

Khorsand, Phuong Ngoc Nguyen-Hadi; Peráček, Tomáš

Article

Implementation of a working time recording system as a digital management tool in public administration

Administrative Sciences

Provided in Cooperation with:

MDPI – Multidisciplinary Digital Publishing Institute, Basel

Suggested Citation: Khorsand, Phuong Ngoc Nguyen-Hadi; Peráček, Tomáš (2023) : Implementation of a working time recording system as a digital management tool in public administration, Administrative Sciences, ISSN 2076-3387, MDPI, Basel, Vol. 13, Iss. 12, pp. 1-12, <https://doi.org/10.3390/admsci13120253>

This Version is available at:

<https://hdl.handle.net/10419/320819>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

Article

Implementation of a Working Time Recording System as a Digital Management Tool in Public Administration

Phuong Ngoc Nguyen-Hadi Khorsand and Tomáš Peráček * 

Faculty of Management, Comenius University Bratislava, 820 05 Bratislava, Slovakia; khorsdand2@uniba.sk

* Correspondence: tomas.peracek@fm.uniba.sk

Abstract: This theoretical scientific study explores using a working time recording system as a digital management tool in public administration. It explains why such a system is necessary in public administration and lays out the report's goals. The main goal is to identify the possibilities of using modern technology, such as the system of recording the working time of public administration employees, to improve its efficiency and pro-client orientation. Recording the working time management ensures that most government and public administration duties are organised and arranged promptly for easier retrieval and allocation of tasks to different departments. A thorough assessment of the literature also looks at the current studies on working time tracking systems, particularly in the context of public administration and their possible effects on effectiveness, accountability, and transparency. Employee privacy-related legal and moral issues are also covered. The Materials and Methods section describes the system's implementation in detail, covering system selection, employee training, data collection methods, and technological considerations. As a result, the use of time recording systems in public administration has been found to have various benefits, including better work–life balance, fairness and transparency. These solutions improve accountability and trust by streamlining workforce management and ensuring compliance with labour laws. The main result of our research is the design of a theoretical model applicable in public administration for monitoring an employee's working time.

Keywords: employee; employer; human resource management; public administration; working time recording systems



Citation: Khorsand, Phuong Ngoc Nguyen-Hadi, and Tomáš Peráček. 2023. Implementation of a Working Time Recording System as a Digital Management Tool in Public Administration. *Administrative Sciences* 13: 253. <https://doi.org/10.3390/admsci13120253>

Received: 6 November 2023

Revised: 7 December 2023

Accepted: 9 December 2023

Published: 12 December 2023



Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

A trend denotes a direction of change in attitudes and desires motivated by factors, and it has become evident in various ways within particular social groups. Technology offers new opportunities to the public sector, and streamlining processes can improve relations between governments and individuals while promoting open government (Kalampokis et al. 2023). The increased modernisation of public administration, frictionless cross-border mobility, and improved digital interactions are all results of the digital transformation of government. According to Ditschun (2023), governments worldwide are utilising an expanding variety of digital tools. There is considerable interest in shaping the digital transition to uphold democratic values and fundamental rights while benefiting society. The use of data and technologies to help businesses and communities is now called the “European approach” to digitalisation (Bieli et al. 2020).

In order for public administration bodies to be able to fulfil their tasks effectively, they must also be effectively managed (Funta and Ondria 2023). In our opinion, the concept of good governance is made up of the basic requirements for the quality of the activities of managing entities towards the addressees of their activities. As stated by Handrlica (2019), these requirements have been gradually profiled since the beginning of the 20th century within European administrative law in the sense of common law for the public administration of European democratic states. Sararu (2019) expresses the opinion that in

relation to the mentioned requirement, the aspect of good public administration comes to the fore, which defines it as a process of governance and its control connected with the participation of residents in this process, with the aim of improving the quality of public administration and bringing it closer to the people themselves.

Public administration faces various difficulties and opportunities in streamlining its operations and guaranteeing effective service delivery to residents in today's rapidly changing digital landscape. Effectiveness, particularly regarding monitoring and controlling employee work hours, is one such difficulty. A game-changing approach to overcoming these difficulties is adopting a working time recording system as a digital management tool in public administration. This research explores the critical need for such systems, their potential advantages, and the factors to be considered before they are successfully deployed.

The need for a working time recording system comes where delivering essential services to citizens is the responsibility of public administration, which is the cornerstone of governance. These services range from infrastructure and public safety to healthcare and education. Public sector organisations heavily rely on their staff to accomplish this purpose. However, managing human resources in the public sector brings particular difficulties, particularly in large enterprises. Monitoring and controlling working hours is a crucial component of labour management. This procedure has historically been labour-intensive, paper-based, and prone to mistakes and inefficiencies. Various departments, shifts, and different labour rules and regulations are frequently a part of the complexity of public administration (Gregusova et al. 2016). As a result, keeping track of working hours, leave, overtime, and compliance with labour rules has been challenging and time-consuming. Despite the fact that many authors (Bajžíková and Bajžík 2020; Javed et al. 2023; Tache and Sararu 2023; Saxunova et al. 2017; Santos and Pereira 2023) have addressed this issue, we consider it necessary to contribute to this discussion with our perspective on the matter.

