



## Black boxes and collective labour law

*The key to solving the problem?*

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### Abstract

Algorithmic management is a daily occurrence for many employers. While it offers numerous advantages, it also presents a number of potential risks. One significant concern is the lack of transparency surrounding the operation of algorithms, which has been termed a ‘black box’. It is worth discussing the use of collective labour law to protect employees against black boxes. Can workers’ representative bodies play a significant role here? Are they ready for it? And are employers ready for such a dialogue? Are such regulations possible to be introduced at the national and European level? It is worth seeking answers to these questions.

**Keywords:** Artificial intelligence, algorithmic management, black box, trade unions, collective labour law

### 1. Preliminary remarks

The rapid pace of digital development has made the operation of artificial intelligence (AI) an essential activity for many companies, including in the management of the work process. Elements of algorithmic management can be seen at every stage of the existence of the employment relationship, and even before it is formally established.

At the initial stage, artificial intelligence algorithms carry out the recruitment process. ATS (Applicant Tracking Systems) allow this entire process to be automated.<sup>1</sup> These systems are capable of

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<sup>1</sup> Cf. Ajay TYAGI: *Impact of e-recruitment on human resource*. Horizon Books, 2016. 28 et seq.

designing the entire process of sourcing personnel, using appropriate tools to select the right candidates (including advertisements, use of social media, database searches, etc.), conducting comprehensive communication with candidates, constructing and analysing recruitment forms and tests, and even conducting interviews using bots.<sup>2</sup> Such systems are now widely used, especially in large corporations<sup>3</sup>. Algorithms are already capable of constructing a typical employment contract, with the terms and conditions of the position, including the proposed salary, aligned with the employer's pay policy.

At the performance stage of the employment relationship, artificial intelligence can play a crucial role. Algorithms are able to efficiently and optimally organise the entire work process. Algorithms can select employees for appropriate tasks or arrange them into teams that will cooperate optimally. In doing so, AI is able to analyse multiple data regarding individual employees – their character traits, productivity, chronotype, or even views expressed on social media. Furthermore, AI can assign work to be performed by employees (e.g. specific transportation requests to taxi drivers or couriers) and determine the manner in which the work is to be carried out (e.g. the route to be taken, the location of goods in the warehouse, etc.). Algorithms can introduce work standards that workers are required to meet. AI can also perform tasks related to controlling the performance of workers. The forms of this control can vary. Simple control instruments count the clicks of a computer's mouse at a given time, check the correctness of the ticking in a mobile app of information related to the next steps of the task at hand (e.g. by deliverers), and check and analyse the driving style of drivers using GPS devices. However, AI can perform much more complex control tasks such as analysing text documents drafted by an employee, controlling the productivity of warehouse workers (by measuring their hand movements with an electronic wristband)<sup>4</sup>, or checking the facial expressions of an employee during work (e.g. a smile when serving a customer)<sup>5</sup>. The results of such monitoring can have significant implications. AI algorithms determine work standards, the amount of awards or bonuses to which employees are entitled for their efforts, but can also lead to disciplinary actions against them.<sup>6</sup>

AI can also be used at the termination stage of the employment relationship. This is particularly evident when it comes to collective redundancies, where AI algorithms are used to select employees for release by analysing their performance, commitment, competence or suitability for further operations. In the case of individual dismissals, the role of AI is related to the control mentioned above. If an employee's performance, is deemed by AI to be insufficient, it may be grounds for termination of

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<sup>2</sup> See more in: Jacek WOŹNIAK: *Zarządzanie pracownikami w dobie Internetu*. Warsaw, 2020. 183.

<sup>3</sup> Based on data for 2024 – Kelsey PURCELL: 2024 Applicant Tracking System (ATS) Usage Report: Key Shifts and Strategies for Job Seekers. *Jobscan*, November 1, 2024. <https://www.jobscan.co/blog/fortune-500-use-applicant-tracking-systems/> (accessed on: 15.11.2024).

<sup>4</sup> Didem OZKIZILTAN – Anke HASSEL: Artificial Intelligence at Work: An Overview of the Literature. Governing Work in the Digital Age Project Working Paper Series, 2021-01. <https://doi.org/10.13140/RG.2.2.11440.28169> .

<sup>5</sup> Tomasz JURCZAK: Liczenie uśmiechów nie łamie prawa. *Sztuczna Inteligencja*, 2020. <https://tinyurl.com/4zyhjuys> (accessed on: 5.01.2022).

