

THE BENEFITS OF TELEWORK AND A STRATEGY FOR SUCCESSFUL IMPLEMENTATION

Richard Blake Morris, Austin Peay State University

Al Tilooby, Austin Peay State University

Jennifer D. Thayer, Austin Peay State University

Amye Melton, Austin Peay State University

Vikkie McCarthy, Austin Peay State University

ABSTRACT

The purpose of this paper is to present the benefits of telework for businesses and outline a four-point deployment strategy comprised of preparing the required infrastructure, fostering employee engagement, mitigating the risks, and developing a clear communication plan. This four-point deployment strategy is designed to assist organizations in developing a post-Pandemic remote work strategy. Furthermore, this paper provides the strategic relevance of telecommuting and presents a plan for implementation.

This paper is significant because it argues that telecommuting is an environmentally sound practice for gaining a competitive advantage. In addition, telework offers a work environment protecting the employee and organization in times of crisis while also having a positive impact on the environment. Additionally, two phenomena that emerged after the pandemic include, “the great resignation” and “quiet quitting” which seem to be fueled by employees’ desires for more work-life balance and are contributing to increases in remote work. Access to talent and the ability to retain talent are benefits of telework contributing to competitive advantage. Furthermore, the cost savings related to telework is another strategy to assist organizations in the post-Pandemic economic environment. The advances in the technology available to businesses including access to the Internet and cloud computing are necessary for telework to be successful. Therefore, a solid framework for embedding telecommuting strategically is needed to ensure the long-term satisfaction and success of telework for both the employer and employee.

This paper is significant because it contributes to the business strategy and sustainability literature by providing a prescriptive approach to implementing a workplace practice, of telecommuting to improve operations. The future of telework will be dependent on businesses’ strategic implementation. While flexible work arrangements such as remote and hybrid working have been around for years, their significance has grown since 2020 due to the global COVID-19 pandemic. Research indicates that telework has benefits for both the employer and the employee. Some of the benefits of telework are work-life balance, flexibility, increased cash flow, higher morale, and climate change. However, such a strategic change in the way a company conducts business needs an appropriate infrastructure, the right culture, the ability to

communicate, and methods to mitigate risks. The four-point deployment strategy presented provides a roadmap for this post-Pandemic strategic change.

Keywords: Employee Satisfaction, Cost Savings, Sustainability, Remote Work, Work-from-home, The Great Resignation, Quiet Quitting, Cash Flow, COVID-19, post-Pandemic, Technology

INTRODUCTION

Telecommuting, or other various names such as telework or alternative workspace, is the practice of working at home or in other remote locations outside the office. Initially used for disaster recovery cases to ensure employees would be able to work in case of natural disasters, the Covid-19 pandemic forced businesses that may have previously hesitated to engage in telecommuting. While many businesses may be planning to return to their original in-office arrangements once the pandemic subsides, there are a variety of reasons why they should reconsider.

Examples of some of the benefits are reduced costs, flexibility, productivity, efficiency, and reduction of greenhouse gasses (Atoufi, et al., 2021; Tremblay & Thomsin, 2012). Intrinsic benefits to the employee consist of more autonomy, a better work-life balance, and higher morale (Abrams, 2019; Church, 2015; Morgan, 2004; Rupietta & Beckmann, 2018). In 2009, Nairn noted that IBM stated 42% of its employees do not regularly come into the office saving \$10 million annually in real estate expenses. More recently, *Business Insider* reported that IBM plans to have 80% of its employees working remotely post-pandemic (Sonnemaker, 2021). This is significant considering Global Workplace Analytics's estimated savings of \$11,000 per employee working two to three days a week remotely (Kidwai, 2022).

While a trending practice already, the global COVID-19 pandemic has emphasized the importance of being able to work remotely. At the onset of the Pandemic, many businesses were able to pivot to working from home quickly due to the wide availability of mature virtual presence platforms such as Zoom, WebEx, and Microsoft Teams. The transition was helped by the abundance of modular cloud computing resources as well as by the ongoing race between many technology giants to dominate the virtual presence market (Ilhan, 2021). Minimizing personal contact and social distancing has become the new normal, and many corporations have struggled to implement these measures while either remaining operational or sustaining productivity. A benefit of telecommuting particularly during the pandemic era is to remain operational and give employees the security of their careers and wages during such trying times. Statistics from the *Monthly Labor Review* in June 2020 illustrated the importance of telecommuting by finding between February and April 2020, employment in areas where telework was not feasible fell by 15% versus 7% (Dey et al., 2020). Dey et al.'s study also showed there were even larger disparities in certain industries such as information technology, where employment fell 37% when telecommuting was not present versus only 2% of those who were able to telecommute.

