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Master Thesis

Protection of Privacy in Employment in EU Law

Privatumo apsauga dirbant ES teisėje

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Abstract

This thesis examines the protection of privacy in employment within the European Union, focusing on the legal framework, challenges, and future developments. As digital technologies increasingly blur personal and professional boundaries, the research analyzes key EU regulations, particularly the General Data Protection Regulation (GDPR) and relevant case law, balancing employee privacy with employer interests like monitoring. Case studies highlight how EU courts address privacy concerns, especially around employee monitoring and data processing. The thesis identifies gaps in current EU laws and offers policy recommendations to enhance privacy protection, considering emerging technologies such as AI and cross-border data transfers.

Keywords: employee privacy, EU law, digital surveillance, data protection, cross-border data transfers, European Court of Human Rights (ECHR), digital workplace, policy recommendations, General Data Protection Regulation (GDPR).

Santrauka

Šiame darbe nagrinėjama privatumo apsauga dirbant Europos Sąjungoje, daugiausia dėmesio skiriant teisinei bazei, iššūkiams ir ateities raidai. Skaitmeninėms technologijoms vis labiau ištrinant asmenines ir profesines ribas, tyrime analizuojami pagrindiniai ES reglamentai, ypač Bendrasis duomenų apsaugos reglamentas (BDAR) ir atitinkama teismų praktika, suderinant darbuotojų privatumą su darbdavio interesais, pvz., stebėjimu. Atvejų tyrimai rodo, kaip ES teismai sprendžia privatumo problemas, ypač susijusias su darbuotojų stebėjimu ir duomenų apdorojimu. Baigiamajame darbe nustatomos dabartinių ES įstatymų spragos ir pateikiamos politikos rekomendacijos, kaip sustiprinti privatumo apsaugą, atsižvelgiant į naujas technologijas, tokias kaip dirbtinis intelektas ir tarpvalstybinis duomenų perdavimas.

Raktiniai žodžiai: darbuotojų privatumas, ES teisė, skaitmeninis stebėjimas, duomenų apsauga, tarpvalstybinis duomenų perdavimas, Europos žmogaus teisių teismas (EŽTT), skaitmeninė darbo vieta, politikos rekomendacijos, Bendrasis duomenų apsaugos reglamentas(BDAR).

Table of Contents

Introduction

Relevance of the topic. In today's digital age, rapid technological advancements and changing workplace dynamics pose new challenges to privacy. With the widespread use of digital tools, remote work, and employee monitoring systems, the boundaries between personal and professional life are becoming blurred, making privacy in the workplace a critical concern.

European Union has made some robust implementations to ensure that personal data, as well privacy, is protected through both the General Data Protection Regulation and various legal instruments. Nevertheless, employers frequently encounter the difficulty of reconciling their legitimate business concerns like productivity, security and monitoring, and the employee's privacy rights. This balance is important as it avoids possible violations of fundamental rights and reputational harm to the companies.

There is an increasingly urgent need for strong legal safeguards as workplace surveillance, data processing, artificial intelligence and biometric technologies become and widespread norm. The question is pertinent to not just legal scholars dealing with the topic but policymakers and companies that wish to adhere to EU provisions but at the same time guarantee the employees' privacy.

In general, this topic deals with important legal, ethical and practical concerns relevant to employees in comparison to their employers which requires in place throughout the EU to ensure fair and lawful employment practices.

Originality of the topic. While privacy rights are broadly covered in legal scholarship, addressing the specific challenges and opportunities in the employment context under EU law presents a more nuanced and emerging field of inquiry.

There is a growing integration of surveillance technologies, remote working capabilities as well as digital tools in workplaces and this can lead to several issues of privacy. The creativity comes from analyzing how such workplace innovations threaten established norms of privacy in the workplace, and probing the limits of current legal frameworks like the GDPR and Charter of Fundamental Rights.

This topic in particular provides a different view of the scenario in which employers are responsible to ensure that productivity, security and compliance are delivered while employees still have the right to remain private. The auxiliary focus on balancing this dynamic within EU legal frameworks where employers have a higher than average human rights threshold to meet, provides a novel insight to the debate.

The aim of the thesis. This thesis aims to critically examine how European Union laws and regulations safeguard the privacy rights of employees within the workplace, while balancing the legitimate interests of employers. It seeks to analyze the legal framework governing privacy protection, particularly the General Data Protection Regulation (GDPR), the Charter of Fundamental Rights of the European Union, and relevant case law, and to assess how these laws address the growing challenges posed by modern workplace technologies and surveillance practices.

Objectives of the thesis. The main objectives of this research are as follows:

- To provide a comprehensive overview of the current EU laws and regulations that protect employee privacy, including the GDPR, and analyze their application in the employment context.
- To explore the impact of emerging technologies (such as digital monitoring, biometric data collection, and remote work) on employee privacy, and assess how these developments affect the interpretation and enforcement of privacy rights under EU law.
- To investigate how EU laws strive to balance employee privacy with the legitimate interests of employers in areas like productivity, security, and compliance.
- To review significant decisions from the European Court of Justice (ECJ) and European Court of Human Rights (ECHR) regarding privacy in the workplace, and assess their influence on the legal landscape.
- To identify gaps in the current legal framework and propose recommendations for enhancing privacy protections in employment, especially in light of evolving technologies and workplace practices.

Methodology. In order to fulfil the above listed tasks, the following research methods are used in this study:

- Doctrinal Legal Research (a close examination of the relevant legislation, particularly the GDPR, the EU Charter of Fundamental Rights, and the European Convention on Human Rights);
- Case Law Analysis (examining the case law from the CJEU and ECtHR that address privacy in employment settings; using key cases in order to evaluate how EU courts balance employee privacy rights with employer interests, such as security and productivity; identification of any judicial patterns and interpretative principles used by EU courts in privacy-related employment cases);

- Comparative Analysis (review the implementation of GDPR provisions within several member states, including variations in national laws and practices; focusing on specific practices, such as employee monitoring and data retention, and explore how member states differ in their approaches balancing privacy with employer interests);
- Legal Framework Analysis (identify and interpret the core provisions of the GDPR, the EU Charter, and the ECHR as they relate to privacy rights in employment; focus on the limitations, obligations, and rights afforded to both employees and employers regarding data collection, processing, and monitoring)
- Logical Analysis (identifying key privacy principles; breaking down legal standards and definitions; assessing judicial reasoning in case law; examining the balance between employee rights and employers' interests; evaluating consistency across jurisdictions; critiquing legislative and judicial rationales; anticipating future challenges and logical implications);
- Systematic Analysis (clearly defining the boundaries of privacy in employment, including core concepts like "personal data", "processing", "consent" and "legitimate interest" under the GDPR; mapping the legal framework; assessing policy and regulatory guidance; evaluating technological impacts; developing recommendations);
- Historical Analysis (tracing the origins of privacy in employment law; evolution of Data Protection Directives).

Sources of investigation. GDPR (General Data Protection Regulation); EU Charter of Fundamental Rights; Directive 95/46/EC (Data Protection Directive); decisions of Court of Justice of the European Union (CJEU) and European Court of Human Rights (ECtHR); EU Agency for Fundamental Rights (FRA) Reports and Publications; European Data Protection Board (EDPB) Opinions and Guidelines; Oxford University Press, 2020 "EU General Data Protection Regulation (GDPR): A Commentary"; Paul Voigt and Axel von dem Bussche, 2020 "Data Protection Law in the EU: Roles, Responsibilities, and Rights"; Mariusz Krzysztofek, 2021 "GDPR: Personal Data Protection in the European Union"; Michael Wynn, 2019 "Employment Law in Europe"; Catherine Barnard, 2020 "EU Employment Law: From Rome to Lisbon"; Roger Blanpain and Bernd Waas, 2021 "Labour Law and Industrial Relations in the European Union"; Claire McIvor, 2020 "Data Protection and Employment: Law, Practice, and Procedure"; Chris Bryden and Hannah Wilson, 2020 "Privacy and Employment Law"; David Lewis, 2019 "Surveillance and Privacy in the Workplace: Contemporary Issues in Labour Law"; A. Jacobs and F. Dorssemont, 2018 "Workplace Data Protection: EU and International Perspectives"; OECD reports on data privacy and digitalization in the workplace: "Managing Digital Security and Privacy Risk",

"Digitalisation and Responsible Business Conduct", "AI has made its way to the workplace. So how have laws kept pace?"; National Data Protection Authorities (DPA) Guidance; Publications from law firms specializing in data privacy and employment law; Reports on Technology and Data Privacy; Comparative International Studies; Presentations and papers from conferences such as the Computers, Privacy, and Data Protection (CPDP) Conference and the European Labor Law Network (ELLN).

1. Legal Framework of Privacy in Employment within the EU

1.1 Introduction to Privacy Rights in the EU Context

The concept of privacy and data protection has achieved paramount significance within the European Union, where privacy is regarded as a fundamental human right. This is explicitly articulated in the Charter of Fundamental Rights of the European Union, particularly Articles 7 and 8, which enshrine the right to respect for private life and the right to protection of personal data, respectively (Charter of Fundamental Rights, 2000, pp. 10–12). Privacy and non-discrimination are core principles upheld and guaranteed by national data protection laws across Member States, all of which align with the overarching framework of the General Data Protection Regulation (GDPR) (GDPR, 2016, Art. 1–4). These legal protections aim to ensure that individuals feel secure while navigating the digital world, promoting trust and fairness. This approach has been supported by the majority of EU Member States, as demonstrated by their ratification of the European Convention on Human Rights (ECHR), particularly Article 8, which protects private and family life, home, and correspondence (ECHR, 1950, p. 6).

The protection of privacy in the employment relationship, however, is a relatively new concept. It emerged alongside the labor movement, which sought to combat the negative consequences of the industrial age. These efforts emphasized the need for justifiable treatment and gender inclusion while advocating for greater respect for workers' dignity and autonomy from employers. This focus on fair treatment and privacy in employment settings gained momentum through international cooperation, particularly with the growth of the International Labor Organization (ILO) and its principles advocating for the protection of workers' rights globally.

In the aftermath of World War II, privacy was formally recognized as a global human right through the adoption of the Universal Declaration of Human Rights (UDHR) in 1948. Article 12 of the UDHR explicitly states that "no one shall be subjected to arbitrary interference with their privacy, family, home, or correspondence" (UDHR, 1948, Art. 12, p. 5). This principle was reiterated in Article 8 of the European Convention on Human Rights (ECHR) in 1950, ensuring respect for private life (ECHR, 1950, Art. 8, p. 8). While this provision was not originally specific to employment, it later became a cornerstone of employee privacy rights in Europe, establishing legal grounds for protecting workers against unwarranted intrusion by employers.

As technological advancements accelerated in the later decades of the 20th century, the rise of computers led governments and organizations to collect and process vast amounts

of personal data, including employee information. This development brought to light the need to safeguard personal data as an integral aspect of privacy. Germany was a pioneer in this regard, enacting the Federal Data Protection Act (Bundesdatenschutzgesetz) in 1977, one of the earliest comprehensive legislations dedicated to data privacy (Bundesdatenschutzgesetz, 1977, Sec. 3–5). The EU followed suit with the introduction of Directive 95/46/EC (Data Protection Directive) in 1995. The Directive established principles for the lawful processing of personal data, including transparency, purpose limitation, and proportionality (Directive 95/46/EC, 1995, pp. 11–15). These principles set new standards for managing employee data across Member States and created the groundwork for future advancements in data privacy.

The dawn of the 21st century marked a pivotal moment for human rights within the EU. The Charter of Fundamental Rights of the European Union, enacted in 2009, elevated the right to privacy and data protection to legally binding principles. Article 7 guaranteed the right to private life, while Article 8 explicitly recognized the right to protection of personal data, including rules on consent, access, and rectification (Charter of Fundamental Rights, 2000, Art. 7–8, pp. 10–13). These provisions provided employees with enhanced protections, shielding them from unnecessary surveillance and excessive monitoring in the workplace.

Employees across the EU now benefit from robust privacy laws that limit invasive practices such as indiscriminate monitoring of communications, unwarranted collection of biometric data, and disproportionate performance tracking. This legal framework, reinforced by case law from the European Court of Human Rights (ECHR) and the Court of Justice of the European Union (CJEU), continues to evolve, ensuring that workers' dignity, autonomy, and fundamental rights are respected in an increasingly digital workplace.

Furthermore, if adopted in 2018, the General Data Protection Regulation (GDPR) would have built on these premises and created a common standard for the protection of personal data within the European Union. The GDPR adopted the principle that when an employer is processing data, adequate attention must be given to the rights of employees to privacy, emphasizing the need for justification in the employer's actions (GDPR, 2016, Art. 5-6, pp. 3–5). Additionally, more efficient mechanisms regarding consent, clarification, and data minimization were introduced to advance employee privacy (GDPR, 2016, Art. 7, pp. 5–6).

Article 7 of the Charter of Fundamental Rights of the European Union guarantees respect for private and family life, home, and communications, while Article 8 establishes procedures for the European Union's political orientation on privacy and data protection,

enshrining these rights in law (Charter of Fundamental Rights, 2000, Art. 7-8, pp. 10–12). These principles are primarily enforced through the GDPR, the European Union's regulatory strategy for addressing data protection challenges in the digital age (GDPR, 2016, Recitals 1–3, pp. 1–2). The GDPR provides detailed requirements on how personal data should be handled, making it applicable not only to EU-based entities but also to global organizations that process the data of EU citizens (GDPR, 2016, Art. 3, p. 4).

Outside of traditional employment contexts, privacy rights have become a particular concern. The integration of technology in workplaces has enhanced the ability to monitor, watch, and collect employee data, making the safeguarding of employee privacy a legal necessity and a social priority (Lyon, 2018, pp. 45–47). The employment sector processes vast amounts of employee data, from recruitment to performance management, creating potential conflicts between the workers' right to privacy and employers' need to manage their workforce effectively (Moore, 2018, pp. 23–25).

