Submission No 29

INQUIRY INTO IMPACT OF TECHNOLOGICAL AND OTHER CHANGE ON THE FUTURE OF WORK AND WORKERS IN NEW SOUTH WALES

Organisation: International Transport Workers' Federation (ITF)

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Submission to the Select Committee on the impact of technological and other change on the future of work and workers in New South Wales

27 September 2020

International Transport Workers' Federation (ITF)

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1. About the ITF

The International Transport Workers' Federation (ITF) is a democratic, trade union-led federation recognised as a world-leading transport authority. Together, we are 20 million strong, representing almost 700 unions across 150 countries. We are the voice for all transport workers, standing up for international labour standards, rights, equality and justice. We work tirelessly to move us – and the world – forward.

The ITF headquarters is located in London with regional offices in Abidjan, Amman, Brussels, Hong Kong, Nairobi, Delhi, Rio de Janeiro, Singapore, Sydney and Tokyo.

The following goals form part of our constitution and inspire everything we do:

- To promote respect for trade union and human rights worldwide;
- To work for peace based on social justice and economic progress; and
- To help our affiliated unions grow, strengthen and defend the interests of their members

Our affiliated unions in Australia are:

- Australian Institute of Marine & Power Engineers (AIMPE)
- Australian Licensed Aircraft Engineers' Association (ALAEA)
- Australian Maritime Officers Union (AMOU)
- Australian Rail, Tram & Bus Industry Union (RTBU)
- Australian Municipal, Administrative, Clerical and Services Union (ASU)
- Australian Workers' Union (AWU)
- Civil Air Operations Officers' Association of Australia (Civil Air)
- Flight Attendants' Association of Australia - International Division (FAAA - International Division)
- Maritime Union of Australia (MUA)
- Transport Workers' Union of Australia (TWU)

2. Our Submission

The ITF welcomes the opportunity to share our perspective on the impact of technological and other change on the future of workers in New South Wales with this Select Committee of the New South Wales Legislative Council.

This matter is at the heart of our work as a global union federation. We are working closely with our nearly 700 union affiliates to shape the future of work for transport workers. This includes campaigning for decent working conditions for workers in the so-called "gig economy" by supporting their efforts to organise and influence local, regional and global policy. We are also advocating for a human-centred approach to technological change, which ensures the full participation of workers in processes of automation and the introduction of new technologies. Our submission speaks to the realities of on-demand work and automation from the perspective of transport workers.

Technological change driven by digitalisation profoundly affects the lives of workers in New South Wales and indeed workers all around the world. We believe it is critical for workers, who are on the frontlines of changing workplaces, to have a seat at the table and a voice in decision-making processes.

Digitalisation and Automation

Digitalisation can be defined as the use of sensors to measure phenomena in digital form that can be 'read' by computers and then used by them to control processes, or to enable better human control of processes. As such it sits behind all of the technological changes the world is witnessing today.

ITF research into this issue has concluded, like other recent studies, that the impacts of digitalisation, including the shift towards automation or higher levels of automation, are conditioned by many other factors, including social resistance, regulation and the broader health of the economy. Its impacts are being felt at differently across the world, with a fundamental divide among those advanced economies that can produce technology and those which cannot. Even in the advanced economies there are multiple factors to be considered before a technology is adopted at scale. At the scale of the economy technological change is therefore uneven and gradual, and its impacts are complex and conditioned by the political, economic and social environment.

This is why ITF along with its sister organisations in the global labour movement, and the ILO are arguing that the most effective means to a successful transition to the digital economy is the reinforcement and modernisation of existing tripartite mechanisms and a broader social dialogue.[1]

Nevertheless, digitalization does pose some novel and specific challenges for workers, many of which relate to the ways in which algorithms and AI are beginning to be used to control and condition work processes, and workers by extension, but also to the data that workers produce while they work, and

[1] ILO Global Commission on the Future of Work Report, 'Work for a Brighter Future', 2019. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_662410.pdf

the use of 'predictive' technologies based upon data. Measures to mitigate these impacts are suggested below.

The Gig Economy

The gig economy is now a global phenomenon employing workers in every continent. In transport we see it mainly applied in taxi services, food delivery, last mile delivery (particularly for e-commerce) and in road freight. However, we are aware that existing gig economy employers are always seeking out new niches for their techniques, and that 'traditional' employers are in some cases adapting gig-like forms of employment, as is the case with XPO.

As the Australia Institute's Centre for Future Work told the *Inquiry into the Victorian On-Demand Workforce*, insecure working conditions in this sector are not an immutable fact; rather they are "subject to deliberate choice and change." In their adept assessment, gig work is "contingent on the existence of a large pool of underutilised, desperate labour, and the passivity of labour market regulators who are willing to accept (or at least overlook) violations of conventional fair treatment that in the past would have elicited a more active and effective response."

When the ITF convened a forum of app-based delivery riders in London in 2019, we heard strikingly similar testimonies about exploitative working conditions across Europe and in Australia. On-demand apps aim to provide consumers with seamless services, however we now know that their business models are based on two core principles that have nothing to do with technology or innovation: 1) spending billions of dollars with the backing of venture capitalists to build their market share, often before there's any sign of turning a profit, and 2) evading labour regulations at all costs. Yet this reality was concealed during the first years of the gig economy's existence by what one scholar has called a 'collective media swoon over these app-based service-delivery corporations and their products.'

As the valuations of these corporations continue to inflate, the precarious workers who provide their services are trapped in poverty. You will recall that Foodora, a subsidiary of Berlin-based delivery giant Delivery Hero, exited Australia in August 2018 shortly after the Fair Work Ombudsman commenced proceedings against the company. Foodora left behind millions in debts and workers received only 31% of their legal entitlements. The company pulled a similar tactic in Canada in May 2020, mere months after their workers in the province of Ontario won the right to form a union and engage in collective bargaining. In 2017 Uber left Denmark after a law was introduced requiring all taxis install fare meters to align their services with existing taxi regulation, a move that unions had argued would level the playing field and protect the 'Danish model'. Often gig economy companies have argued that they are not transport or logistics providers, but tech companies or 'multi-sided platforms'.

Nevertheless, governments and regulators around the world are beginning to see the importance of making strong interventions to address the realities of app-based work. In 2017 the Court of Justice of the European Union (CJEU) ruled that Uber is a transportation company undermining their tech

company argument.[2] Earlier this year the French Supreme Court also ruled that an employment relationship existed between Uber and its drivers.[3]

In September 2019 the state of California, which is the cradle of Silicon Valley and many gig economy companies, passed the AB 5 law which made it harder for gig employers to misclassify workers as independent contractors.[4] In August 2020, a California judge ordered Uber and Lyft to abide by AB 5 and begin treating their drivers as employees, following action by the Attorney General and District Attorneys.[5] However, days later the injunction was suspended after heavy lobbying and amid threats by Uber and Lyft that they would leave the state.[6] In May 2019 a Swiss court in Lausanne ruled that a former Uber driver was an employee.[7] A year later, in June 2020 a Swiss Cantonal Court in Geneva ruled that UberEats was an employer and should hire its riders and drivers. The company has done so, although unfortunately through the establishment of a fake construct called Chaskis S.A. which means that UberEats is effectively outsourcing its employer obligations.[8] In the UK Uber is appealing three Court rulings that supported Uber drivers arguing they were employees.[9]

