NSW GOVERNMENT

Work health and safety perceptions of food delivery platforms in the gig economy

Centre for WHS

THE BEHAVIOURAL INSIGHTS TEAM

MACQUARIE University

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Executive Summary

Background and method

Food delivery workers (FDWs) for app-based food delivery platforms (FDPs) face a multitude of work health and safety (WHS) risks. While the number of incidents involving FDWs that have been reported to SafeWork NSW is low, there has been an exponential increase over the past three years, from one incident reported in 2017 to 19 in the first half of 2020 alone. The majority of these incidents are road and traffic related, but previous research has highlighted additional harms that FDWs risk on the job, including physical assault, intimidation, and verbal abuse.

FDWs are independent contractors and are thus primarily responsible for their own WHS. However, the FDPs that contract FDWs are also crucial stakeholders within the WHS landscape. FDPs and FDWs share a duty of care toward anyone involved in or impacted by their work, yet ambiguity remains over who is responsible for which aspects of WHS risk mitigation and management. While contractors in other industries, such as construction, must also manage their own WHS through measures such as procuring their own safety equipment and training, contractors on a construction site, unlike FDWs, work within an environment with a greater degree of control (e.g. rules about personal protective equipment (PPE) upon entering the site) and direct oversight (e.g. from other on-site staff or contractors). These environmental characteristics, in combination with demographic factors and limited WHS knowledge and skills

(Convery, Morse, Fung, Wodak, Powell, Quinn, Taylor, Searle, & Vårhammar, 2020), means that FDWs may lack the capacity to fully and effectively manage WHS risks on their own.

While the risk profile and concerns of FDWs are emerging, limited research has explored the WHS perspectives and priorities of FDPs. Understanding these perspectives is critical in developing interventions that improve WHS for FDWs, as well as those impacted by their work, such as customers, restaurants, and members of the public.

The Behavioural Insights Team, in collaboration with Macquarie University and the Centre for Work Health and Safety, is undertaking a four-phase project that aims to improve the WHS of FDWs in the gig economy. The objective of Phase 1 was to describe the characteristics of FDWs and their WHS knowledge, concerns, and behaviours. The findings of Phase 1 are detailed in the report *Work health and safety of food delivery workers in the gig economy* (Convery et al., 2020). Phase 2 aimed to describe the characteristics of FDPs, their knowledge, concerns, and behaviours in relation to the WHS of those engaged, or caused to be engaged, by their operations. In Phase 3, the findings of Phases 1 and 2 will inform the development of proactive risk prevention activities to improve FDWs' WHS, which will be co-designed with relevant stakeholders. In Phase 4, the outcomes of these prevention activities will be evaluated in the field.

This report details the results of Phase 2, in which we undertook semi-structured interviews with large, international FDPs; small, local FDPs, including those who deliver alcohol; and a vehicle hire company that supplies e-bikes and associated safety equipment directly to FDWs. We also drew on data collected during a "service safari", in which members of the project team signed up to the major FDPs, went through onboarding, and worked a shift as a FDW.

Interview and service safari data were distilled into key insights. The insights were then synthesised with the opportunities and ideas presented in conjunction with our earlier research (Convery et al., 2020) to inform the subsequent two phases of the project, in which proactive risk prevention activities to improve the WHS of FDWs will be co-designed with stakeholders and trialled in the field.

Results and discussion

Characteristics of FDPs

All FDPs we interviewed operated within a contractor-based business model that uses automated systems to coordinate the behaviour of three stakeholders: FDWs, restaurants, and customers. Both the business model and the automated nature of their systems have important implications for FDWs' WHS. FDPs reported a belief that they could offer, but not mandate, WHS training, the use of personal protective equipment (PPE), and other WHS promotion mechanisms without risking the reclassification of FDWs from independent contractors to employees. For globally operating FDPs, the automated nature of the systems offers both challenges and opportunities in relation to WHS. For example, when WHS initiatives are relevant on a global scale (e.g. in response

to COVID-19), this means that initiatives can be implemented and scaled up rapidly. However, as the systems are developed overseas, some FDPs reported that it can be difficult to implement app-based initiatives that are relevant to a local context. Global FDPs who did engage in locally focused WHS initiatives felt that the cost was high relative to the financial benefits. Smaller FDPs faced different WHS challenges. They appeared to have less automation and less WHS knowledge than larger FDPs.

WHS knowledge of FDPs

WHS knowledge among the FDPs we interviewed was relatively high. All FDPs named traffic accidents and COVID-19 as the primary WHS risks faced by FDWs. In contrast to our Phase 1 findings, in which FDWs reported that verbal abuse is both commonly experienced and a major WHS concern, only one FDP identified verbal abuse as a WHS risk. Almost all FDPs had created teams dedicated to FDW WHS, which they reported was driven by a desire to retain and satisfy FDWs. However, the FDPs also reported a belief that their WHS obligations to FDWs were minimal and that FDWs were ultimately responsible for their own WHS.

WHS behaviours of FDPs

All FDPs reported that they provided mechanisms to encourage both *proactive* WHS behaviours (those that FDWs engage in to manage risk) and *reactive* WHS behaviours (those that FDWs engage in after a WHS incident has already occurred). The proactive risk prevention activities they provide include WHS training resources for FDWs during the onboarding process, safety features within the app (such as maps that offer bicycle-specific navigation), and PPE to reduce risks associated with COVID-19. Methods for supporting reactive WHS behaviours were largely incident reporting mechanisms. Some FDPs acknowledged that despite the existence of these mechanisms, low reporting rates by FDWs was a concern. These FDPs suggested that lack of knowledge about how to report WHS incidents and fear on the part of the FDW about the repercussions of lodging a report may contribute to low reporting rates. These views are corroborated by our findings from Phase 1, in which relatively few FDWs reported accessing the WHS training resources provided by FDPs and a belief that reporting a WHS incident to their FDP could pose a threat to their continued employment and/or visa status (Convery et al., 2020).

WHS perceptions of vehicle hire companies

In contrast to FDPs, the vehicle hire company we interviewed reported an obligation to ensure vehicles complied with safety regulations and were properly maintained and serviced. They reported a perception that unsafe and poorly maintained vehicles were a key safety risk for FDWs. This view is supported by our Phase 1 findings, in which some FDWs reported self-servicing their vehicles without the requisite skill level, or with substandard or worn parts (Convery et al., 2020). In response, the vehicle provider we interviewed provides safety equipment and regular maintenance as part of their standard offering, which are included in their rental price.

Opportunities and ideas

Based on the insights of Phases 1 and 2 of the research, and a review of successful interventions from other policy areas, we have identified eight ideas to take forward to the co-design and trial phases of this project. These were presented earlier along with the insights from Phase 1 (Convery et al., 2020). Here, we have applied the insights from Phase 2 of the research to provide the FDPs' perspective. The ideas are aimed specifically at changing behaviour to improve WHS and are all underpinned by behavioural science. Each idea was rated in terms of its impact and feasibility. Impact was estimated by assessing the approximate number of people the idea would directly affect and the extent to which the idea would directly or indirectly improve WHS. Feasibility was estimated by identifying the range of stakeholders who would need to "buy in" to the idea, assessing potential obstacles, and estimating costs.

We note that the ideas represent opportunities only, rather than firm recommendations. That is, the focus of the co-design and trial phases of this project is not limited to the ideas we have presented in this report, which are summarised in the following table.

Table 1: Summary of ideas for risk prevention activities.

Idea	Risks addressed	Impact	Feasibility
Increasing participation in safety training at onboarding through making it mandatory or using better choice architecture	*Lack of familiarity with Australian road rules and understanding of WHS obligations*	*High*	*High*
Alter the order acceptance process to minimise the risk of phone distraction	*Distractions on the road*	*High*	*Medium*
Benchmark the time that FDPs are allowed to give FDWs for each delivery using map APIs	*Rushing behaviours; stress due to perceived threat of robbery*	*High*	*Medium*
Reduce abuse by humanising FDWs to potential abusers	*Abuse from businesses, customers, and members of the public*	*Medium*	*High*
Use a rating system to alter restaurant behaviour	*Abuse from businesses, customers, and members of the public; COVID-unsafe waiting behaviours; stress due to perceived threat of robbery*	*Medium*	*High*
Facilitate mentor schemes or buddy systems	*Lack of familiarity with location-specific WHS risks*	*Medium*	*Medium*
Send targeted and triaged safety prompts and reminders at critical points	*COVID-19 risks; weather-related risks; abuse*	*High*	*Low*
Prompt FDWs to anonymously report near-miss and abuse hotspots, and map them	*Abuse from businesses, customers, and members of the public; environmental risks like poorly lit roads*	*Medium*	*Medium*

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Introduction

Background and objectives

Food delivery workers (FDWs) for app-based food delivery platforms (FDPs) face a multitude of work health and safety (WHS) risks. Our previous research with FDWs indicated that their primary concerns were traffic accidents, robbery and vandalism of their equipment, and verbal abuse (Convery et al., 2020). At the time of writing, the global COVID-19 pandemic poses an additional and complex challenge to food delivery WHS in the gig economy. While the risk profile and concerns of FDWs are emerging (Convery et al., 2020), limited research has explored the perspectives and priorities of FDPs. FDPs are key stakeholders influencing the WHS of FDWs, as well as others impacted by their work, such as customers, restaurants, and members of the public. Understanding the FDP perspective is critical in developing effective interventions to improve the WHS of FDWs.

The Behavioural Insights Team, Macquarie University, and the Centre for Work Health and Safety are conducting a four-phase research project that seeks to improve the WHS of FDWs and those impacted by their work. In Phase one, we explored the WHS knowledge, concerns, and behaviours of FDWs (Convery et al., 2020). In Phase two, the results of which are detailed in this report, we explored the characteristics of FDPs and their knowledge, concerns, and behaviours in relation to the WHS of those engaged, or caused to be engaged, by their operations. In Phase three, proactive risk prevention activities will be co-designed with end users, industry partners, and other stakeholders. In Phase four, these prevention activities will be evaluated to determine their effectiveness.

In this report, we first provide an overview of the existing literature. We note that there is some overlap with the literature review presented in our report on the FDW perspective (Convery et al., 2020). We then outline our research methods, which include interviews with FDPs and a service safari, in which members of the project team signed up to work shifts as FDWs. We present and discuss our synthesised findings under the following subheadings:

1. Characteristics of FDPs
2. WHS knowledge of FDPs
3. WHS concerns of FDPs
4. WHS behaviours of FDPs
5. WHS perceptions of tertiary stakeholders

Based on these insights, we close with a series of opportunities and intervention ideas to explore and trial in subsequent phases of the project.

Literature review

The regulatory landscape

WHS regulation for FDPs and FDWs in the gig economy is complex. No jurisdiction has created laws specific to the needs of the on-demand workforce (Victorian State Government, 2018). There is ongoing discussion as to whether current legislation (e.g. definitions of 'workers,' 'employees,' and 'independent contractors') is fit for the gig economy (Horton et al., 2018).

In Australia, there are nine WHS jurisdictions, with one for each state, territory, and the Commonwealth, each with its own regulator (Horton et al., 2018). Safe Work Australia is responsible for maintaining 'model' laws around WHS, such as the *Model Work Health and Safety Bill* (Safe Work Australia, 2019). Jurisdictions can then adapt and implement these model laws as an Act, at which point they become legally binding. In all jurisdictions, except Victoria and Western Australia, the WHS laws are based on the model laws created by Safe Work Australia (2019).