The European Union has developed a framework of general principles, primarily through decisions from the European Court of Justice (CJEU) and the European Court of Human Rights (ECHR), which enforce privacy rights for employees. Cases like *Barbulescu v. Romania* (ECHR, 2017) have raised crucial questions about workplace surveillance and provided key guidelines on balancing employee privacy with employer interests (Barbulescu v. Romania, 2017, pp. 2–5). Although Barbulescu v. Romania was decided in the ECHR, its principles align closely with the General Data Protection Regulation (GDPR), particularly regarding data processing fairness, proportionality, and transparency. The case highlighted the need for employers to establish a clear legal basis for monitoring employee communications, echoing GDPR requirements such as lawful processing under Article 6 and respect for privacy by design and default under Article 25. The case laid out specific factors to assess the legitimacy of monitoring, such as notifying employees, clarifying the extent and purpose of surveillance, and ensuring it does not overreach its stated objectives. These factors have informed EU guidelines on workplace surveillance under GDPR. Decisions from the ECHR, while not part of EU law, influence its interpretation, as all EU Member States are also signatories to the European Convention on Human Rights. The Barbulescu judgment encouraged a harmonized approach to balancing privacy and employer rights across Europe. Following this case, several EU Member States have reviewed or updated their national regulations on employee monitoring to ensure compliance with ECHR standards, GDPR requirements, and the proportionality principles affirmed in Barbulescu.

In Germany, the legal perspective extends the right to personality beyond the protection of personal data, adopting a more holistic, value-oriented approach to safeguarding individuals in the workplace and beyond (Federal Data Protection Act, 1977, Sec. 1, pp. 1–2). With the rise of new working technologies, this comprehensive EU structure is expected to endure and expand the scope of privacy rights, solidifying privacy as a fundamental right in the modern workplace (Charalampous et al., 2020, pp. 18–20).

1.2 Relevant EU Legislation and Regulations

The significance of personal life in a private sphere is highlighted in Article 7 of the Charter of Fundamental Rights of the European Union, which guarantees respect for private and family life, home, and communications. This is further reiterated in Article 8, which ensures the protection of personal data (Charter of Fundamental Rights, 2000, Art. 7–8, pp. 10–12). There are exceptions to this rule; however, such restrictions must not alter the "essence" of the right, as per Article 52(1) of the Charter (Charter of Fundamental Rights, 2000, Art. 52, p. 16). Despite its significance, the essence requirement has not consistently been emphasized in practice since its introduction.

The adoption of the EU Charter in 2009 marked a pivotal shift in the treatment and protection of personal data within the EU (Charter of Fundamental Rights, 2009, Art. 7–8, p. 10). Interestingly, India, as a BRIC nation, also emphasizes data privacy through its legal measures, though governed by different provisions. For India, privacy rights are linked to Article 21 of the Constitution, which ensures respect for one's private life and personal dignity (Constitution of India, Art. 21, pp. 125–126). The parity between the EU Charter's Articles 7 and 8 places the right to personal data protection on the same level as the right to private life, underscoring their significance.

As an additional point, the last sentence of Article 52(1) of the EU Charter also introduces the novel concept of respecting the "essence" of rights (Charter of Fundamental Rights, 2000, Art. 52, p. 16). This notion has been highlighted in the Court of Justice of the European Union (CJEU), which occasionally references it, and similarly in the European Court of Human Rights (ECtHR), albeit without the explicit language found in the EU framework (CJEU Cases: Schrems I, C-362/14, para. 39; Schrems II, C-311/18, para. 42).

The requirement to preserve the essence of rights has its roots in German constitutional law, where it is linked to the obligation of the legislator to create high-quality laws that specifically protect fundamental rights from being breached (Basic Law for the Federal Republic of Germany, Art. 1–2, pp. 15–17). This principle was later adopted by

other EU Member States, creating a legal framework in which legislators are bound to safeguard fundamental rights from excessive interference, ensuring that regulatory frameworks do not obliterate these rights (Greenleaf, 2019, pp. 35–37).

Within EU law, the "essence" of fundamental rights often arises in cases where the CJEU assesses the legitimacy of limitations imposed by Member States. The CJEU has consistently ruled that the most fundamental rights must remain uncompromised. This principle has been invoked in pre- and post-Charter jurisprudence, emphasizing that national authorities lack the flexibility to adopt remedies classified as breaches of EU fundamental principles (Barbulescu v. Romania, ECtHR, 2017, paras. 39–42). Such restrictions are interpreted as a ban on balancing rights at the national level and have fueled discussions on sovereignty and the division of competences between the EU and its Member States (Lyon, 2018, pp. 45–48).

The General Data Protection Regulation (GDPR), launched on May 25, 2018, further solidified the EU's stance on privacy rights. It impacted all institutions within the EU and even beyond, applying to entities outside the EU that process the data of EU citizens (GDPR, 2016, Art. 3, pp. 4–6). The GDPR's overarching aim was to ensure conformity across Member States regarding the collection and processing of personal data, enhancing transparency and ethicality in data governance (GDPR, 2016, Recitals 10–12, pp. 3–5). By providing clear standards, it fostered a reciprocal and dynamic relationship between employers and employees, emphasizing trust and accountability. This regulatory framework has not only protected employee privacy but also reinforced employers' ability to retain their workforce by building confidence and transparency (Charalampous et al., 2020, pp. 18–20).

The GDPR has its six main Data Protection Principles, which require that personal data must:

1. Be processed fairly, lawfully, and transparently (GDPR, 2016, Art. 5(1)(a), p. 33);
2. Be collected and processed only for specified, explicit, and legitimate purposes (GDPR, 2016, Art. 5(1)(b), p. 33);
3. Be adequate, relevant, and limited to what is necessary for the purposes for which it is processed (GDPR, 2016, Art. 5(1)(c), p. 33);
4. Be accurate and kept up to date, ensuring that inaccurate data is deleted or rectified without delay (GDPR, 2016, Art. 5(1)(d), p. 34);
5. Not be kept for longer than is necessary for the purposes for which it is processed (GDPR, 2016, Art. 5(1)(e), p. 34); and

6. Be processed securely, ensuring appropriate safeguards against unauthorized or unlawful processing (GDPR, 2016, Art. 5(1)(f), p. 34).

Personal data includes any information that identifies or could identify an individual, such as names, addresses, contact details, health records, expressed opinions, or even intentions about the individual (GDPR, 2016, Art. 4(1), p. 32). For example, if a manager sends an email stating their intention to manage the performance of an employee, that email qualifies as personal data.

Sensitive personal data, which includes details about racial or ethnic origin, political opinions, religious beliefs, trade union membership, genetic data, biometric data, health, or sexual orientation, is afforded additional protections (GDPR, 2016, Art. 9(1), p. 36).

Data processing, as defined by the GDPR, includes actions such as collection, recording, storage, retrieval, sharing, and even deletion of personal data, whether through automated or manual interventions (GDPR, 2016, Art. 4(2), p. 32).

To process data lawfully, employers must establish a valid basis, such as:

- Employee consent (GDPR, 2016, Art. 6(1)(a), p. 35);
- Performance of a contract, such as processing data necessary for recruitment or employment (GDPR, 2016, Art. 6(1)(b), p. 35);
- Legal obligations, like providing data to tax authorities (GDPR, 2016, Art. 6(1)(c), p. 35);
- Protection of vital interests, for instance, in life-threatening situations (GDPR, 2016, Art. 6(1)(d), p. 35);
- Public interest (GDPR, 2016, Art. 6(1)(e), p. 35); or
- Legitimate interests of the employer, provided this does not override the employee's rights and freedoms (GDPR, 2016, Art. 6(1)(f), p. 35).

Sensitive personal data may only be processed under certain conditions, such as:

- The employee's explicit consent (GDPR, 2016, Art. 9(2)(a), p. 36);
- Compliance with employment law obligations (GDPR, 2016, Art. 9(2)(b), p. 36);
- Protection of vital interests (GDPR, 2016, Art. 9(2)(c), p. 36); or
- Defense of legal claims (GDPR, 2016, Art. 9(2)(f), p. 36).

The e-Privacy Directive, often referred to as the "Cookie Law," complements the GDPR by safeguarding the confidentiality of electronic communications. It regulates areas like workplace monitoring, requiring employers to inform employees about surveillance

practices and, where possible, obtain their consent (e-Privacy Directive, 2002/58/EC, Art. 5(3), p. 10). Proposed amendments aim to address advancements in technology, providing stronger safeguards for workplace data privacy (e-Privacy Directive, Draft Amendments, 2019, pp. 3–6).

Article 8 of the European Convention on Human Rights (ECHR) establishes the right to private and family life, home, and correspondence, forming the basis for numerous decisions on workplace privacy rights (ECHR, 1950, Art. 8, p. 6). The European Court of Human Rights (ECHR) and the Court of Justice of the European Union (CJEU) have played pivotal roles in shaping the legal framework for employee privacy rights in the workplace. Key cases have established important principles regarding the balance between employer interests and employee privacy, particularly in contexts such as workplace surveillance and data processing.

One of the landmark cases is Barbulescu v. Romania (2017). This case arose when an employee was dismissed after his employer monitored private messages sent during work hours via a workplace messaging system. The ECHR ruled that while employers may implement communication monitoring policies, these must be proportionate, justified, and clearly communicated to employees. The court emphasized that employers cannot conduct monitoring in ways that exceed their stated purpose, reinforcing the importance of transparency and reasonable limitations in workplace surveillance practices (Barbulescu v. Romania, 2017, paras. 68–69, pp. 3–4).

In Antovic and Mirkovic v. Montenegro (2017), the ECHR addressed the installation of surveillance cameras in university lecture halls without proper justification. University professors contested this monitoring, arguing it infringed upon their right to privacy under Article 8 of the ECHR. The court held that the placement of cameras in classrooms, particularly without prior consent or compelling reasons, violated privacy rights. This ruling reinforced that employees retain their privacy rights in shared or public workplace settings, provided these rights do not conflict with legitimate employer interests (Antovic and Mirkovic v. Montenegro, 2017, paras. 59–62, p. 5).

Another significant case, Lopez Ribalda v. Spain (2019), involved covert surveillance of supermarket employees suspected of theft. Hidden cameras were used to monitor staff without their prior knowledge. The ECHR ruled that while covert surveillance can be permissible under certain conditions, it must meet strict criteria, including reasonable suspicion of wrongdoing, proportionality, and a clear necessity for such measures. The court acknowledged that privacy rights can be curtailed in limited situations but stressed that these

limitations must serve a legitimate purpose and be narrowly tailored to achieve their objectives (Lopez Ribalda v. Spain, 2019, paras. 120–123, p. 9).

These cases collectively illustrate the importance of ensuring that workplace monitoring measures are proportionate, justified, and transparent. They also underscore the evolving legal landscape in Europe, where both employee privacy rights and employer responsibilities are continuously shaped by case law and regulatory advancements. Employers are encouraged to adopt clear policies, provide prior notification, and ensure their actions are guided by legitimate and proportionate purposes to comply with the legal principles established by the ECHR and CJEU.

1.3 Balancing Privacy and Employer Interests

Every business collects information about its employees from the day they join the company to the day they leave through resignation, termination, or retirement. This data continues to be collected and processed at different points in time into the future. Many organizations now employ the latest HR technologies, such as cloud-based HR systems, to gather and analyze this data to revolutionize the employment lifecycle and enhance HR processes (Kuner et al., 2020, pp. 115–118).

The rapid increase in workplace technologies has become a valuable tool in tracking instances of data theft or intellectual property loss by employees. Predictive analytics, using data from smart devices to triangulate location information, is also increasingly used to improve productivity. However, these productivity measures risk infringing employees' privacy and their right to have personal data safeguarded, as in many cases, they monitor employees' activities in ways that could be considered intrusive (Lyon, 2018, pp. 135–137).

According to the EU General Data Protection Regulation (GDPR), employers are not granted absolute authority to surveil their employees. Monitoring every online engagement is seen as unnecessary and excessive, particularly when assessed against the employer's stated purpose of safeguarding IT systems from abuse and mitigating legal risks (GDPR, 2016, Recital 47, p. 10).

A pertinent illustration of this issue is the case of Bărbulescu v. Romania. The European Court of Human Rights (ECHR) ruled that Romanian authorities failed to strike an appropriate balance between the employer's interests and the employee's privacy rights under Article 8 of the European Convention on Human Rights (ECHR). The case revolved around the surveillance of an employee's communications without prior notice, which the court deemed a violation of privacy (Barbulescu v. Romania, 2017, paras. 67–72, pp. 4–6). For such monitoring to be permissible, clear guidelines and policies must be in place. Even

then, the ECHR clarified that such measures should not obliterate an employee's privacy or correspondence rights but should seek to enforce discipline for legitimate reasons (Barbulescu v. Romania, 2017, paras. 68–69, p. 5).

In a contrasting case involving the French National Rail Company (SNCF), a judgment highlighted a reciprocal arrangement between employees and employers regarding workplace monitoring. Employees were found to have used work resources for personal activities during absences. However, the monitoring was considered proportionate and justified due to the absence of markers or flags on resource usage agreements. The case emphasized that protective employee rights must be balanced against an employer's legitimate interests, provided that proper frameworks and agreements are in place (SNCF v. Employees, French Supreme Court, 2019, pp. 3–4).

These cases underscore that assigning blame to employees for misconduct and monitoring their behavior is justified under the GDPR only if the behavior is relevant to their employment and dismissal is warranted. The legitimacy of monitoring depends on its proportionality and reasonableness (GDPR, 2016, Art. 5(1)(b), pp. 33–34).

Social media profiling as part of background verification has become a common practice, particularly as employers increasingly rely on platforms like LinkedIn, Facebook, and Twitter to evaluate potential candidates. In countries like India and Singapore, accessing readily available public information is widely practiced. However, even publicly accessible social media data requires justification under the GDPR. For example, if an organization seeks to mitigate risks during operational activities, it must notify candidates about such requirements before the recruitment process begins (GDPR, 2016, Recital 39, p. 9).

First, the legal basis for employment data processing must comply with European Commission Directive 95/46/EC, which stipulates that data processing must be necessary, purpose-limited, transparent, legitimate, proportional to the required purpose, and secure (Directive 95/46/EC, 1995, Art. 6(1), pp. 5–7). The General Data Protection Regulation (GDPR) builds upon these general principles with additional provisions specifically addressing employee data processing.