<sup>6</sup> Krzysztof STEFAŃSKI: The Issue of the Subjectivity of Artificial Intelligence Acting for an Employer. *Studia z Zakresu Prawa Pracy i Polityki Społecznej (Studies on Labour Law and Social Policy)*, Vol. 29. (2022) 99. <https://doi.org/10.4467/25444654SPP.22.009.15683>

employment. In addition, AI is able to create a letter of termination of employment. Signing such a document with an electronic signature and sending it by email is already a simple task. The algorithm can disable a dismissed employee's access to the electronic system operating at the employer, invalidate the office access card and make it difficult for such an employee to contact the employer.

## 2. Black boxes problem

Algorithmic management certainly has many advantages and allows employers to make significant savings. However, it is not free of disadvantages.

Not only does the performance of the aforementioned employer's tasks by artificial intelligence raise many controversies of an ethical nature, but also considerable dilemmas related to their legality. These include algorithmic discrimination resulting from inappropriate design of algorithms by developers who implement their personal beliefs and stereotypes into the algorithms they create<sup>7</sup>, or from inappropriate perception of initial data.<sup>8</sup> Another sensitive issue is the violation of an employee's right to privacy, e.g. through the collection of a large amount of data on the employee and the use thereof in making an employment-related decision<sup>9</sup>.

A key problem in the whole algorithmic management process is the black box issue - the lack of transparency in AI data processing and decision-making. AI operates according to implemented rules and instructions that are very difficult to check and understand both for those using AI and, above all, for the people whose data is being processed. As indicated in the literature, this lack of transparency is a "design feature of the technology and as such not a remediable flaw"<sup>10</sup>. At the same time, it must be remembered that a feature of AI is the ability to learn deeply.

This means that millions of data points are input into the algorithm, which then identifies correlations between certain data features to produce an output. However, this process is mostly self-directed and hardly comprehensible to data scientists, programmers or users in general. This is especially true since most AI applications are based on neural networks, which are difficult to decipher.<sup>11</sup> Furthermore, the application of AI usually involves the recognition of abstract patterns. While these then form the

<sup>7</sup> Valerio DE STEFANO: Negotiating the Algorithm: Automation, Artificial Intelligence and Labour Protection Comparative. *Labor Law & Policy Journal*, Vol. 41., Iss. 1. (2018) <https://doi.org/10.2139/ssrn.3178233>; Marta OTTO: Dyskryminacja algorytmiczna w zatrudnieniu. Zarys problemu. *Studia z Zakresu Prawa Pracy i Polityki Społecznej (Studies on Labour Law and Social Policy)*, Vol. 29. (2022).

<sup>8</sup> Jeffery DASTIN: Amazon Scraps Secret Ai Recruiting Tool That Showed Bias against Women [Online]. *Reuters*, October 11, 2018. Available: <https://www.reuters.com/article/us-amazon-com-jobs-automation-insight-idUSKCN1MK08G> (accessed on: 5.01.2022).

<sup>9</sup> Article 29 Data Protection Working Party. Opinion 2/2017 on Data Processing at Work. Adopted on 8 June 2017 [Online]. Available: [https://ec.europa.eu/newsroom/article29/item-detail.cfm?item\\_id=610169](https://ec.europa.eu/newsroom/article29/item-detail.cfm?item_id=610169) [Accessed 5.01.2022].; see also: Antonio ALOISI – Elena GRAMANO: Artificial Intelligence Is Watching You at Work. Digital Surveillance, Employee Monitoring and Regulatory Issues in the EU Context. *Comparative Labor Law & Policy Journal*, Vol. 41. (2019) 101–127.

<sup>10</sup> Cf. Alexander ROSSNAGEL: Art. 5 marginal no. 61. In: Spiros SIMITIS – Gerrit HORNING – Indra SPIECKER gen. Döhmman (Hrsg.): *Datenschutzrecht*. Nomos, 2019.

<sup>11</sup> Bernd WAAS: Artificial intelligence and Labour law. *HSI-Working Paper*, Vol. 17. (2022) 130.

basis for decisions that take effect in relation to a specific person, they are not themselves related to the person. Such a person is “treated according to a statistical average” by the AI system. The people in the most difficult situation are those whose data are processed, who not only have no knowledge of how the algorithm works and on what criteria it bases its results. An employee whose data, e.g. on his or her work performance, has been processed and as a result a decision has been made regarding his or her employment relationship, has little chance of obtaining information about the design of the algorithm or how and why a particular decision has been made. And yet these decisions may be of existential importance to these individuals. They may, for example, involve dismissal from a job and thus deprivation of the means necessary to support a family. The lack of such information can mean that certain workers’ rights become illusory, including, for example, the worker’s right to appeal against a particular decision (e.g. dismissal).