Implementing a system for tracking working time becomes imperative in this situation. These solutions can completely transform workforce management if smoothly included in public administration. They provide a systematic, automated, and highly accurate way to record and manage working hours, ensuring that workers receive just compensation for their time and that public administration adheres to labour regulations (Gesualdi-Fecteau et al. 2019). Time recording ensures that the staff within the public administration sector are clocked in whenever they come to work and sign out during the day to determine their contribution towards the section's goals and objectives.

According to Sararu (2016, 2017), with the introduction of cutting-edge management innovations into the public sector, the landscape of public administration is experiencing a significant upheaval. The search for the best management techniques is frequently considered a private-sector issue, but it increasingly influences public administration. The necessity to develop transparent, citizen-centred governments that deliver high-quality, tailored public services motivates this convergence. Transparency, participation, and accountability, the tenets of open government, serve as the foundation for this evolution and seek to promote more social interaction. Adopting contemporary management techniques such as a working time recording system can boost public policymaking, increase efficiency, create trust, and fight micro and macro corruption.

From a global perspective, this theoretical scientific study examines the internal and external issues that hinder the adoption of a working time recording system in public administration. It also examines the leadership skills needed to build and maintain thriving public and government organisations. Additionally, it looks at how well public authorities can adjust to shifting conditions and assesses the link between effective governance and societal well-being. The study explores the tools and techniques required to enhance administrative structures and procedures to ensure that policies are developed using evidence and that the legal framework is codified. Finally, it highlights the significance of having a solid management and monitoring system to keep an eye on the implementation of reforms.

The realisation of this study may enable different governments worldwide to recognise the importance of introducing a working time recording system in their management practices. A perfect example is in Germany, where the court published a ruling in September 2022 that required all employers to record the working hours of their employees ([Becker 2022](#)). This study on working time recording systems is critical worldwide while ensuring governments transform to a digital system that integrates well with their duties and responsibilities to the general public.

2. Literature Review

The German Federal Labour Court in Hamm issued a ruling (Case No. 1 ABR 22/21) on 13 September 2022, with significant business and especially labour law implications. In terms of labour legislation ([Parliament of the Federal Republic of Germany 1994, 2014](#)), the court said the employer must keep track of the employee's working hours, as its choice was consistent with an ECJ's decision from 2019. Employers who do not currently track employees' working hours would need to make considerable changes due to the judgment, which has been called a "seismic shift". It will be crucial to assess what discretion currently exists, how occupational health and safety authorities respond, and whether the federal government will step in and change the law to protect employers. This was the first significant step to ensure employees' working time was mandated by law, whereby government offices would also aim to uphold this new law ([Federal Labour Court 2022](#)). The report by [Becker \(2022\)](#) shows the German government's dedication to ensuring its employers ensured a continued use of the working time recording system. The working time recording system is the standard way of ensuring the daily and weekly working hours of every individual in an organisation, more so public administration, to ensure they conduct their duties diligently without delays and unnecessary unwarranted offs.

According to [Marica \(2023a\)](#), over the years, most organisations and workplaces have adopted either electronic or manual methods of recording working hours. The aim of keeping these records is to keep track of the hours worked by employees, overtime, breaks, and rest periods. It is also crucial to ensure the payment for overtime work is carefully calculated more than those done outside office hours, on weekends, and on holidays. According to [Nováčková and Vnuková \(2021\)](#), this decision was mainly passed down by the [Court of Justice of the European Union \(2019\)](#) in May 2019, which required all EU member states to start systematically recording the working hours of their employees. This decision resulted from the lawsuit filed by a Spanish trade union against the Deutsche Bank SAE for not having a time recording system for its employees. The case was filed because having accurate information on the working hours of every employee is necessary in order to easily calculate the number of hours and overtime worked. This could also lead to the exploitation of workers, where some receive underpayment for the extra hours worked while others do not report to work on time or leave early but still receive similar pay as those who work full time.

Several employers and countries are starting to get into the mix of ensuring their employees' time is recorded. This works for those in the private sector; public administrations can also employ this tactic. According to [Campbell \(2007\)](#) and [Binaku \(2021\)](#), countries such as Australia, Canada, Switzerland, Germany, and the Netherlands are developing stringent laws to record employees' working time. For instance, monitoring employee working hours is essential to Australian labour law and management. The country's labour laws aim to balance corporations' requirements and ensure that workers are treated fairly. The primary laws and rules governing employee working time monitoring in Australia are examined in this essay, emphasising employers' and employees' duties and rights. The importance of these rules in promoting a peaceful and effective workplace is also covered ([Switzerland 2015](#)).

