

Digital platform work and occupational safety and health: overview of regulation, policies, practices and research

Executive Summary



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Authors:

Karolien Lenaerts (HIVA-KU Leuven), Willem Waeyaert (EFTHEIA), Dirk Gillis (HIVA-KU Leuven), Ine Smits (HIVA-KU Leuven), Harald Hauben (EFTHEIA)

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1. Introduction

The findings of the study presented here aim to contribute to a better understanding of safety and health in digital platform work by **mapping occupational safety and health (OSH) challenges and opportunities** and **exploring if and how these are tackled**. Despite the growing body of research on platform work, the issue of OSH has only recently become more prominent in the literature and in policy. The overall aim of this study is to provide an updated overview of regulation, policies, research and practices in relation to digital platform work and its expected impact on workers' protection and more specifically, on OSH. In that way, it builds further upon previous work by the European Agency for Safety and Health at Work (EU-OSHA) on this topic: a first expert discussion paper published in 2015 (Huws, 2015), followed by a report published in 2017 on 'Protecting workers in the online platform economy: An overview of regulatory and policy developments in the EU' (EU-OSHA, 2017).

The digitalisation of our economies has transformed and disrupted labour markets and business sectors across the European Union (EU), changing the nature, organisation and conditions of work. One of the central and most visible players in this transformation are digital labour platforms that match the demand for and supply of labour, by connecting platform workers with clients (Eurofound, 2018; European Commission, 2020). Digital platform work promises high levels of flexibility and autonomy, with platform workers being able to choose when, where and how long to work, and what tasks to accept. However, concerns have been raised by the scientific and policy communities about the working and employment conditions of digital platform work, including in the area of safety and health at work. In this regard, the European Commission proposed a Directive aiming to improve the conditions in digital platform work in December 2021, which also contains important provisions on OSH.

For the purpose of this study, the following concepts and definitions are used:

Digital platform work: All paid labour provided through, on or mediated by an online platform.

The main characteristics of platform work are as follows:

- Paid labour is organised/coordinated through a digital labour platform.
- Specific tasks are performed or specific problems are solved.
- Algorithmic management based on digital technologies is used to allocate, monitor and evaluate the work performed and the platform workers' behaviour and performance, including reliance on customer rating mechanisms.
- Three parties are involved, namely a digital labour platform, a client and a digital platform worker.
- There is a prevalence of non-standard working arrangements, and digital labour platforms tend to classify digital platform workers as self-employed in their terms and conditions.
- The risks, liabilities and responsibilities, including in the area of safety and health, are shifted onto digital platform workers.

Digital platform worker (or 'a person working through a platform'): An individual person providing labour intermediated with a greater or lesser extent of control via a digital labour platform, regardless of that person's legal employment status.

Platform workers can have the status of employee, self-employed or any third-category status.

Digital labour platform: An online facility or marketplace operating on digital technologies (including the use of mobile apps) that are owned and/or operated by an undertaking, facilitating the matching between the demand for and supply of labour provided by a platform worker.

Platforms matching the demand and supply of goods are excluded, as are platforms whereby services are exchanged without remuneration or where the remuneration only covers the cost of providing the services (such as car-sharing). Furthermore, labour provided directly to the platforms as employers (such as working for a platform), or in related satellite activities, do not fall under this definition.

With the growing heterogeneity of digital platform work, a range of taxonomies have been proposed in the literature to capture the core features that help disentangle different platform work types. The most basic taxonomies differentiate on-location from online digital platform work (see for example, OECD, 2018; ILO, 2021), whereas more advanced taxonomies also consider aspects such as the complexity

and scale of the tasks performed, the task content, the matching process, the actor allocating tasks and so on. (Eurofound, 2018; Pesole et al., 2018; Urzi Brancati et al., 2020; European Commission, 2020; Bérastégui, 2021).

To capture those dimensions which affect the OSH risks that platform workers encounter as well as their prevention and management, a taxonomy with three dimensions is proposed which eventually combine into four types of digital platform work:

Table 1: Taxonomy of digital platform work

Dimensions	Type of digital platform work			
	Type 1 (e.g. Uber)	Type 2 (e.g. RingTwice)	Type 3 (e.g. AMT)	Type 4 (e.g. 99designs)
Format of labour provision	On-location	On-location	Online	Online
Skill level required	Lower	Higher	Lower	Higher
Level of control	High	Moderate	High	Low

Source: Authors' own elaboration.

- The first dimension is the **format of labour provision**: online or on-location. In both cases, the matching of platform workers to clients is done online, but the work itself is either performed on-location, or it can be performed virtually using an electronic device at any location. From an OSH perspective, the physical environment in which the work is performed strongly determines both OSH risks and their management (Huws, 2015).
- The second dimension is the **skill level required to execute the task**: lower-skilled or higher-skilled, which captures the task content, scale and complexity. These all affect what OSH risks platform workers face as well as their prevention and management, for example in terms of the use of equipment, the workplace, and so on.
- The third dimension is the **level of control exercised by the platform**, which can range from minimal to a highly significant degree of control. This dimension signals the hierarchical power and managerial prerogatives a digital platform deploys in its relationship with platform workers, in particular regarding the allocation, organisation and evaluation of work. The level of control:
 - gives an indication of the *degree of subordination* that platform workers are subjected to. Subordination is the key legal criterion used in the determination of the employment status and consequently the applicable OSH regulations.
 - indicates the reliance of digital labour platforms on *algorithmic management*. Research finds that higher levels of algorithmic management are associated with higher levels of OSH risks, in particular on the psychosocial wellbeing and mental health of digital platform workers (Bérastégui, 2021).

2. Methodology

Methodologically, this study builds on a combination of desk research and field work. More specifically, the study relies on a review of the academic and grey literature on OSH and digital platform work and available data; a consultation of EU-OSHA's national focal points by means of a written survey; case studies (policy case studies and case examples of platforms); and interviews with key informants from research and policy as well as digital labour platform and digital platform workers. By using a mixed-

methods approach, the findings obtained from different sources or methods can be validated through triangulation, and their robustness across national contexts, types of platform work, types of OSH risks and impacts, can be verified. Any knowledge or data gaps identified in the literature, could be taken up in the fieldwork.

