https://doi.org/10.52326/csd2024.22

TELEWORK AS A SUSTAINABLE BUSINESS SOLUTION: ADVANTAGES, CHALLENGES AND FUTURE PERSPECTIVES

Lucia MOROSAN-DANILA¹, Otilia-Maria BORDEIANU², Claudia-Elena GRIGOSAS-ICHIM³, Dumitru FILIPEANU⁴

^{1,2,3}Stefan cel Mare University of Suceava, 13 Univeritatii St, Suceava, Romania ⁴Gheorghe Asachi Technical University of Iasi, Mangeron St, Iasi, Romania

Abstract. In accelerating digitisation and increasing sustainability requirements, telework has become a viable solution for many organisations. Initially adopted as an emergency measure during the COVID-19 pandemic, teleworking has become a permanent practice, offering economic, ecological and social advantages to employees and employers. This paper explores telework as a sustainable business solution, considering the main benefits and challenges. The study highlights how telework helps reduce operational costs and carbon footprint while improving employees' work-life balance. However, the effective implementation of telework depends on overcoming obstacles, such as data security, social isolation and performance evaluation difficulties. The paper suggests several measures to support long-term telework, including investing in digital infrastructure, enhancing managerial skills, and fostering a flexible and collaborative work environment. In conclusion, telework allows organisations to achieve economic efficiency while promoting social and environmental responsibility. However, its success relies on adapting the organisational culture and implementing appropriate technologies.

Keywords: Telework, sustainability, digital transformation, organisational efficiency, performance evaluation, hybrid work model

JEL code: J24, M15, M54

Introduction

In an era characterised by rapid economic transformations, accelerated digitalisation and a sharp increase in sustainability requirements, telework has established itself as a viable solution for many organisations around the world. Used as an emergency measure during the COVID-19 pandemic, telework has become a current and desired practice, both for employees and employers [1-3]. However, the full integration of telework into organisational strategies involves significant advantages and challenges, requiring detailed analysis to identify optimal approaches that can ensure business sustainability [4].

Also, the integration of telework contributes to a new framework of business sustainability, reducing the carbon footprint by reducing the need to travel [5] and promoting a healthier balance between employees' personal and professional lives [6]. Thus, the topic of telework has become increasingly relevant in a world that seeks to balance economic efficiency with social responsibility and environmental protection.

This paper aims to examine telework as a sustainable business solution, focusing on its advantages and challenges and providing a glimpse into the prospects of this work model. In this context, the work aims to fulfil the following objectives:

- Investigating how telework contributes to organisational efficiency and employee satisfaction, focusing on the positive impact on work-life balance, operational cost reduction and resource optimisation.
- Exploring the complexities of remote management, as well as issues related to information security, social isolation of employees, and performance appraisal difficulties in the context of telework.

- Addressing the possible evolutions of this work model, with a particular focus on hybrid work scenarios and technologies that can support effective remote collaboration.

The specialised literature increasingly emphasises the need for flexible and sustainable work models. Recent studies underscore the importance of telework in modern business, offering a local view of the impact of this work model on the Romanian economy [7].

To underpin the analysis, this paper proposes the following key research questions:

- To what extent can teleworking become a sustainable long-term solution for organisations?
- What are the main advantages and challenges of implementing telework in companies of different sizes and sectors?
 - How can organisations optimise telework to maximise benefits and minimise challenges?

Telework is an inescapable trend in today's business landscape and offers a unique opportunity to reconcile productivity needs with sustainability needs. In this context, the present study seeks to provide an integrated analysis of the advantages and challenges of telework and identify the future perspectives of this work model, thus contributing to the literature and providing relevant directions for future research and organisational implementations.

1. Theoretical Foundation and Literature Review

Telework (or remote work) is a way of working where employees work outside the traditional office, using technology to communicate and collaborate with the team [7]. Studies have shown that telework has evolved from a marginal option to a strategic component of organisations, influencing work structures and organisational culture [8].

