ORGANISING THE WAREHOUSE

Building worker power in **global supply chains**

International Transport Workers' Federation

FOREWORD

It is our pleasure to introduce the first report on warehousing from the International Transport Workers' Federation (ITF).

The ITF was founded over 120 years ago as an expression of solidarity between transport workers in different countries. In an earlier era of globalisation, those workers recognised that they needed to organise themselves along international supply chains to win and sustain fair labour standards.

Today, equally radical changes in the global economy present us with similar challenges. The revolutions in logistics and e-commerce have created a whole new warehousing sector to manage the continual flow of goods, characterised by immense levels of worker exploitation. In many cases, warehouse operators are also imposing as many obstacles as possible to prevent workers organising for a better deal.

The ITF and its affiliate unions should be especially concerned by these developments. Warehouse workers deserve the same fair labour standards as all others. However, the abuse of their rights also directly affects transport workers elsewhere in the supply chain: drivers, dockers, seafarers, and air freight workers are all impacted by how their colleagues are treated under the warehouse roof.

This report is intended to open the conversation within the ITF family about our response. Many readers will have direct experience of working in warehouses or organising warehouse workers; others have seen the erosion of labour standards in adjacent workplaces and are considering what action to take.

The ITF has created a warehousing steering group made up of a globally representative set of unions organising workers in this sector. We also want to hear from all other ITF-affiliated unions keen to be part of this work. If you would like to get involved, please email warehousing@itf.org.uk.

We hope you find the report stimulating and useful for organising efforts in your respective countries. We would also like to personally thank Anne Engelhardt from the University of Kassel, whose literature review for the ITF of existing studies on the warehousing sector forms the basis of the report. We look forward to engaging with a wide range of stakeholders to establish the ITF as the global voice of warehouse workers.

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EXECUTIVE SUMMARY

Changes in the global economy over recent decades have led to the **emergence of a new warehousing sector** in many parts of the world. Driven by the integration of supply chains across borders and the increased importance of logistics, hubs for managing the flows of goods have become integral.

New technologies have been influential in the transformation of warehousing. This applies especially to **new e-commerce companies**, which have risen to dominance through data-driven optimisation of the warehousing and delivery processes.

In many cases, **these developments have negatively impacted workers**. People employed in warehouses often face low pay, excessive and unpredictable working hours, unmitigated health and safety risks and barriers to organising collectively in improve their labour conditions.

Despite many challenges, there are **significant opportunities to organise warehouse workers** to improve their labour standards. The ITF should use its existing power and expertise in the transport sector to support colleagues in warehousing to win a fair deal.

1. INTRODUCTION

Transport workplaces are evolving. It has always been the case that **nothing in the world moves without a transport worker**, but recent decades have seen rapid change in the structure of the global economy. As capital has become more mobile and supply chains have integrated across borders, workers are facing both new challenges and new opportunities to exert their power.

One of the starkest changes since the 1990s has been **the emergence of a new warehousing sector in many parts of the world**. The deepening of globalisation has created integrated global supply chains that span the world. The increased international movement of goods and the development of 'just in time' production methods have hugely increased the importance of logistics to the global economy. In recent years the development of e-commerce has pushed this process even further.

Today, driven by these developments, warehousing has **changed from a sector providing long-term storage services to one focused on managing the flows of goods**. Traditional large storage sites are being complemented by smaller sites in old retail units or even trucks. As both business and retail customers demand an ever-shorter turnaround between order and delivery, more and more strain is placed on workers at all points in the supply chain. Warehousing is a growing sector, and one that occupies an increasingly important place in the global economy.

Warehouses are overwhelmingly characterised by **poor pay and working conditions**, and employers are often hostile to trade unions. This exploitation is both an injustice to the workers directly involved and a threat to standards in other parts of the supply chain, especially transport. That said, if organised, warehouse workers have the potential to wield a great deal of power. The international labour movement must take this burgeoning sector very seriously.

At its 44th Congress in 2018, **the ITF passed a resolution to organise warehouse workers globally.** This report gives a brief overview of the warehousing sector, including its prevailing labour conditions, and gives some initial consideration to the challenges of and opportunities for organising. It is not intended as a definitive view, but instead as the beginning of a conversation within the ITF family about how to challenge some of the worst labour exploitation of the 21st Century.