3. OSH challenges, prevention and management in the context of digital platform work

3.1 OSH challenges and risks related to the work activities

As the activities that are performed as platform work are highly similar to those carried out outside of the platform economy (such as parcel delivery or cleaning), their **OSH risks are similar as well** (Huws, 2015; Tran and Sokas, 2017; EU-OSHA, 2017; Garben, 2019; Samant, 2019). Depending on the type of platform work, workers experience different types of risks, to different degrees. Platform work, however, tends to be concentrated in **sectors and occupations that are generally considered more dangerous**, such as the transport sector. While some of these activities require specific skills or certification, not all platforms may require their platform workers to provide evidence of their qualifications when creating an account. Finally, platform work may further require **additional tasks and/or rely on a different combination of tasks** than similar jobs in the traditional labour market, thus requiring other skills. It often involves **extra work** which is not required in comparable jobs outside of the platform economy (for example, setting up and maintaining an account, searching for tasks or communicating with clients), which may lead to other OSH risks and negative health effects. Besides these risks, digital platform work involves a number of additional risks that are specific to the nature and conditions under which this work is performed. These are discussed in the next sections.

Looking only at the work activities, the physical risks of platform work depend on the precise task at hand and whether it is performed on-location or online (Huws, 2015). Platform workers engaged in **on-location platform work face a variety of physical and psychosocial risks**. Due to the wide heterogeneity in on-location platform work, it is impossible to provide an exhaustive list of risks. Common examples from the literature include: cleaners being exposed to chemical products; ergonomic and safety risks such as slipping on wet floors; handypersons being exposed to physical agents (such as noise or dust and vibration when drilling holes) and dangerous substances (such as gas when fixing a boiler) or facing ergonomic risks; and delivery riders drivers and taxi drivers risking being in an accident due to fatigue, being distracted by their phone or violating traffic regulations. On-location platform workers interact with clients and may face violence, harassment or criminal acts perpetrated against them. Other commonly reported sources of stress and accidents for platform workers doing on-location tasks are the weather conditions and traffic congestion (European Commission, 2020).

Online platform work involves desk-based tasks which rely heavily on the use of a computer connected to the Internet. The physical risks associated with this type of work are similar to those of office workers, such as sedentary work, poor posture due to incorrect workstation set-up and working in a cramped space, prolonged sitting and sedentary work, working for long periods with a keyboard, mouse and other devices using frequent and repetitive arm, hand and wrist movements, using an inappropriate screen (in terms of size, flickering, glare, reflection or poor legibility), working with poor lighting and so on (EU-OSHA, 2017). Common health issues relate to musculoskeletal disorders (MSDs), such as pain in the neck, back and upper limbs, headaches and tired-looking, red or sore eyes, cardiovascular diseases, diabetes, visual fatigue as well as other health problems (Huws, 2015). In the COVID-19 pandemic, these issues could have become more severe, for example due to prolonged working hours, extended periods of online work, the blurring of work and private life and so on.

Regarding **psychosocial risks** related to the tasks performed, the literature again points to a link with the nature of the tasks themselves (such as tasks involving direct contact with clients in their home) (see Huws, 2015; EU-OSHA, 2017), but also highlights that most platform workers experience stress. This is driven by the manner in which tasks are allocated, monitored and evaluated (algorithmic management and digital surveillance), the conditions in which platform workers operate (such as overload of information or having to be available at short notice) and so on (see Bérastégui (2021) for a detailed discussion). As platform workers often depend on having a good reputation and positive reviews to get assigned work, being in contact with (prospective) clients can be stressful (Huws, 2015). Out of fear that 'saying no' to a client or going against their wishes will result in a negative review, platform workers may

accept work which they are not qualified to do or have no experience with, or take unnecessary risks. Similarly, platforms rely on a range of nudges and incentives ('gamification'), aiming to motivate platform workers to be available for work for longer periods of time (such as Uber encouraging workers to stay online rather than logging off), to work faster (such as payment by number of deliveries rather than by hour) and so on. These elements are discussed in the following sections.

Some platform workers may further be faced with violence, harassment and abuse and exposed to crime (Eurofound, 2018; ILO, 2021). According to the literature on platform work, these are concerns in particular for on-location platform workers working as taxi drivers or delivery riders and drivers. Online platform workers may experience cyberbullying and harassment, though there is less literature covering this issue. A group of online platform workers that is vulnerable to stress are online content reviewers (Huws, 2015; EU-OSHA, 2017, European Commission, 2020). These workers monitor forums, check photos, videos or social media, and so on to filter out pornographic or violent images, hate speech, racism, xenophobia and so on. Platform workers doing these tasks may not have the required training or support to perform them. In turn, this may cause these platform workers psychological harm.

3.2 Aggravating factors in platform work

Even though the risks and hazards of carrying out activities in the context of digital platform work are largely similar to those in the traditional labour market, the specific characteristics of digital platform work aggravate these challenges and complicate the implementation of a sound health and safety policy. Four dimensions are considered here: a) employment status and contractual arrangements; b) algorithmic management and digital surveillance; c) professional isolation, work-life balance and social support; and d) job and income insecurity.

3.2.1 Employment status and contractual arrangements

In the literature on platform work, the determination of the employment status of platform workers has been identified as the main challenge to be addressed. In platform work, determining employment status can be complicated by the triangularity of the work relationships (for example, platform work involves at least three parties - a platform, a platform worker and a client - among which different types of contractual relationships may exist). Most digital labour platforms qualify their relationships with platform workers as services contracts, and the platform workers themselves as independent contractors/self-employed (Eurofound, 2018; Pesole et al., 2018; Prassl, 2018; European Commission, 2020). This, however, may not be in accordance with the factual circumstances in which these platform workers operate. In particular, platform workers engaged in low-skilled on-location work run the risk of being wrongly classified as self-employed (European Commission, 2020), as evidenced by a growing number of court cases across Europe (De Stefano, 2021).

From the OSH perspective, the core issue is the applicability of the existing regulatory frameworks at the EU level and in individual Member States (Huws, 2015; EU-OSHA, 2017; Tran and Sokas, 2017). More specifically, the self-employed are not covered by EU OSH directives or by national OSH legislation in most Member States and are generally responsible for their own safety and health. The self-employed are not typically targeted by prevention services either. Moreover, the self-employed are excluded from worker participation and are not covered by labour inspections, which are key components of an effective OSH management system. To sum up, in platform work, the responsibility for OSH risk prevention and management is pushed onto the platform workers.

