

An international conference on 'Labour Inspection and the Challenges of the Future', organised by the State Labour Inspection, was held at the SLI Training Centre in Wrocław on 27 and 28 October 2022. The event was attended by labour inspection staff from EU Member States, as well as representatives from the International Association of Labour Inspection (IALI), the International Social Security Association (ISSA), the International Labour Organisation, the Senior Labour Inspectors' Committee (SLIC) and the European Agency for Safety and Health at Work (EU-OSHA). In a special series, we present the most interesting excerpts from the conference participants' speeches.

Challenges to the labour inspection related to the digitalization of work and artificial intelligence

Pavlin Vaskov Todorov, Director of the Labour Inspection Directorate in Burgas, General Labour Inspectorate Executive Agency in Bulgaria

Denitsa Ivanova Nikolova, Principal Labour Inspector, Labour Mobility Directorate, General Labour Inspectorate Executive Agency in Bulgaria

The emergence of digitalisation and artificial intelligence in various areas of the economy poses a major challenge for labour inspections. It is a question of finding a balance between current occupational health and safety legislation and emerging new technologies and risks. Denitsa Ivanova Nikolova, on behalf of the Bulgarian inspection, gave a presentation on specific practices in the field of digitalisation of work process and the introduction of artificial intelligence in the operations of leading companies in Bulgaria in the communications technology and mining sectors.

More opportunities

The first tool the representative of the Bulgarian labour inspection talked about was an online employee training platform introduced by one of the telecommunications operators, with access to thousands of updated training materials, which:

- facilitates the process of conducting internal training for employees;
- saves employees' time;
- supports the activities of the human

resources department by allowing the development of employee competencies to be assessed;

- meets employees' needs for self-development in various fields.

An example of the use of advanced technology in work process is also the digitisation of ventilation systems for underground workings, providing real-time information on air flow, temperature and gas concentrations in mines and at the same time automatically controlling ventilation. As Nikolova explained, the implementation of this technology was determined not only by economic reasons, such as the rising price of electricity, but also by the regulation of technical safety parameters in mines regarding the concentration of gas in the mine atmosphere or the ventilation air flow rate in mines. Coal companies are obliged to report to the relevant supervisory institutions on the extent to which they implement these requirements. There are also environmental and social factors that translate into the need to implement more and more new techniques and

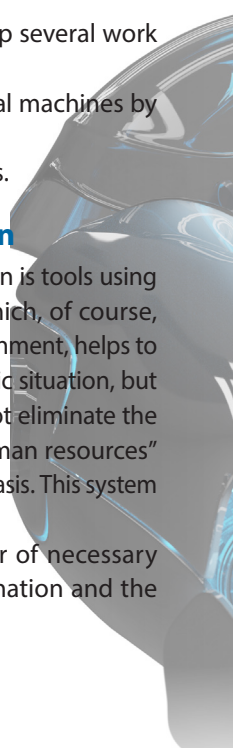
technologies that are taken into account. The labour inspector also discussed the remote control system for mining machinery, which features:

- a safe working area for the operator remotely controlling the machinery,
- higher productivity,
- maximum usage of working time,
- reduction in downtime caused by machine failure due to operator mistake – by up to 30%,
- possibility of setting up several work execution scenarios,
- management of several machines by one operator,
- reduced operating costs.

In the service of man

A more advanced solution is tools using artificial intelligence, which, of course, requires a modern environment, helps to analyse or assess a specific situation, but at the same time does not eliminate the employee. A virtual "human resources" assistant operates on its basis. This system offers the possibility of:

- the automatic transfer of necessary human resources information and the



optimisation of communication between those involved in the processes concerned, – the efficient and rapid handling of human resources matters, – avoidance of human errors, – security and traceability of information, – the rapid generation of reports, thematic reports (e.g. related to the recording of working time or absenteeism among employees, data that labour inspectors usually verify during their activities).

AI-based solutions are used in robots, among others. In the case of the sick leave robot, the information received is transferred to a specific HR management subsystem, which results in faster and more efficient registration of sick leave, saves time for HR staff, reduces errors and provides quick access to analyses.

Nikolova also talked about the drone introduced into the underground environment, which is helpful in conducting mining surveys. It is an autonomous, unmanned aerial vehicle (UAV), equipped with a LIDAR scanner and a computer, capable of autonomous navigation and adjusting its movement to work in mines and to optimise front-end loader towing processes. It is invaluable in areas where human access is difficult, and one Bulgarian company has used the device to map underground workings.

Lessons for the future

Taking into account the context of the processes of digitalisation of work and the implementation of artificial intelligence, the principal inspector presented challenges in the control activities of the labour inspection, which can be divided into three groups.

1. The need to update legal norms in order to adapt them to the new working methods and, consequently, to create new regulations, instructions, taking into account the risks that arise during the implementation of new technologies.
2. Improvement of the qualifications of labour inspectors.

3. Exchange of data between labour inspections on good inspection practices at national level and beyond.

As she acknowledged, it would be a good idea to develop some guidelines

or standards for carrying out inspections in working environments using modern technologies, which seems to be particularly relevant in the case of international corporations.

Digital transformation of the labour market – opportunities and risks

Dariusz Mińkowski, Deputy Chief Labour Inspector

We are currently witnessing changes in the labour market resulting from the development of new technologies, including the digitalisation of work, advanced robotics and artificial intelligence. Like previous industrial revolutions, the transformation taking place today represents both an opportunity and a risk to the modern labour market.

The positive aspects of the development of new technologies will certainly be the creation of new jobs for highly skilled white-collar workers. The development of new technologies should increase productivity, allowing companies to reduce prices while increasing wages.

It is also expected that safety and working conditions will improve, as many of the current hazards in the working environment can be eliminated, simply by replacing people working in hazardous and unhealthy conditions with machines. In turn, increasing automation, which will reduce manual tasks, will reduce the number of accidents at work.

As far as the challenges for the labour market are concerned, it should be pointed out that one of the biggest will be the retraining of employees whose jobs will be replaced by new technologies. In this aspect, further

training of employees and upgrading of qualifications will remain essential. A risk remains the lack of transparency regarding the use and collection of data by employers, which raises concerns about privacy, security or, finally, the monetisation of data. Even more questionable are automated monitoring and decision-making systems with a significant impact on working conditions, the use of which employees are mostly not informed about.

The lack of appropriate legislation not only precludes the identification of preventive measures, but in principle makes the work of supervisory and control bodies impossible, which is why the legal regulation of robotisation and algorithmisation in labour relations, as well as the development of rules for the supervision of their use, should be considered essential.

At the same time, it should not be forgotten that the position of artificial intelligence in law and labour relations should be continuously subordinated and supervised by humans.

The change in the way the labour market operates will also force a change in the way labour inspectors conduct inspections. It remains essential that labour inspectors have access, in the course of their activities, to the data which will be subject to inspection.