In January 2020, the Spanish Supreme Court ruled that Deliveroo riders were employees, not independent contractors as argued by the company in its appeal of an original decision of July 2019. The ruling stated that the riders were under the 'false appearance' of contractors in order to 'conceal' an 'ordinary employment relationship' with Deliveroo. The judges also indicated that the categorisation of legal relations as self-employment or employment is a 'public order' issue, not an issue of private choice, because of its connection to the social security system, including unemployment benefits, and to social security contributions.[10]

In February 2020 the Ontario Labour Relations Board in Canada ruled that Foodora riders were 'dependent contractors' and therefore had the legal right to organise in trade unions. The definition states that a dependent contractor is someone in a position of economic dependence, or under obligation to perform duties 'more closely resembling the relationship of an employee than that of an

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[2] *Asociación Profesional Elite Taxi v Uber Systems Spain, SL, C-434/15* Judgement of the Court (Grand Chamber) December 2017, European Court of Justice. https://curia.europa.eu/jcms/upload/docs/application/pdf/2017-12/cp170136en.pdf

[3] Ruling No. 374, French Supreme Court, 4 March 2020. https://www.courdecassation.fr/IMG/20200304_arret_uber_english.pdf

[4] Assembly Bill No.5, California Legislature,18 September 2019. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB5

[5] The text of the Order can be found here: https://oag.ca.gov/system/files/attachments/press-docs/Order_on_Peoples_Motion.pdf

[6] https://www.bloomberg.com/news/articles/2020-08-10/california-wins-preliminary-injunction-against-uber-lyft, https://www.independent.co.uk/news/world/americas/california-uber-latest-lyft-ab5-prop-22-injunction-drivers-a9681066.html

[7] https://www.france24.com/en/20190506-swiss-court-declares-driver-uber-employee

[8] https://geneve.unia.ch/actualites/article/a/17153?cHash=a07ba9e0111bd399bdb358df28c62ae0

[9] *Aslam, Farrar, Hoy and Mithu v. Uber BV et. Al.* Ruling by the Employment Appeal Tribunal (UK) https://www.memerycrystal.com/opinions/employment-case-update-aslam-others-v-uber/

[10] https://www.europapress.es/economia/noticia-tsjm-determina-riders-deliveroo-son-trabajadores-empresa-no-autonomos-defiende-compania-20200123174916.html

independent contractor.'[11] The judgement highlighted that Foodora used technology to 'closely monitor every move of the courier…', and that this '…level of monitoring and supervision is what is commonly seen in an employment relationship'.[12] As was argued in a recent analysis in the Financial Times, the technology used by employers in the gig economy, 'allowed companies to assume much of the power of employers with none of the responsibility.'[13] But this was fundamentally due to a misapprehension of the nature of the gig economy, one substantiated by the enthusiasm for the sector in the media as noted in a recent study.[14] The strenuous efforts made by Uber and others to avoid the employer relationship implies that the avoidance of employer responsibilities is more important to their business model than technology.

These cases and others from countries around the world, indicate the importance of legal oversight and testing of the false claim that gig economy actors are not employers. This is in accordance with ILO Recommendation 198 (2006) that regulators should be guided mainly by the facts relating to the performance of work, and not on how this relationship is characterised by the employer. The above examples demonstrate the way in which courts around the world are beginning to penetrate beyond the technological veil obscuring the reality of the employment relationship in the gig economy. They also evidence the way in which the employment relationship in the gig economy is directly connected to several fundamental rights, including the rights to social protection, occupational safety and health, freedom of association and collective bargaining.

The misclassification of workers by gig economy employers, enabled by the concealment of the relationship of control, is an insidious corrosion of the broader framework of labour relations and labour rights. Many gig economy workers report working long hours, up to 70-75 hours a week just to earn enough to survive on. In a recent survey carried out in India, over 70% of gig economy drivers reported working over 20 hours a day and over 60% of them reported back problems.[15] Gig economy workers around the world suffer from additional stress caused by lack of human contact with their employer, insecure working hours and therefore the lack of consistent pay.[16] Many also subsequently develop health problems associated with long working hours, including musko-skeletal problems. Workers in the gig economy are also exposed to health and safety risks that derive from their contact with the public.

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[11] Canadian Union of Postal Workers, Applicant v Foodora Inc. d.b.a. Foodora, Ontario Labour Relations Board, Case No.1346-19-R, 25 February 2020.
http://www.olrb.gov.on.ca/Decision/1346-19-R_Foodora-Inc-Feb-25-2020.pdf

[12] ibid.

[13] Sarah O'Connor, 'Uber ruling shows gig economy is running out of road' August 18, 2020.
https://www.ft.com/content/11e2e1bf-c1dd-47cc-81b2-2147433ff16d

[14] Sam Harnett, 'How Tech Media Helped Write Gig Companies into Existence', SSRN, August 2020,
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3668606

[15] Drivers in India reported driving for around 20 hours a day.
https://www.financialexpress.com/industry/sme/ola-uber-drivers-work-in-toxic-isolated-environment-with-health-issues-dwindling-earnings-survey/2070806/

[16] For these and other problems reported by drivers in particular see, https://ride.guru/content/newsroom/safety-physical-mental-health-risks-of-being-an-uber-lyft-driver

They are exposed to abuse, assault, robbery and other forms of violence.[17] Furthermore, gig economy workers around the world are not provided with sanitation facilities by their employers, and are obliged to pay to use facilities in café's and bars, or are forced to defecate and urinate in the open or in public.[18]

Workers in the gig economy are currently in effect in non-standard forms of employment, and therefore also fall outside the scope of labour inspection and other forms of monitoring working conditions. The OECD Report 'Negotiating Our Way Up' highlights that workers in non-standard forms of employment are 50% less likely to be in a trade union.[19] Therefore a permissive attitude towards gig economy employers acts contrary to ILO Member States' obligations to create an enabling environment for freedom of association and the promotion of collective bargaining under ILO Convention 98 and Convention 154. That the international community is understands the impact of misclassification on the enjoyment of rights is clear from the recent declaration of the G20 Labour and Employment Ministers which specifically highlights that the classification issue has, 'significant implications for workers' rights.' It also states that the Ministers will 'promote the correct classification of workers' employment status' by, amongst others, reducing incentives for employers and workers to incorrectly classify employment relationships as self-employment, provide clarity on the issue, ensure quick and fair decisions around the issue, and ensure that labour inspectorates are able to effectively monitor and detect breaches.[20]

The rights and broader safety implications of the gig economy model have become obvious since the Covid-19 crisis swept the world. As a World Economic Forum report noted, gig workers are among the most precarious and most impacted by Covid-19.[21] Given this precarity most gig workers have faced 'little choice between protecting their health and the necessity to work'.[22] At the same time lockdowns around the world have highlighted the importance of delivery riders and drivers as people were forced to rely on e-commerce and delivery of even the most basic products, including food. Yet the misclassification of riders as self-employed meant that the employers did not provide workers with personal protective equipment (PPE) and nor were they covered by sick pay in case of falling ill. This naturally led to a significant drop in workers signed up to the apps, and to high levels of discontent among those remaining. A series of actions by workers followed, with subsequent court rulings that the

[17] For example, https://www.irishtimes.com/news/ireland/irish-news/deliveroo-cyclists-we-want-to-deliver-food-without-thinking-we-might-be-robbed-or-run-over-1.4347707 or https://twitter.com/GigWorkersRise/status/1199788628353773568

[18] These issues were raised by gig economy workers at the inaugural congress of the International Alliance of App Based Transport Workers (IAATW), Oxford, January 2019.