2. ECONOMIC AND COMMERCIAL CONTEXT

2.1 Background to the warehousing sector

As a means of storing goods at particular stage in a supply chain, **warehouses have existed for thousands of years.** The ability to store foodstuffs, especially grain, allowed societies to plan beyond the annual agricultural cycle and move into more sophisticated forms of economic activity. In contrast, the major development of the past few hundred years has been the use of warehouses to store manufactured and refrigerated goods as part of domestic and international industrial supply chains.

The past few decades, however, have seen the rapid development of new forms of warehouses around the world. Since the 1990s, the deepening integration of global supply chains has created a need to **efficiently manage the storage and transportation of goods between markets** on a scale never seen before. In addition, utilising new digital technologies, vast e-commerce companies such as Amazon have become powerful economic employers with great influence all along supply chains. Today's warehousing sector combines elements of the traditional retail and transport sectors as new models of businesses emerge.

The **effect of these radical changes on workers has been mixed**. Especially in parts of the developing world, new jobs have been created as warehousing companies seek to profit from booming markets. Nevertheless, these jobs are overwhelmingly characterised by low pay, poor working conditions and barriers to unionisation that all but prevent workers from organising to increase their bargaining power. Where warehouses have emerged in de-industrialising areas of the developed world, the inherently exploitative nature of the jobs they provide are a a poor substitute for older forms of labour characterised by a strong union presence, which underpinned decent pay and working conditions.

2.2 Types of warehouses

The new warehousing sector can be divided in a number of ways, depending on the function of different sites and companies and their relationships with the wider economy.

On one hand, companies can be categorised based on the types of warehouses they operate:

a. Retail warehouses are large mall-style sites, such as IKEA and Wal-Mart stores, which are accessible to end-consumers, i.e, the general public.

b. Distribution centres are operated by logistics service providers such as DHL and UPS, who transport and store goods on behalf of clients.

c. Integrated warehouses, such as Amazon's 'fulfilment centres', are part of a single company's internal supply chain and store goods that are subsequently transported to the end-consumer.

Alternatively, companies can be categorised by the sectors of the economy they serve:

d. Single market-segment warehouses provide storage and handling services for a particular range of retail products, such as perishable foodstuffs (Tesco) or household furniture (IKEA).

e. Multiple market-segment warehouses provide these services for a range of different products on the same site. Parcel delivery companies naturally maintain warehouses that contain a wide selection of goods, while e-commerce companies such as Amazon and Alibaba sell millions of distinct products through their online stores.

Thirdly, warehouses can be categorised based on the level of technology they utilise:

f. Low-tech warehouses make minimal use of new technologies and often use informal labour.

g. High-tech warehouses make use of sophisticated digital technology to optimise a company's operations. They can be further subdivided into high-automation environments (where technology is used to replace human labour) and low-automation environments (where it is used to control the productivity of human labour).

The categories above are just some of the different ways to classify different warehouses and companies. It is important to note that these categories have **no bearing on the ownership structure of a given warehouse**. Some businesses will fully own their warehouses, while others may outsource warehousing services to third-party suppliers, possibly several times over.

Across these various categories, the warehousing sector is dominated by a handful of giant companies with international reach. Table 1 gives an overview of some of these companies and their role in the sector.

COMPANY	FOUNDED	HEADQUARTERS	FURTHER INFORMATION
Alibaba	1999	China	Alibaba was initially a business-to-business platform facilitating the outsourcing of manufacturing to Chinese businesses. It now includes a large retail subsidiary, Taobao.
Amazon	1994	USA	Amazon began as an online bookseller but has now expanded into almost all consumer goods, as well as various other sectors including cloud computing and broadcasting. Chief executive Jeff Bezos is the wealthiest person in world.
DB Schenker	1872	Germany	Schenker was founded in Austria and acquired by Deutsche Bahn in 1931. It became the railway group's logistics subsidiary in 2007.
DHL	1969	Germany	DHL is majority-owned by Deutsche Post and oversees a vast chain of warehouses and outsourced road haulage companies.
DSV Group	1976	Denmark	DSV is currently pioneering digital technologies, in particular the use of big data.
FedEx	1973	USA	FedEx pioneered air freight for delivery purposes and was key in lobbying for the deregulation of the US civil aviation sector in the 1980s.

COMPANY	FOUNDED	HEADQUARTERS	FURTHER INFORMATION
IKEA	1943	Sweden	IKEA started as a mail-order business for stationery and expanded to sell furniture internationally in 1973.
TNT Express	1946	Netherlands	Founded in Australia, TNT is unionised but was acquired by non-union FedEx in 2016.
UPS	1907	USA	UPS was founded as a domestic postal service and now operates in over 220 countries. Together with FedEx it controls 40% of the USA's 1.7 million trucks, and is the country's largest unionised private-sector employer.
Wal-Mart	1962	USA	Wal-Mart is the USA's leading consumer goods retailer, and currently expanding into China.