For individual jurisdictions, there are ongoing challenges in identifying what the WHS requirements are for FDPs. This is driven by jurisdictional differences in the version of the model laws implemented, the specific phrasing of the laws, and the interpretation of the laws (e.g. differing classifications of gig economy workers). The current *Model Work Health and Safety Bill* imposes a duty of care on all "persons conducting a business or undertaking" (PCBUs) to ensure, so far as is reasonably practicable, the WHS of their workers and those who might be impacted by their work (Safe Work Australia, 2019). According to the *Model Work Health and Safety Bill*, some examples of how PCBUs may fulfill the duty of care include providing access to a safe working environment and facilities; providing information, training, instruction, or supervision; and monitoring the health of workers and workplace conditions with the aim of preventing illness or injury. As contractors, individual FDWs are also legally classified as PCBUs, meaning that as per the *Model Work Health and Safety Bill*, FDWs also have a duty of care to those who may be impacted by their work. It also means that FDWs must take responsibility, so far as is reasonably practicable, for their own WHS.

FDWs are typically classified as 'independent contractors' and thus not covered under workers' compensation schemes (Figure 1). While this is an industrial relations (IR) issue, there are implications for WHS. In the absence of a workers' compensation scheme, for example, FDWs may not be incentivised to report WHS incidents to the FDP or to the WHS regulator. Underreporting of WHS incidents means that both FDPs and the WHS regulator are likely to underestimate the prevalence and severity of the WHS risks and incidents that FDWs experience and hinder efforts to implement initiatives to promote safe working environments that closely align with the needs of FDWs.

SCHEME	COVERAGE OF INDEPENDENT CONTRACTORS
NEW SOUTH WALES	Not unless contractor is a deemed worker pursuant to schedule 1, *Workplace Injury Management and Workers Compensation Act 1998*
VICTORIA	Not unless the contractor is a deemed worker pursuant to clause 9 of schedule 1 of the *Workplace Injury Rehabilitation and Compensation Act 2013* (broadly based on 80% of time or income from one employer)
QUEENSLAND	No, unless determined an employee using the ATO Decision Tool
WESTERN AUSTRALIA	No, unless employed under contract for service and remunerated in substance for personal manual labour or service
SOUTH AUSTRALIA	Yes, if covered by definitions in section 4 of the *Return to Work Act 2014*: • 'worker' which includes a person by whom work is done under a contract of service (whether or not as an employee) • 'contract of service' which includes if person undertakes prescribed work or work of a prescribed class
TASMANIA	Persons engaged under a contract for services are not covered unless the contract is for work exceeding $100 that is not incidental to a trade or business regularly carried out by the contractor. A contractor is not covered during any period for which they have personal accident insurance — section 4B of the *Workers' Rehabilitation and Compensation Act 1988*.
NORTHERN TERRITORY	No, unless determined an employee using the ATO Decision Tool
AUSTRALIAN CAPITAL TERRITORY	No, if employed under contract for services; however, there are provisions for the coverage of regular contractors
C'WEALTH COMCARE	No, compensation only through employment of employees
C'WEALTH SEACARE	No, compensation only through employment of employees
C'WEALTH DVA	Yes

ATO = Australian Taxation Office, C'Wealth = Commonwealth, DVA = Department of Veterans' Affairs

Source: Information provided on request by Safe Work Australia – Comparison of workers' compensation arrangements in Australia and New Zealand 2017, Table 2.4a: Summary of coverage

Figure 1: Independent contractors' coverage under Workers' Compensation schemes (Horton et al., 2018).

FDPs are diverse

App-based food delivery is a massive market, accounting for 5.6% ($2.6b) of the restaurant trade in Australia. It is also growing at 86% per year, without impacting income that restaurants would have made without app-based delivery (AlphaBeta, 2020). In Australia, the sector dates back to 1985 when Suppertime launched in Sydney as a courier service for restaurants. The major FDPs currently operating in Australia are Menulog, Deliveroo, EASI, Uber Eats, and DoorDash. Menulog commenced app-based food delivery services in 2009, followed by Deliveroo and EASI in 2015, Uber Eats in 2016, and DoorDash in 2019. However, the sector is in a state of constant change, with FDPs continually entering the Australian market, merging with or acquiring existing FDPs, and/or ceasing Australian operations altogether. For example, Suppertime was acquired by the German FDP Foodora in 2015, which had been acquired by another German FDP, Delivery Hero, earlier in the same year. After operating in Australia for three years, Foodora abruptly exited the Australian market in 2018. More recently, the sector has also seen an influx of new start-ups with unique business models, such as the driver-owned FDP Ride On Australia.

While there is an overarching commonality in their business model, the exact way these companies operate is varied. FDPs engage delivery contractors using a variety of transport methods, each with their own balance of bicycles, e-bikes, scooters, and cars. As a result, the geographic range and speed of delivery differ between FDPs. FDPs charge restaurants a commission fee to be represented on their platform, which can range from 14-35%. Many

restaurants will choose to represent themselves on multiple FDPs. Some restaurants, especially larger chains, can also broker exclusivity deals with FDPs, which handicaps specific market segments. Competition among FDPs thus relies on a number of factors, including exclusivity with restaurants, the range of restaurant food offered, delivery times, and fees, noting that customers are not locked into a single FDP. It is important to note that FDPs are typically reporting net losses (Bailey, 2018; Ball, 2020; Koehn, 2019), and thus there is some concern over the long-term sustainability of their business models.

FDPs have a range of safety policies and information for FDWs

Even with a relatively small number of FDPs, the diversity in their approaches point toward a general lack of WHS regulatory constraint and lend each organisation significantly different operational profiles. However, this is not unique to this industry, as WHS laws are generally not prescriptive: the "how" of ensuring the WHS of FDWs is up to each FDP and their unique context, meaning that the quality and extent of proactive risk prevention activities vary considerably from one FDP to the next. Some offer little to no information on WHS practices and policies, whereas others direct FDWs to online articles, videos, and quizzes during the onboarding process (Veen, Barratt, & Goods, 2019). Deliveroo has established Australia's first FDW-run safety advisory panel, whose aim is to draw on the real-world experiences of FDWs to inform the development and implementation of safety initiatives across their fleet (Deliveroo, n.d.). This range in WHS management approaches is likely to impact the WHS perceptions and behaviours of FDWs, especially for those FDWs who concurrently work for multiple FDPs. Differences in legal regulation in different regions may further impact WHS practices: some FDPs tailor their practices to a specific region, while others take a universal approach. Responsiveness to changing regulation is likely to differ based on whether the FDPs have competing priorities in overseas markets.

Payment structures for FDWs may incentivise risk-taking

FDWs are typically paid per delivery, not an hourly wage, which incentivises speeding and other risky behaviours. FDWs are more likely than other types of workers in the gig economy to report being reliant on this work for their income (McDonald et al., 2019). This makes them more likely than other gig economy workers to take risks to guarantee sufficient income (Christie & Ward, 2019). In a mixed-methods study conducted with drivers in the European gig economy, the authors found that many interviewees reported feeling that a pressure to complete more deliveries directly led them to take risks, such as speeding, running red lights, and ignoring road signs (Christie & Ward, 2019). In the survey component of the same study, these behaviours were frequently reported. Almost half of the survey respondents admitted to speeding, and approximately a third had driven or ridden through a red light. This finding has also been reported in news articles in Australia (e.g. Ross, 2019).

Some FDPs use 'surge pricing', where customers are charged more and FDWs paid more during periods of high demand (Woolley, 2019). Surge pricing can increase the risks to FDWs as it may be correlated with more dangerous environmental conditions (e.g. when it is applied during adverse weather conditions, which discourage people from going out for food). In addition to more obvious hazards, such as wet roads and poor visibility, poor weather conditions can make it more difficult for FDWs to use their phone, which they require to accept and confirm orders via the FDP app and to navigate between pickup and delivery locations. For example, in Christie and Ward's (2019) study, one FDW reported that, as their phone was a touchscreen, using it while cycling in the safest way possible was almost impossible during wet weather conditions.

Algorithmic management can affect WHS

FDWs (and many other platform-based gig economy workers) work within a system of 'algorithmic management', in which variables in an algorithm determine work assignments and performance metrics for workers. Performance criteria for FDWs by major FDPs in Australia primarily consist of customer satisfaction ratings, the proportion of deliveries accepted by the FDW, and travel time between restaurants and customers (Veen, Barratt, & Goods, 2019).

Not meeting these performance metrics can lead to FDWs' work being terminated. Although the proportion of riders who are terminated each year is extremely low, *perceived* risk of termination may be high amongst FDWs (Chau, 2020). In interviews conducted in 2017, Australian FDWs reported that there seemed to be a lack of transparency in the performance rating system and that their customer rating could be impacted by errors outside of their control (e.g. leaky containers from the restaurant), leading to feelings of frustration and uncertainty (Veen, Barratt, & Goods, 2019).

In-app prompts pose a risk to FDWs' safety

FDWs are required to check their phone regularly while working. This includes accepting or declining deliveries through the FDP app, using their phones as a navigation device, and responding to calls and messages from customers. Checking a mobile phone while driving increases the risk of accidents occurring (Simmons, Hicks, & Caird, 2016), including for professional drivers (Choudhary & Velaga, 2018; Queensland Centre for Accident Research & Road Safety, 2015) and when the phone is used for navigational purposes (Dong et al., 2019). In Christie and Ward's (2019) study, drivers and cyclists acknowledged that their phones were a distraction, with some reporting that they actively tried not to use it. However, they also reported that despite trying to drive safely, the notifications from the FDP app remained a distraction, and that they felt pressure from the app to check their phones. In a qualitative study of 58 FDWs working in Perth and Melbourne for Uber Eats and Deliveroo, 24% engaged in 'multi-apping,' meaning they worked for multiple FDPs concurrently within the same shift (Veen, Barratt, & Goods, 2019). If FDWs are using multiple apps concurrently, this may increase the number of notifications they are receiving.

In addition to notifications that provide information, some FDPs have (or have had, at some point, if not currently) had an 'auto-accept' feature, meaning that unless FDWs decline the order within 10 seconds, they automatically accept the next order (Veen, Barratt, & Goods, 2019). This feature increases the supply of FDWs available, increasing the likelihood that FDPs can meet demand. However, it takes control away from the FDW: it requires the FDW to check and interact with their phone within 10 seconds, which may place them at risk of accidents (e.g. through checking their phone while driving or cycling, or through unintentionally accepting orders while fatigued).

FDWs who are responsible for their own equipment and insurance can face greater WHS risks

As described above, the majority of FDWs work within a contractor model. The contractor classification of FDWs allows FDPs to capitalise on offering potential workers flexibility in working hours and methods (Barratt, Goods, & Veen, 2020), which is an important driver for recruitment as well as a key reason that workers seek contracts with FDPs (Convery et al., 2020). Engagement of FDWs as contractors means that FDWs are ultimately responsible for managing their own WHS. This is similar to the requirements for contractors in other industries, such as construction, who manage their own WHS through measures such as procuring their own safety equipment and training. However, contractors on a construction site work within an environment with a greater degree of control (e.g. rules about PPE upon entering the site) and direct oversight (e.g. from other on-site staff or contractors) than do FDWs. A consequence of the combination of inexperience, lack of formal oversight, and incentive to minimise out-of-pocket safety expenses is that many FDWs end up underinsured (Zhou, 2020) and without sufficient equipment to perform the job safely (Kudasz et al., 2010).

