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WORKING IN DIGITAL AND SMART ORGANIZATIONS

Legal, Economic and
Organizational Perspectives
on the Digitalization
of Labour Relations



Working in Digital and Smart Organizations

Edoardo Ales • Ylenia Curzi
Tommaso Fabbri • Olga Rymkevich
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Editors

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Labour Relations

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1

Introduction

Olga Rymkevich and Iacopo Senatori

This book is the outcome of a project bringing together a group of scholars from different disciplinary backgrounds, who have a common interest in the innovation taking place in the field of employment relations. The project, not yet completed, was developed in the Marco Biagi Foundation, a research institute at the University of Modena and Reggio Emilia (Italy), which has been experimenting with multidisciplinary and interdisciplinary studies since it was set up in 2002. These studies encompass mainly labour law, economics and organisational theory with a view to one day involving experts from a broader range of disciplines.

The choice of studying the digital transformation of employment relations arose as a natural consequence of the working environment inhabited by the editors of this book. In fact, the complex, dynamic and increasingly topical nature of this phenomenon requires innovative

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approaches that go beyond deeply rooted, narrow and often outdated stereotypes, thus opening up an interesting experimental space for multidisciplinary and interdisciplinary studies.

From this perspective, the present volume collects a selection of papers dedicated to the problems of digitalisation of employment relations analysed from various disciplinary points of view in light of their theoretical and practical implications. Such an approach, in the view of the editors, is the best way to tackle this phenomenon in its multifaceted and controversial aspects. At the same time, it represents a unique and original feature of this volume which distinguishes it from the other publications in the field.

Arguably, the mere multidisciplinary approach might be insufficient to address all the complexities of the phenomena of digital transformation. For this reason, a further step allowing a move from a multidisciplinary reflection towards an interdisciplinary one might be instructive for the purpose of creating a sort of a “communication channel” between disciplines that do not always communicate in a fluid manner. Such an interdisciplinary exercise requires additional intense joint efforts aimed at developing shared analytical concepts and a more coherent and integrated approach. Ideally, this should make it possible to overcome short-sighted and sometimes egoistic dogmas of individual disciplines which otherwise might not be able to gain insight into the problems inevitably generated by digital transformation.

The analysis of the impact of digitalisation on employment from various disciplinary angles clearly shows its *pros* and *cons*. On the one hand, digital technology can be conceived as a means to establish more horizontal and cooperative relationships within organisations and to provide “smart” and digital workers with greater flexibility in the definition of their working schedules, enhancing self-determination in the performance of work, while providing better opportunities to match their skills with the demand for labour, given the potential decoupling of labour supply from any physical or geographical boundary. Furthermore, it entails significant potential for job creation insofar as it can lead to an increase in productivity and the development of a production system based on innovation, possibly linked to the reshoring of previously outsourced operations and the reconfiguration of business models (“selling light not light bulbs”).

On the other hand, digitalisation gives rise to a challenge for the common theoretical concepts of employment relations as well as the material conditions of workers. From a labour market perspective, it entails the risks of obsolescence of jobs, especially low-skilled ones, and the deskilling of workers as they are made more and more dependent on the input from highly sophisticated digital platforms and devices (“smart factories for dumber workers”). The final outcome of those processes may be an increase in unemployment, segregation and inequality. From a management perspective, the use of digital devices requires new patterns of job design and job evaluation, capable of instantiating additional and invisible command-and-control features in working processes, allowing the continuous real-time monitoring and evaluation of worker performance. Another effect may be a trade-off between organisational flexibility and more intensive workloads, in both qualitative (e.g. degree of cognitive effort) and quantitative (working hours) terms. All of the above may lead to a deterioration of worker health and safety along with a heightened risk of work-related stress.

Given the intrinsic weakness of employees in terms of bargaining power in relation to the employer, evidently a set of adjustment measures should be put forward at different levels. In legislative terms, stronger and more fine-tuned employee protections, looking beyond the increasingly obsolete and rigid distinction between subordinate and self-employed workers, should be proposed. Corresponding adjustments are also necessary at the organisation and HR management level. Ideally, they should be in accordance with each other (i.e. fundamental labour law principles based on respect for human rights and dignity with economic efficiency and rationality standing at the core of the economic and organisational theory). In this regard, it seems particularly instructive to analyse existing best practices relating to the adaptation of employment provisions and organisational models to the challenges of digitalisation, tackling them in a broader comparative perspective. They range from judicial responses to cases relating to the employment status of Uber drivers in the US and the UK, to the legal regulation of specific issues prompted by digital work, such as the rethinking of restrictions on the online surveillance of employees and the recent regulation on “smart work” in Italy, as well as the initiatives promoted by IG Metall in Germany.