3.2.2 Algorithmic management and digital surveillance

Algorithmic management refers to the use of algorithms to allocate, monitor and evaluate work and monitor and evaluate platform workers' performance (EU-OSHA, 2017; Eurofound, 2018; Bérastégui, 2021). Algorithmic management has five core characteristics (Möhlmann and Zalmanson, 2017), all of which affect the safety and health of platform workers:

- the continuous monitoring or tracking of platform workers' behaviour, such as through the device that connects the platform workers with the platform (such as their phone or computer), by taking screenshots or tracking the worker using GPS;
- the continuous evaluation of platform workers' performance, such as through client ratings, statistics on the number of completed or rejected tasks, data on the speed of task execution;
- (semi-)automated decision-making without human intervention;

- the platform workers' interaction with a system, which does not allow any negotiation or provide any opportunity to ask for feedback; and
- a lack of transparency concerning the functioning of the algorithm ('black box of intermediation').

The use of algorithmic management tips the power balance that exists among the platform, the client and the platform workers in favour of the platform (or, in some cases, in favour of the client) (Bérestégui, 2021). Platforms can rank platform workers and issue rewards or penalties based on performance. Having to maintain a good rating at all times and in real time, and deal with the consequences of having a poor rating can be very stressful for platform workers. The use of algorithmic management undermines platform workers' autonomy, job control and flexibility, which causes exhaustion, anxiety and stress, and has a negative impact on platform workers' health and wellbeing. Platforms deliberately withhold information, such as the address where a parcel is to be delivered and the number of platform workers competing for the same task, which may lead to platform workers feeling pressured and can result in physical safety and mental health risks. Algorithmic management also gives rise to questions about the extent to which platform workers work under the direction of or in subordination to the platform, which is the main legal criterion used to determine one's employment status in many EU Member States. Finally, algorithmic management is used to coordinate and maximise the workload and can thus lead to occupational overload, with workers being assigned too many tasks (quantitative overload) or tasks that are not in line with their skills (qualitative overload), which in turn causes stress and anxiety (Cedefop, 2020; Bérestégui, 2021; see also the above discussion on the importance of matching the skill level required). On the other hand, algorithmic management may also bring opportunities for managing OSH risks (Moore et al., 2019; Cockburn, 2021). Theoretically, algorithms could be adapted by integrating OSH prevention measures into their design, for instance by aligning working-time obligations. Moreover, from the perspective of enforcement, 'smart' monitoring tools might increase the efficiency of labour inspections (Samant, 2019; Cockburn, 2021).

3.2.3 Professional isolation, work-life balance and social support

A third set of factors that aggravates the OSH risks in platform work and complicates OSH risk prevention and management relates to the **individualisation of work**, **professional isolation** (both physical and social isolation), **work-life conflicts** and an **overall lack of social support**. The platform workforce is anonymous, globally dispersed and characterised by a high labour turnover. In addition, platform work is mainly executed in isolation and in unconventional workplaces (such as in the homes of platform workers or clients), which may not be adapted to platform workers' needs (Huws, 2015; EU-OSHA, 2017; Tran and Sokas, 2017; Bérestégui, 2021). Having to work in isolation without support from colleagues and management is stressful and has a negative impact on job satisfaction and job tenure (Bérestégui, 2021). The (positive) effect of working in a conventional workplace with support from colleagues or management is lost (EU-OSHA, 2017; Tran and Sokas, 2017; Samant, 2019). In this context, work-life conflicts may be aggravated, as the boundaries between work and home environments become blurred, as well as the boundaries between working time and family life (Bérestégui, 2021). Among the commonly reported issues in this regard are that platform work involves unpaid time, unpredictable and irregular work schedules, and so on. In addition, many platform workers lack a professional identity and do not find their work meaningful. All of these issues are associated with sleeping problems, exhaustion, difficulties in recuperating from work, stress, depression, burnout and loneliness, and an overall dissatisfaction with one's job and personal life (Bérestégui, 2021). In addition, these factors complicate OSH risk prevention and management. For instance, the notion that platform workers have few or no opportunities to directly engage with other platform workers limits worker organisation (and collective bargaining), and in that sense also stands in the way of realising effective worker participation in the development of an OSH management system (Graham et al., 2017; European Commission, 2020). The difficulties in identifying and accessing the platform workforce also complicate the implementation of preventive measures, such as through information campaigns, training or access to OSH services provided by OSH professionals.

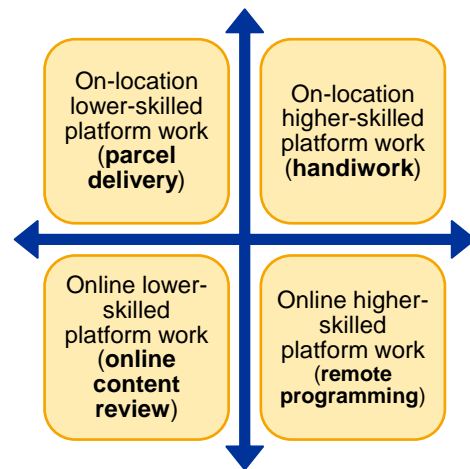
3.2.4 Work transience and boundaryless careers

Finally, platform work is characterised by **boundaryless careers** and **work transience**, which can mean that platform workers are faced with **(chronic) job and income insecurity**. More specifically, platform work consists of a sequence of temporary, short-term assignments that do not guarantee any long-term relationship with a single employer. Most platform workers have little or no control over how many tasks they execute, as tasks are most commonly assigned either by the platform or by the client

(Eurofound, 2018), thereby offsetting to some extent the platform workers' perceived autonomy in performing platform work. Similarly, platform workers typically have limited or no control over how much they earn per task. The pay per task is generally determined by the platform or the client, and, in those cases where the platform worker can set the pay, fierce competition among workers may lead them to set a very low rate. As a result, the income earned through platform work tends to be unpredictable and volatile. Nevertheless, research indicates that an increasing group of platform workers depends on the income earned through platform work to make a living, even when platform work is not the only option for a source of income for these workers (Pesole et al., 2018; Urzi Brancati et al., 2020). The competition among platform workers also means that platform workers need to maintain a good rating, which involves dealing with significant emotional demands (Bérestégui, 2021). Platform work also provides little or no opportunities for skill development through training and career progression (Bérestégui, 2021). This is stressful and can lead to poorer mental and physical health (Huws, 2015; Bérestégui, 2021).