The country has developed several laws, such as the Fair Work Act of 2009, the foundation of Australian labour legislation. It lays forth the minimal requirements for employment, such as those concerning working hours, overtime, and rest periods. Under

this law, employees are often only allowed a maximum of 38 h of regular labour per week, with appropriate overtime pay provided for any additional hours. Employers must give employees pay slips that accurately reflect the hours worked and maintain accurate records. The Fair Work Act's National Employment Standards (NES) also provide a framework for managing working hours in Australia. They specify the maximum length of the ordinary workweek, the rates for overtime, and the guidelines for paid rest periods and leave privileges (Marcum et al. 2018). Employees are guaranteed the right to request flexible work schedules to accommodate exceptional circumstances, such as caring for dependent family members.

Generally, Australian rules governing employee working time monitoring have two objectives: they protect employees' rights while fostering fairness and productivity at work. Combining the Fair Work Act, National Employment Standards, and Modern Awards creates a robust framework that balances the demands of businesses and employees. Essential components of these rules include adherence to record-keeping obligations and openness in pay slips. A harmonious and equitable workplace is also facilitated by preserving employee rights and a commitment to zero-tolerance discrimination based on variables relating to working hours. These regulations demonstrate Australia's dedication to maintaining labour standards and ensuring that working hours are managed to benefit both businesses and employees.

Canada and Switzerland are other countries that have also implemented the use of working time recording systems despite their geographical and cultural differences, as they are committed to striking a balance between the interests of companies and employees. Canada's federal and provincial labour regulations are primarily in charge of regulating working hours. Standards for working time, such as maximum hours worked, rest times, and overtime compensation, are established by the Canada Labour Code, which may be further honed by provincial labour legislation. In Canada, a regular 40-h workweek is the norm, and any hours over that must be compensated with overtime pay (Gesualdi-Fecteau et al. 2019). Employers must keep accurate time records and give employees payslips showing their hours worked and earnings. In recognition of the value of flexibility, Canadian labour regulations let employees ask for adjustments to their work schedules to meet personal or family obligations.

Switzerland, a country renowned for its longstanding labour traditions, uses the labour code and several collective agreements to control working hours. In Switzerland, a typical workweek consists of five or six days, and employees work 45 to 50 h. The protection of workers' health is given top priority by Swiss labour legislation, which emphasises the value of consistent downtime and places restrictions on night work. Employers in Switzerland are under a lot of pressure to guarantee that working hour laws are followed due to employee time tracking. Employers must keep accurate records of all hours worked, including overtime, and give employees a thorough work certificate when an employee's employment ends (Time Tracking 2022). Under Swiss labour law, employees can request part-time work, allowing them the flexibility to manage their personal and professional obligations (Pavelek and Zajíčková 2021).

Employee rights and well-being are prioritised for protection in both Canada and Switzerland. Work-life balance and flexible work schedules are highly valued in Canada, which indicates a national commitment to employee welfare (Raguel and Odeku 2023). Switzerland is committed to providing fair working conditions, as seen by its emphasis on labour traditions, collective agreements, and stringent legislation (Patru 2021). Based on these analyses and literature reviews from different countries, the need to implement a working time recording system in public administration is needed to determine how much it can promote and improve the effectiveness of activities.

3. Materials and Methods

The study also depends on pre-existing literature and secondary data sources, which may result in another drawback. The researchers may have chosen and interpreted sources based

on their viewpoints, introducing potential biases into the data collection process. Furthermore, the report might not reflect the most recent advancements in the industry, considering how quickly managerial innovations and technologies change. Relying on old information and research could cause the study to miss contemporary developments or changes in the public administration field. Additionally, a global viewpoint highlights the difficulty of addressing cultural and regional heterogeneity in public administration. While the study partially acknowledges these distinctions, it does not fully take into account how they affect the efficacy of contemporary management advances. How management practices are adopted and implemented is substantially influenced by cultural norms, historical settings, and regional government structures. A generalised strategy can neglect the requirement for tailored solutions that complement regional cultures and governance structures.

The study's recommendations regarding how quickly technology and governance develop must also be assessed (Skora et al. 2022). Public administration is dynamic, with new governing systems and technological advancements frequently appearing. In the near future, anything that is considered creative might become commonplace. As a result, the study's applicability and usefulness may wane with time, highlighting the necessity of continuing research and adaptation.

Several public administrations still need to include the management technique of recording their employees' work, which may further benefit from this study. In line with this, the research questions that need to be answered are as follows:

1. What factors limit the possibilities of using a working time recording system as a modern management method in public administration to increase public service efficiency and pro-client orientation?
2. Good public administration and governance are critical factors in its economic performance and the well-being of its citizens. Is it essential for public authorities to adapt to changing circumstances?
3. What are the most crucial success elements for integrating digital management tools in public administration, such as working time recording systems, and how do these characteristics differ across various cultural and regional contexts?
4. How may public administration's transparency, involvement, and accountability be affected by implementing current management innovations, and to what extent?
5. What leadership skills are necessary for public sector leaders, particularly in digital transformation, to successfully lead and sustain modernisation projects in government organisations?
6. Is codification and planning of legislation needed to ensure a proper concept of the legal framework of state governance and better policy-making?
7. Is there a need to oversee the implementation of reforms by setting up a reliable management and monitoring system?