[19] 'Negotiating Our Way Up: Collective Bargaining in a Changing World of Work' OECD, November 2019, https://www.oecd.org/employment/negotiating-our-way-up-1fd2da34-en.htm

[20] G20 Labour and Employment Ministers, Ministerial Declaration, 10 September 2020, https://g20.org/en/media/Documents/G20SS_Labour_And_Employment_Ministerial_Declaration_EN.pdf

[21] 'Gig workers among the hardest hit by the coronavirus pandemic', https://www.weforum.org/agenda/2020/04/gig-workers-hardest-hit-coronavirus-pandemic/

[22] Elaine Yerby and Rebecca Paige-Tickell, 'Where next for the gig economy and precarious work post Covid-19', LSE Management, https://blogs.lse.ac.uk/management/2020/05/01/where-next-for-the-gig-economy-and-precarious-work-post-covid-19/

gig economy platforms had to provide workers with PPE, as occurred in Italy and Brazil for example.[23] In the US Uber and Lyft agreed to pay drivers up to 2 weeks of sick pay in case they fell ill with Covid.[24] However, according to the Fairwork Foundation of the Oxford Internet Institute, only 5 out of 120 'platform companies' have introduced compensation for loss of earnings during Covid-19, highlighting that many companies are choosing 'shareholder interests over the safety of their workers'.[25] The situation experienced by gig workers under Covid-19 further highlights the way in which conditions in the gig economy have an impact on society as a whole.

Disguised employment is not a new phenomenon. The misclassification of workers in the gig economy is part of a much broader trend towards the casualisation of labour, and a continuation of practices such as outsourcing, subcontracting, zero-hours contracts and the generalised 'fissuring' of the workplace.[26] Rather than develop new labour law concepts, the development to of the gig economy highlights the need to adapt the scope of employment laws to reinforce the employment relationship and thus broaden the scope of labour protection. The reshaping of employment laws would miss the point. Introducing new intermediate categories would not achieve full labour protection. In those countries like Italy and the United Kingdom, where a third employment category has existed for a long time, vulnerable workers are often excluded from vital employment protections such as unfair dismissal.

Nevertheless, some countries have developed positive models of gig economy regulation, aside from the AB 5 Regulation noted above. Earlier this year, the Chilean Senate approved a new law which established a minimum pay rate alongside other measures that require gig economy companies to register and pay taxes in Chile, and effectively clarified the workers' legal position as transport workers. The Argentinean government has this year drafted ground-breaking legislation for app employers which it is consulting with trade unions (CTA and CGT). The draft legislation considers apps to be employers, legislates pay formulas (including extra pay for poor weather or where workers are using their own equipment), maximum hours, holiday and sick pay, as well as payment in case of dis-activation. It also envisions providing workers with rights to some of the data relating to their work. This is in line with the ITF guiding principles for digital labour platforms outlined below. So, as Uber has noted in its 2019 S-1 filings, "An increasing number of governments are enforcing competition laws and are doing so with increased scrutiny, including governments in large markets such as the EU, the United States, Brazil, and India, particularly surrounding issues of predatory pricing, price-fixing, and abuse of market power." Moreover, Uber also notes that "The independent contractor status of Drivers is currently being challenged in courts and by government agencies in the United States and abroad. We are involved in numerous legal proceedings globally, including putative class and collective class action lawsuits, demands for arbitration, charges and claims before administrative agencies, and investigations or audits

[23] http://www.bollettinoadapt.it/wp-content/uploads/2020/04/provvedimento-1.pdf-1.pdf and https://g1.globo.com/ce/ceara/noticia/2020/04/13/justica-cearense-determina-que-uber-e-99-paguem-salarios-a-motoristas-ativos-durante-a-pandemia-de-coronavirus.ghtml

[24] https://www.theverge.com/2020/3/16/21181387/uber-driver-paid-sick-time-expand-coronavirus-covid19-pandemic

[25] Yerby and Paige-Tickell, 'Where next for the gig economy and precarious work post Covid-19'

[26] David Weil, 'The Fissured Workplace' (London: Harvard University Press, 2014).

by labor, social security, and tax authorities that claim that Drivers should be treated as our employees (or as workers or quasi-employees where those statuses exist), rather than as independent contractors."[27] It is therefore clear, even to Uber, that the tide is with the regulation of the gig economy.

This kind of legislation outlined in the preceding paragraph is necessary, but insufficient to rein in gig economy companies who are intent on gaming the system to disguise a genuine working relationship with their employees in order to avoid their duty to provide basic rights and entitlements. Uber has created a front company in Switzerland in order to avoid employing riders, and in the Arab states of the Persian Gulf, Uber and Lyft created limousine companies in order to avoid both employment and immigration responsibilities. In the US they are considering creating a franchise model that would avoid a direct employment relationship.[28] In fact, Uber already does this in Germany and Spain in a tactic that seems to have been developed precisely to counter the challenge outlined in their S-1 Filing cited above. Veena Dubal, Professor of Law at the University of California, has stated that this scenario is unlikely to improve conditions for employees of the fleets contracted by Uber and Lyft. 'Although the workers would be owed basic protections, whether or not the fleet owners would have the ability to consistently provide these protections given the unregulated supply of vehicles and the ebb and flow of demand, is dubious.'[29] Therefore it is crucial for any regulation of the gig economy that adequate enforcement mechanisms are included to ensure that these employers do not 'game' the system.

Workers in the sector are increasingly active in fighting for their rights, as pay rates have declined and the causes of the problems they experience have become clearer. In Norway in 2019 Foodora riders went on strike and won the first collective agreement with a gig economy employer, fundamentally because Norwegian law required an agreement. In Italy food delivery riders were recognised as falling under the logistics sectoral agreement after industrial action. ITF is aware of gig economy workers having taken industrial action in Argentina, France, Spain, the UK, the US, Chile, Costa Rica, Colombia, Mexico, Belgium, Germany, Venezuela, Guatemala, Ecuador, Italy, Norway, India, and South Africa, with actions across Latin America in July 2020 following wage cuts across many apps. South African gig economy workers have also reported a drop in income since the Covid crisis began. Without substantive change we can expect to see more industrial action among workers in the sector in future.

Interestingly some companies are beginning to see the benefits of moving towards a proper employment relationship, with Dutch company Just Eat, active in Holland, Britain, Germany and the US (via Grubhub), recently announcing that it would move away from 'gig working' in Europe, and employ its delivery riders instead.