3.3 Deep dive: findings from four case studies

As digital platform work involves heterogeneous forms of work, it is difficult to settle on universal conclusions regarding its OSH challenges or implications. Based on the logic of the platform work taxonomy presented above, within the study whose findings are presented here, four examples of platform work were developed with the aim of exploring in detail OSH challenges and opportunities, practices regarding worker protection, safety and health and the management of OSH; and policies, strategies, initiatives and programmes. The main findings of these case studies are summarised below, while for a more extensive presentation of the cases see EU-OSHA, 2022a; 2022b; 2022c; 2022d.



- **Parcel delivery**, which involves the transport of packages by a worker using a motorised vehicle (such as a delivery van, a lorry, a car or a motorbike) or a non-motorised vehicle (such as a regular bicycle or cargobike). Parcel delivery differs from freight transport in that the packages are smaller and lighter. The main physical risks of parcel delivery work involve ergonomic risks; accidents, slips, trips and falls; workplace violence; exposure to extreme weather; and exposure to hazardous materials or substances. The main psychosocial risks are an excessive workload; long working hours; isolation; verbal abuse and harassment.
- **Handiwork**, which involves a range of professional and household tasks, such as plumbing, painting, electricity, small repairs and gardening. Domestic services, such as cooking, cleaning and babysitting, are outside the scope of this case study. The main physical risks include exposure to hazardous substances and to electricity, extreme temperatures or noise; working at heights; accidents, slips, trips and falls; working with various tools; lifting heavy or awkward objects and working in awkward positions. The main psychosocial risks follow from an excessive workload; long working hours; isolation and verbal abuse.
- **Online content review**, which involves the screening of user-generated content (UGC), such as text, images or videos, in terms of illegal or abusive content, according to a predefined set of guidelines and rules, and decisions as to whether this content can stay online or should be taken down (Berg et al., 2018; Soderberg-Rivkin, 2019). The main physical risks follow from excessive screen time; ergonomic issues; prolonged sitting and sedentary behaviour. The main psychosocial risks relate to exposure to violence, crime, abuse and illegal content; isolation; an excessive workload; and time pressure.
- **(Remote) programming**, which involves the process of writing and testing code that allows computer applications and programmes to function properly. This includes professions such as web and multimedia developers, software developers, and applications programmers.¹ The

¹ For more information, see: <https://esco.ec.europa.eu>

main physical risks follow from ergonomic risks; prolonged sitting; sedentary behaviour; and excessive screen time. The main psychosocial risks relate to isolation, an excessive workload and time pressure.

The distinctions among the types of platform work under the scope of this project, also led to different degrees by which the potential health and safety risks and the implementation of a sound health and safety policy are aggravated. Overall, the available evidence suggests that OSH challenges are most striking for online content reviewers and parcel delivery riders and drivers, although challenges persist in the other types of platform work as well (see Table 2). Unsurprisingly, platforms intermediating online content review and parcel delivery typically exercise a significant degree of control regarding task allocation, organisation and evaluation of work; particularly in comparison with platforms intermediating handiwork and programming tasks. In any case, the available evidence from the literature and the interviews makes clear that only minimal information and support is provided by the platforms about health and safety standards. No general policies regarding OSH have been found in the platforms under investigation, despite some anecdotal evidence that positive changes are being made. For instance, some platforms do appear to have some procedures in place in case of accidents or injuries and many offer a voluntary worker-paid insurance policy against work-related accidents and illnesses. In some cases, platforms interviewed mentioned that they are willing to address OSH issues further, but fear requalification of the labour relation between the platform and its platform workers if they provide training, personal protective equipment (PPE), and so on.

Table 2: Factors aggravating OSH risks in selected types of platform work (by risk level)

Factors aggravating OSH risks	Selected types of platform work			
	Parcel delivery	Handiwork	Online content review	Remote programming
Employment status	High	Low	High	Low
Algorithmic management	High	Medium	High	Medium
Professional isolation/social support	Medium	Medium	High	High
Work-life balance	Medium	Low	High	High
Job/income insecurity	High	Low	High	Low

Source: Authors' own elaboration.

4. Lessons from regulation, policies, actions and initiatives targeting OSH in the context of digital platform work

4.1 Mapping responses to digital platform work

With the proliferation of digital platform work, policy- and decision-makers are increasingly taking action to address some of the challenges that it brings. Based on an expert survey, the European Commission (2020) identified 177 measures or initiatives across the EU-27, the United Kingdom, Norway and Iceland, targeting digital platform work. Most related to the employment status, representation, earnings, and social protection of digital platform workers (European Commission, 2020). In the Commission (2020) study, a distinction is made between 'top-down' and 'bottom-up' measures. Top-down measures include legislation (laws formalising policies, setting out standards), case law (judicial decisions), actions of administrations or inspectorates. Bottom-up measures include collective agreements and social

partner initiatives, actions by platforms, and actions by platform workers. The Commission (2020) study indicates that OSH issues in digital platform work have been largely overlooked by policy- and decision-makers. Among the bottom-up responses, some examples were noted of basic safety training and insurance against work-related accidents and occupational diseases offered by platforms, as well as the provision of basic PPE by platforms. Although OSH was raised as a concern by unions and grassroots organisations representing workers, research revealed a general lack of awareness and a lack of action.

The 2021 thematic review on platform work by the European Centre of Expertise (ECE) in the field of labour law, employment and labour market policies (ECE, 2021) corroborates the Commission study's main findings. The ECE (2021) report finds that very few EU Member States have addressed the issue of the ambiguous employment status of digital platform workers. As before, a lack of attention for OSH issues emerged from the ECE (2021) study. An even more recent update of this work was published in December 2021, as part of a study prepared to support the impact assessment of an EU initiative to improve the working conditions in platform work (European Commission, 2021). This EU initiative itself has been designed to address three core issues emerging in digital platform work: (i) misclassification of the employment status of platform workers; (ii) fairness and transparency of algorithmic management practices applied by digital labour platforms; and (iii) enforcement, transparency and traceability of platform work, including in cross-border situations. In the study supporting the impact assessment, a review of national policies and measures implemented in the area of digital platform work in the EU-27 and seven non-EU countries is presented. More specifically, countries can be clustered into four groups based on these policies and measures, notably the extent to which the classification of the employment status of digital platform workers is addressed and whether other measures on working conditions exist. This study, too, confirms that there are few measures directly addressing digital platform work, and that direct measures tend to have a narrow scope.

