sovereignty rules, preventing foreign control over critical port AI infrastructure or vendor lock-in that sidelines national labour standards.

- International agreements on AI and labor, including minimum standards on algorithmic fairness, consultation rights, and portability of labour protections in global supply chains.

(See Appendix A: Campaigning on Automation and AI)

PREVENT UNION-BUSTING

As automation transforms job content and staffing models, employers may use it not only to reorganise operations but also to weaken union power. By reshaping who does the work — and under what terms — automation can become a tool to undermine collective bargaining and bypass worker representation through a sequence of tactics:

- Reducing headcount among the unionised workforce, weakening dues income, collective identity and mobilising capacity.

- Contracting out newly emerging digital tasks — such as data analysis or system monitoring — to external vendors, avoiding the creation of new in-house jobs.

- If the role must remain in-house, attempting to exclude the position from CBA coverage by claiming it falls outside traditional 'dock work' or is too specialised for union classification.

- If the role must be filled under the CBA, prioritising external hires over upskilling existing members — often selecting 'tech-savvy' recruits presumed to be less likely to unionise.

To counter these trends, unions should demand:

- **Minimum staffing levels**, ensuring a stable baseline of permanent, union-covered positions that cannot be undermined by outsourcing, casualisation, or restructuring during or after automation transitions.

- **Retention of technology-related work** as part of the core competencies of the terminal — ensuring that new jobs emerging from digital transformation remain in-house and are not outsourced.

- **Automatic inclusion of all new tech-driven roles** (e.g., algorithmic monitors, data stewards, safety inspectors) under the scope of the collective agreement, with guaranteed union representation and full contractual protection.

JOB PROTECTIONS: AUSTRALIA

In Australia, the Maritime Union of Australia (MUA) negotiated an Enterprise Agreement with Hutchison Ports Australia (HPA) that offers one of the clearest examples of how unions can lock in job protections during automation transitions. A central clause stipulates that, *"No Employee shall be made redundant due to the implementation of automation and/ or technology or mode change"* (Clause 8.4). This provision guarantees that all permanent rostered and part-time employees employed at the time automation is introduced will retain their jobs. Employment levels are explicitly tied to fixed rosters — e.g., *"One hundred and sixty (160) Employees on the Operations Roster"* — which can only be altered by mutual agreement between union and employer.

To ensure continued employment even when total work volume decreases, the Agreement also includes a work-sharing mechanism: *"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... without reduction of the Ordinary Rates of Pay."* In practice, this means work is redistributed across the workforce — reducing individual hours while preserving everyone's job and hourly wage.

TECHNOLOGY IS NOT DESTINY

AI is often treated as inevitable — something that simply 'arrives', reshapes the workplace and leaves workers scrambling to adjust. But that narrative misses a crucial fact: technology is not destiny. Every system reflects human choices — about goals, design, deployment and accountability. And every one of those choices can, and must, be negotiated.

This toolkit has shown how: by asserting governance rights early, demanding control over data, securing fair compensation, influencing how systems are built, maintaining oversight after deployment and bargaining for protection when jobs are transformed. Taken together, these steps offer more than just defence — they form a strategy for shaping technological change on workers' terms.

Dockworkers have faced down waves of mechanisation and automation before. AI is faster and more complex — but the principle is the same. What matters is who decides: who defines 'efficiency'? Who reaps the benefits — and who bears the risks?

When dockworkers organise around these questions, they send a clear message: the future of work is not something to be handed down — it's something we build together.

CBA TEMPLATE: TECHNOLOGY TRANSITIONS AND WORKER RIGHTS IN CARGO-HANDLING OPERATIONS

1. PURPOSE

This section establishes enforceable rights and joint governance procedures between the Employer and the Union to regulate the planning, deployment, and continued operation of Artificial Intelligence (AI), automated technologies and data-driven systems in cargo-handling operations. It aims to ensure that technological innovation proceeds in a manner that is transparent, accountable and legally compliant, while safeguarding workers' rights, dignity and interests.