It is time to close these loopholes and put forward a progressive vision for a future of work in which workers are empowered to succeed. We must affirm the right of all on-demand workers to organise and

[27] https://www.sec.gov/Archives/edgar/data/1543151/000119312519103850/d647752ds1.htm
[28] 'Uber and Lyft Consider Franchise-Like Model in California' The New York Times, 18 August 2020, https://www.nytimes.com/2020/08/18/technology/uber-lyft-franchise-california.html?searchResultPosition=1
[29] Veena Dubal, 'The Pitfalls of Uber and Lyft as Franchisors', https://www.onlabor.org/the-pitfalls-of-uber-and-lyft-as-franchisors/

we must regulate their employers to ensure that there is a level playing field for competition in the industries they have decided to "disrupt". In addition to the key question of employee status, we are keenly aware of a host of other challenges for workers introduced by this kind of app-based, on-demand employment. For example, given the control exercised over workers through the use of the data they produce while they work, the nature of that data and what it can be used for becomes a crucial component of workers ability to understand the basis upon which their pay and conditions are established, which is itself the basis for being able to defend their other rights. Recent cases in the UK, where drivers have taken Uber to court over access to the data held on them and how it is used to control them, and France, where workers have appealed to the CNIL for the right to access the data held on them under GDPR.[30]

With this reality in mind, the ITF developed a set of Principles on the Platform Economy (following section) which outlines our core beliefs on issues including health and safety, data rights, non-discrimination and accountability.

Conclusion

The broader dynamics of technological change extend far beyond the gig economy and have the potential to affect every workplace. Technological advances can widen existing inequalities or create new opportunities. Our approach to automation and the introduction of new technologies is to pursue constructive engagement based on a tripartite process that includes labour, industry and government. Legislators can help build a sustainable digital economy by establishing ethical rules and standards which help sustain and broaden the scope of labour protection, and by committing to close the skills gap through worker access to lifelong education and training. We outline our principles for creating a sustainable digital economy in the section titled 'Towards a Sustainable Digital Economy'.

This inquiry is a crucial moment to consider how principles of decent work and fairness can be protected and promoted by legislative action. We urge the government of New South Wales to do everything within its power to support on-demand workers and workers vulnerable to technological change. Let us seize this opportunity to take bold action that can be an example to legislators across the world.

To this end, we make a series of recommendations on regulating the gig economy and ensuring a sustainable transition to the digitalised economy of the future.

[30] 'Uber drivers to launch legal bid to uncover app's algorithm.' July 2020, https://www.theguardian.com/technology/2020/jul/20/uber-drivers-to-launch-legal-bid-to-uncover-apps-algorithm 'Donnes: la LDH veut ouvrir la 'boute noir' d'Uber', June 2020, https://www.liberation.fr/france/2020/06/12/donnees-la-ldh-veut-ouvrir-la-boite-noire-d-uber

3. Principles for Digital Labour Platforms

3.1 Correct Employment Status

Gig economy platforms shift the burden of risk onto the workers they employ by disingenuously arguing that they are not employers. These companies use technology to conceal the relationship of control or subordination which is at the heart of the employment relationship. Instead of old-fashioned person-to-person control methods, apps use a mixture of incentives (ratings), micro-punishments (lower fares, less profitable 'gigs) and rules (delivery windows, minimum numbers of deliveries etc) which together enable effective control of the worker and the work process. Kellogg, Valentine and Christen have called these forms of algorithmic control the '6 R's' - restricting, recommending, recording, rating, replacing and rewarding.[31] Others have argued that these apps also exert control by actively limiting the choices available to workers.[32] Platforms therefore exploit a regulatory grey area that allows them to pay low or no taxes, and which allows them to avoid paying the costs associated with being a decent employer. They also use language that hides this employment relationship. As the London Employment Tribunal put it in one of the early Uber misclassification cases, the company resorts to "fictions, twisted language and even brand new terminology" to avoid creating an employment relationship.

Nevertheless, courts around the world have begun to recognise that while control may be exercised somewhat differently in the gig economy, it is still a form of control that merits recognition of the employment relationship.

The gig economy platforms of today are a 21st century manifestation of informalised labour arrangements that are, in effect, little different from the conditions suffered by workers in the 19th century, or in countries with few or no labour protections. Misclassification of workers in the gig economy is part of a much wider trend towards the casualisation of labour, with practices such as outsourcing, sub-contracting, zero-hours contracts, the proliferation of global supply chains and the fissuring of the workplace more generally.

The ITF believes that companies that pay workers to provide a service are employers and should behave like employers, paying social security, insurance, and providing sick pay and paid holidays, as well as appeal and redress mechanisms. Governments must enact strong legislation based on a "presumption of employment status" to correct misclassification and put an end to disguised employment relationships. In determining the existence of an employment relationship, regulators should, in accordance with ILO Recommendation 198 be guided primarily by the facts relating to the performance of work, not on how the relationship is characterized by an employer.[33]

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[31] Kellogg, Valentina, Christen, 'Algorithms at Work: The New Contested Terrain of Control', Academy of Management Annals, Vol.14, No.1, Jan 2020. https://journals.aom.org/doi/10.5465/annals.2018.0174

[32] Veen, Barrat, Goods, 'Platform Capital's 'App-ettite' for Control: A Labour Process Analysis of Food Delivery Work in Australia', Work Employment and Society, Vol.34, Issue 3, March 2019. https://journals.sagepub.com/doi/abs/10.1177/0950017019836911?journalCode=wesa

[33] https://ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312535

3.2 Decent Work

All workers deserve living wages, regardless of their employment status, with negotiated cost recovery formulas for fairly classified self-employed workers. Workers must be paid on time, they should understand the basis for payment, and should receive tips in full at the moment they are paid. Workers must also have equal access to social protection, meaning healthcare, pensions and other forms of social security and insurance protection, irrespective of their employment or immigration status.

Enforcing a "labour protection floor" is necessary in order to uphold responsibilities under the International Labour Organization (ILO) Centenary Declaration on the Future of Work and the Declaration on *Fundamental Principles and Rights at Work*, including gender equality, freedom of association and collective bargaining.[34]

3.3 Taxation

Social protections are provided by the state, but can only be paid for if companies adopt responsible business practices, such as paying their fair share of taxes. The existence of companies that do not pay tax effectively enables them to undercut and therefore outcompete those that do. Legislation in Chile and other countries is showing that the establishment of a national office and a commitment to paying national taxes is essential to the effective regulation of the gig economy and other digital technology companies, such as Amazon. Additional legislative measures may be necessary in order to ensure compliance, in order to enable the blocking of the websites of non-compliant companies.

3.4 Health & Safety

Gig economy workers are concerned about the long-term health consequences of isolation caused by an atomised workplace, income insecurity, lack of control and stress caused by ratings and benchmarking systems. Delivery riders are often out on the streets in the dark or during inclement weather. As Covid-19 has shown they are also most exposed to pandemics and other occupational diseases. Gig workers also suffer from intense workloads and a lack of breaks during working hours. Many of these affect women workers worse, a factor that should be considered during the design of health and safety measures.

The ITF advocates for health and safety protection for all workers based on a hierarchy of controls, beginning with the elimination of occupational hazards. Workers are entitled to adequate and appropriate provision of personal protection equipment and sanitation facilities, and specific protections against violence and harassment in the workplace.

[34] ILO Declaration on Fundamental Principles and Rights at Work, adopted 18 June 1998, https://www.ilo.org/declaration/lang--en/index.htm

3.5 Fair Contracts

The choice to work or not to work should be a real choice enabled by decent working conditions. On signing up to a platform, workers should sign a contract that establishes a fair and transparent process for pay, deactivations, and how to appeal them. The contract should also specify grievance procedures and the rights and responsibilities of both parties. Changes to working conditions including rates of pay should be consulted and negotiated in advance. Contracts should specify rights to data that workers produce during their work hours (see section 4.3 Data Requires Workers Representation below) and workers' ratings should be portable across apps.