Taken as a whole, our review of the existing literature underscores the complexity and ambiguity of the landscape in which FDWs and FDPs operate, and highlights the need for focused research to better understand and address WHS risks and harms in this sector. In subsequent sections of this report, we describe the methods we used to gather data from and about FDPs, our findings and insights, and our ideas and opportunities for risk prevention activities to consider in the co-design and trial phases of this project.

Method

Our research methods for this phase of the project involved two primary streams of data collection. These were:

- Interviews with relevant primary, secondary, and tertiary stakeholders in the food delivery sector of the gig economy
- A service safari, in which members of the project team signed up to the major FDPs, went through onboarding, and worked a shift as a FDW

Interviews

We conducted 11 semi-structured interviews with representatives from relevant industry stakeholders. We classified the stakeholders as primary, secondary, or tertiary as follows:

- *Primary*: Large, international FDPs that operate Australia-wide
- *Secondary*: Small, local FDPs, including those that deliver alcohol
- *Tertiary*: A vehicle hire company that supplies e-bikes and associated safety equipment directly to FDWs

We conducted interviews with seven representatives at three large-scale internationally operating FDPs (primary stakeholders), three representatives from small-scale FDPs that operated either locally or nationally (secondary stakeholders) and one representative from a vehicle supplier supporting the industry (tertiary stakeholder). The secondary FDPs specialised in food delivery (1), food and grocery delivery (1), and alcohol delivery (1). All stakeholders were founded between 2012 and 2020.

Participants were recruited via cold call contact. The interviews were conducted between June and September 2020 via teleconference (either direct phone call or videoconference using the Google Meet platform). Interviews lasted between 30 and 45 minutes, and the questions related primarily to FDPs' perceptions on the main WHS issues facing FDWs, their WHS obligations to the FDWs, the WHS activities currently implemented, and the barriers to providing other WHS initiatives. The complete interview guide is shown in Appendix A. Findings from the interviews were consolidated into themes. These findings are explored in the Results and Discussion section below.

Service safari

To gain first-hand experience as FDWs, six team members undertook a service safari. A *service safari* is an immersive research method in which researchers assume a role within the community of interest to better understand real-world decisions, risks, and behaviours (Design Council UK, 2019). In this project, this involved three stages: (1) signing up to a FDP, (2) onboarding, and (3) working a shift as a FDW. In the sign-up and onboarding phases, the primary purpose was to

identify what WHS information was provided by the FDP and how that was delivered and/or tested, as well as any other instructions on how the food delivery work was to be performed. In the working phase of the service safari, the primary purpose was to identify WHS risks (and any incidents, if they occurred) along with barriers and facilitators to mitigating those risks directly from the perspective of a FDW. Only three team members were able to work shifts. This was due to the major FDPs restricting the number of FDWs they were onboarding at the time the research was conducted, which may have been due to an influx of workers during the COVID-19 pandemic. Team members attempted sign-up and onboarding to five primary FDPs and completed shifts with two of the five. They worked across a range of weather conditions and urban and suburban locations. One team member used a car to work a Tuesday dinner shift (3-hour shift in north Sydney) , one used an e-bike to work a Wednesday dinner shift (3-hour shift in east Sydney), and one used a bicycle to work a Thursday lunch shift (3-hour shift in central Sydney) and a Thursday dinner shift (4-hour shift in central Sydney), equalling a total of four shifts worked. Each team member who worked a shift was paired with an observer to take notes and photographs and to provide support as needed. For the car driver FDW, the observer rode in the passenger seat during the shift. For the e-bike and bicycle FDWs, the observer was positioned in an agreed-upon location within the delivery zone. The full service safari protocol is shown in Appendix B.

Results and Discussion

In this part of the report, we discuss our key findings and insights about the characteristics of FDPs and their WHS knowledge, concerns, and behaviours, as well as the implications of the findings for identifying and implementing WHS interventions.

Characteristics of FDPs

Most FDPs use an automated system and a contractor-based business model

Integral to the business model of the FDPs was the use of an automated system that coordinates the behaviours of three stakeholders: the FDW, the shop or restaurant, and the customer. The model relies on matching supply (of both FDWs and restaurant food) and demand (from customer orders). When a customer places an order, the FDP's system notifies the restaurant or shop of the order. The system may be fully automated, as is the case for all of the primary FDPs, or use a combination of automatic and manual order allocation, as is the case for several of the secondary FDPs. FDWs are then matched with the order, which individual FDWs can choose to accept or reject.

All FDPs used a contractor-based business model, with FDWs operating as independent contractors. For some of the primary FDPs, the model includes a rating system that is used as a performance metric for FDWs (see Algorithmic management can affect WHS in the literature review). However, there is an asymmetry in *who* can provide ratings. Specifically, customers (and in some instances, restaurants) can provide ratings of the FDW. However, our service safari found that FDWs typically cannot provide ratings of restaurants or customers. This asymmetry yields a power imbalance: while the poor performance of FDWs can be punished via low ratings, there is limited accountability for restaurant staff or customers.

There are various implications of this business model for WHS, which will be discussed in more detail in subsequent sections. First, the combination of a contractor-based business model and the flexibility sought by FDWs was consistently reported by the FDP interviewees as a barrier to implementing proactive risk prevention activities. This is because FDPs report concerns that providing benefits, including those related to WHS management, could risk the reclassification of FDWs from independent contractors to employees. Further detail about this is provided in WHS concerns of FDPs.

Second, fully automated systems that induct and train FDWs are presumably more efficient than those that require human intervention. However, full automation makes it challenging for FDPs to provide the oversight and hands-on training (e.g. shadowing and auditing) that may be found in on-site workplaces that use contractors, such as construction sites. Primary FDPs also report that while automated systems make tailoring WHS interventions to a local context difficult (see WHS concerns of FDPs), automation also means that WHS interventions that can be delivered via an

automated system can be scaled internationally, and thus have substantial reach (see WHS behaviours of FDPs).

Smaller FDPs appeared to have less automation and less WHS knowledge than larger FDPs

Two of the secondary FDPs we interviewed were new entrants to the market. They served smaller geographic regions (e.g. a single city) and reported offering lower commission rates for restaurants and higher pay for FDWs than the industry average.

In contrast to the primary FDPs we interviewed, only one secondary FDP had a customer-facing app. The other secondary FDPs required that customers place orders on their website or by phone. One secondary FDP reported frequently using text messaging to communicate with its FDWs, in contrast to larger FDPs that tended to communicate via the FDP app. Consistent with WHS research on small and medium enterprises from other industries (e.g. Pinder et al., 2016), the secondary FDP representatives reported that they were "figuring out" WHS as their business grew.

WHS knowledge of FDPs

FDPs named road and traffic accidents as a key WHS risk

All FDPs interviewed reported traffic accidents and injuries as a major WHS risk for their FDWs. Some interviewees perceived that other drivers lack awareness of the presence of FDWs on the roads and exacerbate the risk to FDWs through careless driving behaviour.

In contrast to the WHS concerns reported by FDWs (Convery et al., 2020), very few FDP representatives identified verbal abuse as a potential WHS risk. The exception to this was a secondary FDP, who noted that customer abuse regarding the Responsible Service of Alcohol (RSA) was a common concern:

> *"Refusing service [of alcohol] happens a lot - a lot more often than you refuse to give someone a pizza. It is tricky. We tell [FDWs] to remove themselves from the situation, I need to go talk to my boss, then we refuse them over the phone instead of it having it happen in person."*

Robbery of stock and vehicles, especially bikes and scooters, was also acknowledged as a potential risk. Robbery of stock was unique to alcohol delivery, where the secondary FDP noted that the motivation for the product and resale value is much higher than for food. A primary FDP noted that in some instances, authorities had reported incidents that had not been reported by the FDW who was involved:

> *"Authorities have contacted us about delivery drivers being assaulted, their scooter or bike being stolen while doing deliveries, or even on deliveries being pushed off their vehicle."*

Low rates of incident reporting were identified in our previous research (Convery et al., 2020) and is discussed further in the sections below.

Perhaps due to the timing of our interviews, COVID-19 emerged as the other primary WHS risk FDPs were aware of. FDPs' mitigation of the risk of COVID-19 is discussed in WHS behaviours of FDPs.

FDPs were aware of low reporting behaviours by FDWs

Our previous research has indicated that reporting (both to authorities and FDPs) amongst FDWs is low, with almost one in five (18%) FDWs surveyed saying that they would "never" report a WHS incident to the FDP (Convery et al., 2020). Our research with FDPs corroborated this finding, with FDPs saying that they were aware of low reporting behaviours. FDPs often had mechanisms in place to report incidents, but these were rarely used. For example, an alcohol delivery company had a panic button implemented on the app used by their FDWs. However, despite operating for several years, no FDW had pressed the button. Other primary FDPs reported that they would often find out about incidents through other channels, such as members of the community.

Some interviewees perceived that fear of deactivation could be a potential barrier for FDWs reporting incidents to the FDP. For example, one representative from a primary FDP expressed concern when reports come through members of the community rather than through their FDP. They speculated that cultural barriers and lack of awareness of reporting mechanisms could also reduce FDWs' reporting behaviour. The same representative acknowledged that FDWs may fear negative impacts if they were to report incidents, saying:

> *"Some of the [FDWs] are scared to tell us because… [they could be] scared that it will be of detriment to them."*

Our research with FDWs provides more depth to this speculation. For example, while there was some evidence that FDWs did not know how to report incidents, this was often driven by limitations in the reporting process, such as not being able to access helplines or failures in the in-app reporting mechanisms (Convery et al., 2020). Our research suggests that while some FDWs fear deactivation, a more prominent barrier for reporting to FDWs was a lack of expected benefit. That is, the FDPs were perceived as unlikely to help, difficult to contact, and likely to exploit "loopholes" that would mean FDWs did not receive the expected help from FDPs (Convery et al., 2020).

While our Phase 1 research with FDWs did not specifically explore cultural barriers to incident reporting, we did find that for those on temporary visas, who made up the majority of FDWs we surveyed, the cost of healthcare and a mistrust of police were barriers to accessing ambulance and police services in the event of a serious WHS incident (Convery et al., 2020).

FDPs engage in considerable work toward improving FDW WHS, but this is not driven by a sense of legal obligation

Across the board, FDPs felt their WHS obligations to FDWs were minimal. Many understood that they had a duty of care, but almost all FDPs reported that ultimately, the responsibility for WHS lies with the FDWs. No FDPs reported that they had any legal obligations to increase the safety of FDWs, with a representative from one primary FDP stating:

> *"We want to support [the FDWs]... but in terms of obligations, we obviously treat them as independent contractors and they are able to take the freedom that they have from that."*

Secondary FDPs also reported that they did not have any legal obligations relating to WHS. One reported that they based their knowledge of legal obligations on what they "read in the news" and that they took their "cues from other [FDPs]."

Despite the perception that their WHS obligations to FDWs were minimal, all primary FDPs had teams dedicated to FDW WHS. FDPs reported that the main incentive for these teams and their activities was driven by the desire to increase FDW satisfaction and retention, rather than by legal requirements or public perception. For example, one primary FDP representative reported:

> *"We've invested super heavily in the health of our [FDWs]... [we want the] retention of our fleet."*

This representative reported that the investment was worthwhile: they had seen higher retention and that FDWs were logging more hours, which the representative interpreted as FDWs being more 'sticky' to the FDP, rather than "just giving it [the FDP] a go." Another primary FDP also reported that in addition to being intrinsically driven by moral obligations to FDWs, they wanted to ensure retention and satisfaction of their FDWs into the future, a goal that they believed would require adequate WHS protections for FDWs in order to achieve.