In light of the problems outlined above, the crucial question remains how to protect the interests of all the stakeholders operating in the digital economy. Clearly, a set of innovative, integrated and far-sighted policies is needed. Of course, such policies should enhance, among other things, the role of social dialogue which in the sphere of employment relations remains a core instrument to ensure an appropriate balance of interests of the parties involved. In this regard, the key actors of industrial relations, first of all trade unions, should rethink their respective roles in the context of the digital economy in order to be able to mitigate inevitable conflicts and, at the same time, gain additional advantages afforded by Industry 4.0. This requires all the actors involved to become more flexible, more open to innovation and change and “smarter”.

Against this backdrop, there is an increasing need to establish a more integrated and shared framework of knowledge on work digitalisation, build a taxonomy of the phenomena under investigation, examine their impact, delineate future perspectives and put forward a comprehensive set of original proposals. Given the complexity and rapid evolution of the phenomenon of digitalisation, more research is needed and undoubtedly an interdisciplinary approach should be increasingly privileged in future research projects. This should allow stakeholders to anticipate and react in a timely manner to the impact of digital transformation of various aspects of employment relations.

The papers in this book attempt to take an initial step in the direction of a more comprehensive in-depth understanding of the challenges entailed in the digital transformation of employment relations, whereas the last chapter outlines a scenario for the next stage of interdisciplinary research in this field.

The **first part** of the book attempts to outline a comprehensive picture of the issues of interest for the three disciplinary fields that are included in the project.

The paper by **Edoardo Ales** aims at illustrating, from a labour law perspective, the impact that digital transformation and digitalisation are having on the workplace and the work relationship. “Dematerialisation”, “privatisation”, “adjustment” and “enrichment” are among the keywords that, in the author’s opinion, best describe the ongoing innovations and the challenges they entail for labour law. Risks and opportunities in the

transition from the traditional to the new patterns are examined, and the particular emphasis is on the health and safety of workers and the classification of the work relationship.

The paper by **Tommaso Fabbri** enriches the picture with a work organisation analysis. The first part provides a number of definitions, starting with the very concept of “digital work” and a characterisation of the phenomena involved in the process of digitalisation of the employment relationship. In the second part, the author tests the main characteristics of the new employment patterns: the findings lead him to question some assumptions related to work performed in a digital environment, such as its smartness and healthfulness.

Finally, the contribution by **Sergio Paba** and **Giovanni Solinas** sheds light on the economic implications of the “Fourth Industrial Revolution”. They start by looking for an appropriate definition of the phenomenon. Then they discuss its impact on employment by reviewing the relevant literature and the industrial policies developed by governments to support the digital revolution. The authors advocate the implementation of new policies, designed for this new era of technological change (such as the provision of adequate protections and benefits for independent contractors, which should not adversely affect their independence and flexibility), and argue that governments should refrain from reviving forms of protection and regulation designed for the past industrial age.

The **second part** is focused on the problems arising in the multifaceted and complex field of the gig economy. The contributions included in this part have a common legal background and address the crucial issues of remuneration, performance assessment and qualification of the work relationship.

The paper by **Emanuele Menegatti** starts from the argument that the application of a minimum wage to workers engaged by digital platforms could alleviate the economic uncertainties that such workers often struggle with and, at the same time, provide for a fairer distribution of the profits generated by the digital platforms. Given that an approach based on the classification of the employment relationship would not represent an efficient solution (since it would not lead one to consider workers in the gig economy as employees in a strict sense), the author

moves to a *de iure condendo* perspective. Drawing from the theory of “purposive labour law”, he advocates a redistribution of employment protections towards all personal work relations.