In this context, business sustainability represents a long-term business approach [9] that combines economic objectives with social responsibility and environmental protection, depending on the organisation's ability to adapt and anticipate environmental changes [10].

Telework requires more than adopting communication tools—it involves a profound adaptation of organisational structure and work culture. According to Herrera et al. [11], telework has changed the cultural dynamics in many organisations, adapting management policies and supporting work-life balance, with the study showing how telework affects the relationship between employees, families and companies, aspects that contribute to improving employee satisfaction and retention.

Karia and Asaari [9] discuss telework as a form of organisational innovation that can give organisations a competitive advantage by reducing costs and increasing flexibility. Restructuring organisations to enable telework helps improve long-term sustainability while supporting adaptability and reducing environmental impact. Feroz et al. [12] discuss the role of digital transformation in sustainability, showing that technologies such as big data and IoT can potentially restructure how organisations manage their environmental impact.

Although there is a vast amount of literature on telework, most studies address the advantages or the challenges of isolation without exploring a holistic integration of these perspectives. In addition, there is relatively limited research examining the implementation of telework in a local context, such as Romania, where cultural and economic factors play an essential role in the success of this work model.

2. Advantages of Telework as a Sustainable Solution

One of the most visible advantages of telework is the significant reduction of operational costs for organisations [13]. By eliminating the need for expansive workspaces, companies can reduce expenses associated with office maintenance, utilities, and other logistical resources. According to industry studies [8], many organisations implementing long-term telework have realised substantial savings, using the saved resources for other strategic initiatives. These savings contribute to the organisation's overall efficiency and facilitate additional investment in staff development or telework support technologies.

Telework gives employees more flexibility, allowing them to manage their work-life balance better. This flexibility directly impacts employee satisfaction, reducing staff turnover and contributing to their loyalty to the organisation. The study by Dima et al. [14] shows that telework improves work-life balance by giving employees flexibility and better time management, which can

also increase satisfaction and long-term productivity. Thus, telework improves employee experience and benefits organisations by retaining a stable and satisfied workforce.

Telework supports ecological sustainability objectives by reducing daily trips to the office, which directly contributes to reducing greenhouse gas emissions [15]. Reducing transport significantly lowers organisations' carbon footprint, thus supporting their commitment to sustainability and corporate social responsibility. Simeli et al. [16] highlight the role of telework in aligning companies with the United Nations' Sustainable Development Goals due to the environmental and community benefits. This aspect makes telework attractive to organisations that want to be perceived as environmentally responsible.

Telework removes geographical barriers in recruitment, allowing companies to attract talent from various regions and even other countries. This expanded hiring flexibility will enable organisations to select the most competent candidates regardless of location, contributing to greater diversity and increased team innovation. According to Stratigea and Giaoutzi [17], this diversity brings varied perspectives and enriches the organisational culture, facilitating innovation and adaptability. Burrell et al. [15] point out that access to a global workforce helps organisations expand their knowledge and improve their long-term competitiveness.

Several studies have shown that telework can increase employee productivity by allowing them to work in an environment without the distractions of a traditional office. According to the research of Nakrošienė et al. [18] and Kurnia et al. [19], many employees report better focus and fewer interruptions when working from home, leading to improved performance. This increased productivity contributes to achieving organisational goals and strengthens operational efficiency, making telework an attractive option for many organisations [20].

Telework supports not only organisational goals but also the general well-being of employees. They have more time for personal activities and spending time with family, which contributes to a better mood and, implicitly, better mental health. Studies by Elbaz et al. [21] and Kawada [22] point out that employees who work from home are less exposed to the stress of daily commuting and are more willing to stay at work for the long term, thus contributing to a stable and productive team.

The advantages of telework are multiple and cover both economic, social, and ecological sustainability aspects [23]. Telework reduces costs and carbon footprint and improves employee satisfaction and productivity. In addition, it enables organisations to access a global talent base, driving innovation and long-term competitiveness. Thus, telework can be considered a robust, sustainable business solution that supports organisations in achieving multiple and diverse objectives. These benefits are essential for a world where companies are increasingly aware of their environmental impact and the need to ensure a healthy balance between economic efficiency and social responsibility.