3.6 Data Rights

Workers produce data when they work for a digital platform. The fact that they produce it, often using their own tools, and that it describes them, means that they should have some rights over the data itself and access to it, as is partially recognised by the EU's GDPR regulation. This data is used to control their work, and to justify their dis-activation, so they have the right to know what data is collected, what it is used for, where it is stored, and how the software built on it works. They should enjoy free access to all the data collected on them.

Gig economy employers should make the criteria (the rules embedded within the software) used in their algorithms transparent to their employees. The lack of transparency of the algorithms creates a power imbalance between the worker and the platform, which is exploited to the companies' profit. Gig economy workers should have some say in what the algorithms are allowed to do, particularly in relation to any benchmarking of their performance.

3.7 Non-Discrimination

Algorithms are often presented as neutral and objective since they work on data. But recent research across the world is highlighting that there are multiple issues with bias in algorithms, in data, and in the choices made about what should be measured. Platforms must ensure that their algorithms and digital processes are tested so that biases such as those affecting women, migrant and disabled workers and other social groups are prevented during the process of management. Without oversight and control algorithms can embody social or political prejudices and biases that threaten workers with algorithmic discrimination in relation to their pay, safety or other issues. It is essential that workplace algorithms should be tested to ensure non-discrimination, a core right as recognised by the ILO.

3.8 Accountability

Given that workers in the gig economy have their work conditioned and controlled by software and data, the ITF believes that named individuals should be responsible for the software and its impacts on workers. We call this "human and humane" control. With algorithmic, digital management processes there is often no human line-management that workers can readily contact. This makes it extremely

difficult to communicate issues to the company or get redress for injustices. Therefore we also believe that it is important for gig workers to be assigned a human line manager when they contact the app, alongside established procedures for appeals and grievances.

4. Towards a Sustainable Digital Economy

Workers in the modern workplace are increasingly seeing the introduction of myriad forms of digital technology. These can vary from software systems that monitor productivity, to geotracking, and the introduction of highly automated or autonomous machines, or the shifting of a work process from one place to another via remote operation. All of this is enabled by the implantation of digital sensors in machinery, tools, equipment and infrastructure which enables the digital measurement of an increased variety of workplace phenomena, and holds out the promise of being able to control them more effectively. There is therefore an immense variety of technologies being introduced into workplaces. Rather than detail them individually, here we present measures that we think would help create an effective framework for dealing with the challenges that our affiliates have outlined, or those outlined in the expert literature on the issue.

Technology can help improve conditions for workers if we prioritise that outcome by enshrining this goal in modern legislation. However, a technology's impacts on workers are often negative because it tends to be deployed solely in the interests of owners, who primarily seek to increase the level of their control in order to increase predictability, cut costs (including labour costs), or increase efficiency in the name of competitiveness, and ultimately, profit.

Digital sensors pass the data they collect onto computer systems that use software, or AI in order to process and analyse the data. The analysis occurs in relation to criteria or benchmarks that have been established by the programmers, without any consultation with the workers potentially affected. Unfortunately, by increasing the potential for employer oversight and control, digital technologies can often act to reduce worker agency, increase surveillance, lead to increased isolation and generally to a situation whereby the worker becomes heavily controlled, either directly or indirectly, (as partially evidenced by the experience of gig economy workers) by the technologies around them. Digital technology can also enable the use of automated, or highly automated machinery, which can replace human labour in certain tasks, or displace it to new tasks or locations. When applied together these technologies often act to enable the fragmentation and reorganisation of a work process. For example, some scholars are highlighting that digitalisation is enabling the outsourcing of work processes without any attendant loss of quality control. In this way digitalisation can contribute to the process of the 'fissuring' of the workplace, and to the process of outsourcing and casualisation.[35]

As well as the more direct impacts of the use of digital control, the use of algorithms in the workplace creates a new set of problems which derive from the way in which algorithms are written and the data

[35] For a discussion of the labour impacts of algorithms and digital technologies more broadly see, Kellogg, Valentina, Christen, 'Algorithms at Work: The New Contested Terrain of Control', Academy of Management Annals, Vol.14, No.1, Jan 2020. https://journals.aom.org/doi/10.5465/annals.2018.0174 also, Brishen Rogers, 'Beyond Automation: The Law and Political Economy of Workplace Technological Change', Roosevelt Institute, June 2019. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3327608 also the Data and Society 'Labor Futures' reading list on labour and technology https://points.datasociety.net/labor-tech-reading-list-55053bd8099e#5740

upon which they 'learn'. At root algorithms written by people can reflect the conscious and unconscious biases and prejudices of the writers, but they can also reflect biases present in the data that machine-learning algorithms use.[36] For example, an algorithm used to assist in a hiring process might be 'trained' on the CVs of people already carrying out a particular role. If these were mainly white men with a private school education the algorithm could begin discounting those that did not fulfil that criterion.[37] The issue is also heavily prevalent in the increased use of algorithms in assisting decision-making in government. There are notorious examples of the problems this has created, for example in the recent failures of a UK government algorithm that assigned exam grades to students.[38] But while society is increasingly aware of the problems created by biases in algorithmic decision-making in government or hiring, there is far less awareness of the problems this technology creates in the workplace.

There are also potential serious health and safety risks in the widespread use of connected, highly automated or autonomous vehicles and moving equipment in transport workplaces. For example, some cybersecurity experts are questioning whether current cybersecurity measures can prevent the hacking of network connected machines. This could lead to hacking which could cause industrial accidents, or potentially even environmental disasters if they involved hazardous materials.[39] The introduction of autonomous vehicles in workplaces without bias testing the algorithms involved could carry serious safety implications for black workers if the algorithm has not been trained on enough pictures of black people. It might not recognise them as people.[40] Furthermore, even if the algorithms are tested, the potential for adversarial images to confuse AI systems could lead to serious health and safety implications for workers.[41]

Digital technology and the use of algorithms in the workplace introduce new problems into the workplace. However, many of these problems could be mitigated through consultation and negotiation with workers, as long as all sides understand the potential issues with digital technologies, such as those outlined above. These problems require new regulation that help to ensure that technologies are introduced before their negative impacts occur. The measures outlined below are intended to make digital technologies safe, protect the data interests of workers, companies and governments, and create a level playing field for all actors in the economy.