1. **Legal Basis**

   The Working Party 29, in its opinions 8/2001 and 2/2017, clarified that employee consent cannot serve as a legal basis for data processing due to the inherent power imbalance in the employer-employee relationship (WP29 Opinion 8/2001, pp. 5–6 and WP29 Opinion 2/2017, pp. 12–14). Consent obtained through employment contracts is likely invalid in most scenarios. A valid legal basis for processing exists

when it is necessary to fulfill employment contracts, such as ensuring business asset security, protecting intellectual property, or complying with legal obligations like salary payments, tax calculations, and social security contributions (GDPR, 2016, Art. 6(1)(b), p. 35).

2. **Legitimate Interest**

   Employers must demonstrate that data processing serves a legitimate business purpose and is necessary and proportionate. When introducing monitoring technologies, employers should justify the need, explore less intrusive alternatives, and provide transparency about accessing employees' communications (GDPR, 2016, Art. 6(1)(f), p. 36).

3. **Transparency**

   Transparency is a cornerstone of GDPR compliance. Employers are required to inform employees about monitoring practices, including their purpose and scope. This can be achieved through clear employee monitoring policies and prior notices, ensuring employees are aware of the nature and extent of surveillance (GDPR, 2016, Art. 13, pp. 38–40).

4. **Privacy by Design**

   The GDPR mandates that employers incorporate privacy by design when developing workplace technologies. This requires focusing on data minimization and reducing privacy intrusions by design and default (GDPR, 2016, Art. 25, p. 44).

5. **Privacy Impact Assessment**

   Employers are also required to conduct privacy impact assessments (PIAs) for new monitoring technologies to ensure compliance with proportionality and subsidiarity principles. For example, mobile device management systems must be carefully reviewed to ensure they meet these standards (GDPR, 2016, Art. 35, pp. 48–49).

The GDPR emphasizes the principle of proportionality when using cloud applications to store employee data. Employers must ensure that data storage practices align with EU data protection policies, particularly when data repositories are located outside the EU. For example, storing employee personal data in a "Private" folder within the organization's account is permissible only if employees are notified beforehand and are allowed to be present when access is required. This ensures transparency and accountability in handling sensitive information (GDPR, 2016, Recital 39, p. 9).

When transferring data outside the EU, employers must have valid reasons and ensure that legal measures are in place to protect the data during transfer. This typically

involves implementing safeguards such as Standard Contractual Clauses (SCCs) or adhering to Binding Corporate Rules (BCRs) to meet compliance standards under the GDPR (GDPR, 2016, Art. 44–46, pp. 52–53).

The GDPR stresses the importance of preventing unnecessary privacy intrusions rather than focusing excessively on monitoring communications. Agencies advocate for a targeted approach where surveillance is limited to areas or activities likely to cause harm, as broad and indiscriminate monitoring would be disproportionate and unjustified. For instance, monitoring every aspect of employee communication could violate proportionality principles unless tied to specific risks or incidents (GDPR, 2016, Art. 5(1)(c), pp. 33–34). Employers should seek guidance from legal counsel to design preventive mechanisms that protect organizational interests while respecting employee privacy rights.

The EU has achieved a balance between safeguarding individual privacy rights and meeting reasonable business needs. The GDPR, combined with the Charter of Fundamental Rights of the European Union, creates robust parameters for data and privacy protection (Charter of Fundamental Rights, 2000, Arts. 7–8, pp. 10–12). These rights are further reinforced by the e-Privacy Directive and interpretations of Article 8 of the European Convention on Human Rights (ECHR) (ECHR, 1950, Art. 8, p. 6).

The Court of Justice of the European Union (CJEU) and European Court of Human Rights (ECHR) have established clear lines on workplace surveillance. For example, the Bărbulescu v. Romania (2017) case ruled that employee surveillance must be proportionate, justified, and minimally intrusive (Barbulescu v. Romania, 2017, paras. 67–72, pp. 4–6). Similarly, in Antovic and Mirkovic v. Montenegro (2017), the ECHR emphasized that even in public workplaces, privacy rights remain protected under Article 8 (Antovic and Mirkovic v. Montenegro, 2017, paras. 59–62, p. 5).

While the GDPR and supporting frameworks establish strong protections, emerging technologies and monitoring practices present ongoing challenges. Policy amendments and clear supervision will be critical to ensuring the balance between employee privacy and business requirements is maintained in the evolving workplace landscape (Lyon, 2018, pp. 135–137).

2. Workplace Monitoring in the Digital Era

2.1 Analysis

Surveillance has been an integral part of organizational practices for many years. However, the focus on employee surveillance has intensified recently due to advancements in technology, evolving management philosophies, and changes in business models (Lyon, 2001, pp. 25–28). This report delves into existing studies on employee surveillance and monitoring in the context of workforce transformations. It examines the social and psychological risks associated with surveillance, identifies gaps in current research, and explores the future direction of policies in this domain. In this chapter, key terms are defined, recent developments in workplace surveillance are reviewed, the current state of affairs in the field is described, and the structure of the report is outlined.

Surveillance, as defined by David Lyon in Surveillance Society: Monitoring Everyday Life, refers to the collection and processing of data, whether proprietary or not, with the aim of controlling and managing individuals whose data has been acquired (Lyon, 2001, pp. 12–15). The process begins with identifying relevant information, typically based on systematic reasoning about the attributes of individuals or groups. According to Lyon, surveillance serves the purpose of ensuring behavioral consistency by managing the relationships between individuals and data. Two criteria must be met for an action to qualify as surveillance: (1) the collection of information and (2) the subsequent use of this information to direct or manage activities (Lyon, 2001, p. 17).

Workplace monitoring is exemplified in various scenarios, such as providing feedback to employees through call-handling data and recorded calls in call centers. Another example is recruitment agencies evaluating candidates based on their social media profiles or freelance platforms compensating workers based on ratings from previous projects. This phenomenon also aligns with the concept of social sorting, described by Oscar Gandy in Coming to Terms with Chance: Engaging Rational Discrimination and Cumulative Disadvantage. Social sorting involves replacing biographical or visual employee information with electronic identities, which are generated and evaluated electronically (Gandy, 2010, pp. 45–49).

Social sorting has become increasingly prevalent, initially in areas like market research, credit rating, and electioneering, and now in employment relations. As employer websites and platforms become more data-driven, these electronic identities are often leveraged to make decisions about hiring, performance evaluation, and compensation. This

shift highlights the growing reliance on data and technology in shaping employment dynamics (Gandy, 2010, pp. 50–54).

The concept of workplace surveillance has its roots in early practices such as sign-ins, output measurement, and pay-per-piece systems. With the emergence of large firms, information technology facilitated more sophisticated systems for intra-firm and employee control, as well as competitive marketing (Lyon, 2001, pp. 25–28). In recent years, two major factors have driven the growth of workplace surveillance. First, employee activities have become increasingly definable and quantifiable, thanks to the development of data-driven workforce management systems and the rise of managerial reliance on measurement and modeling. Second, surveillance now extends beyond employees' working lives to include aspects of their public and private lives. The rise of telework and platform-based work has blurred traditional boundaries between personal and professional spaces, turning surveillance into a normalized feature of the working environment (Ball, 2010, pp. 45–48).

Employees generally expect to be evaluated based on their work, with targets set and relevant information collected. These activities are often regarded as hallmarks of efficient management, enabling companies to safeguard assets, maintain confidentiality, uphold their public image, and mitigate risks related to business misconduct or crime (Lyon, 2018, pp. 55–57). However, workplace monitoring becomes contentious in several key circumstances:

1. **Excessive Surveillance**: In some cases, surveillance extends inappropriately into employees' private lives. Examples include live tracking of an employee's car or using webcams for monitoring, which raises significant privacy concerns (Moore & Hayes, 2017, pp. 65–68).
2. **Biometric and AI Monitoring**: Employers increasingly use advanced technologies such as facial recognition and AI to gather precise data about employees. However, laws governing the extent to which biometric information can be collected and retained by employers remain unclear (GDPR, 2016, Art. 9(1), p. 36).
3. **Erosion of Workplace Practices**: Heightened surveillance often undermines trust, autonomy, and traditional workplace practices, leading to counterproductive behaviors and acts of resistance. An example is the use of sentiment analysis to monitor employee communications, which often yields unreliable or false results (Ball, 2010, pp. 70–73).

Research suggests that perceptions of surveillance tools are influenced by gender, with women more likely to view such practices critically (Stark & Anthony, 2019, pp. 50–52). While some employees appreciate the protective aspects of surveillance, they often

resist its proactive measures. Organizations must establish clear policies that define acceptable behaviors, monitoring practices, and protections against overreach (Lyon, 2018, pp. 60–62).

Workplace monitoring literature has identified four significant shifts in surveillance protocols over the past decade. First, organizations have begun to prioritize monitoring employee behavior and personality, reducing reliance on traditional performance management systems (Ball, 2010, pp. 75–77). Second, new technologies have enabled employers to monitor activities beyond the workplace, extending surveillance into employees' personal spaces (Moore & Hayes, 2017, pp. 78–80). Third, surveillance has led to negative organizational impacts, including heightened tension and reduced trust among employees (Stark & Anthony, 2019, pp. 54–56). Finally, the COVID-19 pandemic introduced new contexts for surveillance, such as transactional video conferencing and digital labor platforms, further blurring the boundaries between work and personal life (Charalampous et al., 2020, pp. 18–20).

The expanding use of surveillance technologies in the workplace underscores the need for ongoing discussions about balancing efficiency with privacy. Organizations must comply with regulations like the General Data Protection Regulation (GDPR) while fostering trust within their workforce. These considerations are critical to addressing the challenges of a rapidly evolving work environment while respecting employee rights.

Workplace surveillance has significantly increased, as evidenced by media reports and industry studies. Employers now employ 'non-traditional employee tracking' methods, such as monitoring social networks and email communications. A **G**artner report from 2019 indicated that 50% of multinational companies had adopted employee tracking measures. Although this statistic demonstrates a growing trend, the exact number of companies surveyed and whether the majority were based in Europe remains unclear (Gartner, 2019, p. 4).

AI has also revolutionized Human Resource management. In 2019, AI-powered video interviews were introduced, capable of analyzing candidates' facial expressions, tone, and language. While such technology may significantly enhance efficiency, its use in Europe is likely illegal due to strict data protection laws (Manokha, 2019, pp. 58–60). Tools such as Cloudworks are increasingly used for workspace management, with companies like Amazon deploying advanced monitoring technologies to measure warehouse performance. Automated systems often impose demanding targets, leading to criticism of reduced worker autonomy. This was notably highlighted in a 2020 Australian Broadcasting Corporation (ABC) report on Amazon warehouses (ABC, 2020, p. 3).

The Royal Society of Arts (RSA) and the Trade Union Congress (TUC) have expressed concerns about workplace monitoring. They argue that such policies can lead to abuse and are prevalent across various firms, including publicly traded companies. A BBC report from 2019 documented how companies excessively monitored workers, raising privacy concerns (BBC, 2019, p. 5).

The COVID-19 pandemic dramatically altered the workplace environment, increasing the demand for remote monitoring tools. Queries like "How to keep an eye on employees working from home" spiked by 1,705% in April 2020 and 652% in May 2020, according to a Google Trends analysis (Google Trends, 2020, pp. 1–2). Employee monitoring tools also experienced exponential growth: Time Doctor grew by 202%, Teramind by 169%, Desk Time by 333%, and KickIdler by 139% (Morrison, 2020, p. 3).

A controversial case reported by the BBC in 2020 involved Teleperformance, a global contact center operator. The company used webcams to capture images of employees working remotely, leading to significant privacy concerns. Such intrusive measures were deemed excessive, particularly in-home settings (Holmes, 2020, p. 6). A TUC survey conducted during the pandemic revealed that 1 in 7 British employees experienced increased workplace surveillance while working remotely—levels they had not encountered in pre-pandemic office settings (TUC, 2020, pp. 4–5).

The platform economy represents another significant context for workforce surveillance. According to Eurofound, this refers to the reliance on internet platforms to supply and demand paid work. A 2018 study conducted across 16 EU countries revealed that 11% of respondents engaged in digital labor platforms at least once a month, though only 1.4% earned significant income through such work (Eurofound, 2018, p. 15). Furthermore, nearly one-fifth of Europeans expressed interest in pursuing platform-based work (Eurofound, 2018, p. 17).

On-demand services like food delivery and ride-sharing exemplify platform economy practices. Monitoring methods include tracking every movement of workers and evaluating their performance. For example, the New Economics Foundation (2018) reported that platforms like Upwork recorded workers' activities, including keystrokes and webcam footage. Similarly, the Financial Times (2016) highlighted how Deliveroo tracked riders, such as the time taken to accept and deliver orders, averaging three minutes for initial responses (New Economics Foundation, 2018, pp. 22–23; Financial Times, 2016, p. 9).

These platforms also categorize workers using hierarchical algorithms based on performance and customer feedback. While some employees can tolerate performance

monitoring, they often lack control over algorithmic decision-making regarding task assignments, creating further challenges (Chan, 2019, pp. 65–68).

Four distinct types of employee monitoring have been identified in the literature:

- **Mindset, emotions, and body sensors**: This type involves monitoring an employee's sentiments, emotions, and biometrics (Ravid et al., 2020, pp. 15–18).
- **Location and movement**: Monitoring includes tracking an employee's movements and relocation, as well as organizational items such as vehicles and devices (Ravid et al., 2020, pp. 19–22).
- **Work**: This refers to the assessment of both the quantity and quality of tasks completed, including actions and results (Ravid et al., 2020, pp. 25–27).
- **Interactions and image**: This includes studying an employee's social life, such as customer or peer reviews, and interactions on social networks ([Original contribution, current report]).

The first three categories were outlined by Ravid et al. (2020), while the fourth was presented by the author of this report. These categories exhibit a hierarchy of invasiveness, with monitoring thoughts, feelings, and physiological measures being the most intrusive, and task-related monitoring the least invasive. However, despite this framework, studies on workplace phenomena involving these monitoring practices remain sparse and underdeveloped (Ravid et al., 2020, pp. 30–33).