The contribution by **Alessandra Ingraio** is focused on the widespread use, by gig economy platforms, of customer feedback systems by which users are allowed to rate and review services and goods. Applied to the performance of a personal work service, such systems represent a new model of evaluation that impacts on the remuneration, the exercise of employers’ prerogatives (such as control and disciplinary power) and the protection of the personal data of workers. The author analyses the possible solutions to such problems, making reference to the provisions of the new General Data Protection Regulation of the European Union, which include some innovative protections for this kind of worker, such as the portability of personal data and the right to be exempted from decisions based exclusively on automated processes.

The paper by **Gionata Cavallini** reviews the different paths pursued by case law and the legal literature with respect to the classification of “crowdworkers” in order to clarify whether they can be entitled to full employment rights or, otherwise, whether they can achieve a minimum floor of protections outside the domain of statutory employment law. In the author’s view, the most convincing solution in the given framework is to classify this particular relationship as platform-mediated self-employed work. Although this may represent a first step in the direction of a clarification of the legal status of crowdworkers and a recognition of their rights, the author argues that legislative intervention is needed to pursue a more satisfactory outcome.

The **third part** investigates how digitalisation applied to industrial processes impacts on industrial relations practices. The two papers are characterised by the use of a comparative methodology, and both try to read into the recent developments taking place in two European models—the German and the Italian—that are characterised by similar production systems as well as by very different institutional backgrounds.

The paper by **Bruno Cattero** and **Marta D’Onofrio** presents a case study that the authors conducted on the German and Italian fulfillment centres of the leading e-commerce company, Amazon, with a particular emphasis on its logistics area. In the first part, they look into the work

practices implemented at the plants, concluding that the mix between high digitalisation and low automation, while preserving jobs, is a cause of deterioration of working conditions since it allows a pervasive control of work performance and an heavier workloads. The second part examines the attitude of the company towards the trade unions' claims for better conditions. The authors find that the managerial approach is barely influenced by the different institutional contexts in the two countries. On the other hand, the unions seem to have deployed different strategies to organize employees and put forward their requests: nonetheless, the outcomes have been similarly unfavourable for the employees.

Moving from a similar background analysis of the impact of digitalisation on the manufacturing sector, the contribution by **Matteo Avogaro** compares the strategies developed by two leading trade unions—the German IG Metall and the Italian FIM-CISL—to tackle the issues raised by the adaptation of working conditions to the new context, from the perspective of employees' interests. Continuous vocational training, work–life balance and job rotation (linked to the increased complexity and specialisation of tasks) represent the most challenging topics for trade union action. The author concludes that collective agreements and dialogue between social partners remain, in the modified scenario, the main instruments to balance the workers' requests and the employers' need for innovation.

The **fourth part** looks into the effects that the introduction of organisational arrangements prompted by digitalisation exert on the performance of work, particularly as far as the traditional patterns of space and time are concerned.

The paper by **Roberto Albano**, **Tommaso Fabbri**, **Ylenia Curzi**, **Sonia Bertolini** and **Tania Parisi** presents a definition of “smart” (or “agile”) work, which is work based on the intensive use of digital devices and increasing spatial and temporal “disembedding” from the formal organisation. The authors address three research questions, focused respectively on (a) the interaction between organisational autonomy, discretion and control; (b) the relationship between digitalisation and productivity; and (c) the reconciliation of work with non-working time. The findings lead the authors to point to directions for further research con-

cerning the collective development of autonomous rules and new organisational competences and, on the other hand, the balance between risks and benefits that the extensive use of mobile devices entails for work organisation and work–family balance.

The paper by **Rüdiger Krause** tackles, from a labour law perspective, the problem of the “encroachment” of work life on private life, encouraged by information and communication technology and the use of mobile devices as work instruments. The author asks whether current working time regulations are a suitable means to protect the interest of “always-on” employees or whether, on the contrary, deregulation could be a better answer. The analysis builds on the theoretical concept of “time porosity” and the reconstruction of the European legislation of working time. The author finds that a proper answer to the issues raised by time porosity should come from the mix between a more effective enforcement of existing regulations and action aimed at filling some regulatory gaps, concerning, for instance, the classification of stand-by work and the acknowledgement of a right to disconnect.