2. DEFINITIONS

For the purposes of this Article, the following terms shall have the meanings specified below:

Artificial Intelligence (AI): Any system or particular tool that uses algorithmic logic, statistical models or machine learning techniques to perform tasks that typically require human intelligence, including but not limited to classification, prediction, decision-making or pattern recognition.

Automated Technologies: Tools or systems that perform tasks with minimal or no human intervention, including but not limited to robotics, automated scheduling systems, predictive maintenance and autonomous vehicles used within cargo-handling operations.

Data-Driven Systems: Digital systems that rely on the collection, analysis or processing of data to guide operations or decision-making, including but not limited to dashboards, optimisation algorithms or performance-monitoring software.

Cargo-Handling Operations: All direct or supporting activities involved in loading, unloading, inspecting, transporting or storing cargo within terminal, quay or yard facilities operated, controlled or contracted by the Employer.

Worker-Generated Data: Any data, metadata, feedback or digital trace produced by workers in the course of their duties, including operation logs, sensor interactions, task inputs, override actions and contextual information, that contributes to the design, training or performance of automated or AI systems.

Tacit Knowledge: Non-codified, experience-based understanding or intuition demonstrated by workers through their decisions, adjustments and interactions with digital or physical systems, often extracted indirectly via data traces or feedback loops and used to improve AI performance.

Joint Technology Review Committee (JTRC): A joint oversight body composed of equal representatives from the Union and the Employer, responsible for evaluating technological proposals, monitoring implementation and ensuring compliance with risk classification, data governance and compensation provisions under this Agreement.

High-Risk System: Any AI or automated system that has the potential to significantly impact employment status, task assignment, performance evaluation, safety or worker autonomy, as determined by the JTRC.

Prohibited Technologies: Any system or tool that infringes on fundamental rights to privacy, dignity or nondiscrimination, including but not limited to emotion recognition, covert surveillance and biometric tracking technologies, is designated as unacceptable under this Agreement and applicable laws.

3. GOVERNANCE RIGHTS

3.1 Advance Notice and Scope

The Employer shall provide written notice to the Union, the Works Council (if applicable), and the Joint Technology Review Committee (JTRC) at least forty five (45) calendar days before initiating the procurement, testing, deployment or substantial modification of any AI, automated technology or data-driven system.

3.2 Required Impact Assessment

The notice shall include a comprehensive Technology Impact Assessment, written in clear, accessible language and covering at least the following:

A. The strategic goals and intended functions of the proposed technology, including any secondary or latent functions that the system could reasonably be expected to perform, based on technical specifications, vendor documentation, or historical deployments in other workplaces.

B. The specific tasks, departments or work processes impacted.

C. Anticipated effects on employment levels, working conditions, job autonomy and required skill profiles.

D. A list of all types of data to be collected, including personal and worker-generated data, with intended processing methods.

E. Legal grounds for data processing (e.g., consent, legitimate interest, compliance obligations).

F. When applicable, proposed governance measures, fallback protocols and worker rights to contest automated decisions.

3.3 Union Review and External Expertise

Upon receipt of the Impact Assessment:

A. The Union and the JTRC shall have fifteen (15) calendar days to complete their review and submit written feedback.

B. No implementation, testing or pilot may proceed until the Union and the JTRC have reviewed the proposal and issued a written recommendation.

C. The Employer shall grant timely access to the Union and the JTRC to relevant technical documents, vendors, test results and personnel.

D. The Union and the JTRC may engage independent technical, legal or ethical experts to review the proposed technology.

E. All reasonable expenses related to the independent review shall be covered by the Employer.

4. TECHNOLOGICAL CODETERMINATION

4.1 Establishment and Structure

The Employer and Union shall jointly establish a JTRC as the primary governance and oversight body for the planning, deployment and operation of AI, automated technologies, and data-driven systems in cargo-handling operations. The JTRC shall:

A. Be composed of an equal number of representatives from the Union and the Employer.

B. Include at least one member from each side with relevant technical expertise.

C. Be granted access to independent advisors as needed, whose costs shall be borne by the Employer.

4.2 Mandate and Core Functions

The JTRC shall ensure that technological transitions proceed in a manner that is transparent, participatory, rights-respecting, and consistent with the provisions of this Agreement. Its responsibilities include:

A. Pre-Deployment Evaluation

    i. Review all Technology Impact Assessments submitted under Section 4.

    ii. Classify proposed technologies under the risk framework (Prohibited, High-Risk, Acceptable with Safeguards).

    iii. Identify likely impacts on employment, autonomy, safety, and skill requirements.

    iv. Issue binding recommendations regarding implementation conditions or prohibitions.