In contrast, one secondary FDP reported that the only barrier they had to implementing additional WHS procedures was risking the contractor classification of FDWs (see WHS concerns of FDPs).

WHS concerns of FDPs

Implementing WHS interventions that were tailored to a local context was a challenge

FDPs that operated on a large scale felt that it was difficult to tailor interventions to a specific local context. For example, one primary FDP reported that product-based preventive actions (such as in-app changes) were developed overseas. The centralisation of product control for this FDP made it challenging to implement product-based changes that were relevant to the local context. Another primary FDP reported that they often have to implement "unscalable" initiatives to address WHS concerns, or focus on initiatives that can be executed locally. As part of the decision-making process for these initiatives, consideration is given to whether the impact on

WHS and the potential to change FDW safety behaviour is significant enough to justify the cost of implementation.

Another primary FDP reported that growing larger made it more difficult to support FDWs. Specifically, they said:

> *"As we grow, [we] try to find scalable ways to remain human… [we] wanted a face to the name. But of course, we had to remain scalable… we make compromises how often we see the [FDWs] in person."*

One primary FDP reported that the biggest challenge was addressing features in the built environment (e.g. urban infrastructure and city layouts). They reported that improving WHS was a 'globally supported' movement within the FDP, and that they had partnered with local groups to address infrastructural issues in cities like Sydney. However, given the scale of their global activities, they acknowledged that the cost-to-benefit ratio of local activities was low.

The ability to scale up support was also an issue for FDPs operating at a national level. For example, a secondary FDP noted that providing WHS support for FDWs was challenging due to distance and the inability to provide hands-on training. They reported:

> *"The biggest barrier is the fact, the proximity, we aren't near them. I can do a lot more for the people working under our roof."*

FDPs reported a key focus on marketing 'flexibility' to FDWs, meaning they were hesitant to implement WHS procedures

FDPs seek to be the 'preferred' FDP for FDWs. While pay is perceived as the key mechanism on which to compete for FDWs, the FDPs we interviewed reported that FDWs "cherish the flexibility" offered by the contractor model, with many FDPs highlighting this flexibility in their marketing to prospective FDWs. This means that FDPs feel they cannot mandate PPE, training, or various other mechanisms to promote WHS. For example, one internationally operating FDP reported that:

> *"We don't want to prescribe a specific benefit or specific level of protection to the whole fleet. We think that that's something that the fleet enjoys being able to conduct themselves."*

We note that marketing flexibility is common amongst primary FDPs. In their marketing to potential FDWs, FDPs consistently emphasise FDW choice, for example by emphasising 'You choose the way you want to deliver' and 'it's up to you' (Figure 2). The desire for flexibility is corroborated by FDW reports. For example, flexibility was the most common reason FDWs reported choosing to become a FDW in our survey, and similar sentiments were shared in interviews with FDWs (Convery et al., 2020).

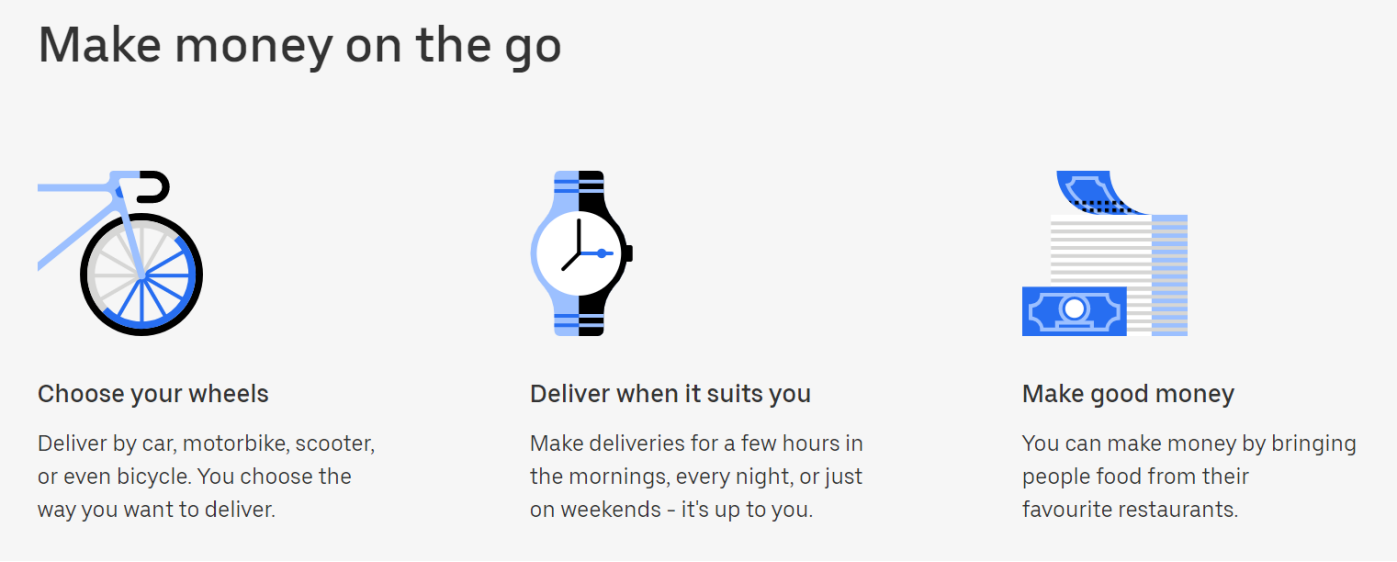

Figure 2: Marketing from a major FDP demonstrates that flexibility is used to recruit prospective FDWs.

Across the board, FDPs reported that they did not want to risk FDWs classification as a 'contractor', which meant they were hesitant to mandate WHS procedures

Consistent with public reporting and submissions to inquiries that have been made by large FDPs (e.g. Deliveroo, 2019; Uber, 2019), the vast majority of FDP representatives we interviewed reported that FDWs classification as a 'contractor' (rather than 'employee') was crucial to their business model. They further stated that providing "benefits" to FDWs would risk that classification, which meant that they could not provide the degree of WHS support to their FDWs that they would like to. It is important to note that when FDP representatives spoke of "benefits," they used the term to refer collectively to both *labour* benefits, such as paid sick leave and minimum wage, and *WHS* benefits, such as safety training and equipment. This suggests that FDPs may be conflating their responsibilities under the *Independent Contractors Act 2006* and the *Fair Work Act 2009*, which are part of the IR legal framework and directly inform the legal distinctions between employees and independent contractors, with their obligations under the *Model Work Health and Safety Bill*, which imposes a duty of care on all PCBUs to ensure, so far as is reasonably practicable, the WHS of their workers and those who might be impacted by their work (Safe Work Australia, 2019). For example, a representative from a primary FDP reported that their role had been created to provide support to FDWs, but "unfortunately with the current working status, we can only support so much." The same representative indicated that they perceived that they had supported the FDWs as much as they could with regard to WHS (see WHS knowledge of FDPs for further information on incentives for FDPs to support FDWs' WHS).

Some FDP representatives expressed uncertainty about what they were able to do. A representative from a secondary FDP shared the perception of being 'limited.' Specifically, they reported:

> *"We are limited in what we can do because they are contractors; we can't be treating them like employees or we'll get in trouble."*

They reported that their understanding of the legal requirements meant they were not able to implement WHS procedures, such as buying PPE or equipment for FDWs, as this would jeopardise the FDWs' contractor classification. Again, we note that this perception may not be entirely accurate.

WHS behaviours of FDPs

FDPs viewed the provision of training and induction as sufficiently meeting their WHS obligations to FDWs

There was consensus from all FDP interviewees that they wanted to support the FDWs' WHS and that they were doing so within the bounds of their legal relationship with FDWs. The main activity delivered to meet their obligations was the induction and training resources for FDWs to access during the onboarding process. One primary FDP reported on the different onboarding models used, depending on the experience of the inductees. When entering a new market, particularly regional areas in which food delivery is less well-established, the FDP applies what they term a "high-touch" induction model. This involves sending out their top-performing FDWs to run in-person induction sessions with the new local FDWs in which they demonstrate use of the FDP app and share tips for working safely and successfully.

Some FDPs reported mandatory safety tests:

> *"[The test] has videos/instructions, a few of the different rules and regulations like always carrying a bell, not utilising the phone when moving, and always having a light on at night."*

One secondary FDP reported sending daily messages to their FDWs to remind them to drive safely and check all of their gear. However, they acknowledged that the impact of those reminders is limited and may not be sustainable as the business grows.

However, the resources and information provided during induction were judged by the project team members who participated in the service safari to be of varying quality and viewing the resources was not always a mandatory step in signing up to deliver for a primary FDP (Convery et al., 2020). Further, our team members who undertook the service safari perceived the quality of safety information provided as highly variable in quality from one primary FDP to another. This variability was corroborated by the 61% of FDWs surveyed in Phase 1 who stated that they received little to no safety training from their FDPs (Convery et al., 2020).

The FDPs' applications and allocation algorithms are a key safety mechanism

The participating FDPs emphasised the safety features made available to the FDWs via the apps. These include the provision of bespoke map directions within the app, panic alert buttons within the app, their delivery allocation algorithms, and their policies with respect to limits on distances travelled and overall time spent driving on shifts.

Map directions

One primary FDP spoke to the custom map feature that has safety built into it:

> *"We partner with a map provider and directions provider, we make use of simple things like one-way streets."*

However, this FDP also noted that the suggested routes are optimised primarily for the shortest distance possible in the fastest time, highlighting that FDWs are not penalised for going too fast or too slow, with a very deliberate focus on not encouraging speeding. Our service safari suggested that this may not always be implemented in practice. For example, one service safari participant who delivered for a primary FDP noted that there was a discrepancy between the in-app estimation of time and the time estimate provided by Google Maps. Specifically, the FDP's estimate of trip duration was shorter than that provided by Google Maps (Convery et al., 2020). Further, the estimated trip duration did not include the time required for additional safety and logistical steps, like putting on a helmet and locking/unlocking the bicycle. Another primary FDP provides bicycle-specific navigation, however this is only available for Android users. All other participating FDPs reported the FDW's default map application being utilised for delivery routes. It was expected that FDWs apply common sense when following the delivery route, with a primary FDP noting that FDWs should:

> *"Use best judgement, if looks like it is taking you on [a] motorway, recalculate or call customer care to help you sort it out - don't follow it blindly."*

Panic alert button

A secondary FDP reported the safety feature of a panic button within the app available to all FDWs. However, it was noted that the button had never been utilised. One primary FDP reported a desire to have a similar feature and that it was something that some FDWs had requested. However, the central control of product design, located outside of Australia, was a barrier to being able to implement this feature locally.

Allocation of FDWs to delivery areas

FDPs also reported their process of allocating FDWs to certain areas as a contributor to FDW WHS. A primary FDP reported that they manage the allocation of FDWs to areas to balance the supply and demand; if an area is oversubscribed they will cease allocation of work for that shift. This practice is to reduce competition between FDWs for deliveries, provide a more constant flow of work, thus reducing the FDWs' stress. Our team members experienced a version of this during the service safari, whereby they received an in-app prompt towards the end of their shift advising that they may not be matched with any more orders before the end of their shift.

A secondary FDP noted the danger of on on-demand allocation:

> *"But ultimately [the FDWs] are trying to optimise their earnings, particularly if they are on an on-demand basis, where they are hunting for jobs when they come in, that creates a level of urgency that I think is potentially dangerous because they are rushing. So, they will be speeding to do deliveries and rush back to get another job, that combined with using mobile, combined with weather conditions, it's not in their favour from a safety perspective."*

To combat this, the FDP implemented different optional set shifts offered for peak periods, such as Thursday and Friday night, where the FDW is paid an hourly rate during this shift, thus reducing the stress and competitive behaviour.