2.3 Overview of new technologies

Alongside wider economic trends, the transformation of the warehousing sector has been facilitated by rapid developments in digital technology. First and foremost, the creation of the **internet** has allowed retailers to access consumer markets in new ways. While the first mail-order companies – selling goods, for the first time, without physical stores or marketplaces – were founded in the mid-1800s, since the 1990s businesses have been able to sell goods online and pivot their operations away from traditional retail environments towards delivery.

While many traditional businesses have moved partially or fully online, a large subset of the internet-based market is made up of new **e-commerce companies**. These companies rely on digital technology to minimise the time between an order being placed through an online store and the physical delivery to the customer's front door. Digital tools are used to manage accuracy and the peaks and troughs in demand (due to, for example, major sales events like Black Friday) and reduce the quantity of goods returned to the retailer. E-commerce companies primarily engage in consumer markets (B2C) but there is an increasing growth in systems targeted at other businesses (B2B).

Given the increased importance of the warehouse relative to the shop floor, another strand of technological innovation is aimed at optimising the **operations of the warehouse**. Data on how the warehouse is functioning is collected from around the site by sensors embedded in tools, vehicles, equipment and products. Sensors can track many factors, from temperature to exact location through global positioning software (GPS), radio-frequency identification (RFID) and portable scanners carried by workers. This data is then analysed using computers and operational alterations are made. New systems, such as those used by Amazon, enable workers' productivity to be constantly measured against predetermined criteria. This benchmarking is used to force workers to work harder and faster. Further data can help inform decisions on the introduction of further technologies, such as the Kiva robots used in some Amazon warehouses. Other warehouses are governed by proprietary supply-chain programmes that control every aspect of the storage and delivery process.

Furthermore, new technologies are targeted at **optimising the delivery process**. Again, data is collected on the location and performance of drivers and riders and digitally analysed. Companies can then adapt their delivery operations, including by the digital micromanagement of drivers, to shift goods between different modes of transport and minimise time and costs. Some companies are also examining the possibilities of using drones or self-driving vehicles to deliver goods to the end-consumer in future.

Needless to say, **the introduction of these technologies has negatively impacted workers**. While it is true that jobs have been lost to technology in specific warehouses, the growth of the sector as a whole means that employment in warehousing is growing. However, these innovations have hugely increased the intensity of labour exploitation in the sector, with damaging effects on health and safety. The impact of new technologies on warehouse workers is further examined in **section 3.2** on page 12.

The **glossary** contains a list of terms and brief explanations of many of these technologies.

3. LABOUR CONTEXT

3.1 Where and how do warehouses appear?

Where companies choose to locate warehouses is a good indication of their attitude to their intended workforce. Warehouses tend to appear in places that fit three main criteria: strong logistical infrastructure, weak social infrastructure and weak legal infrastructure.

A potential warehouse site has **strong logistical infrastructure** if it is located close to transport hubs such as ports and airports, and/or is easily accessible from transport corridors such as motorways and railways with freight capacity. This integrates the warehouse into the supply chain as closely as possible and allows goods to flow in and out with minimal friction. Conversely, weak logistical infrastructure – such as poorly maintained roads or nearby customs barriers – increases this friction and the costs of transportation. For example, in early 2015 the route between Mombasa and Kampala was disrupted by a system breakdown between the Ugandan and Kenyan authorities, leading to significant losses for logistics companies reliant on fluid links across the two countries.

If strong logistical infrastructure helps to suppress transport costs, then **weak social infrastructure** helps suppress labour costs. Warehouses tend to be located in areas of high unemployment or widespread low-paid employment, allowing companies to pay workers near or below the statutory minimum (where this even exists) without being outcompeted or facing bargaining pressures. For example, Amazon's warehouses in central Europe are clustered in the former East Germany and Poland. Both areas suffer with high unemployment and low wage levels compared to neighbouring West Germany and Austria – the areas these warehouses serve. Conversely, strong social infrastructure means higher labour costs, either because companies have to comply with higher statutory minimums or because they have to pay more to attract workers with other employment options.