As many businesses struggle to recover from the economic fallout of forced close-downs during COVID-19, labor market shortages are slowing progress for some industries (Ferguson, 2022). Continuing concerns related to labor shortages are related to two current phenomena, “the great resignation” and “quiet quitting” (Ferguson, 2022; Hetler, 2022; Liu, 2022). Recruiting new employees and re-engaging with the “quiet quitters” will require employers to offer incentives such as flexible work arrangements. Thus, the trend toward remote and hybrid work appears to be a must for business survival. Thinking strategically about the implementation of permanent remote and hybrid work arrangements will allow businesses to reap their benefits and navigate their challenges.

LITERATURE REVIEW

Employee Satisfaction and Productivity

Fuller (2016) defines productivity as “the amount of value produced divided by the amount of cost (or time) required to do so,” (para. 1). Whereas contributing factors such as employee morale, efficiency, and automation are enhanced by telecommuting. Employees were more content and productive working from home by measuring self-rated job performance, job satisfaction, and creative performance higher than those at the office (Vega et al., 2015). Westfall (2004, p. 95) found that companies could see a 20% gain in productivity from telecommuting one day a week.

Research indicates that employee satisfaction can increase employee productivity (McKee, 2014). Vega et al. (2015) found that employees who work at home or in other areas autonomously feel more independent and less stressed thus resulting in innovation and efficiency gains. Their results showed that employees who worked most of the time at home reported higher job satisfaction, and higher self-rated performance, and performed better on creative problem-solving tasks. Mayer (2016) also reports higher perceived happiness and self-worth for those who work from home compared to traditional workers. The psychological impact should be noted and taken into consideration.

Many employees struggle with work-life balance, and by telecommuting, employees have more flexibility to address home needs with less work disruption (Gálvez et al., 2020). Rather than having to take off early to get to a doctor’s appointment or another errand, a telework employee could complete these tasks during lunch. For many employees, cutting out the commute could save hours daily which can be used for satisfying other needs. Telework enables those with family care responsibilities to be more actively engaged in their work because they no longer have the conflict of deciding which priority to address (Lenahan, 2016). Galvez et al., (2020, p. 3583) affirm that “the success of telework as a measure for achieving work-life balance establishes productive harmony between the individual, the organization, and the community.”

Firms realize greater access to talent because they can hire on a national or global level. In addition, the firm becomes more attractive to potential employees by creating a work-life balance opportunity. When workers have a work-life balance, worker loyalty increases (Chimote & Srivastava, 2013; Dizaho & Othman, 2013; Meenakshi et al., 2013). Therefore, open positions

are filled quickly without relocation expenses, and overall training costs are reduced. Employees leaving firms due to a lack of work-life balance is a widely accepted truth.

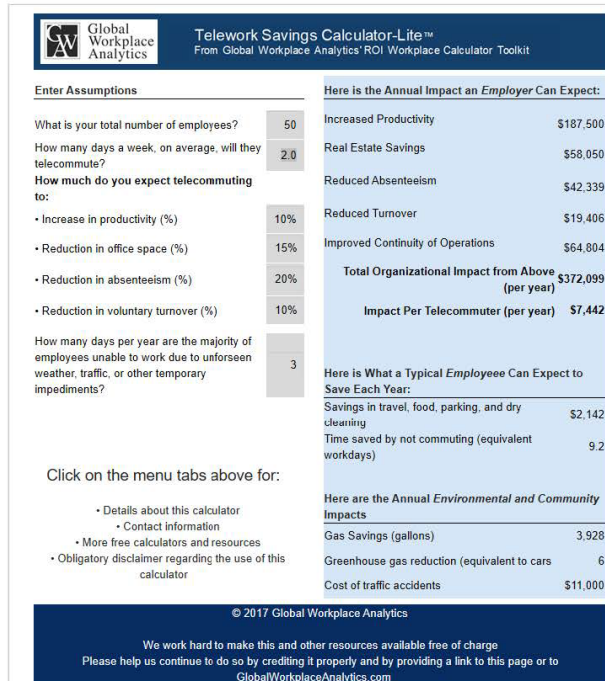
Cost Savings

While productivity is a key determinant in the argument for telecommuting, there are cost savings to be found as well. Companies increase their cash flow with the reduction of expenses, thus allowing the company to remain operational (Vafin, 2021). The more profitable the company, the more opportunity to improve employees, and the community, and contribute to social responsibility. A 2017 study by the American Economic Association found employees would take an 8% reduction in pay to work from home (Mas & Pallais, 2017). According to *CPA Practice Advisor*, an accounting firm's total expenses range from 20-25% of revenues, not including salaries and benefits (Rosenberg, 2014). If non-depreciable overhead expenses, such as utilities, can be reduced, these can result in an immediate increase in cash flow. The Controller's report found Sun Microsystems saved \$68 million annually on real estate costs, \$3 million a year in energy, and \$25 million a year in IT costs ("Compensation," 2010). All savings were made possible by allowing employees to work from home. This same article estimated companies could save around \$10,000 a year per employee ("Compensation," 2010).