Limits on distance and overall time travelled during shifts

A secondary FDP noted that, as a safety measure, the distance of the FDWs trips were limited:

> *"We don't send them far, we don't expect them to travel more than 3-4 kilometres, it's more about shorter, quicker trips so it's less likely for things to go wrong."*

Primary FDPs indicated that they were concerned with the amount of time a FDW spends driving, with the distance of the delivery being less of a concern. Our service safari findings were consistent with this, revealing that FDWs are often required to deliver outside of their allocated zone, with no obvious limits on the distance of the trip.

Food delivery platforms have responded to the WHS risk presented by COVID-19

The global impact of the pandemic placed mitigation strategies for COVID-19 front of mind for FDPs. There has been mostly consistent global guidance with respect to PPE, limited contact and physical distancing allowing primary FDPs to implement global responses. All FDPs noted a major risk of infection and transmission of COVID-19. Some FDPs focused more on the measures taken to protect their customers:

> *"We had to be very careful about contactless delivery… the customer chooses if they want it contactless."*

Others were more concerned with the risk to the FDWs health and financial wellbeing:

> *"[FDWs] have helped the community in a tremendous way… giving people what they want easily and quickly and reducing their exposure. But when we talk about the drivers' exposure, there's two elements, the actual contact and the risk of transmitting or catching the virus. But also exposure in terms of people's financial wellbeing."*

All of the FDPs interviewed reported either providing PPE or an allowance for obtaining PPE during COVID-19 and many talked to the contactless delivery option implemented to protect FDWs and customers. However, many FDWs faced challenges when trying to obtain the PPE or allowance for PPE offered by FDPs (Convery et al., 2020). Further, in Phase 1 of our research, we observed the vast majority of FDWs without face masks. Photos and videos capturing members of the public corroborate that they also largely failed to comply with mask wearing.

FDPs reported having appropriate insurance and processes in place to support FDWs following an incident

Most primary and secondary FDPs reported that FDWs are covered by group personal accident insurance cover[1] should an incident occur while completing a delivery. Some primary FDPs have dedicated teams who support the FDWs when an incident occurs, checking on their wellbeing, supporting them through the process of making a claim, and getting back on to the road. A secondary FDP reflected that being able to offer personal injury insurance is a huge advance for the sector. However, the FDP felt that the ultimate goal for safety would be:

> *"To provide something similar as a workers' compensation policy. From an economic point of view, that's the gold standard of what you receive as an employee. So being able to provide something analogous to that to a contractor community, would go a long way to addressing that issue."*

Conversely, a primary FDP felt that this would conflict with the FDWs desire for flexibility:

> *"We want to make sure we are providing the support, should they need it, but we don't want to enforce one particular thing to the whole fleet in one go."*

As previously noted, some FDPs indicated that FDWs do not always report incidents, with some incidents reported by authorities or members of the community. In these cases, the FDP does follow up with the FDW, however FDPs noted that providing retrospective support is challenging. Our earlier textual analysis of FDWs' posts in FDW community Facebook groups indicated a substantial proportion of their posts were seeking information about how to report WHS incidents to a FDP (Convery et al., 2020). Many posts said that the FDP was not contactable, either because the in-app reporting system had failed or because helplines and offices were closed.

WHS perceptions of tertiary stakeholders

In contrast to FDPs, vehicle suppliers reported an obligation to ensure vehicles were properly maintained

Many FDWs use rented e-bikes (Convery et al., 2020), meaning that vehicle suppliers are an important stakeholder. FDPs acknowledged their obligation to communicate to FDWs that they must practice safe delivery behaviours, including following road rules and laws with respect to safety gear (i.e., wearing a helmet, having functional front and rear lights). They also acknowledged that the FDW is responsible for ensuring that they comply. In contrast, the vehicle supplier interviewed spoke to the obligation that they hold to the FDW, to supply vehicles that comply with the safety regulations (for example, motorised scooters with a 250W engine with speeds capped at a maximum of 25 km/h). This supplier reported unsafe vehicles being a large safety risk and noted that many of the FDWs have limited resources, time, access, and money. Supplying safety equipment, such as a helmet, lights, bell, and phone holder, and servicing and

[1] This insurance protects contractors income from injury and sickness via a Group Personal Accident & Sickness policy.

maintenance on all their rental vehicles is a standard offering, included in the rental price. Our previous research corroborates that some FDWs lack awareness of how to source safety equipment, with posts in our earlier textual analysis identifying cyclist FDWs asking for advice about reliable brands, sources, and costs of, for example, front and back lights (Convery et al., 2020).

Opportunities and ideas

A comprehensive list of ideas was provided in conjunction with our earlier research (Convery et al., 2020). This phase of the project has provided insights into the FDPs' perspective and allowed us to provide additional recommendations as to how these ideas align with FDP priorities. These recommendations are detailed in the FDP Perspective section within each idea.

We note that the ideas we have proposed represent opportunities only, rather than firm recommendations. That is, the focus of the co-design and trial phases of this project is not limited to the ideas we have presented in this report, which are summarised in Table 2 below.

Table 2: Summary of ideas for risk prevention activities.

Idea	Risks addressed	Impact	Feasibility
Increasing participation in safety training at onboarding through making it mandatory or using better choice architecture	*Lack of familiarity with Australian road rules and understanding of WHS obligations*	*High*	*High*
Alter the order acceptance process to minimise the risk of phone distraction	*Distractions on the road*	*High*	*Medium*
Benchmark the time that FDPs are allowed to give FDWs for each delivery using map APIs	*Rushing behaviours; stress due to perceived threat of robbery*	*High*	*Medium*
Reduce abuse by humanising FDWs to potential abusers	*Abuse from businesses, customers, and members of the public*	*Medium*	*High*
Use a rating system to alter restaurant behaviour	*Abuse from businesses, customers, and members of the public; COVID-unsafe waiting behaviours; stress due to perceived threat of robbery*	*Medium*	*High*
Facilitate mentor schemes or buddy systems	*Lack of familiarity with location-specific WHS risks*	*Medium*	*Medium*
Send targeted and triaged safety prompts and reminders at critical points	*COVID-19 risks; weather-related risks; abuse*	*High*	*Low*
Prompt FDWs to anonymously report near-miss and abuse hotspots and map them	*Abuse from businesses, customers, and members of the public; environmental risks like poorly lit roads*	*Medium*	*Medium*

Detailed opportunities and ideas

1 / Encourage participation in simple work health and safety training at onboarding

Risks: The project showed that while the majority of FDWs cared about safety, and believed that WHS was their responsibility, many demonstrated a lack of understanding and skill implementing standard safety information in practice.

Risk control strategy: This can be addressed by ensuring that FDWs receive adequate training during the onboarding process. Our earlier exploratory research showed that the best-placed provider of this information may be the FDP (Convery et al., 2020). This is because FDWs can receive conflicting information from their peers, use modes of transport that do not require testing or licensing (e.g. bicycles and e-bikes), and/or may have initially learnt to drive or ride in countries with substantially different WHS and road rules. One way of increasing safety training would be to make it mandatory for FDWs during the FDP's onboarding process. A more 'light touch' way of encouraging the uptake of voluntary training is through more effective design.

Potential implementation strategies: While some FDPs provided WHS information and training to FDWs, it was typically not mandatory nor tested, meaning that it was unlikely to be accessed by the majority of FDWs. The seminal book *Nudge* (Thaler & Sunstein, 2009) popularised the concept of 'choice architecture': the design process of how choices are presented to users of a product or service. The choice architecture of FDPs' websites and onboarding experience does not currently encourage the uptake of safety training. This could be modified in multiple ways. The simplest is that FDWs are directed to safety information during the onboarding process, as standard. In its most extreme, the onboarding process could be designed so that FDWs will only be allowed to advance to the next stage once they have watched a series of safety videos or passed a short, mandatory test. A lighter version of this would not be mandatory, but might require a FDW to click a button which says "9 out of 10 FDWs believe it is important to drive safely. This short video can help you do this"[2] or the more extreme "I do not need to complete this safety training since I don't care about my safety."[3] In the behavioural literature, this is referred to as an 'active choice' design.

The advice to take up training can also be more targeted. For example, we observed in our earlier research that many FDWs may be using international driver licences or are using bicycles, which are unlicensed (Convery et al., 2020). FDWs could be asked whether or not they hold an Australian driver licence when they commence the onboarding process. At the final stage of the process, they could be presented with the following: "Australian road rules are different to some

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[2] This number is taken from the number of our survey respondents who responded that they 'agreed' or 'strongly agreed' with the statement: 'Driving or riding safely is part of my job as a food delivery worker'.
[3] While we do not expect any FDP to implement this, we have included this phrase to show that even within a small piece of design, radical changes can be made that can have outsized impacts on decision making.

other countries' rules. As an international driver licence holder, we can provide you with some quick training to keep you safe." This promotes the training as a helpful and supportive process, rather than as a mandatory box-ticking exercise.

The design of the training itself will also be important. Long text should be broken up into smaller, digestible chunks, with video demonstrations illustrating complex concepts and behaviours. This would also overcome language barriers. Short summaries could be provided at the beginning of each page so that FDWs are prompted to focus on the most important information. It is important to note that we found that the quality and quantity of safety information varied substantially from one FDP to another, and that some FDPs were already adopting many of the above approaches. In practice, this intervention could take the shape of a best-practice guide for how to present safety information to FDWs, which would be co-designed with FDWs, FDPs, and other stakeholders. This best-practice guide could also be warehoused and managed by WHS regulators as guidance to support FDPs.

Behavioural evidence underpinning this insight: There is a vast literature on how choice architecture can impact behaviour. The literature on defaults clearly demonstrates how design choices can fall on a spectrum from mandatory processes through to opt-out defaults, smart defaults (e.g. the targeted driver licence example above; see Johnson & Goldstein, 2012), active choice (e.g. the requirement for the FDW to say that they do not want to do the training), and opt-in choice (e.g. the current system; see Smith, Goldstein, & Johnson, 2013).

Considerations: The design of the choice architecture of the sign-up process will require careful consideration. However, we believe that this is one of the simplest and most effective ways of increasing the road safety knowledge of FDWs. Many of the following ideas in this section would be vastly improved if the FDWs begin with a basic knowledge of the Australian road rules, as well as other aspects of WHS such as legal obligations and reporting requirements.

FDP perspective: All FDPs interviewed were aware of rider safety and traffic accidents as a WHS risk, and viewed the provision of training and induction as a means to support FDWs' WHS. However, the quality and quantity of safety training during onboarding varied substantially from one FDP to another. While some FDPs are already adopting many of the above approaches, many are not. We expect that FDPs will find this intervention acceptable for two main reasons. First, it involves increasing the quality and quantity of an already widely used practice. Second, it involves the dissemination of preventive WHS information, rather than mandating WHS procedures. This means it is unlikely to have any ramifications for FDP concerns about the reclassification of FDWs from contractors to employees. To increase the acceptability of this recommendation for FDWs, this recommendation could take the shape of a best-practice guide for how to present safety information to FDWs, which would be co-designed with FDPs and FDWs.