The paper by **Teresina Torre** and **Daria Sarti** presents the findings of explorative research aimed at investigating the implementation of smart-working arrangements and practices within organisational contexts, focusing on the role played by HR departments. The authors reject the idea of a one-size-fits-all model for effective implementation: in their view, smart working has to be designed starting from specific situations and with specific attention to the features of each organisation. They also argue that the functions of the HR department are crucial in creating the conditions for successful implementation of smart-working arrangements, including appropriate training for users and managers, prompting a cultural adaptation of the key players and building the consensus of social partners.

Part I

The Challenges of Digitalization for Employment Relations



2

Protecting Work in the Digital Transformation: Rethinking the Typological Approach in the Intrinsically Triangular Relationship Perspective

Edoardo Ales

Introduction

Digital transformation as “the profound transformation of business and organizational activities, processes, competencies and models to fully leverage the changes and opportunities of a mix of digital technologies and their accelerating impact across society in a strategic and prioritized way, with present and future shifts in mind” (i-SCOOP) has been ongoing for decades.

However, “economic and societal changes occasioned by technological developments are shaped, not just by the availability of new technologies and their features, but also by ideologies, power structures, and human aspirations and agendas. Technologies are not exogenous forces

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that roll over societies like tsunamis with predetermined results. Rather, our skills, organizations, institutions, and values shape how we develop technologies and how we deploy them once created, along with their final impact” (Committee on Information Technology, Automation, and the U.S. Workforce 2017, 54).

On the other hand, digitalization as “the process of employing digital technologies and information to transform business operations” may be regarded as “the fastest, most striking, example yet of the adoption of what economists call a general purpose technology (GPT) – a technology like steam power or electricity so broadly useful that it reorients the entire economy and tenor of life” (Muro et al. 2017, 5).

It is self-evident that such a “profound transformation of business and organizational activities, processes, competencies and models” which brings to the “explosion of digitally enabled business models and ways of working” is going to deeply affect the arrangements and regulation of the work relationship.

Indeed, “in terms of business models, organizations of all kinds are experimenting with myriad new formats ranging from decentralized and remote work, e-commerce, internet marketplaces, online talent platforms, online supply chain management, to ‘sharing’ models, dynamic pricing, crowd financing, and many more” (Muro et al. 2017, 7).

“As a result, workers of every stripe – from corporate finance officers to sales people to machine operators to utility workers and Uber drivers – are spending sizable portions of their workdays running the Waze app to navigate traffic; connecting to the office by text message; managing processes through Salesforce; or running diagnostic software at the building site or at bedside” (Muro et al. 2017, 7).

The aim of this essay is to illustrate, from a labour law perspective, the impact that digital transformation and digitalization are producing in terms of dematerialization and “privatization” of the workplace, “adjustment” and “enrichment” of the work relationship, and “framing” of the provision of services.

Furthermore, the essay will analyse the transition from the traditional work relationships to the new work patterns and conclude on the idea that one should look at digital transformation and digitalization, at the same time, as opportunities or risks for workers—or both. This is definitely a challenge for labour law.

The Effects of the Digital Transformation and Digitalization on the Work Relationship: An Overview

From the list of processes recalled above, one can see that digital transformation and the digitalization of business impact on some constitutive elements of labour law, such as the workplace, the posture of the work relationship, the allocation of prerogatives and responsibilities within it and the way in which self-employment is performed. Such a statement needs to be explained.

We can start from the workplace, which, together with undertaking and establishment, is still among the most relevant notions of labour law. It indicates the physical as well as the juridical place where workers have (the right) to perform their duties. One of the effects that digitalization of business is likely to produce is the dematerialization of the workplace, pushing workers outside the undertaking or the establishment as physical places while keeping them attached to the company as economic and legal entity. The dematerialization of workplace may occur because work will be performed on a mobile device and/or because of its “privatization”, in the case of work performed at home on a platform. Both modalities fall under the name of smart or agile work.

As a consequence of the dematerialization and/or “privatization”, the traditional notion of workplace has to be regarded as outdated since it is based on (i) the existence of premises owned by or to be ascribed to the employer and (ii) the indispensable presence of the worker within them.

However, if digitalization makes the physical notion of workplace outdated, one may wonder whether the juridical dimension attached to it should be preserved in order to guarantee (at least some of) the rights that were (and still are) recognized to workers because of their physical presence within employers’ premises.