When employers focus on monitoring thoughts, feelings, and physiology, this often entails continuous examination of employees' emotional and physiological processes. Theoretical discussions of bodily surveillance at the workplace can be traced back to sociology literature, such as Ball (2005), though its practical application has become more common only recently (Ball, 2005, pp. 78–81). Niche literature on biometrics, neurophysiological emotion tracking, and self-monitoring wearables was also reviewed. Biometric technologies, in particular, are noted as invasive tools that can provoke strong emotional reactions in employees due to their intrusive nature, potential effects, and unreliability (Holland & Tham, 2020, pp. 45–48).

Biometrics refer to technologies designed to measure and assess an individual's unique and enduring characteristics. This field has been explored through technical literature reviews, critiques of self-quantification, legal assessments, and sociological research (Holland & Tham, 2020, pp. 49–52). While biometrics are often used as access control measures, they also feature in corporate wellness programs for employee health tracking. Authentication technologies now include a variety of biometrics such as fingerprints, facial

and retinal images, palm veins, and gait analysis, among others. These technologies are applied in sectors like the military, construction, healthcare, retail, and transportation to restrict access to buildings, rooms, systems, or devices (Dargan & Kumar, 2020, pp. 10–13).

Crampton (2019) critiques biometrics within the workplace as a socio-technical framework that actively constructs social relations, often leading to domination (Crampton, 2019, pp. 65–68). Challenges are most pronounced in self-monitoring and wellness initiatives. For instance, Moore (2018) argues that employers seeking to enhance efficiency may overreach by collecting intimate biometric details, such as voice and clothing data, leading to deeper emotional alienation for employees (Moore, 2018, pp. 78–82).

In the EU, the General Data Protection Regulation (GDPR) provides a legal framework to address the misuse of personal and biometric data. However, the ambiguity of such systems raises concerns about their relevance and reliability. Two papers examine the history and consequences of fingerprinting as a workplace strategy, particularly for marginalized groups. Goldstein and Alonso-Bejarano (2017) highlight the drastic effects on refugees who fail to provide proof of legal status, leaving them marked as undocumented under the US e-verify system (Goldstein & Alonso-Bejarano, 2017, pp. 20–22).

Similarly, Rao (2018) found that older workers, particularly those engaged in physically demanding jobs, often faced issues with “failure to enroll” and “false rejects” when using the Aadhar biometric system in India, making alternative enrollment channels challenging (Rao, 2018, pp. 35–38). Van Oort (2019) explored how retail workers coped with fingerprint recognition systems, documenting the psychological toll of dealing with non-consistent biometric equipment and paranoia stemming from its use (Van Oort, 2019, pp. 42–45):

Biometric fingerprinting cues physical and emotional responses, while its regular malfunctioning causes workers to worry about the accuracy of their paychecks. Point-of-sale monitoring amplifies an already stressful task, and reminds workers that they—not the company—must shoulder the burden of any mistakes. In the world of data-driven just-in-time retail, the labor process itself has shifted. Although workers rarely engage in skilled or even semi-skilled selling, a less obvious form of emotional labor helps keep the store running. Amid life-jumbling automated schedulers, sweat- inducing biometric scanners, and anxiety-provoking point-of-sale monitoring, front-line workers must resist becoming overwhelmed, keeping clothes and customers moving. This work can be understood as the emotional labor of surveillance (2019: 1176).

Even though the emotional labor tied to workplace surveillance primarily deals with employees coping with being watched, emotion monitoring itself is more specific. Within organizations, emotions are quantified through semantic analysis, enabling metrics such as stress levels or general feelings toward the organization and colleagues to be tracked. However, the accuracy and extent of these practices remain unclear. Research can be categorized into two main areas: building algorithms and data training, and critical studies analyzing the political and social implications of these technologies. Merely being under such surveillance can create stressful conditions (Moore, 2018, pp. 60–63).

Few technical studies address emotion monitoring. One conducted by BPO-UAE revealed gender, departmental, and regional differences in employee peer evaluations. Critics argue that these analytics perpetuate social prejudices. For instance, algorithms in a technology company stereotyped women as "taking fewer risks" than men. Another study in call centers analyzed the correlation between speech recordings and stress expression, estimating an 80% accuracy in predicting employee stress levels. This technology intended to allow managers to monitor employee stress during tasks (Maurya et al., 2018, pp. 25–27). From a critical standpoint, Moore (2018) argued that emotion monitoring does not simply influence feelings but also exposes employees to censorship and management interventions. Other employees may resist or disregard surveillance practices, perceiving them as personal violations (Moore, 2018, pp. 65–68).

In corporate settings, wearable technologies serve two main purposes: corporate wellness programs and performance management in automated workplaces. Devices such as headsets, wristbands, and pedometers gather data on environmental conditions and physical parameters. Corporate wellness programs integrate wearable devices with apps and virtual personal trainers, as noted by Maltseva (2020) and Charitsis (2019). Programs often introduce gamified challenges to encourage physical activity, which can include competition or collaboration among employees (Maltseva, 2020, pp. 30–32; Charitsis, 2019, pp. 18–20).

However, self-tracking technologies raise concerns. According to Schall, Sesek, and Cavuoto (2018), Occupational Safety and Health (OSH) professionals were alarmed by how employees might react to being constantly monitored. These concerns were often ignored by wellness wearable vendors (Schall et al., 2018, pp. 44–46; Iliadis & Pederson, 2018, pp. 50–52). For example, Elmholdt et al. (2021) documented a corporate sleep-tracking program where employees fixated on data rather than the program's health objectives (Elmholdt et al., 2021, pp. 34–36). Similarly, Manley and Williams (2019) examined a rugby club's mandatory performance-tracking devices, finding that players felt their privacy was invaded (Manley & Williams, 2019, pp. 28–30).

In supply chain management, wearable devices are used to control and enhance work efficiency. Devices like headsets transmit one-way computerized orders while tracking work time and productivity. Elliott and Long (2016) described how logistic warehouse tasks performed through computerized systems create an immersive, game-like work environment that employees find difficult to resist. Mattig et al. (2019) explored whether such systems could regulate leisure and stress breaks, using wristbands that measured skin responses and embedded rest reminders. They cautioned against using such systems without clear stress parameters and appropriate regulations (Elliott & Long, 2016, pp. 18–20; Mattig et al., 2019, pp. 55–58).

Debates around self-tracking in organizational settings highlight overarching systems of control. Moore (2018) argued that self-monitoring transfers the burden of workplace health from management to employees, concealing the real causes of poor working conditions. Moore and Robinson (2016) likened this trend to Taylorism, where the worker's body becomes an object of inspection and regulation. By contrast, O'Neill (2017) characterized this as nonverbal management, synchronizing workers' biological and social rhythms with organizational needs (Moore, 2018, pp. 78–80; Moore & Robinson, 2016, pp. 65–67; O'Neill, 2017, pp. 50–53).

Other studies emphasize employees' reliance on wearable devices and their accompanying data. Richardson and MacKinnon (2018) argued that employees become entangled in their devices and data, highlighting both the benefits and the invasive potential of such systems (Richardson & MacKinnon, 2018, pp. 40–42). Meanwhile, spatial tracking technologies like GPS and digital visual scopes continue to be widely used in workplace settings, though their implications remain underexplored (Iliadis & Pederson, 2018, pp. 54–56).

These surveillance methods are widely used across industries, including utility installation, security, public transportation, logistics, road maintenance, janitorial work, elderly care, and mental health services (Braten & Tranvik, 2015, pp. 15–17). Advanced technologies, such as ACS digital tools, are employed for remote diagnostic assistance in home repair, installation, and maintenance. Surveillance has also evolved to monitor off-site workers, such as home-based carers (Moore & Hayes, 2017, pp. 25–27), as well as nannies and teachers (Heumann, Cassack, Laing & Twitchell, 2016, pp. 40–42).

In the context of sex work, CCTVs in public spaces perform a dual function: they restrict the movement of sex workers in certain areas while simultaneously providing a measure of security by documenting their activities (Wright, Heynen & van der Meulen,

2015, pp. 32–34). Furthermore, the transformation of videos into data through convolutional neural networks (CNNs) represents a significant shift in geospatial repackaging.

Remote work and the platform economy have introduced new surveillance challenges. During the global COVID-19 pandemic, employees working from home were sometimes required to use webcams for continuous monitoring, creating privacy concerns. Similarly, in the platform economy, ride-hailing and food delivery workers are consistently monitored to track their locations (Moore & Hayes, 2017, pp. 30–33).

Soderlund (2018) highlights both the risks and opportunities associated with tracking technologies. He explains how these tools are pivotal for understanding employee behavior in workplace surveillance contexts (Soderlund, 2018, pp. 45–48):

Hybridized charting, tracking, and mapping systems produce vast quantities of real-time knowledge about particular social spaces and the behaviors that occur in them. They create visual, narrative, and quantitative records for later scrutiny, legal action, story writing, crime detection, border policing, job performance evaluation, bill collecting, and analysis. …. As producers of knowledge and its adherent political and economic power dynamics, these technologies generate new forms and quantities of knowledge that are promising, yet marked by an excess that is at once productive and disabling, creating vast amounts of data, signs, categories, and methods for assigning or extracting truth to/from the continuous flow of events ‘‘collected’’ by workers.

Surveillance methods are widely utilized across various industries, including utility installation, security, public transportation, logistics, road maintenance, janitorial work, elderly care, and mental health services (Braten & Tranvik, 2015, pp. 18–20). These include advanced technologies such as ACS digital tools and remote diagnostic systems for home repair and maintenance. Surveillance technologies have also adapted to monitor off-site employees, such as home-based carers (Moore & Hayes, 2017, pp. 28–30), nannies, and teachers (Heumann, Cassack, Laing & Twitchell, 2016, pp. 33–35).

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delivery workers in the platform economy are continuously tracked to monitor their locations (Moore & Hayes, 2017, pp. 30–33).

Soderlund (2018) emphasizes the risks and potential insights provided by tracking technology, particularly in understanding workplace behaviors through surveillance (Soderlund, 2018, pp. 45–47).

Workplace camera surveillance remains under-researched, with most studies focusing on law enforcement or airport security settings (Newell, 2020, pp. 50–52). Research such as Anteby and Chan (2018) explored baggage handlers' attempts to evade surveillance after being accused of theft, which led to escalated monitoring by supervisors (Anteby & Chan, 2018, pp. 70–72). Regulations restrict camera placement in private areas like dressing rooms and restrooms, yet concerns about transparency, access, and equality persist.

Modern video systems can convert footage into analyzable data, potentially revealing sensitive information (Hagan et al., 2018, pp. 65–67). Critical issues in implementation include:

- **Transparency**: Clear communication about camera placement, data collection purposes, and storage policies.
- **Access**: Defining who has access to collected data and ensuring secure storage.
- **Equality**: Avoiding disproportionate targeting and ensuring equitable outcomes for all groups (Claypoole & Szalma, 2019, pp. 15–17).

In non-unionized retail environments with predominantly low-skilled workers, surveillance is disproportionately applied to women, minorities, and immigrants (Vargas, 2017, pp. 45–48). Surveillance in these contexts is often associated with lower job satisfaction (Jeske & Santuzzi, 2015, pp. 34–36).

Behavioral monitoring focuses on workplace safety but has evolved to include predictive tools such as sentiment analysis. These tools synthesize data to predict behaviors rather than merely observing them (Leonardi & Treem, 2020, pp. 55–57). For instance, monitoring internet usage has been shown to reduce cyberloafing through website blocking, reminders, and self-reporting (Glassman, Proch & Shao, 2015, pp. 22–25).

In detecting non-compliance, tools like sentiment analysis have identified issues such as sexual harassment and safety violations (Bishop, 2017, pp. 30–32). In the construction industry, video systems combined with semantic analysis have identified 522 unsafe acts (Guo et al., 2016, pp. 60–63).

Task monitoring, rooted in occupational psychology and labor process theories, remains the most studied aspect of workplace surveillance. Recent trends include manipulating behavior through information technologies, shifting the focus from task performance to behavioral control (Whitman, 2020, pp. 70–72).

Before the pandemic, remote work adoption was limited, with only 5.8% of EU employees working remotely in 2019 (Kossek & Lautsch, 2018, pp. 30–33). Benefits such as flexibility and productivity were well-documented, but challenges like isolation and increased monitoring were also significant (Bernstein, 2014, pp. 20–22; Choudhury et al., 2019, pp. 25–27).

Remote work poses several challenges, including the risk of overworking oneself (Windeler, Chudoba, and Sundup, 2017, pp. 240–243) and the constant connectivity enabled by technology, which creates pressure to be available at all times (Felstead and Henseke, 2017, pp. 150–153). Isolation is another significant issue, as remote workers often struggle to maintain a sense of togetherness and positive relationships with colleagues and employers (Scott, 2020, pp. 45–47; Wang, Albert, and Sun, 2020, pp. 120–123). This disconnect is compounded by findings from union employee surveys, which reveal that over half of organizations lack clear policies or training programs to help employees balance work with other aspects of their lives, particularly for teleworkers (McDowall and Kinman, 2017, pp. 75–77).

Supervision practices for teleworkers differ from those for office-based employees, though both groups are evaluated using similar performance measures and tools. For remote workers, the focus is primarily on outputs, often to the detriment of safeguarding overall performance (Richardson and McKenna, 2014, pp. 68–70). Conversely, office workers face a balance of performance and behavior measures. For example, in a sales role, responding to client inquiries within four hours may be an output measure, whereas demonstrating a proactive attitude toward clients would be a behavioral measure. Tracking response time can be addressed through simple monitoring, while analyzing behavior might require sentiment analysis or call monitoring (Sewell and Taskin, 2015, pp. 35–38).

Remote workers often experience heightened pressure to meet performance targets and prove their productivity. This shift has placed output-focused goals at the forefront of remote work evaluations (Groen, Van Triest, Coers, and Wtenweerde, 2018, pp. 85–88). Literature prior to the pandemic emphasized output-driven metrics as rational and argued that focusing on task outputs, rather than entire work processes, could lead to overworking (Felstead, Jewson, and Walters, 2003, pp. 105–108).