2 / Alter the order accepting process to minimise the risk of phone distraction

Risks: Checking phones while riding or driving was a clear threat to FDWs. We described in our earlier research how the FDWs we interviewed, and one project team member taking part in the service safari, stated that the need to accept orders meant that they checked their phone while riding or driving and wore in-ear headphones in order to hear notifications while cycling on the road (Convery et al., 2020). This distracted them from monitoring the surrounding road and traffic conditions.

Risk control strategy: The process by which orders are accepted is a critical reason why FDWs check their phones. By altering this process, we can substantially reduce their exposure to hazards.

Potential implementation strategies: There are two ways this process could be made safer: first, by increasing the duration of time FDWs have to accept an order, or second, by making it impossible to accept orders while moving. Increasing the duration of time FDWs have to accept an order is a 'lighter touch' strategy than not providing any notifications while FDWs are moving. It means that FDWs may have time to arrive at a safer place and may feel less stress or pressure to check their phone constantly.

Behavioural evidence: The evidence that notifications affect driving performance is well-established (e.g. Lee & Strayer, 2004). It therefore stands to reason that this intervention would be an effective strategy to reduce risky behaviours. Trialling this recommendation would also help us establish how important the reduction of notifications would be.

Considerations: Not offering orders to FDWs who are moving substantially reduces the need for them to look at their phones while riding or driving. However, this strategy also has multiple downsides. For example, it may increase the amount of time FDWs spend waiting or decrease their earnings. Similarly, from an FDP perspective, it may make it more difficult to match FDWs with upcoming orders.

FDP perspective: FDPs already algorithmically manage shifts for FDWs in order to optimise operational efficiency. FDPs might not find this recommendation attractive if it slows down their operations by making it more difficult to match FDWs with upcoming orders. A co-design process will be essential to ensure that FDP business and operational considerations are balanced with the potential WHS benefits.

3 / Benchmark the time that FDPs are allowed to give FDWs for each delivery using maps APIs

Risks: The service safari highlighted that the time given to FDWs to complete trips does not consider the time it takes to lock up a bicycle or park a car. In some cases, the allotted time was not enough to actually make the trip according to Google Maps. This encouraged rushing behaviours, which could lead to FDWs ignoring road rules. Moreover, if a FDW leaves the road to

ride on the footpath to save time by avoiding a red light, this behaviour is likely to aggravate pedestrians and leave the FDW open to more abuse.

Risk control strategy: A benchmarking process in which FDPs cannot ask FDWs to complete a trip within a time period that is a set amount less than Google Maps predicts.

Potential implementation strategies: This additional time could either involve a fixed amount of time (e.g. 3 minutes to lock up a bicycle) or a percentage (e.g. FDPs have to give FDWs 110% of the time estimated by Google Maps).

Behavioural evidence: While it stands to reason that giving FDWs enough time to complete their orders will reduce rushing behaviours and any flow-on risks, this should still be tested to make sure that the extra time does actually lead to safer driving and cycling behaviour.

Considerations: The proposed intervention may provide a market disadvantage for FDPs opting in to the scheme (i.e. because food may be delivered more slowly by those using this intervention relative to competitors). This means that successful implementation requires substantial buy-in (e.g. all FDPs operating in Australia take part).

FDP perspective: While all FDPs provide estimated trip durations to FDWs, there appears to be large variability in how this information is calculated and communicated. Some FDPs we spoke to optimised the map directions provided by offering bicycle-specific navigation, while others relied on default map applications to calculate routes and estimate delivery times. Considering that all FDPs are already providing this information, standardising the formula for how these estimations are calculated is unlikely to be controversial, provided the FDPs are engaged in a co-design process to ensure their perspectives are is considered.

4 / Reduce abuse by humanising FDWs to potential abusers

Risks: Verbal abuse, particularly from customers and members of the public, was identified as a hazard for FDWs. This should not be considered part of the job. Stopping this abuse is clearly the responsibility of the abuser, rather than the abused.

Risk Control Strategy: Increasing the salience of the fact that FDWs are human beings has the potential to reduce abuse against them.

Potential implementation strategies: There are numerous ways in which this strategy can be implemented. Some strategies would involve user interface changes to the FDPs, such as giving customers more information about the FDWs when they order their food, in the same way that Uber shares information about its drivers' home country, languages spoken, and feedback received from passengers. Another strategy might involve a social marketing approach similar to those used by various transport authorities (Figure 3).

Figure 3: Campaign poster developed for the London Underground to reduce abuse of their staff by members of the public (Transport for London, 2012).

Behavioural evidence: The 'identifiable victim' effect is a well-established psychological phenomenon (Jenni & Loewenstein, 1997). It shows that people are more likely to help others if they are identifiable. Therefore, it stands to reason that people are also less likely to abuse people if they are more identifiable. There is also separate literature that indicates that dehumanisation increases the risk of violence, therefore it is possible that increasing humanisation may decrease violence (Rai, Valdesolo, & Graham, 2017). However, being able to test this would allow us to definitively understand whether this is the case.

Considerations: There is a risk that such a campaign may come across as trite, in the same way that "R U OK day" has recently received some public backlash (e.g. Walker, 2019). This could be avoided by designing the campaign with FDWs to ensure that it is seen as authentic. It is also important that a social marketing campaign does not commit what Cialdini et al. (2006) call the "big mistake": using a social norm that highlights the fact that an undesirable incident is common, therefore inadvertently increasing its incidence.

FDP perspective: FDPs are clearly concerned with their public image and already engage in social marketing activities to demonstrate their concern for FDW safety. For example, in response to negative press, Deliveroo established and publicised a rider safety advisory panel (Marin-Guzman, 2019). Similarly, in response to the public health crisis caused by the COVID-19 pandemic, many FDPs publicised their response and new safety practices, including contactless deliveries. Many FDPs also pledged to support healthcare workers and the heavily impacted hospitality industries,

with DoorDash, Deliveroo, Menulog, and Uber Eats reducing their commissions, increasing the frequency of restaurant payments, or providing stimulus packages to boost restaurant sales (Vrajlal, 2020; Telegramma & Fraser, 2020; Waters, 2020). Much of this activity can be seen as fostering goodwill in the face of previous criticism. This suggests that if there was enough public pressure put on FDPs to address the dehumanisation of FDWs, they would find a social marketing approach attractive.

5 / Use a rating system to influence restaurant behaviour

Risks: In our observations, we saw that the environment where FDWs pick up their deliveries is largely controlled by restaurants. These are also locations where many COVID-19 physical distancing guidelines are breached. The interviews with FDWs highlighted that some customers may abuse FDWs because of issues with their order that were due to the restaurant, rather than the FDW (e.g. using leaky food containers). Although the leakiest of containers could never excuse abuse, having a mechanism to hold restaurants accountable would mitigate this risk to FDWs.

Risk control strategy: FDPs require engagement from three key stakeholders to function: their fleet of FDWs, customers, and restaurants. Rating-based systems allow customers to regulate the behaviours and quality of service offered by FDWs and restaurants, prompting competition for high quality service and food delivered to the customer. However, there is currently no clear mechanism for FDWs to regulate the behaviours of restaurants. Introducing a rating-based system *by* FDWs may help control the behaviour of restaurants.

Potential implementation strategies: FDWs could be asked to rate the safety and quality of the order pick-up (and FDWs can in turn be rated by restaurants to maintain a level of accountability). Restaurants' average ratings would be shown to FDWs when they choose to accept the job. This would create pressure on restaurants to improve their pick-up experiences, such as restaurant worker friendliness and speed, parking access, and COVID-19 safety measures). FDPs can also choose whether they allow customers to see the ratings that FDWs give restaurants. This would signal to customers that the FDPs care about the safety of their FDWs. There would be a substantial first-mover advantage for the first FDP to implement this. It also highlights the importance of FDW safety more generally.

Behavioural evidence: Rating systems are widely used in the gig economy and have been shown to have a large effect on behaviour. For example, Luca (2016) found that a one-star increase in Yelp rating leads to a 5-9% increase in revenue.

Considerations: While ratings can be effective, they have also been shown to introduce bias, which have been observed on FDPs (Rosenblat, Levy, Barocas, & Hwang, 2017). As many FDPs rely on the use of rating systems to power their accountability mechanisms for FDWs through

ratings from customers, we assume that FDPs would be best placed to use their own mechanisms to reduce bias against FDWs to ensure a similar lack of bias against restaurants.

FDP perspective: FDPs may have low motivation to engage in this recommendation for a couple of reasons. Firstly, very few FDPs acknowledged that abuse from restaurants was a potential WHS risk for FDWs. Secondly, FDPs may fear backlash or lobbying from larger and more powerful restaurant chains who fear negative public relations resulting from a public facing rating system.

6 / Facilitate mentor schemes or buddy systems to disseminate local risk information

Risks: In our earlier research, we found that inexperienced FDWs appeared to have the poorest level of WHS knowledge and were more likely than experienced FDWs to engage in risky behaviours (Convery et al., 2020). When they did look for information, the majority of WHS information was found on informal channels, such as social media. FDWs could generally find the correct information, but these sites often contained information that was only relevant for some FDPs or geographic locations, or outright misinformation. Like any other user-posted information on social media, there are few, if any, processes in place to vet, contextualise, or correct inaccurate or misleading advice.

Risk control strategy: Rather than seeking to shut down informal peer-to-peer learning, FDPs have the opportunity to target it more effectively through the use of an internal mentorship scheme. This would likely be in the interest of FDPs, who could publicise this as a service they offer FDWs and could help them position themselves as a community-driven FDP to customers.

Potential implementation strategies: It will be critical to make sure that the 'mentor' drivers have a basic level of WHS information (see Opportunity and Idea 1). Therefore, the implementation of a mentorship program could be a two-stage process:

> Stage 1: Provide (paid) WHS training to experienced FDWs
>
> This could involve providing more intensive WHS training to a small number of experienced FDWs (e.g. through paid workshops) once they had reached a specific milestone (e.g. 500 trips). Those who participate in the training could then be rewarded based on the quality and quantity of mentorship they provide.
>
> Stage 2: Match mentors and mentees
>
> Newly recruited FDWs could be paired with an experienced FDW buddy who is prompted to maintain contact with the new recruit during their initial tenure. They will be encouraged to check in and answer questions about the demands and realities of the job and provide WHS information that would otherwise be more difficult to access.

Buddies and mentees could be incentivised financially, or by adapting the behaviour change strategies already used in the app. For example, our textual analysis found that some FDPs use

elements of gamification (e.g. 'levels' to reward behaviours such as order completion and acceptance; see Figure 4). Incentivising mentors based on reporting structures and ratings by mentees could improve the quality of mentorship. However, it may be the case that FDWs have an intrinsic motivation to become a mentor, which would reduce the risk of people attempting to game the system.

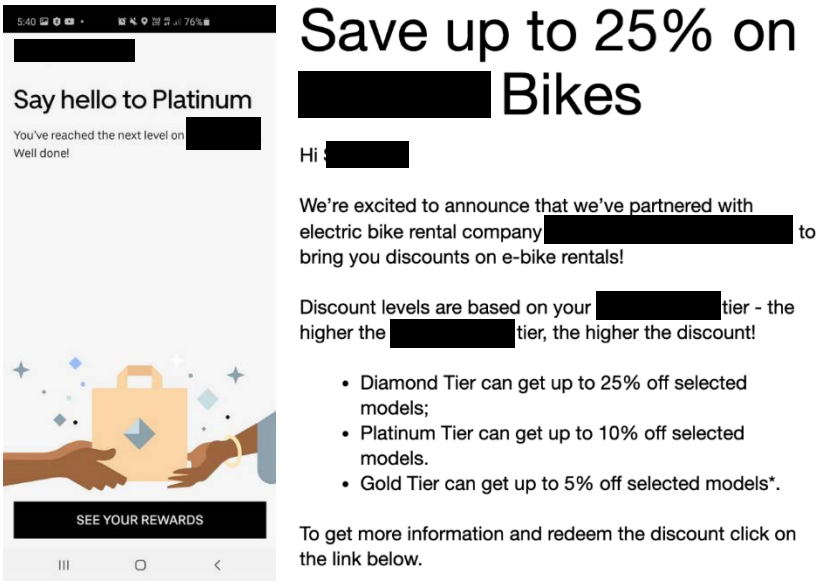

Figure 4: Examples of the gamification system used by one of the FDPs.