The main goal is to identify the possibilities of using modern technology, such as the system of recording the working time of public administration employees, to improve its efficiency and pro-client orientation. The goal of this theoretical study is also to propose a theoretical model for monitoring the working time of an employee applicable in public administration based on an examination of the available literature.

This study is based on a comprehensive literature review on the topic of implementing a working time recording system in public administration. We also verified the content of the literature in the legal regulations and court decisions that the authors of the scientific articles referred to. The literature search was conducted through electronic databases such as Google Scholar, ScienceDirect, Web of Science, Scopus, and JSTOR. The search terms used were "working time recording system", "control", "working hours", "employee", and "public administration". The search was limited to articles published especially between 2016 and 2023. Similarly, the inclusion criteria for the literature were articles that addressed the challenges of implementing a working time recording system in the public administration in selected countries. These articles were thoroughly reviewed, and the relevant information was extracted and summarised.

We aim to achieve the set goals mainly through a thorough study of relevant legal regulations and professional and scientific literature. Due to the nature of our theoretical study, we use several scientific methods of knowledge suitable for learning both legal and non-legal sciences. It is mainly about using the method of critical analysis to examine the legal status and legal regulation. Using the comparative method, we make available the various opinions of experts from the fields of economics, management, public administration, and law not only on the appropriateness of legislation but also on the interpretation of individual institutes. With such a procedure, we strive for not only a multidisciplinary view of the investigated issue but also, due to our own long-term experience both in practising law and teaching labour law, we also use doctrinal interpretation. Selected legal regulations are an indispensable source of knowledge needed to achieve the main goal.

4. Results and Discussion

4.1. Implementing Working Time Recording System in Public Administration

Concerning the research question, implementing a working time recording system in public administration may face several limiting factors before its full acceptance. Employees who are used to using traditional time-tracking techniques may show resistance to change in public administrations, particularly in bureaucratic settings. The implementation of digital technology may upset routines and cause staff members to feel uneasy. Effective change management techniques, transparent communication, and extensive training programs are required to overcome this reluctance. In addition, setting up and maintaining a working time recording system might be difficult on a technical level. It necessitates investments in IT infrastructure, hardware, and software. Public administrations need the required technological know-how or resources, which could make the system's rollout less successful. Concerns about data security and the working time recording system's compatibility with current systems must also be addressed ([Fedushko et al. 2021](#); [Andrukhiv et al. 2021](#)).

Another significant limitation is sensitive data, including personnel information handled by public authorities. It is crucial to guarantee the privacy and security of this data in a working time recording system. Worries about data breaches, unlawful access, or the improper use of personal information can create significant barriers. To reduce these dangers, compliance with data protection standards is essential. Moreover, the legal and regulatory environment in which public administrations frequently operate is complicated. Strict labour rules or regulations in some jurisdictions may make it challenging to use computerised time-tracking devices. Implementing a working time recording system while adhering to these rules can be difficult and time-consuming ([Marica 2021](#)).

However, according to [Kaššaj \(2023\)](#) and [Hajduova et al. \(2021\)](#), a significant introduction of a working time recording system in public administration could have impactful impacts and outcomes where a strong governmental administration positively impacts a country's economic performance. Reduced red tape, cheaper business transaction costs, and increased investment are all benefits of effective governance and efficient public services. Public authorities must be flexible to respond to economic changes, promote innovation, and uphold financial stability. Also, public administrations are in charge of providing necessary services that directly impact citizens' well-being. Authorities who are adaptable are better able to deal with new social problems like healthcare crises, changing demographics, or environmental issues. An agile reaction is necessary to guarantee access to high-quality services and protect public health and safety.

Public authorities function in constantly changing political and social environments. The capacity to modify policies and practices is necessary in response to shifts in leadership, public opinion, and societal values. Maintaining credibility and trust requires adapting to shifting political and social environments, such as introducing digital management systems like the working time recording system. This ensures transparency, allowing the administration to keep track by maintaining a close work relationship between its public employees and their duties ([Marica 2022](#)).

4.2. Measures to Improve the Activity of Public Administration

This research shows that recent years have seen a substantial increase in the use of working time recording systems in public administration due to legal requirements, changing labour laws, and the need for effective and open government. According to [Pavelek and Zajíčková \(2023\)](#), based on the legal requirements and the global context, the CJEU's ruling in 2019 and the German Federal Labour Court's ruling in 2022 provide a precedent for systematically recording employees' working hours. This change is not specific to Germany; it is part of a global pattern. Nations like Australia, Canada, and Switzerland have previously adopted working time recording systems to balance employer and employee interests, and their experiences provide insightful lessons.