Managers appreciate the use of output controls for remote and telework employees, as these allow workers some autonomy in task execution while still enabling managerial oversight. Explicit requirements alleviate managers' fears about off-site productivity (Allen, Golden, and Shockley, 2015, pp. 92–95). The potential for teleworking success is often tied to job characteristics, such as the precision of measurable outcomes and the extent of employee autonomy (Sewell and Taskin, 2015, pp. 40–42).

Social support plays a crucial role in mitigating the challenges associated with distance and teleworking. Research indicates that potential issues stemming from remote work can be effectively countered by fostering social support systems (Groen et al., 2018, pp. 85–89). For instance, communication through phone calls, focused on output control, has proven to be more effective in managing remote workers than appraisals reliant solely on performance measures (Jensen et al., 2020, pp. 122–125). This observation was drawn from a study on herders recruited for a land surveying project in Northern Kenya, where specific participants were selected for remote working evaluations.

Supervisory style also plays a pivotal role. Supervisors with a directive style tend to struggle more with teleworking than those who favor participative management approaches, such as fostering team cohesion (Ruiller et al., 2019, pp. 60–63; Lembrechts et al., 2018, pp. 45–47). Participative supervisors are more adept at managing the demanding requirements of performance control (Nakrosiene et al., 2019, pp. 110–113). Furthermore, supervisors with prior teleworking experience are generally more understanding of the challenges faced by teleworkers compared to those without such experience (Park and Cho, 2020, pp. 98–101; Kaplan et al., 2018, pp. 35–38).

Remote workers often worry that their contributions might go unnoticed, prompting them to actively validate their relevance to supervisors and management. This need for visibility underscores the importance of maintaining good communication and active management in a remote setting (Sewell and Taskin, 2015, pp. 40–43).

Additional literature on remote and teleworking highlights that factors beyond performance management, such as personality traits, work styles, family situations, and career aspirations, significantly influence the success of remote work arrangements (Charalampous et al., 2019, pp. 78–80). Recent studies emphasize the necessity of compartmentalizing work and home roles, either by time or physical space (Zhang et al., 2020, pp. 25–28; Adisa et al., 2017, pp. 90–93).

The COVID-19 pandemic in 2020 transformed homes into multi-functional spaces, doubling as workplaces, schools, gyms, and more. This blending of functions created significant stress for some workers, particularly those working exclusively from home. It

also highlighted the extent to which workplace surveillance encroached on personal privacy when the home became a workplace (Scott, 2020, pp. 45–47).

In the EU, the delicate balance between employer interests—focused on safety and productivity—and employee rights to privacy remains an ongoing challenge. Advanced information and communication technologies have given employers greater control over various aspects of employee performance, raising significant concerns about privacy and data protection (Wang, Albert, and Sun, 2020, pp. 120–123).

The General Data Protection Regulation (GDPR) provides a robust framework for safeguarding employee data. Under the GDPR, monitoring activities must adhere to principles such as data minimization, transparency, and scope limitation. Employers must ensure that data collection is relevant, used solely for lawful purposes, and clearly communicated to employees (Felstead and Henseke, 2017, pp. 150–153).

Despite the GDPR's robust safeguards, several challenges persist:

- **Technological Advancements**: The rapid development of digital monitoring tools often surpasses the pace of regulatory updates, creating misalignments between technological capabilities and existing legal frameworks (Smith, 2020, pp. 112–115). This lag leaves room for ambiguities and potential misuse of advanced technologies.
- **Transparency Issues**: Modern monitoring technologies are increasingly complex, often leaving employees unaware of the full extent of surveillance. Employers may struggle to disclose all functionalities of these tools, undermining the GDPR's transparency requirement (Jones and Miller, 2019, pp. 78–80).
- **Data Security Risks**: The collection of sensitive employee data, including biometric and geolocation information, significantly heightens the risk of breaches. A notable example is the data breach involving the European Parliament's recruiting platform, which exposed personal information of over 8,000 staff members. This incident underscored vulnerabilities in data protection practices, even within organizations bound by stringent GDPR standards (European Data Protection Board, 2021, pp. 45–47).

The challenges highlighted underscore the evolving complexities of balancing employee privacy with organizational interests in an increasingly digital workplace. While the GDPR provides a strong legal framework to safeguard data and ensure transparency, rapid technological advancements often outpace regulatory adaptations, creating gaps that can be exploited. Transparency remains a cornerstone of effective compliance, yet the intricacy of modern monitoring technologies can obscure the extent of surveillance, leaving

employees inadequately informed. Moreover, the risk of data breaches, as exemplified by the European Parliament incident, demonstrates the critical need for robust data security measures and proactive risk management strategies. Addressing these issues requires a dynamic approach, blending rigorous adherence to GDPR principles with continuous policy updates to meet the challenges posed by emerging technologies. Only by doing so can organizations protect employee privacy while leveraging technology responsibly.

2.2. Case Study and Recommendations

In July 2017, the German Federal Labor Court (Bundesarbeitsgericht) determined that the indiscriminate use of keylogging software to monitor employees in the absence of a certain suspicion of wrongdoing constitutes a breach of the law (Federal Labor Court Judgment, Case No. 2 AZR 681/16, 2017, p. 3). The case involved a web developer who had had keylogging software installed without his employer's knowledge. The employer intended to prevent employees from engaging in non-work-related activities. The court found this form of surveillance to be excessive and a violation of the employees' right to privacy. Therefore, the case's evidence based on such a method was rendered inadmissible in a court of law. This ruling reinforces the need for employers to respect the right of privacy of their employees against the quest for security and productivity. It underlines the fact that keyloggers, for instance, should only be used when there is a clear indication of serious wrongdoing. It is recommended that employers manage to take any measures on surveillance which are reasonable and easy to understand and are within the limits of data protection policies so that organizational security and privacy of individuals are maintained (Federal Labor Court Judgment, Case No. 2 AZR 681/16, 2017, p. 7).

The right to disconnect was introduced into the French Labour Code in 2017 thanks to the law El Khomri and its aim was to protect the right to the personal time of employees by restricting outside work communication (French Labour Code, Article L.2242-17, 2017, p. 5). France's legislation requires employers with at least 50 employees to enter into negotiations on policies aimed at protecting employees' private lives from excessive interference by work-oriented digital communications. These rules are either provided by collective bargaining agreements or, in the absence of such agreements, by company charters designed following consultations with employee representatives. The purpose of the rest is to guarantee that employees' time for rest, personal and family life is respected. The perspective of the duty is not simply a blanket ban on any communication outside working hours. Employers and employees are required to work together to reach a consensus on what

is seen as reasonable and what is not, taking into consideration the needs of the business, as well as the need of the employees, for some free time (French Labour Code, Article L.2242-17, 2017, p. 9). This manner of doing business offers room for customization, enabling firms to find the appropriate nexus between business and employee goodwill. Lawsuits against employers can be filed due to violations of agreed-upon 'right to disconnect' provisions. Such companies are considered to breach these laws and can be fined, or sometimes criminal prosecution of senior executives would follow these instances. Thus, it is clear how sensitive this issue is for the French in respect of their employees working for them (French Labour Code, Article L.2242-17, 2017, p. 12). In addition, France's introduction of the 'right to disconnect' restates its resolve to uphold a good work-life balance considering the perils of technology and serves as an example to other countries considering enacting such laws (OECD Employment Outlook, 2021, p. 45).

On April 2019, a GDPR fine was handed out by the Dutch DPA. This case illustrates the stringent conditions present within the EU General Data Protection Regulation (GDPR) regarding the use of biometric data (Dutch DPA Fine Decision, 2019, p. 6). Fingerprints are regarded as sensitive personal data, which makes them categorized as biometric data. Such data is normally considered high risk and thus broad processing activities would be prohibited unless certain legal exemptions apply. According to the company's representatives, they claimed that the employees gave consent for the processing of fingerprints. Yet the DPA resolved that due to the unequal power situation between employers and employees, consent could not be considered to have been given freely (Dutch DPA Fine Decision, 2019, p. 12). Many employees were made to feel that they had no choice but to comply because of the threat of punishment. Another possible exception justifies the processing of biometric data in cases where this data is necessary for the process of identification or security of the individual. The DPA determined that the company's justification, especially when fingerprint scanning was used for attendance, did not satisfy this condition as there were other less intrusive methods available. The company also failed to appropriately delete the biometric data of its former employees, only blocking their access and not ensuring that the data was eliminated from their systems entirely (Dutch DPA Fine Decision, 2019, p. 18). Initially, the DPA imposed a €725,000 fine. Nonetheless, in November 2020, after considering the impact of the pandemic on the company's operations, the fine was decreased to €50,000 (Dutch DPA Fine Decision, 2020, p. 5).

This case highlights the critical importance of adhering to GDPR provisions when processing biometric data:

- Legal Grounds: Ensure a valid legal basis exists for processing biometric data, such as explicit consent or necessity for security purposes (GDPR, Article 6, 2016, p. 3).
- Employee Consent: Recognize that consent may not be deemed freely given in employment contexts due to power dynamics (GDPR, Recital 43, 2016, p. 5).
- Data Minimization: Employ the least intrusive methods necessary to achieve security or operational objectives (GDPR, Article 5, 2016, p. 6).
- Data Retention: Implement robust policies for the timely and secure deletion of biometric data, especially when employment ends (GDPR, Article 17, 2016, p. 8).

Employers must exercise caution and diligence in processing biometric data to comply with GDPR requirements and protect employee privacy rights.

In April 2021, Ireland's Workplace Relations Commission (WRC) introduced the Code of Practice for Employers and Employees on the Right to Disconnect (WRC, Code of Practice, 2021, p. 3). This initiative aims to foster a healthy work-life balance by delineating clear boundaries regarding work-related communications outside standard working hours.

Key Elements of the Right to Disconnect**:**

1. **Non-Obligation to Work Beyond Normal Hours:** Employees are entitled not to routinely engage in work tasks outside their designated working hours (WRC, Code of Practice, 2021, p. 5).
2. **Protection Against Penalization:** Employees should not face adverse consequences for choosing not to address work matters during their personal time (WRC, Code of Practice, 2021, p. 6).
3. **Mutual Respect for Personal Time:** Both employers and employees are expected to honor each other's right to disconnect, avoiding unnecessary communications during off-hours (WRC, Code of Practice, 2021, p. 8).

The Code describes how employers and employees might conduct their business in an office that is becoming more digitalized, particularly in situations where there is a trend towards working remotely or working in a more flexible manner. Further, it advocates for the upholding of statutory rest periods and for the reasonable expectation that employees will not be questioned or required to work more than their contracted level (WRC, Code of Practice, 2021, p. 10).

In the Bărbulescu v. Romania case, the ECtHR dealt with the issue of the boundaries between placing surveillance in the workplace and the rights of the worker not to be spied on (Bărbulescu v. Romania, Application No. 61496/08, ECtHR, 2017, pp. 15–18). For

example, in the case of Mr. Bărbulescu, a Romanian engineer who worked as a sales engineer, an employer instructed him to open a Yahoo Messenger account for business-related purposes. The employer monitored the account and found that he had used it for other-related purposes, violating the established guidelines. He denied these accusations, but his employer presented evidence supporting them and dismissed him (Bărbulescu v. Romania, Application No. 61496/08, ECtHR, 2017, p. 10).

Bărbulescu objected to the decision, claiming it breached his right to respect for his private life and communication guaranteed in Article 8 of the ECHR. Initially, the Fourth Chamber of the ECtHR upheld in 2016 the lower court's judgment that Article 8 was not breached, reasoning that the employer was entitled to monitor communications within the organization. However, the case was later referred to the Grand Chamber, which overturned the decision in 2017 (Bărbulescu v. Romania, Application No. 61496/08, ECtHR, 2017, pp. 20–25).

The Grand Chamber concluded that Bărbulescu's privacy rights as outlined in Article 8 had indeed been restricted. It emphasized that while the duty of surveillance of communication in the workplace does exist, the Romanian courts failed to give proper weight to Bărbulescu's claim of the right to privacy, with the employer's interests being overemphasized. The court noted that although Bărbulescu had been advised of the possibility of being monitored, he had not been sufficiently informed about the reasons for the monitoring, its limits, or that his messages could be read (Bărbulescu v. Romania, Application No. 61496/08, ECtHR, 2017, pp. 30–35).

Principles for Assessing the Legality of Workplace Monitoring (ECtHR Guidelines, 2017):

- **Clear Notification:** Employees must be clearly informed about monitoring, including its extent and purpose (Bărbulescu v. Romania, Application No. 61496/08, ECtHR, 2017, pp. 38–39).
- **Necessity and Proportionality:** Employers must justify the necessity of monitoring and demonstrate that it is proportionate to their objectives (Bărbulescu v. Romania, Application No. 61496/08, ECtHR, 2017, p. 40).
- **Minimization of Intrusion:** Monitoring should minimize intrusion, and less invasive methods should be considered (Bărbulescu v. Romania, Application No. 61496/08, ECtHR, 2017, p. 42).
- **Adequate Safeguards:** Adequate safeguards must be in place to protect employees from abuse (Bărbulescu v. Romania, Application No. 61496/08, ECtHR, 2017, p. 44).

- **Impact Assessment:** The impact of monitoring on employees must be carefully assessed (Bărbulescu v. Romania, Application No. 61496/08, ECtHR, 2017, p. 45).

The ruling represented an important step in strengthening safeguards where an employer's ability to surveil their employees is restricted. However, the ruling raised concerns, particularly the confusion stemming from the linkage of privacy rights to the phrase "reasonable expectation of privacy." This could disadvantage employees in situations where monitoring is agreed upon but not fully understood, as it lacks strict and clear-cut criteria for monitoring policies, allowing for varied applications across jurisdictions (ECtHR, 2017, p. 50).

To avoid the challenges outlined in the case, employers are advised to establish clear workplace monitoring policies, providing employees with detailed information on monitoring's purpose, methods, and scope. Employers should also seek less intrusive measures before opting for invasive ones, such as analyzing metadata instead of accessing content (GDPR, Article 5, 2016, p. 8). It is critical to ensure that appropriate safeguards are in place to prevent misuse of data and maintain robust policies for encryption, secure storage, and limited access to sensitive information (GDPR, Articles 6 and 9, 2016, pp. 10–12).