B. Oversight of Data Use and Worker Contributions

    i. Review all proposed uses of worker-generated data for AI training or system optimisation.

    ii. Approve or deny data-sharing agreements with vendors or third parties per Section 7.

    iii. Recommend fair compensation measures for worker data contributions and any job restructuring, as outlined in Section 8.

C. Implementation and Safeguards

    i. Define necessary oversight mechanisms (e.g., human-in-the-loop protocols, audits, fallback procedures).

    ii. Coordinate with relevant departments on reskilling and redeployment plans.

    iii. Ensure that High-Risk systems include enforceable safeguards before launch.

4.3 Decision-Making and Authority

A. The Employer shall not deploy any AI or automated system without written review from the JTRC.

B. The JTRC's decisions are binding on all matters involving Prohibited technologies and minimum safeguards for High-Risk systems.

C. In the event that the JTRC is unable to reach agreement on a proposed technology, either party may invoke the grievance procedure outlined in Article [X] of this Agreement. In such cases, and for the duration of the grievance process, the Union may issue a written notice suspending the deployment or continued use of the system in question. This temporary suspension shall remain in effect until the matter is resolved through arbitration, mutual agreement or withdrawal of the proposal.

4.4 Monitoring and Accountability

A. The JTRC shall meet at least quarterly, and more frequently as required, to:

    i. Review operational data from active AI systems.

    ii. Monitor for adverse impacts on workers or deviations from agreed implementation terms.

    iii. Assess compliance with transparency, safety and data governance provisions.

B. The Committee shall prepare an annual Technology Impact Report to be shared with all stakeholders, summarising the status, risks and outcomes of all monitored technologies.

4.5 Resources and Support

A. The Employer shall provide the JTRC with timely access to relevant technical documentation, system logs, test results, vendor contracts and personnel as needed to carry out its duties.

B. Reasonable costs associated with JTRC operations — including external expertise, independent audits, or legal consultation — shall be borne by the Employer.

5. RISK CLASSIFICATION

5.1. Existing and future technologies can be classified by the JTRC as follows:

A. Prohibited: The deployment, testing, procurement or continued use of any system or application shall be strictly prohibited if it fundamentally undermines the dignity, safety, privacy or labour rights of workers, including — but not limited to — the following high-risk and unacceptable use cases, consistent with Article 5 of the EU Artificial Intelligence Act and applicable international labour standards:

   i. Covert surveillance technologies, including those that monitor or record worker activity without prior disclosure, negotiated oversight, and lawful basis.

   ii. Biometric identification systems, including facial recognition, gait analysis or physiological and emotional inference tools, when used for real-time or retrospective surveillance or profiling in the workplace.

   iii. Systems that infer, process or classify protected personal characteristics, including trade union membership, political opinions, religious beliefs, health status or proxy variables thereof, without explicit legal authorisation and collectively negotiated safeguards.

   iv. Predictive analytics or behavioural scoring systems designed to forecast or evaluate the likelihood that a worker or group of workers may engage in protected union activity, report a safety violation or participate in industrial action.

   v. Monitoring systems intended to interfere with or penalise the lawful exercise of workplace entitlements, including but not limited to:

   a) Taking statutory or collectively agreed leave (e.g., sick leave, annual leave, family leave).

   b) Requesting conversion to permanent employment or flexible work arrangements;

   c) Engaging with trade unions, whether through communication, consultation, or representation.

   d) Standing as or acting in the role of union delegate or health and safety representative.