Unfortunately, such information is often not available to other actors. These include state bodies with powers to control work performance and courts that decide on labour disputes. However, the role of trade unions, set up to represent the interests of workers, appears to be crucial<sup>12</sup>. In order to fulfil their role, they need to have adequate information about how AI works. Access to information is not the only problem.

### 3. Trade unions and the process of “unpacking” black boxes

Crucial responsibilities belong to trade unions, which play a role in regulating working conditions in areas where AI and algorithmic management are present.<sup>13</sup> Trade unions concerned with the processes of the algorithmic rule should be able to take on new skills, in addition to their traditional competencies (realization of the right of employee participation, conducting collective bargaining, and conducting collective disputes), so that there is the possibility of performing social control of the operation of algorithmic management using the technology of AI explanation.<sup>14</sup>

Trade unions have a long tradition and play a key role in protecting workers’ rights. In many countries, however, the mentality of trade union activists represents traditional values. This is not a bad thing, of course, but sometimes it gets in the way of seeing the challenges posed by rapid technological development. This is particularly noticeable in countries that are not among the technological leaders. While the headquarters of large trade unions, both at European and national level, often recognise the problems associated with algorithmic management, the case is much worse for small trade unions

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<sup>12</sup> Other institutions for representing the interests of employees such as works councils or European Works Councils should also be included in this group.

<sup>13</sup> DE STEFANO op. cit.

<sup>14</sup> Paweł NOWIK: New challenges for trade unions in the face of algorithmic management in the work environment. *Studia z Zakresu Prawa Pracy i Polityki Społecznej (Studies on Labour Law and Social Policy)*, Vol. 2., Iss. 29. (2022) 122.

or those organisations that operate locally. Such union activists need to be reached with the right message about new technologies and their impact on the working environment, as well as possible threats to workers' interests.

Another important issue is to agree on appropriate rules for trade unions and employers to work together on the introduction and use of AI systems. Therefore, any initiative that serves this purpose should be welcomed. One example is the European Social Partners Framework Agreement on Digitalisation<sup>15</sup>. Although this document is only a joint declaration and AI issues are only one element of it, the fact that such an agreement has been reached is welcome. With regard to the implementation of AI, several conditions are highlighted. Deployment of AI systems:

- should follow the human in control principle;
- should be safe, i.e. it should prevent harm. A risk assessment, including opportunities to improve safety and prevent harm such as for human physical integrity, psychological safety, confirmation bias or cognitive fatigue should be undertaken;
- should follow the principles of fairness, i.e. ensuring that workers and groups are free from unfair bias and discrimination;
- needs to be transparent and explicable with effective oversight. The degree to which explicability is needed is dependent on the context, severity and consequences. Checks will need to be made to prevent erroneous AI output.

Regarding the transparency of AI systems, the Agreement states that

“In situations where AI systems are used in human-resource procedures, such as recruitment, evaluation, promotion and dismissal, performance analysis, transparency needs to be safeguarded through the provision of information. In addition, an affected worker can make a request for human intervention and/or contest the decision along with testing of the AI outcomes.”

The fundamental condition for implementing the transparency principle is to provide trade union activists with access to reliable information on the AI model's operation, including information on the training process, training data, machine learning algorithms and testing methods to validate the AI system. The key issue is the extent to which information about algorithmic management processes should be made available to trade unions.

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<sup>15</sup> Framework Agreement on Digitalisation. May 2020. <https://resourcecentre.etuc.org/agreement/framework-agreement-digitalisation>

Business guidelines<sup>16</sup>, as well as literature<sup>17</sup>, indicate that the explanation one should expect from the AI should include:

- An explanation of the decision-making process, that is, an indication of the reasons that lead to a decision of certain content, which is provided in an accessible and non-technical way.
- Clarification of responsibilities, that is, who was involved in the development, implementation, management, and operation of the AI system.
- Explanation of the data, that is, which data were used in the decision, which data were used for training and testing the AI system and how, whether the data were reliable (not causing algorithmic bias), and whether the quantity of data used was sufficient.
- A safety explanation, that is, proof of the AI system's accuracy, reliability, security, and robustness.
- An explanation of the impact that using the SI system and its decisions has or may have on an individual or, more broadly, on a specific social group.
- The justification of the outcome; it is crucial to explain why a specific decision was taken and justify that the development of the AI is objective and fair.