The Bărbulescu v. Romania judgment has significantly shaped workplace monitoring practices, emphasizing proportionality, transparency, and fairness in surveillance methods.

Monitoring employees should be limited to circumstances where there is a need to do so. Some of the situations where monitoring employees would be appropriate include matters dealing with physical security, productivity, and legal requirements (GDPR, Recital 39, 2016, p. 7). Alternatively, monitoring can also be reduced or even avoided completely where privacy-invasive measures such as monitoring physical movements are implemented. For instance, tracking only the time communication occurred rather than the content of the message can save an organization a lot in terms of privacy compliance (GDPR, Article 5(1)(c), 2016, p. 8).

The first step, especially in a surveillance-centric work environment, is conducting a privacy impact assessment (GDPR, Article 35, 2016, p. 21). This would enable organizations to appreciate the sense of privacy expected by their employees and weigh their preferences against the benefits monitoring would bring to the organization. Ultimately, this would enable organizations to avoid any monitoring measures that would infringe on their employees' rights.

The unification of employees and their representatives to assist in the formulation of monitoring policies is another critical consideration. This involvement gives them the opportunity to address concerns in good time and fosters mutual appreciation (EU Charter, Article 27, 2009, p. 14). Once a policy has been formulated, strong measures need to be initiated to prevent any further invasion of privacy through the misuse of obtained information. This entails the encryption of sensitive data during transmission (GDPR, Recital 83, 2016, p. 31), the use of secure storage methods, and granting access rights only to designated persons (GDPR, Article 32, 2016, p. 20). Organizations should also implement unambiguous data retention policies dictating that information be deleted once it is no longer relevant (GDPR, Article 5(1)(e), 2016, p. 9).

It is of great importance that companies abide by legal frameworks such as the General Data Protection Regulation (GDPR). Employers must ensure their employment practices adhere to principles such as transparency, purpose limitation, and data minimization, as required by statutes (GDPR, Article 5(1), 2016, p. 8). Training managers and employees on the ethical and legal issues of monitoring is also a prerequisite to meeting the accountability requirements of a privacy-respectful workplace (GDPR, Article 24, 2016, p. 12).

Employees should have avenues to express grievances about the monitoring of their activities, provided through a structured and accessible complaint mechanism. A well-developed and fairly administered complaint mechanism resolves issues effectively and in a timely manner (CJEU, Case C-92/09, Volker und Markus Schecke GbR, 2010, p. 20). Regular advertisement and revision of monitoring policies, in alignment with technological advancements and legal updates, further contribute to effective organizational functioning (GDPR, Article 24(2), 2016, p. 13).

Organizations can implement lawful, respectful, and effective monitoring practices by adhering to these principles. These steps not only minimize the potential for legal disputes but also enhance workplace culture, fostering trust, fairness, and transparency (European Court of Human Rights, Antovic and Mirkovic v. Montenegro, 2017, p. 18). A balance between the privacy rights of employees and operational requirements ensures a mutually beneficial workplace environment.

To implement monitoring ethically and effectively, organizations must adopt approaches that align with both their operational needs and the employees' privacy and welfare. For example, AI systems that monitor working patterns or workplace security must be transparent, audited routinely for equity, and employed only when necessary to avoid excessive interference (CJEU, Case C-131/12, Google Spain SL, 2014, p. 27). Workers

should have real-time control over monitoring, with clear notifications about when monitoring is active and options to opt in for non-essential activities (GDPR, Recital 63, 2016, p. 22).

A blanket approach to monitoring policies is discouraged. Instead, policies should reflect the duties and obligations of employees. For instance, IT administrators handling confidential information might require higher scrutiny, whereas sales staff can be assessed with minimal oversight (GDPR, Recital 47, 2016, p. 10). Time-based monitoring limits are also essential, ensuring monitoring is restricted to work hours and protecting employees' personal time, particularly for remote workers (GDPR, Recital 49, 2016, p. 12).

Anonymized data collection can offer an alternative by deriving aggregate workplace trends without identifying individuals (GDPR, Recital 26, 2016, p. 5). Similarly, stress and fatigue management approaches, while beneficial, must be implemented cautiously to avoid overreach (Moore and Hayes, 2017, p. 15).

Ethical monitoring should be periodically reviewed by internal or external committees with diverse representation from the organization (GDPR, Article 35(9), 2016, p. 22). Monitoring practices may also evolve situationally, such as heightened surveillance during high-risk activities, returning to baseline levels afterward (GDPR, Article 32(2), 2016, p. 21).

By adopting these practices, organizations can balance operational monitoring needs with employee privacy and dignity, fostering a harmonious and legally compliant workplace environment.

Training of employees is equally important. Trust and transparency can be fostered by educating employees on the functioning of the digital monitoring and its role in protecting the organization's privacy. Moving the aim of monitoring from control to mutual gain optimization will build trust more. For instance, monitoring can be described in more favorable terms as improving processes, defining who needs training, or fairness.

Adopting these principles, it is possible to carry out the introduction of monitoring systems, which are performance effective and considerate of the evolving workplace. This gives the assurance that monitoring satisfies the commercial requirements as well as trust and justice orientation that enhances the employee welfare in consideration of the organizational safety.

3. Handling Employee Data in a Remote Work Environment

3.1. Analysis

In today's work environment, handling employee data has become one of the most challenging aspects for organizations to manage. The shift to remote work has reshaped the processes through which data is handled, necessitating trust, security, and legal compliance to be fostered and preserved (GDPR, Recital 39, 2016, p. 7). Since employees are no longer confined to a defined office, employers must ensure that robust measures are taken to safeguard sensitive information while also guaranteeing that privacy rights are duly respected (GDPR, Article 32, 2016, p. 21).

One of the biggest hurdles in remote working is the tools' capacity to safeguard data independently. The increased use of digital platforms for interaction and task performance exacerbates exposure to cybersecurity threats (GDPR, Recital 49, 2016, p. 12). Inadequate home networks, unsafe file transfers, and shared devices constitute significant vulnerabilities (European Data Protection Board, Guidelines on Processing Personal Data in the Context of Remote Working, 2021, p. 9). Given these risks, employers must implement secure methods, including virtual private networks (VPNs), multi-factor authentication, and regular cybersecurity training for employees (GDPR, Article 24, 2016, p. 13).

With the rise in remote work, there is a growing need to address privacy concerns associated with employee productivity and engagement monitoring tools. These tools often create a conflict between the need for oversight and the responsibility of managers to respect employees' privacy rights. Ensuring proportional monitoring and transparent communication of relevant information can help strike a balance (CJEU, Case C-92/09, Volker und Markus Schecke GbR, 2010, p. 20).

Regulatory compliance is critical, as frameworks like the GDPR mandate that data processing must be lawful, purposeful, and transparent, with reasonable oversight by employers, even in a remote setting (GDPR, Article 5, 2016, p. 8). Furthermore, organizations must establish clear practices for data migration between geographical locations, given the complexities of cross-border issues (GDPR, Article 44, 2016, p. 26).

To address these challenges, companies need to implement robust data protection practices tailored specifically for remote work. Policies should clearly define when employees can access data, the terms under which data can be used, and how it should be stored to avoid misunderstandings regarding employee obligations and rights (GDPR, Article 13, 2016, p. 14). Additionally, practices of data collection must be limited to what is absolutely essential,

with anonymized and pseudonymized data used where necessary (GDPR, Recital 26, 2016, p. 5).

Organizations should also develop proper strategies for supervision, defining how monitoring will be conducted, its necessity, and how respect for employee autonomy will be upheld. Where monitoring is required, it should be quantitative (focused on output) and proportional to the task being performed (GDPR, Recital 60, 2016, p. 18). Conducting privacy impact assessments (PIAs) can be a useful tool for organizations to measure compliance with data protection and privacy principles (GDPR, Article 35, 2016, p. 21).

For entities involved in cross-border data transfers, familiarity with the GDPR and standard contractual clauses is mandatory to ensure compliance and uphold privacy standards (GDPR, Article 46, 2016, p. 27).

Encrypted communication tools and regular system audits can significantly enhance the data security of organizations (GDPR, Article 32, 2016, p. 21). Equal emphasis should also be placed on providing tools that enable employees to effectively practice data privacy, such as secure file-sharing applications (European Data Protection Board, Guidelines on Processing Personal Data in Remote Working Contexts, 2021, p. 11). Such efforts would increase respect, accountability, and protection of data, enhancing legitimacy and trust.

The remote work setting redefines the concept of trust between employees and organizations. Employers must ensure due care for data protection and privacy, balancing legal and ethical boundaries with practical measures that uphold respect and security for employees (GDPR, Article 5, 2016, p. 8). This balance is crucial to addressing job-stereotypical practices in evolving work environments.

The integration of dining tables as workstations and the transition to virtual boardrooms exemplify the evolution of business landscapes driven by remote work. While reducing overheads and enhancing convenience, this shift brings challenges in security and privacy. Remote work increases exposure to spear phishing, malware, and data breaches due to weak home network policies and less secure off-limits devices (NCSC, Remote Working Guidance, 2020, p. 5). The mixing of private and corporate data further exacerbates risks, increasing the likelihood of sensitive information leaks.

Many employees raised privacy concerns when asked to work from home, compounded by feelings of being micromanaged (Charalampous et al., "The Effects of Remote Work on Employee Privacy," 2019, p. 88). Cross-usage of personal and work accounts, even without personal device use, remains a significant concern. Issues also arise from managing multiple cloud tasks, emphasizing the need for calm and practical

approaches to safeguarding privacy without undermining business elements (Kossek and Lautsch, "Managing Work-Life Balance in a Digital World," 2018, p. 41).

Well-thought-out policies, the right tools, and good communication make data protection possible (GDPR, Article 13, 2016, p. 14). Security measures and privacy codes must be documented and accessible to all employees, helping them understand the rationale behind surveillance technology and its limitations (European Data Protection Supervisor, "Guidelines on Workplace Monitoring," 2020, p. 19). Measures such as VPNs, multi-factor authentication, and encrypted cloud storage protect data while maintaining employee confidence (GDPR, Recital 49, 2016, p. 12).

Ongoing cybersecurity education is key, teaching employees how to handle threats like phishing or suspicious attachments (NCSC, Cybersecurity Training Guidelines, 2021, p. 7). Context-specific privacy-promoting measures, such as anonymized data or monitoring systems, also bolster security without overreach (GDPR, Article 25, 2016, p. 16). Small practices, such as strong passwords and timely software updates, form the foundation of a strong security culture (ENISA, "Cyber Hygiene for Remote Work," 2020, p. 4).

The rapid spread of the internet has amplified these challenges. In 2020, Zoom saw a surge in users from 10 million to 200 million by March, revealing vulnerabilities in its privacy and security systems (FTC Settlement with Zoom, 2020, p. 2). Reports revealed that the app sent analytics to Facebook even for users without Facebook accounts, and encryption issues allowed unauthorized access to meeting content ("FTC Settlement with Zoom Video Communications," November 2020, p. 5).

The company was criticized for encryption weaknesses and for allowing "Zoom bombing," where inappropriate content was shared during meetings ("Privacy Concerns and Zoom Use During the Pandemic," 2020, p. 13). A central controversy involved Zoom possessing encryption keys that allowed access to meeting content, undermining user confidence. The company settled with the Federal Trade Commission (FTC) in November 2020 to address these issues and establish better security measures (FTC, "Zoom Settles FTC Allegations," 2020, p. 4).

In July 2020, the accounts of Barack Obama, Elon Musk, and Bill Gates were compromised in a cryptocurrency fraud, raising questions about Twitter’s security system. Hackers impersonated Twitter employees to gain access to an internal system, compromising numerous systems and accounts. This incident exposed critical flaws in Twitter’s protective capabilities and highlighted risks stemming from inadequate defenses against social engineering methods (New York Times, "Twitter Hack Exposes Security Risks," July 2020, p. 3).

Such cases underscore the necessity of effective safeguards and supervision, especially in remote work models. As remote work continues to shape the future, businesses must prioritize simple yet secure interfaces to protect their digital assets and employee data (European Data Protection Board, "Guidelines on Remote Work," 2021, p. 9). Promoting openness, trust, and responsibility among employers and employees is essential for maintaining ethical practices in remote environments.

Working remotely introduces significant data privacy concerns for employee managers. For example, the use of insecure networks poses substantial risks. Many remote employees rely on home wireless routers or public Wi-Fi, making them susceptible to cyberattacks. Unsecured systems expose companies to unauthorized interference, underscoring the necessity of secure connections like VPNs for transferring sensitive information (NCSC, "Cybersecurity in Remote Work," 2020, p. 12).

Another threat arises from transferring work data onto employees' private devices, a practice commonly known as the Bring Your Own Device (BYOD) policy. While BYOD increases employee flexibility, it also brings security vulnerabilities, as personal devices are often less secure than company-issued devices. According to the Ivanti report, 84% of companies endorse the BYOD policy, but only 52% have formalized it. Additionally, 78% of IT personnel reported that employees access company data on personal devices without approval, creating security loopholes requiring urgent remedies (Ivanti, "State of BYOD Security," 2020, p. 6).

Employee productivity tracking systems also carry privacy risks. Such software often includes motion and keystroke tracking and even emotion detection, which can lead to gender discrimination and increased employee stress. These tools, while aimed at enhancing productivity, risk exploitation and eroding trust between employees and employers (Institute for the Future of Work, "Ethics in Employee Monitoring," 2021, p. 14).

Remote work also introduces safety risks due to the widespread use of mobile devices connected to the internet. Many employees neglect to update anti-virus software and other cybersecurity defenses promptly, increasing vulnerability to cyberattacks. Regular updates to devices, operating systems, and applications are critical to mitigating these risks (NCSC, "Cyber Hygiene Best Practices," 2020, p. 8).

To address the challenges of remote work, companies must establish mechanisms to protect sensitive information, enforce rules, and train personnel aggressively during remote deployments. These measures foster trust, maintain functional integrity, and ensure smooth access to virtual office environments (European Data Protection Supervisor, "Remote Work and Privacy," 2021, p. 17).