The research and literature review also showed the significant benefits and difficulties working time recording systems implementation would cause in public administration. The literature review emphasises that while the adoption of working time recording systems in public administration can have several advantages, there are also some difficulties. The encouragement of fairness and openness in labour processes is one significant benefit. Employees are safeguarded against exploitation by having precise records of their working hours, ensuring that overtime is paid appropriately. Working time recording systems can also help with flexible work schedules, encouraging a work–life balance. However, there is opposition to the switch to working time recording systems in public administration, especially in bureaucratic contexts. Employees may view digital technology as disruptive since traditional time-tracking techniques are entrenched. Overcoming this opposition requires robust change management techniques, open communication, and thorough training programs. Solving technical difficulties like IT infrastructure and data security issues is also necessary.

Public administrations frequently function in a complicated legal and regulatory context, making implementing the working time recording systems more challenging. Strict labour laws and regulations might be difficult to follow, so it is essential to take care. The literature emphasises the need to align working time recording systems and current legal frameworks. In addition, the impact on governance and economic performance has also not been overlooked. Despite these difficulties, the literature points to the possibility of profound changes brought about by the broad use of working time recording systems in public administration. Economic performance is influenced favourably by effective governance, which is characterised by decreased bureaucracy, decreased transaction costs, and more significant investment ([Marcum et al. 2018](#)). Additionally, flexible public administrations can better respond to changing social concerns, guaranteeing access to top-notch services and preserving public health and safety.

Protecting sensitive personnel data is a crucial factor to consider when implementing working time recording systems. Public entities handle personal information; therefore, maintaining privacy and security is crucial. Worries about data breaches, unauthorised access, or improper use of personal information may hamper adoption. To reduce these dangers, compliance with data protection rules is essential ([Marica 2023b](#)).

Working time recording systems usage in public administration marks a significant turning point in workforce management. It is crucial to understand that this change is not just about complying with the law; it is a transformative process that can result in better governance, increased productivity, and improved employee well-being. Some of the positive impacts of adopting working time recording systems in public administration include the following points.

4.2.1. Fairness and Openness in Labour Practices

Promoting fairness and openness in labour practices within public administration is one of the main advantages of implementing working time recording systems. Working time recording systems ensure that workers are fairly reimbursed for their time and effort by accurately capturing and tracking working hours. This aspect of fairness promotes trust among workers and helps create a more egalitarian workplace. Additionally, working time

recording systems offer openness to the general public, improving the overall accountability of public administration. Maintaining public trust in the government depends on citizens' ability to trust that employees work the hours they are paid for.

4.2.2. Enhanced Job–Life Balance

Working time recording systems can greatly help public administration employees balance their jobs and personal lives. Balancing work and personal obligations is a significant issue for many employees in today's hectic world. Flexible work arrangements are made feasible by precise time tracking using working time recording systems, which gives employees greater control over how they spend their time at the office. This flexibility makes employees better equipped to manage personal obligations like caring for dependents or continuing their education. By meeting these demands, public administration improves its appeal as an employer, luring a bright and diverse workforce.

4.2.3. Efficiency and Labour Law Compliance

Efficiency is a critical element of public administration since resources are sometimes scarce and duties are numerous. Working time recording systems offer an organised and automated method for tracking and monitoring working hours, streamlining workforce management. Efficiency lowers administrative burdens and guarantees that government operations adhere to labour laws. The likelihood of legal disputes involving labour practices is reduced in public administration by keeping accurate working hours and overtime records. The reputation of public bodies is also protected by this compliance, in addition to employee rights (Noskova and Mucha 2017).

4.2.4. Global Working Time Recording Systems Adoption

The global adoption of working time recording systems is significant since it represents a change to more progressive and fair labour standards. Working time recording systems have been applied in nations including Germany, Australia, Canada, and Switzerland to balance the interests of employers and employees. These countries offer helpful illustrations of the advantages of such implementation. The German Federal Labour Court's 2022 judgment, which was in line with the European Court of Justice's 2019 order, required employers to keep account of their workers' working hours (Becker 2022). This action was hailed as a "seismic shift" and showed the public sector's dedication to fair labour practices and accountability (Podger 2020).

Australia's laws strongly emphasise balancing employer demands and employee rights, ensuring workers are treated correctly. These criteria are established by the Fair Work Act of 2009, which also sets maximum working hours, overtime pay rates, and rules for permitted leave and rest intervals (Campbell 2007). Like Australia, Canada maintains a standard 40-h workweek with overtime pay for additional hours. Employees may also seek flexible work schedules to accommodate personal or family commitments under the nation's labour laws (Brin 2021). This adaptability highlights the dedication to worker wellness and work-life balance. Switzerland also values worker health protection highly. The Swiss labour code strongly emphasises regular relaxation and limits night work. Employees have the right to request part-time jobs, allowing them to balance their personal and professional obligations.