#### 4. Legal grounds for requesting information by trade unions

Transparency as a requirement for AI is mentioned in almost every document on ethical and trustworthy AI. However, this does not mean that there are currently any legal instruments to verify transparency. In particular, it is difficult to find a legal basis for trade unions to demand such information. This is the situation both at European level and in most EU member states.

This problem is already noticed by the EU institutions. In White Paper on Artificial Intelligence – A European approach to excellence and trust, announced in February 2020, the European Commission noted that workers and employers are directly affected by the design and use of AI systems in the workplace. It also recognized that the involvement of social partners will be a crucial factor in ensuring a human-centred approach to AI at work.<sup>18</sup>

European Parliament resolution of 20 October 2020 with recommendations to the Commission on a framework of ethical aspects of artificial intelligence, robotics and related technologies stresses that applicants and workers should be duly informed in writing when AI is used in the course of recruitment procedures and other human resource decisions and how in this case a human review can

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<sup>16</sup> “Explaining Decisions Made with AI | ICO.” <https://tinyurl.com/5bju82u5>

<sup>17</sup> Silvie SPREUWENBERG: Choose for AI and for Explainability. In: Christophe DEBRUYNE et al. (eds.): *On the Move to Meaningful Internet Systems: OTM 2019 Workshops. OTM 2019*. (Lecture Notes in Computer Science, vol 11878). Cham, Springer, 2020. [https://doi.org/10.1007/978-3-030-40907-4\\_1](https://doi.org/10.1007/978-3-030-40907-4_1)

<sup>18</sup> White Paper On Artificial Intelligence – A European approach to excellence and trust, COM/2020/65 final. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0065>

be requested in order to have an automated decision reversed. The European Parliament underlines also, that artificial intelligence, robotics and related technologies must not in any way affect the exercise of fundamental rights as recognised in the Member States and at Union level, including the right or freedom to strike or to take other action covered by the specific industrial relations systems in Member States, in accordance with national law and/or practice, or affect the right to negotiate, to conclude and enforce collective agreements, or to take collective action in accordance with national law and/or practice.<sup>19</sup>

The most recent and apparently most significant European document on digital rights is the European Declaration on Digital Rights and Principles for the Digital Decade, proclaimed by The European Parliament, the Council and the Commission.<sup>20</sup> In this document, the EU institutions committed themselves to, among other things:

- ensuring that the use of artificial intelligence in the workplace is transparent and follows a risk-based approach and that corresponding prevention measures are taken to maintain a safe and healthy working environment;
- ensuring in particular that human oversight is guaranteed in important decisions affecting workers, and that workers are generally informed that they are interacting with artificial intelligence systems

The declaration also highlights that trade unions and employers' organisations play an important role in the digital transformation, particularly in relation to the definition of fair and just working conditions, including with regard to the use of digital tools at work.

The above-mentioned documents reflect the views of the European authorities and set the direction of EU policy on AI. For this reason, their importance and relevance for future legislative action should undoubtedly be appreciated. However, all the documents to date are merely ideological or political statements and can at best be regarded as soft law. They cannot be regarded as standards of European law. No European legislation has yet been adopted on these issues. The European Commission has only drafted such legislation. In April 2021, the Commission presented its AI package, including inter alia proposal for a regulation laying down harmonised rules on AI (AI Act)<sup>21</sup> and relevant Impact assessment. In September 2022, the European Commission adopted a proposal for a directive on liability for artificial intelligence (AI Liability Directive, AILD)<sup>22</sup>. In the first of the mentioned projects, it is indicated that AI systems used in employment, workers management and access to

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<sup>19</sup> European Parliament resolution of 20 October 2020 with recommendations to the Commission on a framework of ethical aspects of artificial intelligence, robotics and related technologies (2020/2012(INL)).

<sup>20</sup> OJ C 23, 23.1.2023, p. 1–7.

<sup>21</sup> Proposal for a Regulation of The European Parliament and of the Council laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) and amending certain union legislative acts (COM/2021/206 final).