Behavioural evidence: We are not aware of any academic work that looks directly at the impact of mentoring on safety behaviours. Most of the literature here is conducted with children and young people (e.g. DuBois, Holloway, Valentine & Cooper, 2002) or in the corporate world (Underhill, 2006). However, since FDWs operate like sole traders, evidence from the mentoring literature from corporate settings may be applicable, since the mentoring model could therefore be framed as "business-to-business" rather than peer-to-peer. The evidence for the effectiveness of mentoring programs is by no means definitive, but suggests that it has a modest impact on the mentee, and that the mentors also enjoy benefits (Abdullah et al., 2014).

Considerations: If the financial benefits of mentorship are too high, then it might be possible for FDWs to game the system and subvert its intended purpose. We therefore suggest offering modest rewards for being a mentor and limiting mentorship programs to a short period (e.g. 1-3 months).

Other risks include getting a poor mentor, such as one who passes on anecdotal and incorrect advice, or is abusive. For this reason, we propose that some accountability mechanism would be necessary. This could include, for example, a rating system by mentees, as well as regular auditing of WHS knowledge.

FDP perspective: This recommendation will address the challenge of implementing locally relevant WHS initiatives for globally operating FDPs. Further, it would most likely be in the interest

of FDPs, who could publicise this as a service they offer new FDWs and could help them position themselves to customers as a community-driven FDP. One FDP we interviewed was already offering a voluntary peer-based safety and onboarding training process.

7 / Send targeted and triaged safety prompts and reminders at critical points

Risks: Some of the risks FDWs face can be mitigated by engaging in single, one-off behaviours. This might include putting on a fluorescent jacket at the beginning of a shift or wearing a mask to protect against COVID-19. Other risks, such as the presence of a group of abusive, drunk individuals congregating near a restaurant, may be short-lived and immediate and could be dealt with by some simple avoidance behaviours. Other risks require many 'micro-behaviours,' such as remembering to take breaks throughout the shift. The volume of risks means that even the most vigilant FDWs might forget some of these risk mitigation behaviours at some point. To address these different types of risks, we will need to use reminder strategies that are specifically targeted.

Risk control strategy: Ensuring FDWs are prepared to behave safely upon signing in to the FDP app may improve safety behaviour for one-off behaviours. In practice, this could include a simple checklist, reminders about protective behaviours (e.g. ensuring they have adequate, functioning vehicle lights, and are wearing brightly coloured clothing). Immediate prompts will need to be used to address risks which are short-lived and immediate. Persistent risks require reminders at regular intervals.

Potential implementation strategies: The service safari revealed that the FDPs are already using in-app prompts to remind FDWs about other important information. For example, before starting each shift with one FDP, our project team members were sent prompts asking whether our phones were fully charged. In order to sign in to the shift, we had to respond that we had a fully charged phone. Extending these prompts to include safety reminders should therefore be possible for FDPs to implement. In order to increase accountability, FDWs could be asked to upload photos to demonstrate that they have the appropriate clothing and safety equipment.

If we want to integrate peer-based reporting into the system, this might be more challenging. FDWs would need to be prompted to provide specific pieces of WHS advice to other FDWs. There are two options here: one high-tech and one low-tech.

The high-tech option could be implemented through the FDP system (i.e. FDWs would be asked to report an issue, which is then disseminated through the FDP). This would require a central checking process to ensure that the risk information propagated is accurate and meaningful. The low-tech option would simply require a prompt to encourage FDWs to speak to one another during any downtime. Our observational research (Convery et al., 2020) suggests that FDWs have the opportunity to speak to other FDWs during specific time periods (e.g. while waiting for food), but many choose to spend this time on their phone. This indicates that a low-tech solution that

nudges FDWs to look up and speak to their peers may be as effective as the high-tech solution, but much cheaper to implement.

Behavioural evidence: Checklists are now relied upon to reduce errors in clinical and aviation settings (Gawande, 2010) and lessons can be learnt from the academic research that has gone into their creation in these sectors. Small adjustments to both checklists and forms can dramatically increase their effectiveness (Whitenton, 2015). Three factors matter in checklist design: 1) purpose, 2) flow, and 3) feedback. To ensure *purpose*, checklists need to outline why the behaviours on the list matter (e.g. drivers cannot see you in the rain when you wear black) and should have no duplication or redundancy (Conley et al., 2011; Degani & Wiener, 1993). To ensure *flow*, the checklist should minimise the effort needed to complete the form and put crucial aspects up front. Finally, the FDWs should receive *feedback* using peer comparisons to show that others are adhering to the checklists. The World Health Organisation (2009) designed a standardised checklist template for use in surgical settings. As the Figure 31 shows, it incorporates the design principles of Purpose – Flow – Feedback.

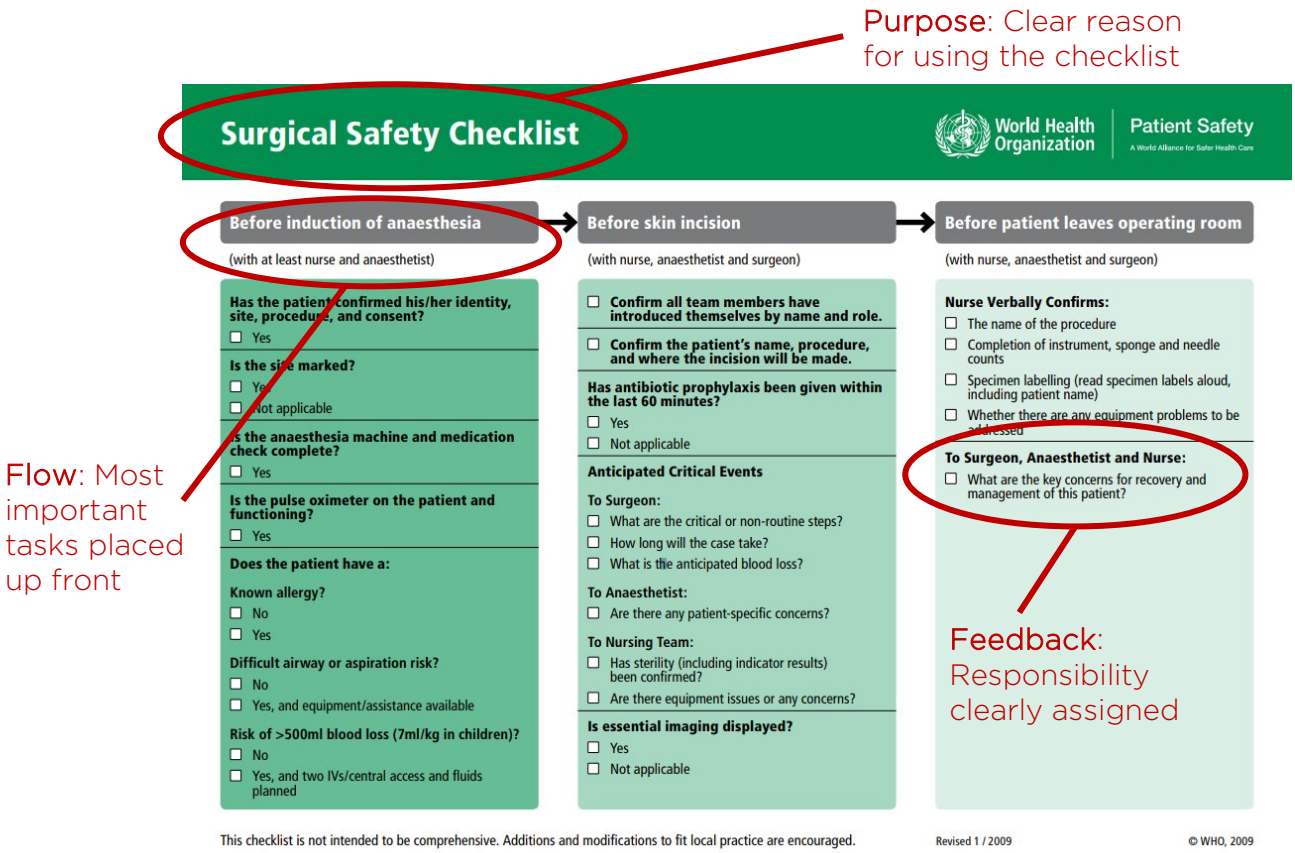

Figure 5: The World Health Organisation's best-practice guide to checklists.

With respect to prompts that encourage FDWs to engage with their peers, there is evidence to show that this can also increase psychological wellbeing. Epley and Schroeder (2014) found that instructing commuters on trains and buses to connect with a stranger near them led to them reporting much higher wellbeing than their comparison groups. This was despite commuters

expecting to prefer peace and quiet to having conversations with others around them. This mistaken preference for solitude stems partly from underestimating others' interest in connecting, which in turn keeps people from experiencing the actual, positive consequences of social interaction. Interestingly, the pleasure of connection seemed to be contagious: people who were on the 'receiving' end of the conversation had equally positive experiences to those on the 'initiating' end of the conversation.

Considerations: Checklists are always best designed with the end users' input, so we would suggest designing them along with FDWs to identify which behaviours they are most likely to forget and when the most critical time points are for them to be prompted.

FDP perspective: The participating FDPs are already providing safety features within their apps, such as sending daily reminders to drive safely and to check all of their gear, panic alert buttons, and access to maps with bicycle-specific navigation for cyclist FDWs. One barrier for smaller FDPs will be the lack of technological sophistication and automation of their apps, which may not support some of the more ambitious and high-tech features suggested above. FDPs are likely to find this recommendation acceptable as it merely reminds users of safety information they are already being provided.

8 / Prompt FDWs to anonymously report near miss and abuse hotspots and map them

Risks: Our interviews and observations suggested that some WHS risks are location-based. This might be due to environmental reasons (e.g. poor lighting), social reasons (e.g. drunken abuse), or an interaction between the two (e.g. drunken and unpredictable crowds pushing cyclists into a busy street causing abuse from drivers).

Risk control strategy: FDWs could be asked to report the geographic locations of these risks. Location-based risks could then be visualised on a map which would allow FDWs to see the location of risk hotspots. This would then allow them to take appropriate precautionary, preventive, or avoidance behaviours.

Such data intelligence would be beneficial for various stakeholders, including FDPs and policymakers. For example, if there are a number of near misses due to a poorly lit street, local governments could use this information to identify areas that need more lighting. If there are a large number of abusive people in a specific area, this might drive more community-based solutions. The data could then feed into council planning. Similarly, an Australian start-up company may be able to use the data to build an open application programming interface (API) for navigation apps or FDPs which will alert FDWs (or the broader cyclist market) when they are driving through a risk hotspot. Mazda currently does this, as shown in the following images from their user manual in Figure 6.

10	Alert Point Warning	It shows the type of the alert points when approaching a road safety camera or other Alert Points like school zones or railroad crossings. You must make sure that using this feature is legal in the country where you intend to use it. See page 41.