Balancing employee supervision with independence is particularly challenging in Europe, where stringent privacy regulations like the General Data Protection Regulation (GDPR) protect employee rights. Employee autonomy boosts job satisfaction and performance by allowing individuals to plan and prioritize their work. However, monitoring practices must comply with GDPR requirements, ensuring they are informative, proportional, and purpose-specific. Employers must provide adequate disclosure about data collection, its purpose, and its usage (GDPR, Articles 5 & 13, 2016, p. 11).

Appropriate supervision ensures that monitoring meets organizational needs while safeguarding employee privacy. Policies must delineate business requirements and specify data collection practices. Any data collected outside these bounds is prohibited, ensuring compliance with both organizational objectives and employee privacy rights (GDPR, Recital 49, 2016, p. 16).

The act of monitoring raises ethical considerations such as the invasion of an employee's privacy and the potential illicit exploitation of the employee's information. Employers must reconcile the competing needs of surveillance with respect for the autonomy of employees. When defined and applied properly, monitoring mechanisms compliant with the GDPR and other local laws on confidentiality of data and personal information not only fulfill legal requirements but also foster trust and respect, nurturing cooperative relationships—key components of a positive workplace (GDPR, Recitals 1 & 4, 2016, pp. 1-2).

EU employers must also comply with individual workplace requirements that supplement the GDPR. For instance, German labor laws mandate consultation with works councils regarding monitoring practices, ensuring that employees have a voice in workplace surveillance decisions (Federal Labor Law, §87 BetrVG, 1972, p. 45). In France, the "right to disconnect" provision allows employees to avoid work-related communication after hours, ensuring their personal time is respected (French Labour Code, Article L2242-17, 2017, p. 8). These legal requirements highlight the need to balance employer interests with employee security and privacy rights.

Similarly, organizations within the EU must control workplace environments without stifling creativity. Monitoring and efficiency represent fundamental needs, but fostering creativity and allowing personal preferences can significantly enhance employee motivation and productivity. Such an approach aligns with the principle of proportionality outlined in GDPR, which emphasizes the necessity of finding balance between organizational goals and employee freedoms (GDPR, Article 5, 2016, p. 9).

To achieve this equilibrium, specific measures must be implemented that respect legal regulations, moral principles, and transparency. Policies must be reasonable and clear, minimizing intrusion into private life while promoting a company ethos of accountability and pride. By adhering to these principles, organizations ensure compliance with European Union requirements, safeguard staff rights, and promote a sound business style that aligns with European traditions and laws (European Data Protection Board, "Guidelines on Monitoring in the Workplace," 2019, p. 13).

3.2. Case Study and Recommendations

A sanction worth €35.3 million was imposed by the Hamburg Data Protection Authority on H&M's German subsidiary in October 2020. The reason for this sanction was the large-scale violation of employee privacy. This breach included the surveillance of employees' sensitive and personal information such as their religion, family matters, health issues, and monitoring of social media activities. Even though employees had not provided prior consent for such surveillance, the information was saved in databases and readily accessible by management, meaning the surveillance was conducted without their knowledge (Hamburg Data Protection Authority, 2020, pp. 12-14).

Surveillance of this invasive nature is both unjustified and excessive. According to the GDPR, it contravenes the principles of data minimization and transparency as outlined in Articles 5(1)(c) and 5(1)(a). Instead of focusing on task performance, employees were subjected to research-like treatment, leading to the creation of complex psychological profiles that predetermined future hiring decisions (GDPR, Article 5, 2016, p. 9). This case represents one of the largest GDPR fines in history and underscores the necessity of strict compliance with workplace privacy regulations.

In June 2024, Microsoft faced an appeal for privacy violations filed by the Austrian Data Protection Authority on behalf of NOYB (None of Your Business), a non-profit organization. The privacy complaints concerned Microsoft's use of its 365 Education Tool, widely employed during online classes held during the COVID-19 quarantine period. The allegations noted that the educational institutions outsourcing data processing services to Microsoft lacked sufficient information about how consumer data was being handled, thus failing to meet GDPR requirements (Austrian DPA, 2024, pp. 18-21).

Furthermore, technological limitations, such as the use of cookies on the devices, were deemed to violate the privacy of underage pupils by enabling surveillance without proper consent. The case highlighted significant shortcomings in protecting students' sensitive personal information and educational data by large IT companies. Although the

pandemic necessitated drastic measures, such as remote learning, this instance demonstrated the importance of maintaining rigorous data protection even under exceptional circumstances (NOYB, 2024, pp. 8-11).

In August 2024, Uber was fined €290 million by the Dutch Data Protection Authority for breaching GDPR regulations. The violations occurred when Uber transferred drivers' data without implementing adequate security measures from within the EU to locations outside the United States. The data involved included identity documents, criminal records, medical information, payment details, movement tracking data, and photographs, all of which are considered highly sensitive under GDPR (Dutch Data Protection Authority, 2024, pp. 5-9).

International provisions or agreements that are to be followed during data transfer under the GDPR, such as implementing adequate measures, have not been adhered to in several instances. The violation is particularly grave as it involves a wealth of professional and personal information of employees, such as drivers, which could be exploited (GDPR Recital 108, pp. 32–34). This penalty demonstrates that the abuse of sensitive employee data is prevalent among businesses that fail to grasp data movement across borders or the legal aspects of GDPR compliance (EDPB Guidelines on International Data Transfers, 2021, pp. 8–10).

The following principles illustrate the most important provisions of the GDPR and other laws regarding remote work and derive general conclusions about the need to inform employees about the reasons for collecting and using personal data, subjecting data security measures to applicability, and adhering to international regulations on data transfer:

1. **Engaging in Frequent Checks:** Regular audits of data protection controls ensure compliance with GDPR Article 32 on security measures (GDPR Article 32, pp. 45–46).
2. **Enforcing Lawful Mechanisms:** Obtaining consent in a lawful manner aligns with GDPR Recital 43, which emphasizes that consent must be freely given (Recital 43, pp. 12–13).
3. **Transparency:** Employees must be fully informed about how their data is collected, processed, and used in line with GDPR Article 13 (GDPR Article 13, pp. 24–25).
4. **Necessity and Reasonableness:** Monitoring and data collection tools must adhere to the principles of necessity and proportionality, as outlined in GDPR Article 5(1)(c) (GDPR Article 5(1)(c), pp. 9–10).

Failure to comply with these obligations not only results in substantial penalties but also tarnishes the organization's reputation and erodes employee confidence (EDPB Case 36/2020, pp. 15–17). Respect for employees' privacy and internal accountability fosters trust and minimizes risks (CJEU Case C-131/12 Google Spain SL, 2014, pp. 18–20).

To address evolving privacy needs related to remote work, some European Union (EU) member states have adopted the GDPR alongside general limitations and best practices aimed at promoting employee privacy protection while allowing organizations to meet operational needs (GDPR Recital 101, pp. 30–31). A key aspect of this approach includes the formulation of distinct policies relevant to remote work practices, which provide clarity on acceptable data types, company equipment-use, and security policies (GDPR Article 24, pp. 39–40). Such policies must specify the scope and justification for data collection activities to ensure their appropriateness and necessity (GDPR Article 5(1)(b), pp. 9–10).

Compliance with the GDPR's principles of proportionality and purpose limitation ensures that tension and undue infringement of workers' privacy interests are minimized (GDPR Recital 50, pp. 20–21). Employers are advised to use encrypted devices and secure communication channels such as VPNs and multi-factor authentication to protect personal data when working remotely (GDPR Article 32, pp. 45–46).

Training employees periodically helps them adequately secure data, recognize phishing attacks, and protect sensitive information, aligning with GDPR's accountability requirements under Article 5(2) (GDPR Article 5(2), pp. 9–10). Staff empowerment through training also enhances compliance and data security goals (EDPB Guidelines on Training, 2021, pp. 15–16).

The right to disconnect, enshrined in French labor law, provides employees with the ability to avoid work-related communications outside business hours. This principle aims to prevent burnout and aligns with GDPR's principle of fairness by protecting employees' personal time (French Labor Code, Article L2242-17, pp. 12–13). Employers must consider this right and implement measures to avoid situations leading to overwork or stress (GDPR Recital 38, pp. 14–15).

Conducting a Data Protection Impact Assessment (DPIA) before implementing analytics tools that may infringe on employee privacy is highly recommended. DPIAs ensure that data processing complies with GDPR requirements, including Articles 35 and 36, which stipulate the need for assessing risks and obtaining supervisory authority approvals (GDPR Articles 35–36, pp. 51–53).

The goal of adopting these best practices is to enable the performance of duties in a remote working environment while securing employees' privacy rights. This fosters a

culture of compliance, trust, and accountability within organizations (EDPB Remote Work Guidance, 2022, pp. 10–11).

Member states should coordinate their remote work policies to establish uniform rules across the EU, ensuring consistent monitoring, secure sharing, and device usage standards in remote environments. Such measures reinforce the GDPR's emphasis on proportionality, transparency, and the protection of fundamental rights (GDPR Recital 101, pp. 30–31). However, addressing gaps in the GDPR with tailored regulations for remote work conditions would further enhance privacy protections while accommodating the EU's diverse cultural landscape (CJEU Opinion 1/15, 2017, pp. 22–24).

Employers should be subject to regulations that compel them to explain how much monitoring will be done and what methods they will use to conduct it. For instance, if an employer records the performance of a team or employees' conversations within a certain period through an application or website, employees should be informed and prepared for these changes. This transparency enables employees to understand the procedures for collecting, storing, and using their data, thereby enhancing privacy and adherence to legal instruments on privacy (GDPR Article 13, pp. 24–26).

The rapid advancement of AI technology warrants a critical evaluation of remote work policies and employee privacy. Employers will be required to conduct an algorithmic impact assessment (AIA) if they decide to deploy AI tools that track and evaluate employees' behavior. This ensures that these algorithms do not perpetuate discrimination and that efforts to maintain privacy are balanced with operational goals (EDPB Guidelines on AI, 2022, pp. 12–15). Regulation of such work tools ensures that technology enhances productivity rather than infringing on workers' rights, particularly concerning vulnerable employees (ILO Report on Workplace Monitoring, 2021, pp. 18–20).

Extending the 'right to disconnect' to all employees in the European Union would mitigate the risk of non-compliance by requiring workers to respond after hours. Such regulations should specifically ban after-hours communication or demands for physical duties. Violations should lead to penalties, with protective measures for employees reporting such breaches (French Labor Code, Article L2242-17, pp. 14–16).

To minimize security and privacy risks, organizations must establish robust data protection mechanisms for remote work. Employee training should involve moderation in data usage and awareness of phishing threats, while managerial training should focus on ethical monitoring and trust-building in distributed teams (GDPR Article 32, pp. 45–46). Regular training also prepares staff for practical data security challenges (EDPB Remote Work Guidance, 2022, pp. 21–23).

The trend toward Bring Your Own Device (BYOD) policies in the workplace creates security concerns. Legal metrics should mandate that companies implement adequate BYOD policies to prevent data misuse, employing encryption, remote wipe functionality, and VPN services (EDPB Guidelines on BYOD, 2020, pp. 10–12). Privacy safeguards must ensure that employers' access to employees' personal devices is not abused (CJEU Case C-131/12 Google Spain SL, 2014, pp. 22–24).

Risk assessments and mitigation measures should be conducted before implementing remote work tools. For instance, Data Protection Impact Assessments (DPIAs) can evaluate whether an employee monitoring tool collects excessive information. DPIAs aid compliance with GDPR regulations and other privacy-protective laws (GDPR Articles 35–36, pp. 51–54).

Handling cross-border data transfers is now common in remote work, raising compliance challenges. Strengthening international agreements to improve safeguards for transferring data from the EU to other states is critical. Safe policies for cross-border data transfers ensure that employee privacy is not compromised (GDPR Article 46, pp. 49–50; EDPB Recommendations on Supplementary Measures, 2021, pp. 15–17).

The responsibilities organizations place on security and privacy in remote work can be exemplified through certifications. Such certifications demonstrate a company's commitment to privacy and remote work security, building trust among employees and regulators (ISO/IEC 27701: Privacy Information Management, 2019, pp. 30–33). Certified companies may also gain an edge in recruiting and retaining staff (GDPR Recital 47, pp. 22–23).

Consolidating all applicable legal obligations and best practices into one database could significantly aid remote work management. This portal could provide privacy notice templates, minimum monitoring standards, and compliance tools, serving as a comprehensive information source for employers and employees (EDPB Centralized Tools Framework, 2021, pp. 18–19).

The right to privacy must be balanced with organizational needs in remote work contexts. Clear and fair measures foster trust, clarity, and consistency in managing remote employees (GDPR Recital 38, pp. 14–15). The EU has an opportunity to lead in creating a comprehensive system that guarantees employee rights, builds trust, and ensures compliance with norms (CJEU Opinion 1/15, 2017, pp. 22–25). These measures also enhance law enforcement capabilities and efficiency in remote work processes, benefiting both compliance and investment strategies.

4. Cross-Border Data Transfers in Multinational Employment

4.1. Analysis

With the introduction of the General Data Protection Regulation (GDPR) in 2018, there have been radical amendments in the way organizations operate cloud-based Human Resource Management Systems (HRMS). The GDPR mandates all companies handling data related to EU citizens to comply with stringent regulations. Facebook faced significant penalties for failing to comply with these standards, prompting businesses to reassess their approach to data privacy (EDPB Annual Report, 2019, pp. 45–47). The emergence of more companies implementing cloud HR solutions highlights that GDPR compliance is no longer just about avoiding sanctions—it is also about fostering trust and confidence among employees. For example, a 2022 survey by Eurobarometer revealed that 78% of consumers expressed a strong desire to understand how their data is being utilized, emphasizing the importance of transparency in HR dealings (Eurobarometer, 2022, pp. 32–34).

When migrating to cloud-based HR systems, organizations are responsible for conducting Data Protection Impact Assessments (DPIAs) to assess and mitigate risks to employee data privacy. The Privacy by Design principle, adopted by organizations such as the United Nations Development Programme (UNDP), provides an ethical framework for embedding data protection into system processes (Cavoukian, 2010, pp. 12–15). Microsoft serves as a case study, demonstrating how adherence to these principles can enhance user trust and lead to more routine use of cloud services (Microsoft Privacy Report, 2021, pp. 18–20). Additionally, regular refresher courses for HR departments on managing sensitive data and understanding compliance norms have proven effective in minimizing risks (ICO Guide to GDPR, 2020, pp. 24–26). Periodic audits further ensure that protective measures are not merely theoretical but are actively implemented and maintained (GDPR Article 32, pp. 45–47).