   vi. Algorithmic systems used to generate engineered performance benchmarks or workload targets derived from continuous surveillance of worker behaviour, where such standards are not jointly negotiated or subject to meaningful human oversight.

   vii. Manipulative AI systems that exploit known vulnerabilities of natural persons, including psychological, economic or cognitive traits, in order to unduly influence behaviour in a manner likely to result in harm.

   viii. Real-time or retrospective mass biometric remote identification systems deployed in the workplace, except where strictly necessary for safety-critical operations and expressly authorised by the JTRC under documented safeguards.

   ix. Any AI or automated system with a known history of discriminatory impact or rights violations in other workplaces or sectors, where such risks have not been demonstrably mitigated through independent assessment and negotiated safeguards.

B. High-risk systems may be implemented only with Union agreement and after documented safeguards are put in place. The following shall be considered high-risk systems for the purposes of this Agreement, including but not limited to:

   i. Systems used to assign, schedule, or evaluate work performance, productivity or disciplinary outcomes.

   ii. Predictive systems that assess worker reliability, absenteeism likelihood, or future job performance.

   iii. AI-based decision-support tools for hiring, promotion, demotion, termination or redeployment.

   iv. Automated monitoring systems used to track worker location, biometric signals, physical movements or task execution.

   v. Optimisation algorithms that affect the pace, intensity or sequencing of labor.

   vi. Any system that materially alters job content, skill requirements or reporting structures.

5.4 No Employee shall be made redundant due to the implementation of automation and/or technology or mode change.

5.5 Employer Duty of Care.

The Employer shall bear primary responsibility for identifying, disclosing and mitigating any foreseeable risks associated with the planning, testing, deployment or continued operation of AI, automated technologies or data-driven systems. This duty includes maintaining comprehensive documentation, conducting due diligence on all proposed technologies and ensuring compliance with applicable legal, contractual and ethical standards. Nothing in this Agreement shall be construed to transfer this duty to the Union, the Joint Technology Review Committee (JTRC) or individual workers

6. TRANSPARENCY AND OVERSIGHT OF AI SYSTEMS

6.1 Explainability Obligation

The Employer shall disclose to the Union, affected workers and the Joint Technology Review Committee (JTRC), in clear and non-technical language, the logic, purpose and potential effects of any AI or automated system deployed in the workplace. This disclosure shall be provided:

A. As part of the Technology Impact Assessment (Section 3.2).

B. Before deployment, and in advance of any major system modification.

C. For all systems classified as High-Risk or Acceptable with Safeguards (Section 5).

6.2 Disclosure and Explainability Requirements

Each disclosure shall include:

A. A description of how the system works, including:

   i. The types of data it uses (e.g., performance metrics, behavioural indicators).

   ii. The decision logic by which it processes this data to generate outputs (e.g., task allocation, risk scores).

   iii. The intended operational function of the system (e.g., shift planning, safety alerts).

   iv. When applicable, visual or numerical explanations generated by recognised interpretability tools such as LIME (Local Interpretable Model-agnostic Explanations) or SHAP (SHapley Additive exPlanations), to clarify how key features influence specific predictions.

B. The legal basis for data processing under applicable laws, including workers' rights to explanation, access and rectification.

C. A full list of internal and external parties with access to the system or its outputs, including vendors, consultants or integrated third-party tools.

6.3 Human Oversight and Worker Redress

Where AI or automated systems influence employment decisions, including, but not limited to, job assignments, performance evaluations, disciplinary actions or terminations—the following safeguards shall apply:

A. Prohibition of Fully Automated Decisions

No employment-related decision shall be made solely based on automated outputs. A process of meaningful human review is mandatory and must include the capacity to alter or override AI-generated recommendations.

B. Worker Rights to Explanation and Challenge

Workers shall have the right to:

i. Request a full explanation of any decision made or significantly influenced by an AI system, including the data, logic and criteria used.

ii. Contest the decision and present counter-evidence or contextual information.

iii. Be accompanied or represented by the Union during any formal challenge or appeal process related to an AI-influenced decision.