The **consultation of EU-OSHA's national focal points**, within the framework of the study whose main findings are presented here, aimed to update the overviews from an OSH perspective. This consultation focused on five types of measures taken by: (i) the government or public authorities (such as legislation or court cases); (ii) OSH authorities or labour inspectorates; (iii) social partners, including social dialogue; (iv) platform or platform workers (or their associations); and (v) any other measure. The consultation confirmed that the levels of awareness about digital platform work and its OSH implications significantly differed across the EU Member States and underlined the differences in approaches taken by different actors within these countries to address them. While EU-OSHA's national focal points recognise the OSH risks in digital platform work, they confirm that digital platform workers are usually not considered when it comes to OSH measures in their country.

Taken together, the latest research and additional fieldwork carried out in this study reveal that, although the challenges of digital platform work are a priority at both the EU and the Member States levels, it is clear that few regulations, policies, strategies, programmes, initiatives and actions directly target OSH. Although a somewhat larger number of measures addresses OSH indirectly, for example by clarifying the nature of the labour relationship, OSH issues in digital platform work remain largely unaddressed. On this note, the case studies of four types of platform work uncovered only few practices undertaken by digital labour platforms. Overall, there was limited awareness of and attention to OSH among platforms, and no examples were found of platforms that had an overall OSH policy for their platform workers. When OSH procedures were in place, for example, in relation to work accidents, these were often poorly documented or remained quite basic. Efforts related to OSH risk prevention and management appeared limited overall, both in terms of numbers and type of initiative (such as basic training only). There was also limited or no involvement of digital platform workers in OSH matters, which is problematic.

From this overview, it is clear that there are key regulatory gaps concerning OSH in digital platform work. In this light, the new EU proposal for a Directive aimed at improving the working conditions and social rights of platform workers, with a view to support conditions for the sustainable growth of digital labour platforms, presents important opportunities. More specifically, this initiative addresses:²

- the **correct classification of the employment status** - which is critical as the OSH regulatory framework most often only tackles dependent employment relationships,
- the **fairness, transparency and responsibility of algorithmic management** - which is the most distinguishing feature of digital platform work, and has significant impacts on the physical

² See: https://ec.europa.eu/commission/presscorner/detail/en/ip_21_6605

and psychological health, wellbeing and safety of digital platform workers,

- the **transparency, traceability and knowledge of developments in digital platform work** and the **enforcement of applicable rules** - which is essential to improve the knowledge base on digital platform work, to foster the exchange of data and information among stakeholders, to clarify the applicable regulatory framework and contribute to the monitoring and enforcement of these rules.

4.2 Deep dive: findings from four policy case studies

In addition to the literature review, the policy brief and case studies on specific types of platform work, **four case studies presenting examples of measures and responses to challenges in platform work were developed** (such as legislation and local government or inspectorate initiatives) (see EU-OSHA, 2022e; 2022f; 2022g; 2022h for more details). Methodologically, each case study was developed based on a review of the available literature and data, and on the inputs of EU-OSHA's national focal point, further completed with stakeholder interviews.

4.2.1 Spain: the Riders' Law

The Riders' Law establishes, at the national level, a right to **algorithmic transparency** (Article 64.4 of the Workers' Statute) and introduces a **legal presumption of a dependent employment relationship for digital platform workers working in the delivery sector** (Additional Provision 23 of the Workers' Statute) (see EU-OSHA (2022e) for the full case study).³ The Riders' law is the outcome of a tripartite social dialogue among the Spanish Ministry of Labour and Social Economy, trade unions and business associations.

More specifically, the law adds an article to the Spanish Workers' Statute, which stipulates that activities of persons who provide paid services consisting of the delivery or distribution of consumer products or merchandise by employers who exercise business powers of organisation, management and control directly, indirectly or implicitly using algorithmic control to manage the service, or to shape the working conditions, **through a digital labour platform** fall within the scope of the law. In this way, there is a rebuttable presumption of a dependent employment relationship for such workers. The 'burden of proof' (presumption) falls on the employer to prove that the worker is self-employed and not an employee. As a result, Law No 31/1995 on Prevention of Occupational Risks also applies to platform workers in the delivery sector, obliging platforms to conduct OSH risk assessments, implement prevention measures, and consult and inform platform workers on all issues concerning safety and health at work. The law also obliges all digital labour platforms (not limited to delivery platforms) to inform their platform workers' legal representatives regarding the functioning of the algorithms used. It compels digital labour platforms to inform the work council on the inner workings of the platform (such as parameters and rules or instructions guiding algorithms). In both areas, the Riders' Law presents a leap forward towards improving the conditions in digital platform work.

Nevertheless, areas for further improvement could be identified. First, the presumption of employment only applies to digital platform workers in the delivery sector, which **limits its scope** and does not reflect the wide heterogeneity of platform work. Second, platforms may seek to circumvent the law by working with subcontractors. Finally, further clarification on the technical and practical scope of the provision on algorithmic management is needed.

4.2.2 Italy: the Bologna Charter

A second case study analyses the Bologna Charter - Charter of Fundamental Rights of Digital Labour in the Urban Context⁽⁴⁾ - and the Italian legislative framework targeting digital platform work (see EU-OSHA, 2022f for more information). After an episode of heavy snowfall in the city of Bologna in the fall of 2017, a group of delivery riders went on strike and marched to the city hall to demand decent working conditions for platform workers, highlighting health and safety issues. In response to these demands, the City Council of Bologna started negotiations with trade unions and digital platforms. This ultimately

³ Adopted on 11 May 2021 and entered into force on 10 August 2021. Real Decreto-ley 9/2021, BOE, 12 May 2021, Sec. I, p. 56733 et.seq., available at: <https://www.boe.es/boe/dias/2021/05/12/pdfs/BOE-A-2021-7840.pdf> See also: <https://apps.eurofound.europa.eu/platformeconomydb/riders-law-105142#:~:text=Description,independent%20contractors%20under%20specific%20circumstances>

⁴ Available at: http://www.comune.bologna.it/sites/default/files/documenti/CartaDiritti3105_web.pdf

led to the adoption of the 'Bologna Charter' in 2018. The Charter's provisions only apply to the territory of Bologna. It includes all platform workers *irrespective of their employment status*, however, in practice, the main focus lies on platform delivery services.