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[36] 'Biased algorithms learn from biased data', https://www.forbes.com/sites/cognitiveworld/2020/02/07/biased-algorithms/

[37] 'Beware of automated hiring', https://www.nytimes.com/2019/10/08/opinion/ai-hiring-discrimination.html
'Why these companies are rethinking the use of AI in hiring', https://www.pbs.org/newshour/world/agents-for-change/why-these-companies-are-rethinking-the-use-of-ai-in-hiring

[38] 'How the British government rules by algorithm', https://www.economist.com/britain/2020/08/20/how-the-british-government-rules-by-algorithm

[39] 'Ports increasingly targeted by cyberattacks as maritime incidents soar', https://www.offshore-energy.biz/ports-increasingly-targeted-by-cyberattacks-as-maritime-incidents-surge/

[40] 'The best algorithms struggle to recognize black faces', https://www.wired.com/story/best-algorithms-struggle-recognize-black-faces-equally/

[41] 'Magic AI: These are the optical illusions that trick, fool and flummox computers', https://www.theverge.com/2017/4/12/15271874/ai-adversarial-images-fooling-attacks-artificial-intelligence

4.1 Human-Centred Design and Negotiated Technology Introduction

Unless it is enforced by law or by collective agreement workers are not consulted about technology introduction, or asked how tech could help improve the work process they are part of.[42] Nor do they participate in developing the goals the technology should help to achieve. This issue is at the heart of the problems that the introduction of digital technologies can cause, including worker resistance to the introduction of new technologies. It is for this reason that we argue that technological change should be enshrined within a process of human-centred design which enables worker participation. Human centred design should seek to firstly involve workers in a consultation around the new technology, but should also ensure that technology introduction is negotiated by trade unions. But human centred design should go further, it should ensure that managers and the producers of technology learn to put people at the centre of their decision-making.

A human-centred approach to new technologies would help to avoid the problems that have dogged some recent technology introductions. Without consultation management can fail to adequately assess the need for, or the potential of a given application of technology. The result can be that a technology fails to achieve its stated objectives, as DHL found out recently to the cost of €345 million.[43] In some ports the stated productivity benefits promised by technology providers fail to materialise, and software updates, security patches and other technical issues rapidly build up financial costs.[44] A human-centred process leading to negotiated outcomes would also help prevent unscrupulous employers from using the introduction of new technology to reduce the influence of trade unions. In other cases workers are left to remedy the resulting problems, as has been the case with European air traffic controllers who have to learn how to 'patch' the issues left by a digital system that fell short of promised improvements.

A human-centred approach would help to avoid the kind of problems outlined above which make work more stressful, unpleasant, isolated and alienating. Whether this is bus drivers in Barcelona driving imported German buses with heaters instead of air-conditioning, UK rail signallers having hugely increased zones of responsibility, or drivers in Spain with red lights blinking if they are off-schedule, or Amazon warehouse workers labouring in cages as robots whizz around them, involvement in the process would have remedied these issues before they arose.[45]

Human-centred design would also help to avoid problems caused by the importing of technologies designed for other environments. For example, bus drivers in Essex (UK) were being monitored by a technology developed in the United States that was intended to monitor driving and help reduce fuel expenditure. However, the driving conditions in Essex are very different from those in Arizona. The technology was designed around straight, level roads and yet it was applied on winding lanes in rolling

[42] At the moment Canada and Belgium have laws on technology introduction that oblige consultation and negotiation. In the EU a similar function is performed by Works Councils. Elsewhere individual unions may have agreements regulating technological change but the scope may vary.
[43] 'DHL writes off $A518m on SAP upgrade' https://sclaa.com.au/dhl-writes-off-a518m-on-sap-upgrade/
[44] As experienced by ITF affiliates in the Port of Rotterdam.
[45] Examples taken from discussions and interviews with members of ITF affiliates.

countryside with roundabouts instead of intersections. The difference meant that drivers in the UK were accumulating 'events' for accelerating up an incline from a roundabout, an event that simply did not take place in Arizona.

In warehousing, warehouse management systems are based on productivity indicators decided without consultation. For example, Amazon warehouses workers must abide by productivity rates measured in warehouses in Washington State.[46] But this same rate is used across Amazon's warehouses around the world, regardless of potential differences in the height, gender, age of the workers in different places. Moreover, the rate takes no account of cultural or other factors which may limit workers' productivity at different times. For example, in 2018 workers at Amazon facilities in the US went on strike after the productivity rate was increased during Ramadan, when most workers were fasting.[47] Adapting warehouse management systems such as those used by Amazon and others to local conditions would help avoid conflicts.

Technology should be introduced after a process of human-centred design in which workers are full participants. These technologies should be introduced to resolve mutually agreed-upon challenges within the work process. Any new technology should be monitored for health and safety impacts on workers. It should also be assessed for potential impacts on the basis of race, gender and the environment (see section 4.5 on Regulation and Certification of workplace software and AI). If technology results in the intensification of the work process, workers should be compensated by reduced working hours or increased pay.

Technology should also be assessed for broader social impacts. Therefore, the human-centred process should also consider potential impacts on the community surrounding a workplace, or serviced by a work process. For example, prior to the automation of port cranes or machinery, or to the remote operation of port gates, the local community should be enabled to discuss the potential financial impact upon it of the loss of well-paid jobs, or the potential hazard posed to their health by cybercrime or of the failure to identify prohibited biological imports such as invasive species. Prior to the adoption of a 'mobility as a service' transport model, the local community should be enabled to participate in a discussion of the potential benefits and pitfalls, and decide the criteria for its potential introduction.

Any monitoring systems should have rules for use agreed between trade unions and employers at the national, sectoral and workplace level. Workers and unions should be able to influence the setting of any benchmarks for productivity. Legislation should be passed governing the uses of artificial intelligence and machine learning, enshrining the principle of ultimate human responsibility for their impacts. Programmers should be trained in the principles of human-centred design and a certification process for the companies that produce the software should be instituted.

The more highly automated the system, the more important the remaining workers are to the effective function of that system. Automation cannot completely eliminate errors, so humans must have oversight of technology. In many cases this requires that workers be allowed time in control of their equipment, in order to develop and hone the skills and knowledge necessary to the successful resolution of emergency situations.

[46] Interview with Amazon workers in Spain, March 2019.
[47] 'Somali workers in Minnesota force Amazon to negotiate', November 2018, https://www.nytimes.com/2018/11/20/technology/amazon-somali-workers-minnesota.html

There are global examples of the success of the human-centred approach. In Norway a Coop warehouse near Oslo was highly automated, but the HK Norge trade union was involved from the beginning. Workers were trained to operate and maintain the new machines and now take pride in their warehouse. In Argentina railway signallers were brought into the process of redesigning the signalling system. The workers developed a new digital-analogue signals box that saved the government millions of dollars and preserved jobs. In another Argentinean case, partly automated rubbish trucks were brought in, but the union was involved and able to negotiate new roles for the workers displaced. These were reassigned from the trucks to operate mini street sweeping machines, and the service was then expanded into new areas of Buenos Aires.

These examples from among ITF affiliates help highlight the ways in which early involvement of workers can resolve multiple issues for workers, companies and government.

4.2 Lifelong Learning, transition funds and the new social contract

Workers whose jobs are significantly changed by the introduction of new technologies should be supported in the acquisition of new knowledge and skills to enable them to make the most of change. Workers who lose their jobs to technological change should have access to free education and training opportunities provided by the state and by their employers.

Workers help to "train" the digital technologies that replace them, by carrying out the actions that the sensors measure. This data is then passed onto software systems that 'learn' by 'analysing' the data the workers produce, therefore it is workers who enable highly automated systems to designed. Furthermore, the ongoing process of digitalisation will increasingly change the skills and abilities required in work. Therefore, workers should be provided with lifelong learning opportunities in exchange for the way in which their collective work helps to develop new technologies. This would significantly mitigate the challenges technological change poses for workers and would ensure that the economy enjoys an adequate supply of qualified labour.