C. Terminal-Level Accountability for AI Decisions

The Employer shall designate a Terminal-Level Responsible AI Officer (RAIO) — a senior official with direct oversight at the site — who shall be accountable for:

i. Ensuring compliance with the safeguards established in this Section, including human review, explainability and challenge procedures;

ii. Responding to complaints, audits or challenges related to employment-affecting AI decisions;

iii. Serving as the primary point of contact for the Union and the Joint Technology Review Committee (JTRC) on system accountability matters.

The RAIO's name, role and contact information shall be communicated in writing to the Union and all affected workers at least 14 days before the system's deployment. The designated individual must possess the relevant technical and operational knowledge to exercise effective oversight.

6.4 Oversight of Worker-Generated Data and Vendor Use

If an AI or automated system uses data generated by workers — including but not limited to sensor data, override inputs or interaction logs — the Employer must:

A. Obtain prior review and approval by the JTRC before such data is used for AI development or optimisation;

B. Secure a Data Stewardship Agreement, approved by the JTRC, before granting third-party access. This agreement must specify:

i. Purpose and scope of data use.

ii. Ownership and access rights.

iii. Terms of worker compensation (per Section 8).

iv. Security and retention measures.

v. Audit rights and penalties for misuse.

6.5 Audit Authority and Corrective Measures

The Union and the JTRC shall have the right to initiate audits of any deployed AI system under the following circumstances:

A. Routine review, to be conducted annually.

B. Triggered review, upon credible concern of:

i. Privacy violations.

ii. Discriminatory outcomes.

iii. Misuse of worker data or deviation from agreed safeguards.

C. The Employer shall fully cooperate, including:

i. Providing access to documentation, decision logs, and communications.

ii. Requiring third-party vendors to comply with audit protocols.

D. If violations are found, the Employer must:

i. Immediately suspend use of the system.

ii. Collaborate with the JTRC on remediation (e.g., altering data use, reclassification or full withdrawal).

7. BENEFIT-SHARING AND JOB PROTECTIONS IN TECHNOLOGICAL TRANSITIONS

7.1 Recognition of Worker-Generated Data as Added Value

A. The Employer and the Union recognise that data generated by workers through the performance of their duties constitutes a form of labour-derived value. As such, this data plays a critical role in the design, training and improvement of AI and automated systems.

B. This data includes, but is not limited to:

i. Operation logs, equipment usage data, interaction patterns, sensor annotations, performance metrics and video/audio recordings.

ii. Tacit knowledge reflected through interactions with digital systems, such as override patterns, feedback inputs and metadata capturing decision-making or task execution processes.

C. When such data is used — directly or indirectly — to develop, train, or enhance AI or automated systems, it shall trigger obligations related to consent, governance, and compensation.

7.2 Fair Compensation for Worker-Generated Data

A. In recognition of the economic and operational value of worker-generated data and the potential job restructuring linked to automation, the Employer shall negotiate with the Union to implement one or more of the following benefit-sharing mechanisms:

i. Wage premiums for roles that generate continuous, high-value data used to train or calibrate automated systems.

ii. Annual AI dividends or one-time bonuses where data use or automation leads to measurable cost savings or productivity gains.

iii. Royalties or revenue-sharing when data contributions are monetised directly or indirectly (e.g., through commercial licensing or vendor partnerships).

iv. Reduced working hours or job reclassification without loss of pay, when automation alters job content.

v. Access to a jointly governed AI Transition Fund, administered by the JTRC, for training, reskilling or early retirement.

B. All compensation mechanisms shall be reviewed annually by the Joint Technology Review Committee (JTRC) and documented in an addendum to this Agreement.

7.3 Minimum Manning

The Employer shall maintain a minimum number of permanent employees at each terminal, across all operational areas, including those transformed by technology. These minimums shall be set in consultation with the Union and shall not be undermined by the introduction of automated systems, AI, or other technological tools.

[For example]

Vessel:

- Two (2) crane operators shall be ordered for each Ship-to-Shore (STS) crane.

- Four (4) swingmen shall be ordered for each STS crane.