Meanwhile, a **weak legal infrastructure** makes it hard for workers to enforce even minimum standards against their employer, again helping to supress labour costs. Robustly 'pro-business' environments are preferable, where governments have legislated to allow employers greater flexibility and courts are unwilling or unable to enforce fair labour standards. For example, one major logistics company clusters its Latin American operations in countries such as Chile, Colombia and Panama where the legal environment has deliberately made organising difficult. Conversely, a strong legal infrastructure would increase labour costs for companies by imposing higher minimum standards and actively enforcing them through penalties for non-compliance.

3.2 Exploitation of workers

As implied above, warehousing sector employers seek out environments that will help to both suppress workers' pay and conditions and prevent them organising effectively to challenging this exploitation. Warehouse workers, therefore, face many interlocking challenges.

Given that warehousing companies aim to locate their operations in areas with weak social infrastructure, it is unsurprising that **low pay** forms a key characteristic of the sector. There are many examples of workers in different countries and companies receiving similarly poor wages. One global logistics company operating in India has no transparent system to calculate pay, while in Turkey wages have failed to keep pace with inflation. In the USA, Wal-Mart has long been notorious for its poverty wages and gender-based pay discrimination. Workers at Sports Direct in the UK were paid below the statutory minimum wage before the company was exposed by an undercover investigation.

Highly exposed to variations in demand along supply chains, warehouse workers also face **excessive and unpredictable working hours**. UPS has attempted to increase its already hefty 60-hour working week to 70 hours, prompting an industrial dispute in the USA. Workers in Amazon warehouses are forced to work longer hours at peak times, while in the UK zero-hours contracts were the norm at Sports Direct until the exposure of its labour standards.

Warehouses are also rife with unmitigated **health and safety risks** for workers. Picking and the use of portable scanners to force higher productivity can lead to strain-related injuries. Poorly constructed buildings without effective heating or cooling can lead to heat exhaustion in summer periods or excessive cold in winter. Poorly maintained equipment and the lack of safety apparatus or specialised clothing can also lead to injury. Due to the potential reprisals for taking sick leave – including 'sick bed visits' by the company to surveil people who have taken the day off – Amazon workers have suffered heart attacks and miscarriages in the workplace. Workers on temporary or precarious contracts also experience the mental strain of constant uncertainty over their earnings in the near future.

Employers can also suppress labour costs by maintaining workers in **precarious employment contracts**, whether temporary, fixed-term, zero-hours or self-employed. Agency workers are used to lower labour costs in Chile, while in India casual day workers unload trucks. In Poland, Amazon workers are segregated into permanent employees with blue passes and temporary employees with green passes, creating a divide intended to prevent expressions of solidarity.

As in many other sectors, workers with an uncertain **migration status** are even more vulnerable to exploitation by employers searching for cheap (and sometimes semi-legal) labour. In Canada, the retailer Dollarama has been accused of overseeing slave-like conditions in its treatment of North African migrant workers. In Italy, IKEA even organised its workforce along a racial hierarchy as a way of staving off solidarity between different migrant groups.

As referenced earlier, workers are subjected to the **negative impacts of new technologies** on their jobs. Sensors, cameras and microphones can be used to monitor the behaviour of workers, whether in the warehouse or as part of the wider delivery supply chain. This underpins systems of algorithmic management, where data on work rates is used to classify workers as above or below a given standard. Workers classified as below-standard can be sanctioned and even dismissed by the algorithm. Constant surveillance and computer-determined employment outcomes can lead to serious mental and physical health impacts on workers.

The most effective way for workers to challenge all these forms of exploitation would be to organise into trade unions. For this reason, many warehousing companies engage in significant **anti-union strategies** in order to continue suppressing labour costs. Evidence gathered shows that union leaders in Latin America are surveilled by microphones in workplace locker rooms and delivery vehicles, and workers are threatened with dismissal for even saying the words 'trade union'. Amazon managers have received training on how to spot early signs of organising, such as talk of the minimum wage among the workforce.

3.3 Considerations for organising workers

Given these exploitative labour practices, and especially the anti-union strategies pursued by employers, how can warehouse workers begin to organise themselves to effect change? While many organising strategies used against anti-union employers in other sectors can be adapted for warehousing, there are some particular opportunities that workers can make use of within the warehousing sector.

One key observation from an organising perspective is that warehouse workers possess **weak industrial power but potentially very strong structural power**. The very low levels of unionisation in the sector, coupled with the various economic, managerial and legal prohibitions on union activity, pose a major obstacle to these workers organising. However, their critical position in cross-sectoral supply chains means that any disruption they do cause will likely create considerable impact elsewhere. Like dockers, warehouse workers have the potential to create a supply-side bottleneck through industrial action that can be used to leverage their demands over pay, working conditions and trade union rights.