As **concerns about OSH were among the main demands** of Riders Union Bologna when appealing to the City Council to take action, the Bologna Charter is particularly ambitious in that area: it requires platforms to develop an OSH management system, to adopt appropriate measures to assess, prevent and reduce risks and hazards, and to provide insurance for work-related accidents and occupational diseases. The Charter also provides that workers have the right to refuse tasks without repercussions when faced with extraordinary weather conditions.

The innovative and proactive approach of the City of Bologna may inspire other cities and regions in Europe facing similar issues. Nevertheless, one should bear in mind the **limited scope** of the initiative, and not just territorially: only four delivery platforms have signed the voluntary agreement so far.

4.2.3 France: legislative framework on platform work

Since 2016, a number of legislative initiatives have been introduced in France, relating to platform work, as described in EU-OSHA (2022g). **This framework consists of three main laws and two ordinances, yet the latter are not yet in force.**⁵ While often applauded as an example of progress towards improving the working conditions of digital platform work, the legal framework is very limited in scope, leaving most platform workers faced with legal uncertainty.

First, the **EI Khomri law** stipulates that **platforms which determine the characteristics of the goods sold or of the services provided, and set the price thereof**, have a **'social responsibility'** towards workers using their platforms. The law provides self-employed digital platform workers with the right to form and join a trade union, and to defend their collective interests through it (Chatzilaou, 2020). For those that earn at least 13 % of the annual social security ceiling of sales revenue through platform work (€5,347.68 in 2021) (Chatzilaou, 2020), the law foresees the right to continuous professional training and to be insured against work-related accidents and occupational diseases.

Second, the law on the fight against fraud aims at a better detection, understanding and sanctioning of different sources of fraud. It obliges digital labour platforms to **report amounts paid to digital platform workers to the tax administrations**. The law also obliges platforms to provide its users and the French fiscal authorities with information on the **identification details** of the platform and its users, the **status of private person or professional** as indicated by the users, and **the number and the gross total sum of the transactions performed** during the past year (Article 242 bis, General Tax Code).

Third, the LOM introduced a **'right to refuse'** and a **'right to disconnect'** for digital platform workers driving a 'transport car' or delivering goods using a motorised or non-motorised two- or three-wheeled vehicle.⁶ Furthermore, the LOM provided that platforms can establish a charter which lays out key aspects, such as OSH risk prevention and working conditions, to foster transparency and secure workers' rights. However, to date no such charters have been established.

Finally, Ordinance No 2021-487 obliges platforms to share data and information with authorities and administrations. Any proof that supports the authority's control mission must be provided; any medium suitable for inspections must be provided on request. Ordinance No 2021-484 will provide collective rights for self-employed platform workers. Worker participation and collective bargaining in the field of OSH is a well-established fact and is a key component of the EU OSH body of EU law.

4.2.4 Labour and social security inspectorates: actions undertaken

The rise of digital platform work has triggered actions from labour and social security inspectorates and OSH authorities in a number of EU Member States, of which three interesting examples are highlighted below and in the EU-OSHA (2022h) case study. In many countries, however, such actions have lacked efficiency and coordination in the approaches used. Labour and social security inspectorates and OSH

⁵ Law No 2016-1088 of 8 August 2016 on labour, the modernisation of social dialogue and the securing of professional careers ('EI Khomri law'); Law No 2018-898 of 23 October 2018 on the fight against fraud; Law No 2019-1428 of 24 December 2019 on the orientation of the means of transport ('LOM'); Ordinance No 2021-487 on the exercise of the activities of digital intermediation platforms in various sectors of public road transport; Ordinance No 2021-484 on the terms of representation of self-employed workers using platforms in the course of their activity, and the conditions for the exercise of this representation.

⁶ The right to refuse implies that platform workers can refuse tasks without penalty. The right to disconnect ensures that platform workers can freely decide on when to work. Both provisions are also important from an OSH-perspective.

authorities have reported limitations in their knowledge and the available data on digital platform work, as well as a lack of resources and ability to tackle it. In addition, as most digital platform workers are classified as self-employed, they may not fall within the remit of inspectorates and OSH authorities.

In **Poland**, a first observation is that the majority of the reported cases that involved labour and social security inspectorates were instigated by traffic police and confined to the most visible forms of platform work: taxi and delivery services. Investigations by the labour inspectorates targeting Uber and its partner companies revealed a very high number of infringements of various rules and regulations. Around 10 % of the platform workers investigated were found to be illegally residing third-country nationals or legally residing third-country nationals without proper work permits.

Another interesting case is **Belgium**, one of the first and few Member States with dedicated legislation⁷ on platform work, although primarily in the field of fiscal law (Gillis, 2018). Of key interest in the Belgian case are the recent joint inspections carried out by the labour and social security inspectorates targeting Deliveroo, which relied on interviews with 115 delivery riders about the employment status, working conditions and OSH issues. The investigation finally led to the initiation of judicial proceedings against Deliveroo, launched by the public prosecutors at the labour court. On 9 December 2021, the Labour Court in Brussels ruled in favour of Deliveroo, deciding that the couriers were rightly classified as independent contractors. In the judgment, the court pointed out, among other things, that the couriers have the freedom to organise their work themselves (they can refuse deliveries, for example), and that the investigation does not show the existence of legal subordination.⁸

The actions and initiatives of the **Spanish Labour and Social Security Inspectorate (ITSS)**⁹ can be considered a best practice. In 2017, the ITSS decided to harmonise the monitoring of the digital platform economy and started aggregating information from different sources (for example, previous cases or information obtained via workers who filed complaints). The ITSS developed a 'guide on the collaborative economy', aimed explicitly at assisting ITSS inspectors in the monitoring of platform work and the enforcement of applicable legislation. The 2018-2020 Labour and Social Security Inspection Strategic Plan¹⁰ presents a range of operational measures directly targeting platform work, such as providing inspectorates with the technical means necessary to facilitate the identification of those involved in digital platforms; issuing an operations manual to assist inspectorate officials and train specialists; conducting a campaign to inspect platforms; and other related measures.