<sup>22</sup> Proposal for a Directive of the European Parliament and of the Council on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive), (COM/2022/496 final).

self-employment, notably for the recruitment and selection of persons, for making decisions on promotion and termination and for task allocation, monitoring or evaluation of persons in work-related contractual relationships, should also be classified as high-risk, since those systems may appreciably impact future career prospects and livelihoods of these persons.

Despite the ongoing legislative work, the above proposals are still drafts and not binding law. Although changes in the field of artificial intelligence are progressing very quickly, the new European standards for artificial intelligence will not come into force immediately. It is expected that regulations at the EU level will not be issued before 2025.<sup>23</sup>

Nor can it be assumed that EU Member States are actively legislating on the regulation of AI in labour law and, in particular, on the introduction of transparency principles for algorithmic management. Although most countries have published government strategies for the development of AI, these remain declarative documents. It is therefore difficult to identify the regulatory policies in place in individual EU Member States. Many governments highlight the need to evaluate the current legal framework and adopt new legislation at EU level to ensure a binding regulatory framework for the successful adoption and use of AI<sup>24</sup>.

The opacity of algorithmic operations is sometimes equated with the risk of discriminatory practices. Hence the idea of introducing anti-black box solutions into anti-discrimination law. One example is the idea of introducing a presumption of algorithmic discrimination. In German legal doctrine, it has been suggested to introduce the principle into the General Equal Treatment Act (AGG) that the use of non-transparent algorithms should be sufficient grounds for discrimination. In such a situation, it would be up to the party using AI to disprove this, e.g. by disclosing the technical and organisational measures taken to avoid discrimination<sup>25</sup>. Of course, such solutions can be considered, but they should not be the only activity of the legislator in this matter. The problem of lack of transparency is not only related to discrimination. Other fundamental interests of workers are also at stake. Therefore, regulation in the fight against black boxes should be holistic and cover the entire field of labour law (and of course other areas of law as well).

One of the few regulations already in place to address the problem of AI's lack of transparency is the regulation adopted in 2021 in Spain<sup>26</sup>. The provision states that:

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<sup>23</sup> Franca SALIS MADINIER: *A guide to Artificial Intelligence at the workplace*. Brussels, European Economic and Social Committee, 2021. 10.

<sup>24</sup> Vincent VAN ROY – Fiammetta ROSSETTI – Karine PERSET – Laura GALINDO-ROMERO: *AI Watch - National strategies on Artificial Intelligence: A European perspective*, 2021. Luxembourg, Publications Office of the European Union, 2021. 15. <https://doi.org/10.2760/069178>

<sup>25</sup> Mario MARTINI: *Blackbox Algorithmus – Grundfragen einer Regulierung Künstlicher Intelligenz*. Springer, 2019. 361

<sup>26</sup> Real Decreto-ley 9/2021, de 11 de mayo, por el que se modifica el texto refundido de la Ley del Estatuto de los Trabajadores, aprobado por el Real Decreto Legislativo 2/2015, de 23 de octubre, para garantizar los derechos laborales de las personas dedicadas al reparto en el ámbito de plataformas digitales. <https://www.boe.es/eli/es/rdl/2021/05/11/9>



“The Council of Workers [of a company] shall have the right, at the appropriate interval, to be informed by the company of the parameters, rules, and instructions on which algorithms or artificial intelligence systems that affect any decision-making that may have an impact on working conditions, access to and maintenance of employment are based, including profiling.”

This regulation is the first step towards ensuring employees’ right to information about the algorithms used by their employer. Despite its shortcomings, it has been highly praised in the doctrine as a first and ambitious solution<sup>27</sup>.

A similar solution is being considered in Poland<sup>28</sup>. The draft amendment to the Trade Unions Act stipulates that the information that an employer must provide to trade unions will include an item on “parameters, rules and instructions on which algorithms or artificial intelligence systems are based, which influence decision-making and which may affect working conditions and remuneration, access to and retention in employment, including profiling”<sup>29</sup>. This project was developed with the AI Work Team of the University of Lodz. The Polish Parliament is currently working on this project, although there is an opinion among politicians that it is too early and we should wait for EU regulations. I find this view too ascendant and based on a misunderstanding of the needs of AI development.