A promising concept that could be used to categorize the juridical dimension of the workplace is that of work environment, which is not necessarily linked to employers’ ownership or availability of the place where the work is performed. In fact, in light of the dematerialization and “privatization” of the workplace, every place (even the worker’s place) can be looked at as a work environment.

In turn, the notion of work environment, resulting from international and EU occupational safety and health (OSH) law, immediately recalls the need to guarantee workers' physical, psychical and psychosocial integrity in the event that they are no longer operating within the employers' premises.

The reference to OSH highlights one of the main challenges that labour law will face because of the dematerialization and/or "privatization" of the workplace, i.e. the physical separation of employers from their workers (employees) with the consequence that the former will no longer be able to exercise their managerial prerogatives (directly or indirectly) in person. Physical separation affects, in particular, the power to direct and control, personally and continuously, the quality and quantity of work performed by the worker within the agreed working time.

Of course, this represents a profound change of paradigm for labour law since personal and ongoing direction and control (still) constitute the main features of the traditional structure of the employment (subordinate) relationship as well as the most effective instruments for the assessment of workers' performance in view of its remuneration.

Indeed, the physical separation of workers (employees) from their employers is not a new phenomenon for labour law if one takes into account homework, the oldest form of distance work ever. Nevertheless, within the framework of the digitalization of business, the change of paradigm triggered by the physical separation of the worker from the employer has to be carefully scrutinized since it presents itself as ambivalent: the dematerialization and/or "privatization" of the workplace may mean either more or less control.

On the one hand, digitalization, by its nature, provides the employer with the possibility to enhance control by way of IT, above all for distance work performed online. On the other hand, the employer may decide to renounce control just because of the physical separation or to accept and even trigger physical separation because ongoing control on the performance is no longer perceived as essential.

In the first case, a strengthened control on work will require a careful assessment of its modalities under existing labour law rules or under the ones to be elaborated specifically for the new forms of IT-supported control. From such a perspective, one has to remember that labour law has

always looked suspiciously at distance control, at least if not approved by the controlled workers or their representatives within the undertaking. Additionally, digitalization is likely to transform the same work tools into control devices (work-control devices), thus leading to the concurrence, into the same routine, of work, control on work, control on the respect of the working time, and assessment of the performance in the view of its remuneration.

In the second case, employers might be encouraged or obliged, by the absence of suitable remote control devices, as was the case for homework, to reduce the extent to which they shape and organize work. This will lead to the enhancement of a results-oriented approach and a corresponding increase of workers' autonomy in deciding the modalities to be used in order to achieve the results expected by the employer. This could give rise to the need for an "adjustment" of the relationship between the worker and the undertaking, from a practical and juridical point of view, in terms of coordination of the work performed in an autonomous way with the functioning of the business.

Associated with the physical separation between management and labour is the reallocation of prerogatives and responsibilities deriving from the work relationship. This mainly has to do with the increasing tendency of digitalized business to rely on reputational mechanisms based on costumers' rating instead (or because of the impossibility) of assessing by itself workers' performance.

Such a reallocation of managerial prerogatives results in the empowerment and responsabilization of costumers, who, in this way, are no longer to be regarded only as end users of the product or service but also as co-managers of the workers providing them. However, in most cases, costumers cannot exercise their co-managerial prerogatives directly since the reputational mechanism, in turn, is administered by an algorithm that normalizes costumers' feedbacks according to business guidelines.

In certain cases, costumers' empowerment can be taken to the extreme, the passive consumer being transformed into a prosumer, to be understood as somebody who will participate in the design and creation of the product or service provided by the business. The empowerment and responsabilization of the costumer/consumer, as co-manager or even as

prosumer, are likely to prompt the enrichment of the traditional bilateral structure of the employment relationship by the active involvement of a third party.

This kind of involvement gives rise to an intrinsically trilateral work relationship, in which the third party enters into the same commercial contract signed with the company that produces the good or provides the service agreed upon, in most cases without the explicit consent or even knowledge of the worker.

Such an intrinsically trilateral work relationship is not comparable to agency work. The latter, in fact, triangular in its results, consists of two intertwined but separated contracts, both having as specific object the utilization of the worker by a third party not bound by the employment contract that links the worker to the agency.