- Key dock/platform workers, paid at Skill I, shall be ordered at a ratio of three (3) workers for every two (2) STS cranes to operate the Container Transfer Platform and provide their own relief. These workers will replace the dock signal historically assigned to the crane.

- Two (2) UTR/Signal jobs per shift per vessel shall be ordered for cargo landed between the crane legs and to signal the crane operator when gantry movement is required. They shall relieve each other.

- Two (2) swingmen per shift per vessel shall be ordered to work on the vessel and between the crane legs. These swingmen will only be ordered when two or more gangs are working.

7.4 Job Security Guarantees

A. No Involuntary Job Loss Due to Technological Change. No full-time employee shall experience involuntary job loss, demotion or reduction in income arising from or associated with the introduction, deployment or expansion of AI, automation, digital systems or other forms of technological change in the workplace.

B. Technologically Transformed Dock Work. All work created or modified through technological means that remains functionally equivalent to traditional dock labour — such as cargo handling, signalling, crane operation or equipment movement — shall remain under the jurisdiction of dockworkers. This includes tasks where the tools or methods have changed (e.g., remote control systems, augmented automation) but the core function continues to reflect customary dock work.

C. New Roles Emerging from Technological Change. Any position that is newly created, fundamentally reclassified or substantially altered due to technological change — including, but not limited to, roles such as algorithmic monitors, data stewards, human-in-the-loop reviewers, automated system safety inspectors or other roles involving oversight of AI or autonomous systems — shall presumptively fall under the scope of this bargaining agreement. The Employer shall not unilaterally designate such roles as managerial, supervisory or confidential. Any proposed exceptions require prior joint agreement with the union.

D. Job Sustainability. Work assignments may only be discontinued where they are demonstrably rendered obsolete by technology, subject to prior consultation with the Union. In such cases, the Employer shall:

i. Redeploy affected employees to equivalent or higher-value roles in oversight, system operation, or technical maintenance.

ii. Provide comprehensive, fully funded training and certification programs, co-developed and monitored by the JTRC,

iii. Ensure redeployment maintains employees' wages, benefits and accrued seniority.

E. Social Transition Planning for Large-Scale Changes. Where large-scale workforce impacts are anticipated — such as position eliminations, significant role transformations or site closures — the Employer and Union shall co-develop a Social Transition Plan. This plan shall be finalised at least 90 days prior to implementation and may include:

i. Voluntary transfer, retraining, or separation schemes.

ii. Early retirement incentives.

iii. Collective workload redistribution strategies.

iv. Employment guarantee periods and tailored job placement support.

v. Work-time reduction strategies to spread hours fairly across the workforce.

8. REVISIONS AND REGULATORY COMPLIANCE

8.1 Review and Renegotiation Procedure

A. This Article — including all provisions related to AI, automation, worker-generated data and technology transitions — shall be subject to a comprehensive review every twelve (12) months, or earlier at the written request of either party.

B. All proposed changes shall be negotiated in good faith and implemented only by mutual agreement, unless otherwise mandated by applicable law.

C. The Joint Technology Review Committee (JTRC) shall serve as the designated forum for initiating, evaluating and coordinating revisions to this Article, especially in response to:

i. Emergent technologies not previously covered.

ii. New use cases or data applications.

iii. Evolving industry standards or worker complaints.

iv. Regulatory updates (see Section 8.3).

8.2 Grievance and Enforcement Mechanism

A. Any alleged violations of this Article — including unauthorised technology deployment, failure to consult, misuse of worker data, or non-implementation of agreed safeguards — shall be subject to the expedited grievance process outlined in Article [X] of the Collective Bargaining Agreement.

B. The JTRC is authorised to initiate fact-finding reviews, independent audits or third-party consultations as part of the grievance resolution process.

C. Confirmed violations shall entitle affected workers and the Union to:

i. Immediate suspension of the offending system.

ii. Backpay or compensatory measures for denied benefits or adverse outcomes.

iii. Binding arbitration if resolution is not reached within 30 calendar days.