3. The challenges of Telework

Although teleworking has multiple advantages, its practical implementation is not without challenges. These difficulties, which address issues related to data security, social isolation of employees, and challenges in evaluating performance and managing change, can negatively influence the success of telework in the long term.

One of the most pressing challenges in telework is data security. Telework involves employees accessing company resources outside of the secure office infrastructure, which can increase vulnerability to cyber-attacks. According to industry studies [24], remote working can expose organisations to increased risks, as employees often use unsecured networks and personal devices to access company systems [25]. This can lead to security breaches, data theft and other cyber incidents, affecting confidence in the organisation's ability to protect sensitive information.

Rigorous security measures, such as multi-factor authentication [26] and data encryption [27], are essential to minimise these risks. Organisations must also train employees on good security practices and ensure access to appropriate data protection technologies to support remote work [28, 29].

Telework can lead to social isolation of employees, which can affect mental health and team cohesion [30]. Lack of physical interactions and face-to-face collaborations can lead to feelings of loneliness and anxiety, contributing to low morale and motivation. Studies show this isolation can affect long-term productivity and employees' sense of belonging [31].

Organisations must implement virtual team-building initiatives, regular meetings, and mental health support activities such as counselling sessions to combat this adverse effect. Creating an open and supportive organisational culture can help reduce the impact of isolation on employees.

Evaluating remote employees' performance can be challenging [32], especially without effective monitoring systems. Telework requires a different approach to assessing employees, based on results and individual achievements, instead of traditional methods involving direct monitoring in the office [33]. Managers need to develop new skills to adapt their leadership style, balance monitoring performance, and trust employees' ability to work independently [34]. Using digital performance management systems and establishing clear, measurable objectives can contribute to the effectiveness of the evaluation and support constant communication with employees.

For many organisations, moving to telework is a significant change that can be met with resistance from employees or management [35]. Studies have shown that adapting to a remote work model requires a shift in organisational culture and an openness to innovative practices [36]. Resistance to change can be a significant barrier, especially in traditional organisations that are used to direct control and physical interactions in the workplace [37].

To facilitate the transition, organisational leaders must adopt a gradual change strategy, clearly communicate the benefits of telework and involve employees in the transformation process [1]. It is also essential that organisations invest in developing managerial skills to manage remote teams and support a flexible and collaborative work environment [38].

Telework requires a solid technological infrastructure that allows constant and secure access to the organisation's resources [39]. Frequent technical issues, such as poor connectivity or the unavailability of specific platforms, can affect the effectiveness of remote work and create frustration among employees [40]. Lack of adequate investment in technology can also limit the effectiveness of telework and affect organisations' competitiveness.

To support telework in the long term, organisations need to ensure a robust and accessible digital infrastructure that includes modern collaboration and security solutions [41, 42]. They must also continuously improve technology support systems to facilitate a seamless work experience for employees [43].

The challenges associated with telework are diverse and affect both the safety and health of employees and the ability of organisations to assess performance and effectively implement this work model. However, these challenges can be managed through rigorous strategic planning, adapting organisational culture and investing in technology. With all its difficulties, telework remains a viable and sustainable solution for companies willing to adjust their internal processes to meet the new demands of the modern labour market.

Conclusions and Future Prospects

As technology evolves and labour market demands change, telework will become increasingly integrated into modern organisational structures. Thus, the future of telework is full of opportunities and new challenges, which will require continuous adaptation on the part of organisations.

One of the most likely developments is adopting a hybrid model, which combines telework with traditional office work and will allow organisations to capitalise on the benefits of both forms of work. This will balance employee flexibility and the direct collaboration required in specific contexts.

Technology will continue to play a crucial role in supporting telework, and investments in advanced collaboration platforms, cybersecurity, and artificial intelligence will increase. Advances in technology will enable organisations to monitor and support distributed teams more effectively, facilitating remote collaboration and increased productivity.