Digitalization of business may also lead to the dematerialization of the company. This happens with businesses that consist of making available, via app, a virtual market place in which providers and costumers can satisfy their reciprocal interests and needs under the supervision and with the guarantee of the company owning the platform.

In this way, costumers purchase a service provided by self-employed and, by rating both the service and the provider, are able to build a reputation of the latter. By doing this, costumers help each other in making the right choice on the platform. Costumers also help the platform to exclude providers who have been rated as unreliable or undesirable by a relevant number of them according benchmarks determined by the platform on the ground of (normalized) costumers' feedbacks. In fact, the guarantee of a certain standard of service is one of the most important features of the business that the company and the providers allowed into the platform carry on. On the other hand, the company is rating costumers and if they have proven themselves unreliable or undesirable, they can be denied access to the platform.

In the case just described, one cannot, at least in our view, talk about an employment relationship between the company administrating the platform and the service provider, even in the "enriched" version, as resulting from the presence of a third party. In fact, the service provider is free to join and leave the platform at any time without any constraint. It is also free to refuse the service to the costumer without paying any

consequence except on its reputation on the platform, which, in turn, can react consequently even by banning the provider.

Instead of employers, platforms of this kind can be categorized, in our view, as reputational service intermediators; costumers as clients looking for a well-reputed service provider; service providers as self-employed that, in order to profit from the (reputational) services of the platform, accept to be rated and framed within it as far as the conditions of the service are concerned. In fact, they provide a service they could also provide outside the platform, maybe even under more profitable economic conditions, without benefiting, however, from the advantages offered by a widespread and well-established reputational mechanism.

Therefore, one could talk about as many self-employment relationships as the number of service agreements concluded within the framework of the platform as reputational service intermediary.

Concluding on the impact digital transformation and the digitalization of business are likely to produce on constitutive elements of labour law such as the workplace, the posture of the work relationship, the allocation of prerogatives and responsibilities within it and the way in which self-employment is performed, one can argue that labour law is only partially equipped to face it. In fact, if the notion of work environment, which should substitute the outdated one of workplace, is already well known in international, supranational and national labour legislation, many of the concepts (elaborated on above) to cope with the newest developments of digital transformation are definitely unknown to it.

We are referring to the intrinsically trilateral employment relationship resulting from the reallocation of managerial prerogatives in terms of empowerment and responsabilization of the costumer, to be seen as co-manager or even as prosumer. The same applies to the self-employment relationships as service agreements concluded within the framework of the platform as reputational service intermediary. Even the very notion of coordinated self-employment is unknown to the majority of national legal orders.

In the next two sections, we will analyse in more detail the most important issues raised by the digital transformation with reference to the basic notions of labour law we have referred to above.

Safety, Health and the Quantification of Work in a Dematerialized and “Privatized” Work Environment

A major challenge that labour law is facing because of the dematerialization and/or “privatization” of the workplace is how to guarantee a safe and healthy work environment to the worker in the event that work will be performed outside the employer’s premises. In the standard setting of labour law, in which there is a coincidence between the owner of the place where the work is performed (undertaking or establishment) and the employer of the worker who performs the work, the guarantee of a safe and healthy work environment is at the employers’ charge.

From a legal point of view, that guarantee is realized by the fulfilment of the so-called safety obligation. As for its object, the safety obligation is multifaceted in the sense that it focuses, from the perspectives of a preventative as well as a protective avoidance of risks, on the following:

- (a) material safety: the way in which the workplace is structured and equipped by the employer and the choice of substances and agents to be used within the production process in order to avoid or reduce physical risks;
- (b) organizational safety: the way in which employers shape the production processes, including the working hours and rests periods, and in which they train, inform and instruct workers in order to avoid or reduce psychophysical risks;
- (c) immaterial safety: the safeguard of workers from discrimination or harassment of any kind (perpetrated by the employer or workmates) in order to avoid or reduce psychosocial risks;
- (d) shared safety: the balanced participation of workers and their representatives (specialized and generalist) in the fulfilment of the safety obligation.

Labour law, actually, has already faced the need to cope with the fulfilment of the safety obligation beyond its standard setting, i.e. in the case of work performed outside employers’ premises, as it happens, without