The social implications of the transition to a digitalised economy are serious, with job losses, job shifts, the emergence of new professions and the displacement of labour all part of the equation. In order to successfully meet these challenges states will need to establish transition funds which target the funding of training and skills development, as well as potential compensation for job losses. These funds should be part of a renewed Social Contract as argued for by the ITUC.[48] The renewed social contract should also ensure that collective bargaining is required to cover digital technologies and data under the principle of human-centred design.

[48] 'A New Social Contract: Crisis, Recovery and Resilience', https://www.ituc-csi.org/crisis-recovery-resilience

4.3 Data requires worker representation

Data is the language of the digitalised world. Data is the raw material of information, information the basis for knowledge, and knowledge is a form of power. Therefore, whoever collects, has access to and can analyse data enjoys the potential for power and control, and power and control can translate into wealth. This is why in recent years analysts have called data the 'oil of the 21st century'.[49] Once digital data is produced it can be freely reproduced and potentially used for purposes far removed from those for which it was collected.

The issues raised by the data and the digitalization of the workplace require workers to have a strong voice. Digitalisation is expanding the areas under surveillance, increasing the measurement of processes and intensifying the pressures of work. This has health and safety implications, but also privacy implications for workers. Digitalisation is also blurring the boundaries between work and leisure, the personal and the public, and changing the skillsets and locations of labour. These direct and indirect impacts derived from data require workers to have a strong voice in their workplace.

To accurately reflect the importance of data in the new digitalised economy there should be a "workers' data" category, and regulations should be established over its collection, storage and use, as well as stipulating some form of compensation for the production of data. These could refer to UNI Global's Ten Principles on Workers' Data.[50] Since data is a product of digitalisation, some experts are suggesting that companies should be required to fulfil a 'Duty to Report' that would require them to state the types of technology they are introducing, and enforce consultation with workers.[51]

Therefore, workers should have some recognised form of collective ownership or control over the data they produce while at work because it is as much a product of their labour as the final product or service that they are involved in 'producing'.

One way of achieving this would be to enable some form of collective part-ownership of large companies, as was suggested by the UK Labour Party in 2017.[52] Another would be the EU-style works council arrangement whereby workers have representatives on the management boards at company and sectoral level. However, in some cases the issues raised by technology go beyond a single employer or workplace, as in a logistics cluster, or a port, or airport. In these locations the organization of joint technology councils with representation from across employers, government and trade unions could

[49] 'Data is the new oil of the digital economy', https://www.wired.com/insights/2014/07/data-new-oil-digital-economy/
[50] http://www.thefutureworldofwork.org/opinions/10-principles-for-workers-data-rights/
[51] For this and other ideas on regulation of technology see Spencer, D., Cole, M., Joyce, S., Wittacre, X., Stuart, M. 2020 (forthcoming). *Digital Automation and The Future of Work.* CERIC, University of Leeds. Scientific Foresight Unit (STOA) of the European Parliament, Brussels.
[52] UK Labour Party, 'Alternative Models of Ownership', 2017. https://labour.org.uk/wp-content/uploads/2017/10/Alternative-Models-of-Ownership.pdf

also be considered. These councils should be enabled to control the types of data collected, the purposes of that data collection, and also where this data is stored.

4.4 Environmental Protection

To ensure that new technologies have a neutral or positive impact on the environment an environmental impact assessment should form part of the decision to deploy any new technology. These assessment processes must include trade unions and dedicated regulatory bodies.

4.5 Regulation and Certification of workplace software and AI

Digitalisation is leading to the increased use of algorithms in workplaces across the world. However, neither the individuals that programme workplace technology, or write management/control algorithms, nor the companies that sell these products are certified or held to any unified set of standards. ITF believes that a key step towards ensuring human-centred design, and therefore mitigating the negative potential of some applications of digital technology, is the certification and regulation of the technology producers.

Certification should be based upon criteria including worker involvement in the design of the technology, worker feedback on the functioning of the system, including its health and safety implication, worker involvement in the setting of criteria within the algorithms. It should also include regulated testing for gender impacts, youth impacts, environmental impacts and impacts on ethnic minorities. Since the functioning of some forms of AI is obscure even to those who have developed it, the certification should also ensure that the designers clearly understand and can explain how the system they have produced functions, and that the system function as a whole is transparent for workers and regulators. Certification should also ensure that the data that software or AI is working from is fit for purpose, and assessed for biases, relevance and so on. In order to facilitate the work of the certifying body, a national register of workplace digital technologies should be created which would see companies register digital technologies such as AI, automated or highly automated machinery and tools, remote operation and process management systems.

One serious problem with the newer applications of 'self-learning' software such as AI, is the way in which producers allege the ability to make predictions about behaviour, emotional states and other private and intimate aspects of the person. This technology is built various forms of surveillance. Unfortunately, experience is showing that this 'affect recognition' is severely flawed, and can be hugely distorted by social prejudices reflected in the data (the categorization of black males as likely to commit crime, or white males with private school education in their 50s being good management material), cultural differences (the way different cultures can express emotion) for example.[53] The makers also

[53] On AI and cultural differences see Purdy Zealley, Maseli, 'The risks of using AI to interpret human emotions' Harvard Business Review, November 2019, https://hbr.org/2019/11/the-risks-of-using-ai-to-interpret-human-emotions On banning affect recognition see 'Emotion recognition technology should be banned says an AI research institute', December 2019. https://www.technologyreview.com/2019/12/13/131585/emotion-recognition-

often claim to be able to accurately predict issues such as illness, depression, anxiety, aggression, happiness among others, all of which clearly have potential for misapplication in the workplace. We would therefore propose that affect recognition and other technologies that target the inner life of the person be banned from use in the workplace at least in the medium term. The use of fitness trackers, facial recognition technology, and other devices that can provide the data for affect recognition should also be limited in the workplace.[54]

This testing and subsequent certification should be carried out at national level under the supervision of a tripartite body serviced by expert advisers. Adequate training in the issues at hand should be provided to all the members of the tripartite certifying body.

The certification system should also consider the creation of a set of ethical criteria for software programmers, AI specialists and other technical specialisms in order that they, like doctors or engineers, be trained in understanding the ethical implications of their work, particularly its impact on workers. To reinforce this ITF believes that software, AI and other digital systems should have named individuals, or specific companies assigned. These individuals or companies would be legally liable for the negative impacts of their products, helping to ensure the system includes an element of self-regulation.

Finally, certification should also cover cyber-security. Many transport workplaces are located near or in the midst of urban areas. They enable the transportation of large numbers of people, or the storage of strategically important goods. Many of these materials are toxic or volatile. In recent years we have witnessed the increased digitalization and automation of systems, equipment and machinery in areas such as ports and airports. Yet there is expert evidence to suggest that it is almost impossible to guarantee the cybersecurity of these digitalized systems.[55] The number of cyberattacks is increasing. In a recent high-profile case, an Israeli attack disabled the Shaheed Rajee port in Iran. Digitalisation therefore clearly has national security implications. Last month's explosion in the Port of Beirut stands as an example of the kind of danger that could be posed by the hacking of a port, an airport, or a large petrochemical storage facility for example. There are clear implications for the general public and transport workers. This is why it is of deep concern to ITF that the digitalization, automation and remote operation of transport tasks is proceeding without due consideration for the potential impacts of cybercrime or cyberwarfare. Certification should also ensure either that the system is cyber secure, or that only low-risk systems are digitalized.