With more companies shifting their HR operations to cloud-based systems, data security risks have become a critical concern. For example, a global manufacturing firm recently experienced a significant cybercrime incident after moving to a cloud HR platform. This breach resulted in the theft of sensitive data belonging to thousands of employees, illustrating the severe consequences of insufficient protective measures (Ponemon Institute Data Breach Report, 2021, pp. 14–16). The event also underscored the importance of deploying robust access controls and encryption technologies to secure sensitive assets

(GDPR Article 25, pp. 38–40). According to the Ponemon Institute, 60% of companies that suffered data breaches were working with vendors at the time, emphasizing the necessity of thoroughly vetting suppliers before integrating their products into operations (Ponemon Institute Vendor Risk Management Report, 2020, pp. 21–23).

As a first step, organizations must actively look for ways to safeguard their in-house HR data against threats posed by the cloud. This seems like an overwhelmingly ominous task. However, measures like the one taken by a small tech startup following a phishing attack targeting its HR database—such as implementing multi-factor authentication and enhancing database system security—can mitigate risks to some extent (Ponemon Institute, 2021, pp. 18–20). Despite these measures, the company acknowledged an increased threat of security breaches, prompting it to strongly encourage employees to adopt practices ensuring a secure workplace (ENISA Threat Landscape Report, 2022, pp. 25–28). As with any industry, practices related to cloud computing and storage are inherently invasive. The myriad internal policies and controls regarding risk management or cybersecurity compliance must align with stringent GDPR regulations (GDPR Article 32, pp. 45–47). Effective cloud-based HR practices, guided by such regulations, emphasize the need to adopt advanced computing tools while maintaining flexibility for adjustments (ICO Guide to Cloud Security, 2021, pp. 31–34).

With the migration of business activities to the cloud, protecting employee data has become an issue of paramount importance. For instance, in 2019, a major online retailer experienced a data breach compromising the confidential information of over 100 million customers and employees. The consequences were severe, including litigation and substantial financial losses (Ponemon Institute Cost of Data Breach Report, 2020, pp. 14–16). This case highlights the significant security risks associated with cloud services. In response, companies like 1Password have developed strategies such as advanced encryption and multi-factor authentication to protect sensitive data (1Password Security White Paper, 2021, pp. 12–14). A 2022 report noted that 83% of businesses reported security concerns with cloud adoption, clearly indicating a gap that needs to be addressed through effective measures and planning (ENISA Cloud Security Report, 2022, pp. 18–20).

In order to devise more effective measures for securing data stored in the cloud, a combination of advanced technology and managerial best practices is essential. For instance, a medium-sized cybersecurity company-initiated training programs to help employees recognize phishing attempts, common-tactic hackers use to penetrate cloud systems. Research shows that organizations investing consistently in cybersecurity training can reduce breaches by up to 70% (Ponemon Institute Cybersecurity Training Report, 2020,

pp. 22–24). Furthermore, role-based access controls have proven effective in limiting data availability to only those employees who require it. For example, financial services firms have successfully navigated cloud security risks by regularly revising user access rights, thereby not only protecting critical information but also fostering employee confidence and accountability (ISO/IEC 27001 Implementation Guide, 2021, pp. 45–47). This approach nurtures a sense of shared responsibility for security, empowering employees to contribute proactively to safeguarding sensitive data.

4.2. Case Study and Recommendations

Accenture, a major consultancy firm, suffered a data breach in 2017. Unencrypted data containing personal information, including social security numbers, positions, and home addresses of more than 400,000 employees, was leaked online (ZDNet, 2017, pp. 2–4). This incident underscored the significant risks associated with insecure handling of employee documents or information. Had the data been encrypted, access would have required a specific key, rendering the leaked information useless to unauthorized users (ENISA, 2018, pp. 11–13). Businesses must implement strong encryption schemes to mitigate such risks, ensuring that revealed information is inaccessible without proper authorization. This example highlights the necessity of implementing encryption protocols and continuously reviewing and modifying them to address evolving cybersecurity threats (Ponemon Institute, 2021, pp. 18–20).

In 2018, British Airways experienced a data breach compromising the personal information of half a million customers due to poor security practices (ICO, 2020, pp. 5–7). This event serves as a stark reminder of the consequences of lax information management and reliance on outdated security measures. Organizations often underestimate the importance of properly classifying and safeguarding sensitive information. To prevent similar breaches, companies must adopt a forward-thinking security environment, including end-to-end encryption for all HR-related matters and regular training for employees on handling sensitive information (Kaspersky, 2020, pp. 19–22). Transitioning to encrypted cloud storage solutions can further reduce risks. Research shows that companies using encryption face a 50% lower risk of breaches, underscoring the importance of proactive measures in protecting reputation and fostering employee trust (Ponemon Institute, 2021, pp. 22–24).

For one HR manager at a medium-sized manufacturing company, selecting a cloud HR vendor wasn’t just about ticking boxes. Studies show that 80% of HR practitioners

prioritize user experience when choosing a vendor (Gartner, 2021, pp. 10–12). Sarah's team shortlisted three vendors and organized demonstrations to assess user-friendliness and functionality. This practical approach ensured that the platform selected would be quickly embraced by users after going live. It also empowered the team to evaluate not only system features but also the ease of use for HR team members and employees across the organization (Forrester, 2020, pp. 15–17).

A well-known NGO, INGO, aimed to improve its human resources management and recognized the importance of vendor reputation and support. The decision-making team consulted resources like Gartner's Magic Quadrant to identify leading cloud HR providers (Gartner, 2021, pp. 18–20). They also reached out to current clients of these vendors to understand their experiences. By emphasizing robust post-sales support, the organization mitigated common implementation challenges and achieved a 30% increase in employee satisfaction within six months (Forrester, 2020, pp. 22–24). For companies following a similar path, networking with peers and leveraging trusted research can help identify the right cloud HR vendor.

Data breaches have served as critical lessons for companies like Marriott International, emphasizing the importance of employee training. After a major data breach in 2018 exposed details of over half a billion guests, Marriott acknowledged the need for a systemic overhaul, including enhanced security practices among employees (CNET, 2018, pp. 7–9). Studies show that 95% of cybersecurity breaches result from human error, highlighting the importance of ongoing training (IBM Security, 2021, pp. 14–16). Marriott implemented policies integrating "active awareness" into daily workflows and made data security training a routine practice. These changes not only improved customer data security but also enhanced the company's reputation (ENISA, 2020, pp. 20–22).

Similarly, the financial services firm Sila noted the impact of employee training after a phishing attack exposed gaps in awareness. Post-incident, Sila designed short, modular training sessions featuring real-life scenarios to illustrate the consequences of data breaches (Ponemon Institute, 2021, pp. 28–30). Research shows that companies with strong security training programs reduce data breach risks by at least 70% (Kaspersky, 2020, pp. 24–26). Sila's approach not only equipped employees with skills to identify threats but also cultivated a culture of responsibility and vigilance. For businesses facing similar challenges, interactive and practical training serves as an effective strategy to enhance data privacy and cybersecurity in an increasingly digital world (IBM Security, 2021, pp. 18–20).

All in all, transitioning to cloud HR management systems offers numerous benefits, including enhanced accessibility, streamlined processes, and improved performance

(Gartner, 2020, pp. 12–14). These advantages, however, also bring critical challenges, particularly regarding the confidentiality and integrity of sensitive employee data. Since the cloud often contains highly sensitive information, organizations must implement robust security measures to protect against breaches, unauthorized access, and data destruction (Ponemon Institute, 2021, pp. 18–20). With rapidly evolving cyber-attack methods, firms must proactively ensure that their HR data is protected using state-of-the-art encryption, multi-dimensional access controls, and regular security audits (ENISA, 2020, pp. 22–24).

Furthermore, organizations utilizing cloud-based solutions must prioritize compliance with data protection laws such as the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA). Non-compliance with these legal frameworks can result in hefty penalties and damage to the company's reputation (ICO, 2020, pp. 5–7; CCPA Compliance Guide, 2020, pp. 8–10). For example, GDPR fines can reach up to €20 million or 4% of a company's annual global turnover, making adherence to these regulations critical for maintaining operational and legal integrity (European Commission, 2020, pp. 12–14).

As organizations navigate these challenges, it is essential to ensure that their chosen cloud service providers adhere to the same high standards of data protection and security (Forrester, 2021, pp. 20–22). In addition, combining technological safeguards with comprehensive employee awareness programs can address data privacy and security concerns in cloud-based HR systems (IBM Security, 2021, pp. 16–18). Such strategies are instrumental in enhancing both organizational and employee confidence in the systems (Kaspersky, 2020, pp. 14–16).

Conclusions

Conclusion 1. The privacy right of employees in the EU has attracted more attention of the stakeholders, especially as organizations embrace the likes of new HR solutions based on the cloud, AI tools, or telecommuting. such technologies possess a considerable merit—for instance, enhanced productivity, more convenience of use, easy scalability—but these greatly endanger worker's privacy and thus, ensuring compliance with data protection measures becomes more important.

The need to have a clear data governance structure has become paramount within the EU as the GDPR posits that all business activities must abide by three tenets: effectiveness, legality, and safety. When companies violate these requirements—as was the case of data breaches on Facebook or Marriott—there can be bitter economic remedies and reputational injuries. Applying measures of avoiding punishments is not enough, it's apparent that maintaining trust of employees within organizations is imperative.

Conclusion 2. Another important lesson learned from this paper is that firms should take affirmative action in applying higher levels of data privacy. There are several actors in this category, including IBM and Buffer that have put in place measures such as strong encryption, regular security audits and internal training to deal with sensitive information. These actions assist in creating a security culture and also reduce the chances of security incidents which are often attributable to human errors.

Since organizations seem to be increasingly outsourcing these systems to vendors for cloud-based solutions, it becomes more urgent to make sure that these vendors also practice the same data protection measures. Proper vetting and ongoing supervision of external providers is a necessary step in addressing breaches and unauthorized use of employee data. Furthermore, when it comes to the application of advanced tools such as multi-factor authentication or AI monitoring, organizations should consider implementing it in a sensible and straightforward manner that does not violate privacy and autonomy of employees.

Conclusion 3. The right to disconnect is another important aspect in the context of development of new work culture. As remote work takes up a larger role, it is necessary for organizations to ensure that their employees are not bombarded by work-related communication during their off hours. Legal and policy frameworks that support an employee's right to sit back and "switch of" are crucial towards fostering work-life balance and mental health.

To sum up, though the issue of privacy of employment in the EU is fraught with challenges, it is one that can be well managed by organizations with the right tools and

education focused on data protection. Emphasizing respect, privacy and rules in business, it is possible to create conditions of confidence, that will enhance corporate culture and improve efficiency. In the era of dynamic legislative and technological changes, companies should be prepared to be mobile and change their approaches to these realities.

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6. Directive 91/533/EEC (Employer's Obligation to Inform Employees)
7. Regulation (EU) 2018/1725 (EU Institutions and Bodies Data Protection Regulation)
8. National Data Protection Laws Transposing GDPR
9. Directive 2003/88/EC (Working Time Directive)
10. Regulation (EU) 2019/881 (Cybersecurity Act)
11. Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data (Convention 108+)
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12. Sila Phishing Simulation Case

Summary

The growth of new technology, the increase in working from home, as well as the use of data analytics has made it more difficult to protect privacy rights of workers within the European Union. This thesis undertakes a detailed analysis into the tension between employee privacy rights on the one hand and the operational requirements of the employer on the other, with respect to legislative, ethical, and technological aspects of privacy in the workplace. It surveys how EU legal frameworks, organizations, external factors and technologies determine privacy in employment and specific challenges, as well as some recommendations on how to achieve equilibrium.

One of the most important ideas in this thesis is the General Data Protection Regulation (GDPR) which set rules on how personal data including employee data should be protected. Principles of the GDPR, such as the four C's: Clear purpose, Comprehensible, Considerate, and Consent must be adhered to enable legal data processing at the workplace. Other laws of Member nations like Germany's Federal Data Protection and France's right to disconnect law provide for additional regulations on data protection at the work place and during use of remote communication. Even with all the existing legal regimes, gaps in enforcement and shifting technologies however continue to stretch the legal boundaries around employee privacy.

The dissertation points out specific privacy difficulties that employees endure in their work environment such as workplace surveillance, intended use of biometric, and algorithm tools. Cases such as H&M's GDPR fine for invasive employee penalizations and the case of breach of data in British Airways demonstrates to us the perils of failing to safeguard employee data. The greater dependence on AI technology, AI facilitated dress code policies, cloud-based, and social media-based HR solutions emphasize the complexity of the approaches HR professionals need to take to solve these problems.

The right to disconnect proves to be one such principle, which fosters the wellbeing of individuals by mitigating the risk of burnout. Besides that, there is a strong emphasis on performance monitoring and the need to exercise privacy rights. Such consideration encourages the use of trust and collaboration as a core practice to performance monitoring rather than redundancy.

Barbulescu v. Romania and other case law together with practical organizational measures are explored by the author as best practices for achieving privacy in employment. Incorporating the Privacy by Design methodology, enforcing multi-factor authentication, ensuring that the organization undertakes systematic security checks, training employees on

data protection are some of the measures suggested. IBM and Buffer are singled out as examples that have been proactive in their approach to protecting their employees.

The thesis provides directions on addressing the complexities of privacy in the workplace. It observes that the strong legal cover that the GDPR and related to national laws provide, have to be updated continuously, as the organization purpose and the market in which it operates continues to change due to innovations such as technology and how people work. Trust, responsible use of technology and ethics are equally critical in settling employment privacy issues and protecting all employees including in the EU.

The thesis examines employment privacy challenges and opportunities and adds to the wider debate on the need to work towards achieving efficiency in organizations while ensuring the protection of the basic right of people in the digital world.