Social isolation and mental health issues remain key challenges in the telework context. To maintain a sustainable and healthy work environment, organisations will need to invest more in programs to support employees' mental health and well-being in the future. Virtual team-building activities and counselling programs can become regular components of company organisational policies.

As companies become more aware of their environmental impact, telework will play a central role in their sustainability strategy. Minimising travel will become standard practice for companies

that want to contribute to long-term environmental goals. Telework can help organisations improve their social responsibility image by reducing their carbon footprint.

Telework has become an indispensable practice in the modern business landscape, offering several significant advantages, from reducing costs and improving employee satisfaction to contributing to environmental sustainability goals. However, the success of telework depends on how well organisations manage the inherent challenges, such as data security, employee mental health, and remote performance appraisal.

This paper analysed the advantages and challenges of telework, highlighting the need for strategic adaptation to ensure effective and sustainable implementation. In conclusion, telework is not only a solution for current needs but also an opportunity to transform the way of working in the long term, contributing to a more flexible, innovative and responsible economy.

Through this analysis, we also highlighted the gaps in the specialised literature and emphasised the importance of integrating the local perspective to provide a deeper understanding of the impact of telework in the Romanian context. The future of telework depends on organisations' ability to adapt and continuously improve this working model, ensuring real sustainability, both for employees and the business environment in general.

References

- 1. CONTRERAS, F., BAYKAL, E., ABID, G., E-Leadership and Teleworking in Times of COVID-19 and Beyond: What We Know and Where Do We Go. *Frontiers in Psychology*, 2022, 11, https://doi.org/10.3389/fpsyg.2020.590271.
- MOROSAN-DANILA, L., BORDEIANU, O. M., Human resources strategies in times of crisis. LUMEN Proceedings, 2021, 17, pp. 475-481.
- 3. MOROSAN-DANILA, L., BORDEIANU, O. M., The need for change and shaping the post-covid business environment in Romania. *LUMEN Proceedings*, 2020, 13, pp. 387-397.
- 4. MHLOPHE, K., & CHINJOVA, F., Teleworking as a Business Sustainability and Continuity Strategy: An Assessment of the Zimbabwean Telecommunications Sector under Covid-19. *International Journal of Applied Business and Management Sciences*, 2022, https://doi.org/10.47509/ijabms.2022.v03i01.05.
- 5. LOIA, F., & ADINOLFI, P., Teleworking as an Eco-Innovation for Sustainable Development: Assessing Collective Perceptions during COVID-19. *Sustainability*, 2021, 13, 4823. https://doi.org/10.3390/SU13094823.
- 6. NEGRUŞA, A. L., BUTOI, E., Approaching telework system by Romanian employees in the Pandemic Crisis. *Ecoforum Journal*, 2022, 11(1).
- 7. MOROSAN-DANILA, L., GRIGORAS-ICHIM, C. E., BORDEIANU, O. M., Telework-Between Obligation and Solution During the COVID-19 Pandemic. *Analele Universitatii Ovidius Constanta*, 2021, 21(1), pp. 621-629.
- 8. LARSON, A., AVILA, O., Telework at At&T: Strategy and Systems Thinking. Darden Case: Strategy (Topic). 2008, https://doi.org/10.2139/ssrn.1278405.
- 9. KARIA, N., ASAARI, M., Innovation capability: the impact of teleworking on sustainable competitive advantage. *International Journal of Technology, Policy and Management*, 2016, 16, 181. https://doi.org/10.1504/IJTPM.2016.076318.
- 10. ALBU, O., MOROSAN-DANILA, L., Current trends in HRM. *The USV Annals of Economics and Public Administration*, 2009, 9(2), pp. 134-139.
- 11. HERRERA, J., HERAS-PEDROSA, C., RODRÍGUEZ-FERNÁNDEZ, M., CIRUELA-LORENZO, A., Teleworking: The Link between Worker, Family and Company. Syst., 2022, 10, 134. https://doi.org/10.3390/systems10050134.
- 12. FEROZ, A., ZO, H., CHIRAVURI, A., Digital Transformation and Environmental Sustainability: A Review and Research Agenda. *Sustainability*, 2021, https://doi.org/10.3390/SU13031530.
- 13. MOROSAN-DANILA, L., FERCAL, E.-M., Company Personnel from the Salary to Accounting, *European Journal of Accounting, Finance & Business*, 2022, 10(2), pp. 8-16.
- 14. DIMA, A., ȚUCLEA, C., VRÂNCEANU, D., ȚIGU, G., Sustainable Social and Individual Implications of Telework: A New Insight into the Romanian Labor Market. *Sustainability*, 2019, https://doi.org/10.3390/SU11133506.
- BURRELL, D., BARNARD-ZAFFINO, M., ULOMI, S., An applied research analysis of telework programmes as an environmentally friendly policy and a viable sustainability development leadership practice. 2014, 1, 123, https://doi.org/10.1504/IJEPDM.2014.067577.
- SIMELI, I., TSEKOUROPOULOS, G., VASILEIOU, A., HOXHA, G., Benefits and Challenges of Teleworking for a Sustainable Future: Knowledge Gained through Experience in the Era of COVID-19. Sustainability, 2023, https://doi.org/10.3390/su151511794.
- 17. STRATIGEA, A., GIAOUTZI, M., Teleworking and Virtual Organization in the Urban and Regional Context, 2000, 14, pp. 331-357, https://doi.org/10.3406/netco.2000.1479.
- 18. NAKROŠIENĖ, A., BUČIŪNIENĖ, I., GOŠTAUTAITĖ, B., Working from home: characteristics and outcomes of telework. *International journal of manpower*, 2019, 40(1), pp. 87-101.