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technology-should-be-banned-says-ai-research-institute/ the report is available here: https://ainowinstitute.org/AI_Now_2019_Report.pdf

[54] Spencer, D., Cole, M., Joyce, S., Wittacre, X., Stuart, M. 2020 (forthcoming). *Digital Automation and The Future of Work.* CERIC, University of Leeds. Scientific Foresight Unit (STOA) of the European Parliament, Brussels contains references to the discussion around surveillance, affect recognition and other issues with data.

[55] 'Ports increasingly targeted by cyberattacks as maritime incidents surge' July 2020. https://www.offshore-energy.biz/ports-increasingly-targeted-by-cyberattacks-as-maritime-incidents-surge/

4.6 Digitalisation, social dialogue and taxation

The issues raised by the digitalization of the economy go beyond the workplace. As described in a recent report from Public Services International (PSI), the digitalization of social spaces through social media, the increasing use of AI in policymaking and governance, the development of smart cities, the increasing connection between the links of the supply chain and the broader economy all require society as a whole to engage with the issues and develop a new set of rules with which to successfully manage the transition into a society where we have much more data.[56]

In relation to the economy the solution needs to ensure a fair playing field for all actors in the economy, prevent the phenomenon of 'digital monopoly' or of 'digital monopsony' that we are now witnessing with firms like Google, Microsoft, Amazon, Facebook and Apple. There should be rules preventing these acting as both marketplace, seller and producer, such as those applied recently in India.[57] Others have argued that these companies should be treated as public utilities and regulated as such, or simply nationalized. There should be rules on the international transfer of data, because data describes, and is a potential source of knowledge and therefore power. Some forms of sensitive data should be held within national boundaries, as has been legislated by many countries. Digital companies should also pay fair levels of taxation.

There have been many suggestions on how the digital economy should be taxed, with France leading the way in their development. Fundamentally these are linked to some formula that takes into account revenues, company valuation, the wealth of the owners, the size of the data flows in the national territory, the number of employees and their national market share. In the EU a Digital Sales Tax is already levied at 3% on gross revenues from online activities. Some experts are suggesting that funds accrued by the DST should go into a 'Digital Automation Fund' to offset potential negative impacts and sustain social and economic infrastructure.[58] However it is done, it is clear that it is essential that the digital economy be taxed on more equal terms with the rest of the economy.

[56] https://publicservices.international/resources/publications/economic-rights-in-a-data-based-society?id=10819&lang=en for recommendations on Smart Cities see the forthcoming Chapter on Smart Cities in the ITF Peoples' Public Transport Policy.
[57] https://www.reuters.com/article/us-india-ecommerce-explainer-idUSKCN1PP1Y2
[58] Spencer, D., Cole, M., Joyce, S., Wittacre, X., Stuart, M. 2020 (forthcoming). *Digital Automation and The Future of Work.* CERIC, University of Leeds. Scientific Foresight Unit (STOA) of the European Parliament, Brussels

Recommendations

Human-Centred Design and Negotiated Technology Introduction

- Adopt the ITF Guiding Principles for Digital Labour Platforms as the basis for regulation of gig economy employers
- Enshrine the principle of human-centred design, and consultation with workers and trade unions, into regulation on the introduction of new technologies
- Legislate to make it illegal to introduce technology as an anti-trade union measure, with specific criteria defining such use of technology
- Regulate to ensure that imported digital technologies, software and AI are adapted to Australian conditions
- Regulate to ensure technology is monitored for health and safety, environmental and discriminatory impacts, and to ensure these are rapidly eliminated
- Regulate to ensure monitoring, benchmarking, surveillance and control systems are subject to agreed rules for use between employers and trade unions
- Ensure that increased intensification of work is compensated either through increased pay, or reduced working hours
- Regulate to ensure human oversight of highly automated and automated machinery, with time in control to hone and develop skills
- Enshrine the principle of ultimate human and corporate responsibility for negative impacts of technology

Lifelong Learning, transition funds and the new social contract

- Free education and training for workers displaced by new technologies provided by the state or employers upon the principle that workers 'train' the technology that replaces them
- Free training provided by the employer for workers exposed to new technologies

- Establish transition funds to cover the costs of the transition to new technologies

- Ensure that labour regulation includes the requirement for collective bargaining agreements to cover digital technologies and data under the principles of human-centred design

- Reinforce and reinvigorate social protections as part of the Social Contract

Data requires worker representation

- Establish a workers' data category in data regulation and recognise the role workers play in the production of data

- Establish controls over the types of data that can be collected under the principle of minimum necessary collection, transparency and worker access (see UNI Principles on data)

- Control where workers' data can be stored and what it can be used for in such a way that workers, regulators and trade unions can easily access the data

- Introduce a 'Duty to Report' to ensure companies report the technologies they are using, and to enforce consultation with workers

- Increase worker participation in corporate decision-making as a way of decentralising the regulation of the impacts of digital technologies, perhaps through partial worker ownership, or the introduction of works councils.

- Consider legislation requiring the organisation of tripartite technology councils in locations where technology leads to impacts beyond one employer

Environmental protection

- Ensure that all new technologies are assessed against environmental criteria, including cyber-security criteria

Regulation and Certification of workplace software and AI

- Introduce the certification and regulation of technology producers, including those that write software, produce AI or other digital technologies with workplace applications

- Create a national register of workplace digital technologies covering AI, process management software, automated and highly automated machinery and tools, as well as remote operation systems among other applications of digital technology

- Certification should cover the issues highlighted in the submission, including worker involvement in the design process, remote operation, bias testing to avoid gender and other discrimination, transparency of algorithms

- Ban the use of 'affect recognition' AI which targets the 'inner life' or the 'private life' of the worker through reading of emotions and feelings through the use of biometric and facial recognition technologies

- Certification should include ethical criteria, including awareness of health and safety impacts, that software programmers, AI developers and other digital technology developers must be familiar with

- Assign named individuals and specific companies to particular technologies to ensure legal liability for negative impacts in order to create the incentive for self-regulation

- Create a legal framework around liability for the impacts of technology that covers health and safety issues, job losses, job displacement and deskilling which would assign liability between the technology provider and the employer

- Ensure certification covers cyber-security under the principle that insecure systems pose health and safety risks to workers and the general public, as well as national security in some cases

- The certification body should be overseen by a tripartite body supported by expert advisers from each side, provided with adequate training

- Certification must be supported by a reinforced labour inspectorate with the remit to inspect and evaluate workplace technologies

Digitalisation, social dialogue and taxation

- Foment the development of a broad and far-reaching national debate around digitalisation and data, and particularly its potential impacts on civic and political life through social media and the digitalisation and automation of public services

- Use the ITF Recommendations on Smart Cities as a way to engage unions in safeguarding the positive impacts of digitalisation across urban spaces, including the minimisation of the use of technology to monitor and control workers, workers' rights clauses in public procurement, the inclusion of working conditions criteria into BRT and MaaS systems

- Pass legislation that targets the development of digital monopolies which create an unfair playing field for non-digital companies, for example by ensuring they pay fair rates of tax, potentially through a Digital Sales Tax

- Prevent e-commerce actors from being marketplace, seller and producer simultaneously

- Consider the nationalisation of some digital monopolies on the basis that they are providing an essential public service

- Establish rules for the types of data, including workers' data, which should be held nationally, and which should be open access for regulators