Figure 6: Excerpt from Mazda user manual.

Potential implementation strategies: The way in which the data are visualised will matter. If the complaints are public, then FDWs may perceive that using the system would put them at risk of losing their job, which was highlighted as a concern in our surveys and interviews. This specific issue has been addressed by Callisto, an organisation working to reduce sexual harassment. Callisto has developed a reporting system in which complaints can be made anonymously but held in escrow for a period of time until a number of similar complaints are gathered (Callisto, 2020).

Behavioural evidence: While this idea has less behavioural evidence underpinning it, it has been adopted by other organisations. For example, Plan International, an Australian NGO working to empower women, has developed FreeToBe, a map to track sexual harassment in a number of cities, including Sydney (Plan International, 2020). As shown in Figure 7, each of the dots represents a safety report made by a FreeToBe user. Orange dots indicate areas that have been rated as unsafe for women, whereas purple dots represent areas that have been rated as safe for women. App users can click on each dot to read more detail about potential risks in the area.

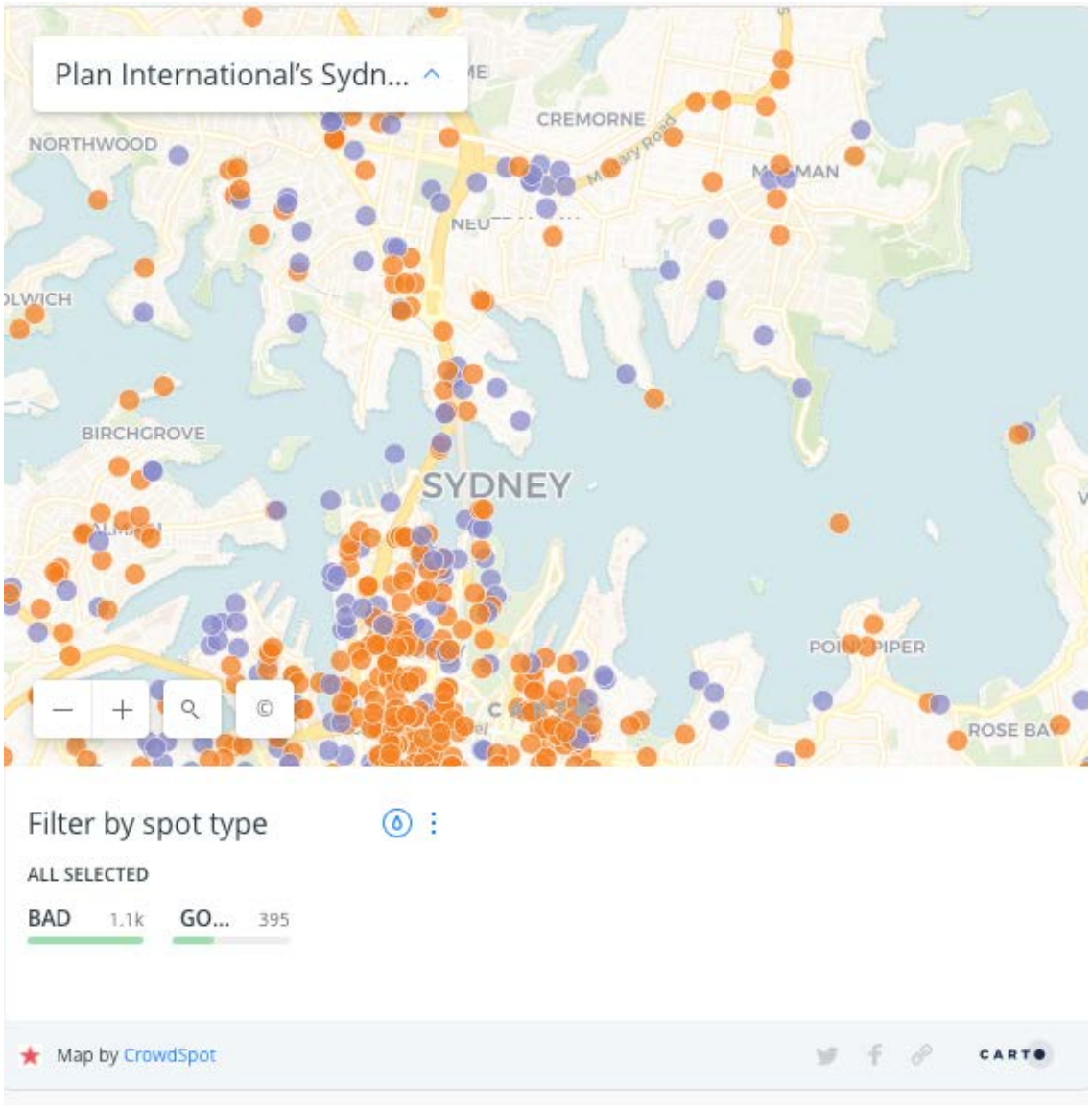

Figure 7: Plan International's map of Sydney showing sexual harassment risk hotspots.

Considerations: It will be important to identify how best to notify FDWs about any live risks in their local area. If this system is poorly designed, it has the potential to distract FDWs on the job, thus causing a greater risk to WHS.

FDP perspective: FDPs have processes in place for reporting WHS incidents, yet many acknowledge that low reporting by FDWs is a concern for them. To increase acceptability, this recommendation should be framed as FDPs and FDWs collecting and sharing information about the location of external WHS hotspots, rather than reporting on the behaviour of either party. Further buy-in might be achieved by drawing attention to the reputational benefit of engaging in the public good behaviour of making roads safer for all citizens.

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Appendices

A: Semi-structured interview guides

Primary FDP

- What types of WHS issues do you think are the most prominent for FDWs?
    - Why do you think these are the most important?
    - What kinds of surveys or data do you gather to support these beliefs? (How do you commonly hear about WHS issues?)
- Can you tell me about any WHS incidents to FDWs that you've heard of?
    - What did the FDW do?
    - What was [organisation's] response?
    - Is this a typical incident/response?
- What is your understanding of the WHS obligations of organisations like [organisation] have to their FDWs?
    - What types of activities does [organisation] do to meet these obligations?
    - Are there any obligations that you think [organisation] does not meet? If so, why doesn't [organisation] meet them?
    - Does [organisation] provide adequate support for you to fulfill these obligations?
    - Can you contrast the WHS support for contractors versus employees?
    - Are there any WHS support initiatives that you provide for FDWs that you don't provide for employees?
    - Are there any WHS support initiatives that you provide to employees that you don't provide to FDWs?
    - How do you think your company's approach to WHS for FDWs has changed over time?
- If you could do something more or something different to support FDWs, what would that look like?
- What types of barriers do you have in terms of implementing new activities that would increase the WHS of FDWs?
- What types of things would help you overcome these barriers?
    - What are the incentives you have for your current prevention activities (public perception, legal liability?)
- What are your thoughts on evolving legal regulation when it comes to WHS?
- We've covered a lot of ground today - I really appreciate your time. Is there anything else you'd like to mention, or talk about further, in relation to WHS?

Secondary FDP

- What types of WHS issues do you think are the most prominent for Food Delivery Workers (FDW) / Alcohol Delivery Workers (ADW)?
    - Why do you think these are the most important?
    - What kinds of surveys or data do you gather to support these beliefs? (How do you commonly hear about WHS issues?)
- Can you tell me about any WHS incidents to FDWs that you've heard of (inside or outside your organisation)?
    - What did the FDW do?
    - What was [organisations] response?
    - Is this a typical incident/response?
- What is your understanding of the WHS responsibilities of organisations like [organisation] have to their FDWs?
    - What types of activities does [organisation] do to meet these obligations?
    - Are there any obligations that you think [organisation] does not meet? If so, why doesn't [organisation] meet them?
    - Does [organisation] provide adequate support for you to fulfill these obligations?
    - Can you contrast the WHS support for contractors versus employees?
    - Are there any WHS support initiatives that you provide for your FDWs that you don't provide for employees?
    - Are there any WHS support initiatives that you provide to employees that you don't provide to your FDWs?
    - How do you think your company's approach to WHS for your FDWs has changed over time?
- If you could do something more or something different to support FDWs/ADWs, what would that look like?
- What types of barriers do you have in terms of implementing new activities that would increase the WHS of FDW/ADWs?
- What types of things would help you overcome these barriers?
    - What are the incentives you have for your current prevention activities (public perception, legal liability?)
- What are your thoughts on evolving legal regulation when it comes to WHS?
- We've covered a lot of ground today - I really appreciate your time. Is there anything else you'd like to mention, or talk about further, in relation to WHS?

Tertiary stakeholders

- How do you see WHS responsibilities being shared across the platforms, themselves, and individual FDWs, especially as it pertains to bike condition and bike safety?
- One of our findings was that since there are a lot of international students and new arrivals in Australia working as FDWs, there's a real lack of knowledge about state-specific bicycle laws (esp riding on the footpath). Whose responsibility is it to make sure they have that knowledge - FDWs themselves, platforms, bike shops, other?
- Can you tell me about any WHS incidents to FDWs that you've heard of (inside or outside your organisation)?
    - What did the FDW do?
    - What was [organisations] response?
    - Is this a typical incident/response?
- What interventions or solutions would better support the WHS of FDWs?
- What types of things would help you overcome barriers for WHS?
- What are the incentives you have for your current prevention activities (public perception, legal liability?)

B: Service safari protocol

You will sign up for your assigned food delivery platform, participate in any induction / training that is required by the platform, and ride as a FDW for one 4-hour shift. You will take detailed notes on your experiences and observations, focusing on the research questions that correspond to each of these three activities. Notes may be in the form of written, typed, and / or voice notes; photos; video clips; screenshots; sketches; and/or helmet- or bike-mounted video footage (optional).

Research question	Operationalised questions	Activity
What is it like to be a FDW?	• Are FDWs pressured to take risks to keep up with the pace of deliveries? • Do food delivery apps automatically accept new jobs during deliveries? • Are in-app prompts distracting during deliveries? • Are FDWs instructed on how long a delivery should take? How realistic is this instruction? • Do FDWs get to decide their preferred route to the destination? • Do consumer reviews incentivise risk-taking behaviour?	Delivery work
Are FDWs abused while working?	• Did the team member experience any hostile behaviour or abuse from consumers, restaurant workers, road users or pedestrians? • Did the team member witness any hostile behaviour or abuse from consumers, restaurant workers, road users or pedestrians? • How was the team member treated by consumers, other FDWs, restaurants, pedestrians, other non-FDWs?	Delivery work
What is the process to become a FDW?	• What is required to apply for food delivery work? • Do FDWs have control over when they work and how long their shifts are? Does this change as they complete more shifts/deliveries? • What is the process for purchasing/renting necessary equipment for food delivery work?	Platform onboarding Delivery work
To what extent are FDWs given safety training before they start working?	• What training is given before FDWs start their first shift on how to do the job? • To what extent do they instruct FDWs on how to carry out the work? • Are FDWs required to complete safety training before they can start their first shift? • How comprehensive is FDW safety training? • Does this process differ by state (NSW vs. Victoria)?	Platform onboarding
What is the process for reporting safety concerns to food delivery platforms?	• How easy is it to report safety concerns to food delivery platforms? • How are safety concerns dealt with after reporting?	Platform onboarding
What risks are FDWs concerned about?	• What aspects of the work made the team member uncomfortable?	Delivery work
What risks are FDPs concerned about?	• Was there any ongoing communication regarding WHS risk and how to manage it from the FDPs?	Delivery work