- 19. KURNIA, S., GLOET, M., & BOSUA, R., Telework, productivity and wellbeing. *Australian Journal of Telecommunications and the Digital Economy*, 2012, 63.
- 20. RUTH, S., CHAUDHRY, I., Telework: A Productivity Paradox?. *IEEE Internet Computing*, 2008, 12. https://doi.org/10.1109/MIC.2008.132.
- ELBAZ, S., RICHARDS, J., SAVARD, Y., Teleworking and work—life balance during the COVID-19 pandemic: A scoping review. Canadian Psychology / Psychologie Canadienne, 2022, https://doi.org/10.1037/cap0000330.
- KAWADA, T., Telework and Work-Related Well-Being. *Journal of Occupational & Environmental Medicine*, 2020, https://doi.org/10.1097/JOM.000000000002058.
- 23. ALLENBY, B., RICHARDS, D., Applying the triple bottom line: Telework and the environment. *Environmental Quality Management*, 1999, 8, pp. 3-10. https://doi.org/10.1002/TQEM.3310080403.
- 24. LANG, M., CONNOLLY, L., Managing the Cybersecurity Risks of Teleworking in the Post-Pandemic 'New Normal'. *SSRN Electronic Journal*, 2021, https://doi.org/10.2139/ssrn.4146506.
- 25. MIHAILOVIC, A., SMOLOVIĆ, J., RADEVIĆ, I., RAŠOVIĆ, N., MARTINOVIĆ, N., COVID-19 and Beyond: Employee Perceptions of the Efficiency of Teleworking and Its Cybersecurity Implications. *Sustainability*, 2021, https://doi.org/10.3390/SU13126750.
- GUO, Y., LIANG, Y., ZHUANG, Y., LIAO, R., DONG, L., LIU, F., XU, J., LUO, X., LI, X., KE, W., DENG, G., A
 Security Protection Technology Based on Multi-factor Authentication. 2022 IEEE 2nd International Conference on
 Mobile Networks and Wireless Communications (ICMNWC), 2022, pp. 1-5.
 https://doi.org/10.1109/ICMNWC56175.2022.10032006.
- 27. LIU, Y., ZHONG, Q., CHANG, L., XIA, Z., HE, D., CHENG, C., A secure data backup scheme using multi-factor authentication. IET Inf. Secur., 2016, 11, pp. 250-255. https://doi.org/10.1049/iet-ifs.2016.0103.
- 28. SARGINSON, N., Securing your remote workforce against new phishing attacks. Computer Fraud & Security, 2020, pp. 9-12. https://doi.org/10.1016/s1361-3723(20)30096-8.
- 29. HU, H., LIN, C., CHANG, C., CHEN, L., Enhanced secure data backup scheme using multi-factor authentication. IET Inf. Secur., 2019, 13, pp. 649-658. https://doi.org/10.1049/IET-IFS.2018.5380.
- 30. LENGEN, J., KORDSMEYER, A., ROHWER, E., HARTH, V., MACHE, S., Social isolation among teleworkers in the context of the COVID-19 pandemic, *Zentralblatt fur Arbeitsmedizin, Arbeitsschutz und Ergonomie*, 2020, pp.1-6, https://doi.org/10.1007/s40664-020-00410-w.