8.3 Regulatory Alignment and Legal Compliance

The Employer shall ensure that all AI systems, data-driven tools and automated technologies deployed in cargo-handling operations comply with relevant international, regional and national legal frameworks, including but not limited to:

[According to each country]

8.4 Non-Derogation Clause

Nothing in this Article shall be interpreted in a way that limits or waives any legal rights held by workers under applicable law or international labour conventions. This section shall be interpreted to enhance, not diminish, protections otherwise afforded to workers.

APPENDIX A: CAMPAIGNING ON AUTOMATION AND AI

In many countries, harsh anti-union laws and a legal system that prioritises managerial prerogative severely limit workers' ability to influence how new technologies are introduced. In such environments, traditional bargaining may not be enough. When employers seek to impose AI and automation without proper consultation or consent, campaigning and industrial struggle become essential tools in defending jobs, rights and union power.

The following is a template campaign plan designed to support unions facing these challenges. Each element should be adapted to reflect the specific legal frameworks, political conditions, and organizational capacities of the local context.

Campaign Pillars	Workplans elements
1. Research and Intelligence Gathering	• Research technologies being introduced (e.g., TOS+, Loadmaster AI). • Track employer statements, vendor marketing and investment trends. • Collect case studies of automation failures, job losses and resistance efforts. • Compare across terminals and ports to identify patterns and leverage.
2. Internal Mobilisation, Negotiations and Industrial Action	• Run education sessions on AI and its impacts. • Hold mass meetings to surface concerns and draft demands. • Train members to identify early signs of AI deployment. • Prepare for escalation: from petitions to strike ballots.
3. Coalition & Alliance Building	• Coordinate with other unions affected by AI (e.g., logistics, admin, ICT). • Launch joint campaigns or shared bargaining platforms. • Build solidarity across roles — connect dockworkers with clerical staff, tech workers, and others to strengthen unity and share information.

4. Political & Community Lobbying	• Meet with elected officials to make them aware of the potential impacts of AI. • Demand inquiries into AI's labour impacts. • Link AI to broader conversations such as employment security, inequality or cybersecurity. • Advocate for tech regulation that protects workers, and tie public funding to enforceable labour standards.
5. Media & Public Awareness Campaign	• Contrast employer rhetoric ('augmentation') with real-world job losses. • Use media to highlight worker contributions to AI systems (e.g., tacit knowledge extraction). • Run strategic communications in support of your aims: press releases, op-eds, digital campaigns and videos. • Employers often portray – 'frame' – unions as fearful of change or hostile to progress. Reframe the narrative: "We're not against technology — we oppose its use to deepen inequality between workers and capital". Shift the focus toward demanding technologies rooted in fairness, worker voice and democratic control.
6. Pressure from the top	• Identify key investors in companies deploying AI and automation, including asset managers and large shareholders. • Engage pension funds, especially those representing workers, to demand responsible and fair use of AI. • Raise labour concerns at shareholder meetings (AGMs) by filing resolutions or speaking directly. • Leverage Environmental, Social, and Governance (ESG) investment standards with investors to challenge harmful or unfair technology deployments.
7. International Solidarity	• Work through the ITF and global union federations to monitor tech rollouts. • Share tools, tactics and data across borders. • Coordinate pressure on multinational employers and vendors.

8. Legal Action & Rights Enforcement	• Take legal action when employers break the rules — challenge violations of collective agreements, labour laws or data protection regulations.
	• File injunctions, health and safety complaints or regulatory objections when needed.
	• Be ready to defend your members — prepare legal support in case of retaliation, disciplinary actions or anti-union tactics.
	• Team up with allies to test new legal strategies that protect workers in the age of AI and automation.
9. Protests & Direct Action	• Plan visible actions that create pressure — such as rallies, marches, work slowdowns or short walkouts.
	• Focus on high-impact locations — like port terminals, company headquarters, vendor offices or major public events where media attention is likely.
	• Make the message visible — use banners, signs and speeches that highlight what's really at stake: decent jobs, respect for workers and a say in how technology is used.
10. Safety	• Enforce existing safety laws to block premature deployment.
	• Insist on joint union–employer oversight committees.
	• Frame unsafe AI as a public risk, not just a workplace issue.

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