Another important consideration is the **role of economic employers in the contracting chain**. As noted above, some companies maintain their own warehouses while others handle and store goods on behalf of manufacturers and retailers. Furthermore, many companies operating either of these models will outsource business to subcontractors, perhaps several times over. Organising workplaces further down the contracting chain may be less effective, as business clients have the flexibility to switch to competitors with lower labour costs. Conversely, targeting economic employers at the top of the chain could lead to benefits cascading down to workers at the bottom.

Thirdly, organising prospects could be improved by campaigning in parallel to **influence global and regional policy**. We have seen that warehousing companies benefit from weak social and judicial infrastructures, which are partly the result of governance failures at the international, national and subnational levels. For example, the creation of special economic zones around key logistics hubs in the developing world often includes exceptional legal constraints on freedom of association and collective bargaining so as not to 'scare off' foreign investors. Similarly, policy incentives to encourage companies to locate new facilities in depressed areas of the developed world often fail to deliver a sustained improvement in living standards. Correcting misguided policymaking in many parts of the world could facilitate organising strategies in the warehousing sector.

4. CONCLUSION

Warehouse workers face many challenges in their jobs: low pay, unpredictable working hours, constant health and safety risks, precarious contracts and management by oppressive technology, to name but a few. However, they are also uniquely placed to **leverage their power in international supply chains** in order to demand better labour standards.

At the national and subnational levels, **transport unions have a particular opportunity to reach out to warehouse workers** and demonstrate that they will not tolerate exploitation anywhere in the supply chain. At the international level, the ITF can build them into its coalition of different workers all fighting for fair treatment.

Following its Congress resolution on warehousing, **the ITF has created a steering group** for affiliates who are either already organising warehouse workers or are planning to in the near future. The group is chaired by Peter Lövkvist from the Swedish union STF. If you want to get involved or find out more, please get in touch with **warehousing@itf.org.uk.**

5. GLOSSARY

3D printing: The creation of objects by combining physical materials, computer-generated design and precision manufacturing technology.

Algorithmic management: A system of management employing artificial intelligence to adjudicate on workers' performance and take automated action in response, such as sanctions or dismissals.

Artificial intelligence (AI): Software that analyses a mass of big data and uses it to make decisions without human involvement.

B2B / B2C: Business-to-business sales / business-to-consumer sales.

Benchmarking, management and surveillance (BMS): A catch-all term for management techniques aided by the digital technologies used in warehouses.

Big data: The accumulation and analysis of vast quantities of data, usually in order to provide insights into how to make a system operate more efficiently.

Cloud computing: Computing where data is stored on a remote server as opposed to on the hard-drive of a personal computer. Amazon Web Services is an example of a company offering cloud-computing products to a wide range of clients.

Drones: Miniature flying vehicles piloted remotely by either a human or computer, used in some warehouses to transport goods.

E-commerce: Retail business conducted primarily or solely online, often based on delivery to the end-consumer rather than on maintaining a network of physical stores.

Fixed-location warehouse, terminal and logistics workers: The technical term for the industrial group that ITF is aiming to organise as part of its supply chain work programme.

Global positioning software (GPS): Technology that tracks the location of a person or object via Wi-Fi, used in some warehouses to locate workers across the site. (Similar function to RFID.)

Internet of things (IoT): A network of objects connected to each other by digital technology, for example portable scanners connected to a central computer.

Kiva robotics: Technology used to bring portable shelves of goods to workers for picking, as opposed to workers moving to goods within the warehouse. Kiva Systems was acquired by Amazon in 2012, and other warehousing companies have similar robots in development.

M-commerce: Online sales made via customers' mobile phones rather than their personal computers.

Picking: The sectoral term for workers locating and transporting goods within the warehouse.

Portable scanners: Devices carried by some warehouse workers to scan goods, both to help locate goods within a warehouse and to generate data on worker productivity.

Radio-frequency identification (RFID): Technology that tracks the location of a person or object via radio waves, used in some warehouses to locate workers across the site. (Similar function to GPS.)

Self-driving vehicles: Vehicles operated by a computer without human involvement, usually based on the insights of big data.

Warehouse management system (WMS) / warehousing operating system (WOS): The overall computing system used to manage a warehouse, often incorporating other forms of technology listed in this glossary.

6. NOTES

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