5. Conclusions and policy implications

5.1 OSH challenges in digital platform work

In spite of all the fuss, digital platform work does not create completely new jobs, but rather gives rise to additional tasks or a different combination of tasks within jobs, and involves a new way of organising and managing them. As a result, at the task and job level, platform workers encounter similar OSH risks as other workers doing comparable tasks outside of the platform economy. In the case of digital platform work, these risks are aggravated due to the specific nature of this type of work and the conditions under which it is performed. More specifically, the combination of algorithmic management with non-standard work arrangements which in practice typically implies that high levels of control over work organisation, allocation, monitoring and evaluation lie with the digital labour platform. Difficulties concerning the correct legal classification of the employment status of digital platform workers imply that most workers are categorised as self-employed and thus not covered by the OSH regulatory framework in place at the EU level and in the Member States. Platform work has also been associated with professional isolation, work-life conflicts, and a lack of social support, as well as (chronic) job and income insecurity. In general, it appears that only minimal information and support is provided by digital labour platforms about health and safety risks prevention. No general policies regarding OSH have been found in the platforms under investigation, despite some anecdotal evidence.

⁷ Programmawet 1 juli 2016, Belgisch Staatsblad 4 juli 2016, 40.97, also known as the 'Law De Croo'.

⁸ See: https://trends.knack.be/economie/bedrijven/deliveroo-koeriers-zijn-geen-werknemers-maar-zelfstandigen-oordeelt-brusselse-arbeidsrechtbank/article-news-1810315.html?cookie_check=1639684012

⁹ Inspección de Trabajo y Seguridad Social.

¹⁰ See https://www.mites.gob.es/ficheros/ministerio/plandirector/National_Plan_for_Decent_work.pdf

Key takeaways for policy- and decision-makers

Takeaway 1: Focus efforts on getting a good understanding of the OSH challenges and opportunities in digital platform work by gathering knowledge and data on working and employment conditions (such as OSH), considering differences among various types of digital platform work, digital labour platforms and digital platform workers:

The understanding of digital platform work, in particular of OSH challenges in digital platform work, is limited among core stakeholders - such as labour and social security inspectorates, OSH authorities or enforcement bodies - across the EU Member States. Efforts should be made to raise awareness and exchange data and knowledge among such stakeholders. Further research and targeted data collection efforts are necessary in relation to the prevention and management of OSH risks in digital platform work, for example by imposing registration and reporting obligations on digital platforms. These topics have been largely overlooked in the literature, but critically support the actions of governments, social partners, labour inspectorates and OSH authorities in the field. There is scarce and mostly theoretical research evidence on the OSH opportunities created by digital platform work and how these can be reaped. This gap must be addressed. For instance, opportunities provided by algorithms to integrate OSH prevention measures into their design (such as aligning working-time obligations) need to be explored further.

Takeaway 2: Introduce measures to help reduce or eliminate information asymmetries and power imbalances between digital labour platforms and digital platform workers by:

- facilitating the determination of the employment status of platform workers,
- addressing the prevalence of undeclared work in the platform economy,
- opening up the algorithmic 'black box' to shed light on the functioning of platforms' algorithms and the repercussions of algorithmic management for platform workers,
- creating opportunities for dialogue among digital platform workers and among platform workers, platforms and other stakeholders (for example social partners, OSH authorities),
- addressing issues related to working time, non-transparent or unpredictable working conditions,
- ensuring effective monitoring and enforcement of OSH regulatory frameworks, as applicable.

5.2 OSH risk prevention and management in digital platform work

The study also confirmed how the nature and conditions of digital platform work complicate OSH risk prevention and management. More specifically, the unclear employment status and classification of digital platform workers as self-employed imply, in practice, that digital platforms externalise obligations, which were historically assumed by employers based on traditional employer-employee relationships. This is mainly because platforms contend that they solely provide online intermediation and not the underlying services. Other key characteristics of digital platform work complicate the implementation of fundamental components of OSH management systems with respect to risk assessment, preventive and protective measures, training, worker participation and labour inspections. Examples are difficulties in identifying and reaching platform workers, the lack of a common and fixed workplace, the temporary nature of the contractual relations, and the lack of collective organisation.

These findings led to several conclusions:

- The OSH regulatory framework at the EU level and in the Member States may not be (fully) applicable to platform workers. Overall, the question can be asked whether the singular focus on the divide between the self-employed and employees as the gateway to labour protections (including OSH) for platform workers is the right way forward for policymakers in Europe, if the desired end result is the improvement of working conditions and OSH for *all* platform workers.¹¹ That being said, the European Commission's proposed directive on improving the conditions of

¹¹ In that context, during the EU-OSHA symposium on the new EU OSH Strategic Framework, EU Commissioner for Jobs and Social Rights, Nicolas Schmitt, who launched the Framework on 28 June 2021, stated that 'digitalisation is rapidly changing the world of work, including working conditions - and not always for the better'. Referring to platform workers, the EU Commissioner highlighted 'the need to provide protection for all of them, independently of their status' and said: '*Platform workers are very often not protected by our OSH rules because they are considered self-employed, which I personally consider not appropriate. Our rules in terms of health and safety should apply to everybody; employed, self-employed and entrepreneurs and that the new OSH Framework aims to address these changes to the way we work to ensure that everybody is protected - all of the time*'. (ibid) See: <https://euosshybrid2.nirestream.com/uploads/evento/euoshahybrid2/symposium-5-july-summary-final-pdf.pdf?updated=1626790742>

platform work draws inspiration from this Spanish law, but with the explicit ambition to be applicable to all platform workers, also including cases where the employment status is not so clear.