- 31. BENTLEY, T., TEO, S., MCLEOD, L., TAN, F., BOSUA, R., GLOET, M., The role of organisational support in teleworker wellbeing: a socio-technical systems approach, *Applied ergonomics*, 2016, 52, pp. 207-15, https://doi.org/10.1016/j.apergo.2015.07.019.
- 32. AGUINIS, H., BURGI-TIAN, J., Talent management challenges during COVID-19 and beyond: Performance management to the rescue. *Business Research Quarterly*, 2021, 24, pp. 233-240, https://doi.org/10.1177/23409444211009528.
- 33. NITIKA, N., ARORA, P., Performance Appraisal in the Era of New Normal, 2020, 11, pp. 11-15, https://doi.org/10.15415/jtmge.2020.111002.
- 34. RUPPEL, P., JUANICO, J., JOHNSON, K., The Effects of Remote Instructions, Rehearsal, and Feedback on Preference Assessment Implementation. *Journal of Organizational Behavior Management*, 2022, 43, pp. 27-49, https://doi.org/10.1080/01608061.2022.2078455.
- 35. STAPLES, D., BORSTAD, A., PLISKIN, N., ROMM, C., TAN, M., DUSDAR, S., Telework practice across national cultures (panel session), 1998, pp. 429-430. https://doi.org/10.1145/353053.353125.
- 36. PETERS, P., DULK, L., Cross Cultural Differences in Managers' Support for Home-Based Telework. *International Journal of Cross Cultural Management*, 2003, 3, pp. 329-346, https://doi.org/10.1177/1470595803003003005.
- 37. PÉREZ, M. P., SÁNCHEZ, A. M., DE LUIS CARNICER, M. P., Benefits and barriers of telework: perception differences of human resources managers according to company's operations strategy. Technovation, 2002, 22(12), pp. 775-783.
- 38. CAMP, K., YOUNG, M., BUSHARDT, S., A millennial manager skills model for the new remote work environment. *Management Research Review*, 2022, https://doi.org/10.1108/mrr-01-2021-0076.
- 39. CURRAN, K., Cyber security and the remote workforce. Computer Fraud & Security, 2020, https://doi.org/10.1016/s1361-3723(20)30063-4.
- 40. POKOJSKI, Z., KISTER, A., LIPOWSKI, M., Remote work efficiency from the employers' perspective—What's next?. *Sustainability*, 2022, 14(7), 4220.
- 41. UMER, H., KHAN, M., Benefits and Challenges of COVID-19 Induced Telework Across Gender: Policy Lessons for Sustainable Future Telework. *Andrew Young School of Policy Studies Research Paper Series*, 2021, https://doi.org/10.2139/ssrn.3848640.
- 42. PEDRAM, M., Sustainable digital infrastructure. 2010 15th CSI International Symposium on Computer Architecture and Digital Systems, 2010, XIII-XIII. https://doi.org/10.1109/CADS.2010.5623550.
- 43. IBRAHIM, N., Reviewing the evidence: use of digital collaboration technologies in major building and infrastructure projects. *J. Inf. Technol. Constr.*, 2013, 18, pp. 40-63.