## 5. Difficulties in providing information to trade unions

While the obligation to provide information on algorithmic management in itself should not raise objections, there are some doubts about the implementation of this obligation. Employers using algorithms very often refuse to provide such information to trade union activists on the grounds of copyright and commercial confidentiality. The design and operation of an algorithm may be protected by copyright. The employer is a user of such software, which does not mean that it has full access to the information related to the programming code. Even if he has access to such information, he will not always be entitled to share it with others, such as trade unions. Programmed commands, patterns of action or the results of an algorithm may be covered by commercial confidentiality. Algorithms used in human resource management can lead to more efficient work, better cooperation between employees and their teams, and an increase in quality and productivity. All of this can determine a company’s market position and should be kept confidential. Sharing such data with trade union

<sup>27</sup> Carmen VILLARROEL LUQUE: Workers vs Algorithms: What can the new Spanish provision on artificial intelligence and employment achieve? *VerfBlog*, 2021/5/27. <https://verfassungsblog.de/workers-vs-ai/>, <https://doi.org/10.17176/20210527-100128-0>

<sup>28</sup> Krzysztof STEFANSKI – Katarzyna Żywolewska: Lack of Transparency in Algorithmic Management of Workers and Trade Unions’ Right to Information: European and Polish Perspectives. *Białostockie Studia Prawnicze*, Vol. 2. (2024) 58. <https://doi.org/10.15290/bsp.2024.29.02.05>

<sup>29</sup> Commission bill to amend the law on trade unions. Draft No. 2642. <https://www.sejm.gov.pl/Sejm9.nsf/druk.xsp?nr=2642>

activists can therefore be an action that affects the employer's economic position. Legislation should take this into account. One solution may be to require trade union activists to keep confidential information that could adversely affect the economic position of the company. Access to the data can be restricted to selected trade union activists.

Another problem may be the comprehensibility of the data transmitted. The languages used to program AI are not widely known. It is clear that not all users, including trade unions, have the knowledge to understand how the algorithms work. However, this is not necessary, especially as the system may be so complex that a layperson would not be able to explain how it works. The information provided to unions does not have to be about the technical features of the software. The employer should give them feedback that allows them to understand the decision made by the AI. This will enable employees to draw the appropriate conclusions and possibly appeal the outcome, if there are separate provisions for the right of appeal<sup>30</sup>.

The explanation should be delivered understandably in written or visual form, adapted to the stakeholder's level of knowledge. The simplest form of presentation of the reason is visualization, which highlights the relationship between input and output. A more advanced form involves testing hypotheses, where a well-formulated argument is tested based on information and production. However, it seems that for a non-expert user, the best way to present an explanation is to use natural language – both verbal and written communication – and to indicate which data features and algorithmic functions led to the decision. However, this solution is probably the most technically complex<sup>31</sup>. Solutions are sometimes proposed to allow stakeholders to interpret AI results, which may avoid the problem of black boxes<sup>32</sup>. Such solutions can be introduced at the AI programming stage.

It is important to ensure that the right to information is respected at every stage, whether in the design of AI systems, their implementation in companies and their use in managing employees. It is therefore worth applying the “transparency by design” rule, along the lines of the “privacy by design” rule that applies under the GDPR.

## 6. Conclusions

The development of modern technologies, especially those that affect the way and conditions in which work is performed, cannot remain unreflected in labour law doctrine. This is particularly true of those technologies which may bring about changes in a very wide range of areas – not only in

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<sup>30</sup> NOWIK op. cit. 131.

<sup>31</sup> Alejandro BARREDO ARRIETA – Natalia DÍAZ-RODRÍGUEZ – Javier DEL SER – Adrien BENNETOT – Siham TABIK – Alberto BARBADO – Salvador GARCIA et al.: Explainable Artificial Intelligence (XAI): Concepts, Taxonomies, Opportunities and Challenges toward Responsible AI. *Information Fusion*, Vol. 58. (Jun 2020) 82–115. <https://doi.org/10.1016/j.inffus.2019.12.012>

<sup>32</sup> Cynthia RUDIN: Stop explaining black box machine learning models for high stakes decisions and use interpretable models instead. *Nature Machine Intelligence*, Vol. 1., Iss. 5. (2019) 206.

the performance of work, but also in the labour market or forms of employment. However, new technologies do not only bring new opportunities and chances, but also new dangers and risks. Some of these can be mitigated through the use of existing institutions, such as collective labour law. These include trade unions. But there are many difficulties to overcome. These include the introduction of appropriate legislation at European and national level, as well as changing the mentality of trade unionists, employees and employers to recognise the problems of algorithmic management. This may seem like a difficult process, but I believe it is necessary to face the threats of the future.