- It is clear that there is an overall lack of awareness for and attention to OSH and other fundamental rights of digital platform workers in both research and policy.
- Practical solutions to respond to the challenges in the field of OSH are mostly absent and, if not absent, often insufficient or narrow in scope.
- Only few measures target digital platform work directly, and legislation that does target platform work specifically often does not address OSH or, if it does, in some cases it may diminish OSH-coverage rather than extend it.
- A closer look at Member States' legislative frameworks thus reveals that digital platform work is largely left unregulated and unmonitored. In many Member States, neither labour, nor social security inspectorates competent for monitoring the self-employed actively monitor the platform economy. As a result, and as also reported by various interviewed stakeholders, the largest part of the digital platform economy remains uncharted territory, and involves significant amounts of undeclared work activities
- Finally, several stakeholders point out the lack of data concerning both the platform economy as a whole, and of platforms, platform workers and activities performed in particular. Regarding OSH, such lack of data is problematic, by making it difficult to estimate the size and severity of risks and challenges, but also by rendering monitoring and enforcement of applicable rules and legislation de facto impossible.

Key takeaways for policy- and decision-makers

Takeaway 3: Increased efforts should be made to raise awareness about the key importance of OSH issues in general and of risk prevention and management, as well as to foster respect for OSH fundamental principles among government authorities, digital labour platforms and digital platform workers:

While this lack of awareness is inherently connected with the debate on platform workers' employment status, this should not be a barrier to increasing transparency and OSH support overall. This can be grounded on the principle of public interest and the principles of the welfare state (such as reducing healthcare costs). Awareness raising and information campaigns and strategies targeted at digital platform workers, digital labour platforms, trade unions, authorities and competent inspection services, policy makers at all levels and any third party concerned would be helpful in this regard.

Takeaway 4: More transparency is urgently needed to facilitate the work of OSH actors (for example, competent authorities, workers and workers' organisations)

To facilitate the work of OSH actors, more transparency is urgently needed. This can be achieved by including provisions in policy and legislation targeting digital platform work that support the identification of digital labour platforms and digital platform workers, for example by imposing reporting obligations on platforms towards the authorities (such as labour and social security inspection services, tax authorities and so on). It must be acknowledged that the European Commission's proposal of a Directive on improving working conditions in platform work is expected to increase the transparency of platforms by clarifying existing obligations to declare work to national authorities and asking that platforms make available information about their activities and the digital platform workers who use their platform.

Related to this point, transparency on the functioning of platforms' algorithms is critical given algorithms' severe impact on workers' health and safety. The Spanish Riders' Law serves as an excellent source of inspiration for what can be done. The proposed Directive on improving working conditions in platforms equally forms an important step in that direction (Article 6-9).

Takeaway 5: Monitoring and enforcement of OSH regulations in digital platform work should be strengthened:

This can be achieved by ensuring that the respective authorities have the knowledge, the means and the resources to do so. The example of Spain, where labour inspectors are trained and receive guidance on how to inspect digital platform work, can serve as inspiration here. At the same time, their actions make clear that inspection services can monitor and enforce compliance despite issues regarding the qualification of the labour relations between the worker and the digital labour platform.

An inventory of resources and capacity of inspection services, in particular those services competent for OSH, and a collection of reliable and interoperable data on the number of actions related to work, the number of workers and platforms monitored, the assessment of OSH risks in the digital platform economy by inspection services, the number of incidents and health-related issues recorded and the outcomes of the actions undertaken, would be helpful. The SLIC and/or ELA,¹² in cooperation with EU-OSHA, could potentially play a critical role of coordination in this regard, and foster knowledge exchange among (OSH) authorities in various Member States.

Takeaway 6: *Digital platform workers and their representative organisations (grassroots organisations, trade unions) should be informed and involved in the prevention and management of OSH risks in digital platform work:*

Social partners are highly recommended to continue their efforts in organising and representing platform workers, paying attention in particular to those workers who are less visible. This is also in line with the European Commission's communication on the EU Strategic Framework on Health and Safety at Work 2021-2027 which, with regard to social dialogue highlighted how social partners are very well placed to find solutions adapted to the circumstances of a specific activity or sector.¹³ In that sense, the proposed guidelines on the application of EU competition law to collective agreements of solo self-employed people are welcomed. The case study on the Bologna Charter is also a testimony of the important role that workers and workers' organisations could play in improving the working conditions and health and safety of digital platform work. Platforms should ensure that such involvement is thus respected and guaranteed, for example by making it mandatory for digital labour platforms to consult workers on OSH issues when changes are made to the work organisation or conditions. The Riders' Law in Spain is equally a key example in this regard, by obliging platforms to inform the legal representatives of platform workers about the inner workings of the algorithms leading to (semi-) automated decisions 'influencing working conditions and work allocation'. Additionally, this provision is a first and vital step in the process of implementing the Human-In-Command approach (HIC), as promoted by the European Economic and Social Committee (EESC), the International Labour Organisation (ILO) and The European Trade Union Confederation (ETUC) among others.¹⁴ Applied to the context of platform work, this would ensure that platform workers are actively participating/negotiating in the design of the algorithms, while also ensuring that the final decisions affecting working conditions are taken by human beings.

¹² See Article 7 of Regulation (EU) 2019/1149 of 20 June 2019 establishing a European Labour Authority.

¹³ European Commission, Communication on the EU Strategic Framework on Health and Safety at Work 2021-2027 - Occupational safety and health in a changing world of work, COM(2021) 323 final, Brussels, 28 June 2021 (available at: <https://eur-lex.europa.eu/legal-content/eN/TXT/HTML/?uri=CELEX:52021DC0323&from=EN>).

¹⁴ European Economic and Social Committee (2017), 'Artificial intelligence -The consequences of artificial intelligence on the (digital) single market, production, consumption, employment and society'. Opinion No 7; ILO (2019), 'Global Commission on the Future of Work. Work for a Brighter Future'. Available at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_662410.pdf; ETUC (2020), 'AI - Humans must be in command'. Available at: <https://www.etuc.org/en/document/ai-humans-must-be-command>

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The European Agency for Safety and Health at Work (EU-OSHA) contributes to making Europe a safer, healthier and more productive place to work. The Agency researches, develops, and distributes reliable, balanced, and impartial safety and health information and organises pan-European awareness raising campaigns. Set up by the European Union in 1994 and based in Bilbao, Spain, the Agency brings together representatives from the European Commission, Member State governments, employers' and workers' organisations, as well as leading experts in each of the EU Member States and beyond.

European Agency for Safety and Health at Work

Santiago de Compostela 12
48003 - Bilbao, Spain
E-mail: information@osha.europa.eu
<https://osha.europa.eu>