4.2.5. Our Proposal for Working Time Recording Systems

Based on our research, we propose the use of working time recording systems in selected administrative workplaces of public administration bodies, which would be able, based on internal management acts (work order from which the attendance schedule and organisational schedule are based), to keep records of employee attendance, in particular, to monitor the time of arrival and departure of employees. It could be adjusted based on the actual length by an administrative employee assigned electronic access to the system. It is also necessary to monitor the course of the working day, i.e., breaks at work, business

trips, visits to the doctor, and more. In the event of the introduction of flexible working hours, the system would record information on the mandatory number of hours worked per month, which is of fundamental importance for remuneration. In the event that the labour pool is not filled in for a given month due to obstacles on the part of the employee, the system would give information regarding the extent to which the employee's salary should be reduced. The system would also record the drawing of "benefits" either from the labour code or the collective agreement, such as a doctor's visit, a doctor's visit with a family member, a doctor's visit with a disabled family member, or paid leave in preparation for state final exams at the end of the first and second university degree.

Employees would record their data under their own code on a reader card and put it into the system reader at the entrance to the workplace, and the data would be stored in the system. This would be accessible to authorised administrative employees monitoring working time records, who would have the opportunity, in addition to other authorisations, to inform the employee about the deficit or excess number of hours worked.

If necessary, intervention in the working time monitoring system could also be carried out by an authorised employee based on the decision of the superior if the conclusion of the inspection states inaccurate registration in the system or if an employee violates internal procedures.

The outputs of individual employee worksheets would be processed according to the organisational structure for individual departments and departments and would form the basis for calculating each employee's salary.

Based on the verified data from the worksheets, the wage of the employee for a specific time worked in the month would be calculated in the payroll accounting system. In the case of a wage cut, the difference would be indicated with a justification. If an employee works more than the prescribed number of hours in a month, the system will alert the employee to the extent to which he/she can take personal leave until the end of the month or reduce working hours. However, this is only if the employer does not have the funds available to pay for overtime work.

5. Conclusions

While implementing working time recording systems has many benefits, there are also some drawbacks. One of the biggest obstacles is resistance to change, especially among personnel used to the old-school time-tracking techniques. This resistance may be amplified in bureaucratic environments, where individuals are frequently entrenched in routines. Public administrations must use powerful change management strategies to overcome this opposition. Open communication, thorough training programs, and ongoing support are keys to a successful adoption. Employees must comprehend the advantages of working time recording systems and experience help during the transition.

According to [Nekit et al. \(2020\)](#), technical difficulties, such as IT infrastructure and data security issues, require careful consideration. To ensure working time recording systems are implemented and operated without a hitch, investments must be made in hardware, software, and cybersecurity safeguards. The technical knowledge or resources necessary to successfully traverse these complexities must be available to public governments. Since public entities manage sensitive personnel information, data security is paramount. Adoption can be significantly hampered by improper use or disclosure of personal data. Strict adherence to data protection rules is necessary to reduce these threats. Access controls, strong data encryption, and regular audits are crucial defences.

In conclusion, using working time recording systems in public administration has various advantages, including improved work-life balance, fairness, and transparency. These solutions improve responsibility and trust by streamlining worker management and ensuring adherence to labour laws. Despite employee opposition and technical challenges, working time recording systems have been adopted internationally by nations like Germany, Australia, Canada, and Switzerland, highlighting their universal applicability. Additionally, working time recording systems promote efficient government, a prosperous economy, and

the welfare of employees and citizens. Working time recording systems emerge as valuable instruments for achieving these goals as public administrations try to modernise and adjust to shifting labour dynamics.

The study on the working time recording system as a new management innovation to improve public administration offers insightful information. The scope and generalisation of the study are the most significant limitations. The study's vast scope is its main drawback. Although it seeks to offer a global perspective on contemporary management advances, its breadth naturally limits its capacity to delve extensively into particular circumstances. As a result, the conclusions only apply to some. Practices, obstacles, and cultural dynamics in public administration differ significantly throughout areas and even within nations. What works well in one situation might not be appropriate in another. The study's recommendations should be taken as broad principles that need to be modified to fit the particular conditions of different administrations.

Although we have tried to provide a global view of the progress in tracking working time in the context of existing jurisprudence, our possibilities are limited by the diversity of individual legal systems, which do not allow us to process this issue in a globally applicable way.

For this reason, as part of further research, we will focus on designing such a system for recording working hours in public administration, which will be applicable in several countries. The practical part and the main benefit will also be the verification of the functionality of our model in a real situation.

Author Contributions: Conceptualization, T.P.; methodology, P.N.N.-H.K.; software, T.P.; validation, P.N.N.-H.K. and T.P.; formal analysis, P.N.N.-H.K. and T.P.; investigation, P.N.N.-H.K.; resources, T.P.; data curation, P.N.N.-H.K.; writing—original draft preparation, P.N.N.-H.K. and T.P.; writing—review and editing, T.P.; visualization, T.P.; supervision, T.P.; project administration, T.P.; funding acquisition, P.N.N.-H.K. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the National Infrastructure for Supporting Technology Transfer project in Slovakia II—NITT SK II, co-financed by the European Regional Development Fund.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Data are contained within the article.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Andruxhiv, Andriy, Maria Sokil, Solomiia Fedushko, Yuriy Syerov, and Yarina Kalambet. 2021. Methodology for increasing the efficiency of dynamic process calculations in elastic elements of complex engineering constructions. *Electronics* 10: 40. [CrossRef]
- Bajžíková, Ľubica, and Peter Bajžík. 2020. Mobility and working opportunities in the EU and Slovakia. *Management* 25: 103–15. [CrossRef]
- Becker, J. 2022. German Federal Labor Court Announces Mandatory Recording of Working Hours in Germany. *Health & Safety-Germany* September 15. Available online: <https://www.mondaq.com/germany/health--safety/1230540/german-federal-labor-court-announces-mandatory-recording-of-working-hours-in-germany> (accessed on 26 November 2023).
- Bieli, Jana, Nadja Huber, and Marco Toni. 2020. Recording of Working Time under Swiss Law. *Lexology*. Available online: <https://www.lexology.com/library/detail.aspx?g=7b82f372-f9d1-4ca3-b96e-da96dc6066a3> (accessed on 26 November 2023).
- Binaku, Muhamet. 2021. Violations of the Right of Employees in Public and Private sector in Kosova. *Perspectives of Law and Public Administration* 10: 133–37.
- Brin, Dinah Wisenberg. 2021. Canada: Tracking Workers through Technology Has Legal Limits SHRM. July 7. Available online: <https://www.shrm.org/resourcesandtools/hr-topics/global-hr/pages/canada-tracking-workers-legal-limits.aspx> (accessed on 26 November 2023).
- Campbell, Iain. 2007. Long working hours in Australia: Working-Time regulation and employer pressures. *Economic and Labour Relations Review* 17: 37–68. [CrossRef]
- Court of Justice of the European Union. 2019. Judgment of the Court (Grand Chamber) of 14 May 2019 in Case C-55/18, the Subject of Which Is a Request for a Preliminary Ruling Pursuant to Article 267 of the TFEU. Available online: <https://curia.europa.eu/juris/document/document.jsf?text=&docid=214043&doclang=SK> (accessed on 26 November 2023).

- Ditschun, Lauren. 2023. Workplace Monitoring Technologies and Employee Time Theft. Norton Rose Fulbright | Global Law Firm, March. Available online: <https://www.nortonrosefulbright.com/en/knowledge/publications/310bca1e/%20workplace-monitoring-technologies-and-employee-time-theft> (accessed on 26 November 2023).
- Federal Labour Court. 2022. Case No. 1 ABR 22/21 Right of Initiative of the Works Council—Electronic Time Recording on 13 September 2022. Available online: <https://www.bundesarbeitsgericht.de/entscheidung/1-abr-22-21/> (accessed on 26 November 2023).
- Fedushko, Solomiia, Tomas Peracek, Yuryi Syerov, and Olha Trach. 2021. Development of methods for the strategic management of web projects. *Sustainability* 13: 742. [CrossRef]
- Funta, Rastislav, and Peter Ondria. 2023. Threats to Diversity of Opinion and Freedom of Expression via Social Media. *TalTech Journal of European Studies* 13: 29–45. [CrossRef]
- Gesualdi-Fecteau, Dalia, Delphine Nakache, and Laurence Matte Guilmain. 2019. Travel time as work time? Nature and scope of Canadian Labor law's protections for mobile workers. *New Solutions: A Journal of Environmental and Occupational Health Policy* 29: 349–70. [CrossRef] [PubMed]
- Gregusova, Daniela, Maria Srebalova, Petra Capandova, and Alexandra Mittelman. 2016. Safeguarding obligations through securities. Paper presented at 3rd International Multidisciplinary Scientific Conference on Social Sciences and Arts, SGEM 2016, Albena, Bulgaria, August 24–30; pp. 469–775.
- Hajduova, Zuzana, Jana Coronicova Hurajova, and Michaela Bruothova. 2021. Determinants of innovativeness of Slovak SMEs. *Problems and Perspectives in Management* 19: 198–208. [CrossRef]
- Handrlica, Jiri. 2019. Two faces of “international administrative law”. *Juridical Tribune–Tribuna Juridica* 9: 363–76.
- Javed, Hafiz Ali, Naaved Ahmad Khan, Silke Michalk, Noor Ullah Khan, and Muhammad Kamran. 2023. High-Performance Work System and Innovation Capabilities: The Mediating Role of Intellectual Capital. *Administrative Sciences* 13: 23. [CrossRef]
- Kalampokis, Evangelos, Nikos Karacapilidis, Dimitris Tsakalidis, and Konstantinos Tarabanis. 2023. Understanding the use of Emerging technologies in the public sector: A review of Horizon 2020 projects. *Digital Government* 4: 1–28. [CrossRef]
- Kaššaj, Michal. 2023. The influence of jurisprudence on the formation of relations between the manager and the limited liability company. *Juridical Tribune–Tribuna Juridica* 13: 43–62. [CrossRef]
- Marcum, Tanya Maria, Elizabeth Anne Cameron, and Luke Versweyveld. 2018. Never Off the Clock: The Legal Implications of Employees' after Hours Work. *Labor Law Journal* 69: 73.
- Marica, Michaela. 2022. Considerations on the protection of teleworkers, in light of the current European regulations. Elements of comparative law. *Juridical Tribune–Tribuna Juridica* 12: 509–20. [CrossRef]
- Marica, Michaela. 2023a. The legal framework of on call duty for teleworkers. *Juridical Tribune–Tribuna Juridica* 13: 82–92. [CrossRef]
- Marica, Michaela. E. 2021. Considerations on Employee sharing in the context of GDPR. *Perspectives of Law and Public Administration* 10: 241–46.
- Marica, Michaela Emilia. 2023b. Considerations on Disciplinary Sanctions Applicable to Employees. Elements of Comparative Law. *Perspectives of Law and Public Administration* 12: 185–93.
- Nekit, Katerina, Denis Kolodin, and Valentyn Fedorov. 2020. Personal data protection and liability for damage in the field of the internet of things. *Juridical Tribune–Tribuna Juridica* 10: 80–93.
- Noskova, Milena, and Boris Mucha. 2017. Selected Issues of Slovak business environment. Paper presented at 24th International Scientific Conference on Economic and Social Development—Managerial Issues in Modern Business, Warsaw, Poland, October 13–14; pp. 254–59.
- Nováková, Daniela, and Jana Vnuková. 2021. Competition issues including in the international agreements of the European union. *Juridical Tribune* 11: 234–50. [CrossRef]
- Parliament of the Federal Republic of Germany. 1994. Working Time Act of 6 June 1994, as Last Amended by Article 6 of the Act of 22 December 2020. Available online: <https://www.gesetze-im-internet.de/arbzg/BJNR117100994.html> (accessed on 26 November 2023).
- Parliament of the Federal Republic of Germany. 2014. Minimum Wage Act of 11 August 2014 as Last Amended by Article 2 of the Act of 28 June 2023. Available online: <https://www.gesetze-im-internet.de/milog/BJNR134810014.html> (accessed on 26 November 2023).
- Patru, Radu Stefan. 2021. Reflections on actual situation of collective bargaining for the public servants and public services in Romania and in Europe. A theoretical and practical approach. *Juridical Tribune–Tribuna Juridica* 11: 251–61. [CrossRef]
- Pavelek, Ondrej, and Drahomira Zajíčková. 2021. Personal Data Protection in the Decision-Making of the CJEU before and after the Lisbon Treaty. *TalTech Journal of European Studies* 11: 167–88. [CrossRef]
- Pavelek, Ondrej, and Drahomira Zajíčková. 2023. Compensation for non-material damage caused to legal entities in the decision-making practice of the CJEU and the ECHR. *Juridical Tribune–Tribuna Juridica* 13: 331–45. [CrossRef]
- Podger, Andrew. 2020. Public sector use of new technology: Opportunities and challenges. *The Asian Pacific Journal of Public Administration* 42: 207–8. [CrossRef]
- Raguel, Mojapelo Mogohloro, and Kola Ola Odeku. 2023. Critical analysis of the failure of labour law to adequately protect atypical workers and its impact on human rights and fair labour practice. *Juridical Tribune–Tribuna Juridica* 13: 63–81. [CrossRef]

- Santos, Reinaldo Sousa, and Silvia dos Santos Pereira. 2023. For Telework, Please Dial 7—Qualitative Study on the Impacts of Telework on the Well-Being of Contact Center Employees during the COVID-19 Pandemic in Portugal. *Administrative Sciences* 13: 207. [CrossRef]
- Sararu, Catalin Silviu. 2016. Considerations on the public services in the XXI century. *Juridical Tribune-Tribuna Juridica* 6: 160–66.
- Sararu, Catalin Silviu. 2017. General principles of European Administrative Law. *European Administrative Space—Recent Challenges and Evolution Prospects* 1: 110–29.
- Sararu, Catalin Silviu. 2019. Public domain and private domain. *Administrative Law in Romania* 1: 84–100.
- Saxunova, Darina, Lubica Bajzikova, and Daniela Novackova. 2017. Globalization in the Case of Automobile Industry in Slovakia. Paper presented at 30th International Business-Information-Management-Association Conference, Madrid, Spain, November 8–9; pp. 4879–93.
- Skora, Agnieszka, Maria Srebalova, and Ingrida Papacova. 2022. Administrative judiciary is looking for a balance in a crisis. *Juridical Tribune* 12: 5–20. [CrossRef]
- Switzerland: New Rules on Time Tracking Duties. 2015. CMS Law.Tax. Available online: <https://cms.law/en/int/publication/switzerland-new-rules-on-time-tracking-duties> (accessed on 26 November 2023).
- Tache, Cristina Elena Popa, and Catalin Silviu Sararu. 2023. New transdisciplinary Directions in international Law? *Lex Humana* 15: 86–109.
- Time Tracking: Where Employers Need to Record Working Hours Lano Blog. 2022. July 5. Available online: <https://www.lano.io/blog/time-tracking-where-employers-need-to-record-working-hours> (accessed on 26 November 2023).

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.