Another cost saving with the implementation of telecommuting is office space. For example, Cisco closed 239 buildings over five years, reducing \$196 million in expenses and adding \$294 million to building sales (Wright, 2017). Many organizations own, build, or lease physical locations. Additionally, there are maintenance, insurance, utilities, and other related costs to occupying a property. Telework eliminates this cost by allowing the employee to utilize their home - essentially shifting the responsibility of office space to the employee though many organizations cover this expense. With fewer employees in the office, the need for large depreciable assets may decrease, including office buildings, large office equipment, and furniture. By reducing the commercial real estate square footage, rent, insurance, custodial services, and utilities are also reduced. Most physical offices cannot be reduced in size immediately, however, a plan to move in this direction will be motivation for future cost savings.

A simple yet conservative model of a small firm of 50 employees working 40% remotely, assuming a 10% increase in productivity, 15% reduction in office space, 20% reduction in absenteeism, and 10% reduction in voluntary turnover provides approximately \$370,000 savings to the organization and \$2,100 savings to each employee (see Figure 1) (Global Workplace Analytics, 2020). The *Telework Savings Calculator-Lite* from *Global Workplace Analytics* is free and practitioners may use this tool when considering telework implementation. The Global Workplace Analytics website provides multiple calculators to assist organizations in decision-making (<https://globalworkplaceanalytics.com/standard-calculator>).

Figure 1: TELEWORK SAVINGS



CALCULATOR

Environmental and Community Impact

Atoufi et al. (2021), describes COVID-19 as a “double-edged sword” for the environment due to increased waste from personal protective equipment (PPE), but also reductions in carbon emissions due to less commuting. Telework has been promoted even before the Pandemic for the benefit of reducing carbon emissions (Fu et al., 2012). The Environmental Protection Agency estimates "a typical passenger vehicle emits 4.6 metric tons of carbon dioxide per year" (Environmental Protection Agency, 2018). Recent research has confirmed carbon emissions decreased worldwide as a result of less commuting during the onset of the COVID-19 Pandemic; and telecommuting can continue to have a positive impact (Tollefson, 2021). For a small business with 50 employees, an estimated 3,900 gallons of gas could be saved, which is the equivalent of six cars being removed from the roads. In addition, \$11,000 could be saved by reduced traffic accidents (Global Workplace Analytics, 2020). Employees would see a reduction in automobile insurance costs because of fewer traffic accidents and miles driven.

Sharing office spaces, or “hoteling” is one way that businesses cut down on physical space (Ansio et al., 2020). Employees can realize personal cost savings on transportation, car insurance, and fuel. Reducing office space and commutes to work, results in a smaller business

footprint which has both cost and environmental benefits. Other community benefits include reductions in vehicular accidents and traffic providing a residual benefit by lessening drive times and pollution.

Traffic-related air pollution is associated with many cardio and respiratory health issues such as asthma, reduced lung function, and heart attacks (Matz et al., 2017). Implementing telecommuting would virtually eliminate many drivers while delivering benefits to all biological life, on top of eliminating unnecessary costs. These are just some of the environment benefits from telework (Strain, 2019).

Technology Enablers

Change can be perceived as hard, but one of the few positives from the COVID-19 pandemic is businesses were pushed to innovate, adapt, and persevere. Companies have been forced to do business differently and moving forward, companies will need to decide which innovations to keep in pursuit of long-term competitive advantage. The U.S. Office of Personnel and Management (OPM) reported that they hope to increase the number of remote workers significantly by leveraging the CHIPS Act of 2022 which has allotted significant funds for improving technology in America (Heckman, 2022). In North America, 94.6% of households have access to the Internet (Table 1), while the world's total is 62% connected (Internet-World-Stats, 2020). The abundance of access to the Internet allows North America's population to utilize the connectivity to work from home. Similarly, mobile broadband subscriptions in the Americas are slightly over 100%, compared to 97.4% in Europe, 89% in the Asia Pacific, and 34% in Africa (Internet-World-Stats, 2020). Some parts of the world face connectivity challenges, such as stable connections. However, the Broadband Commission for Digital Development—a co-establishment by the International Telecommunication Union (ITU) and the United Nations Educational, Scientific and Cultural Organization (UNESCO)—has an advocacy target by 2025 for all countries to have "a funded national broadband plan or strategy, or include broadband in their universal access and services definition." (Internet-World-Stats, 2020).

Table 1: INTERNET PENETRATION RATE BY GEOGRAPHICAL REGION	
Geographic Area	Population with Internet Access (%)
World Average	58.7%
North America	94.6%
Europe	87.2%
Latin America/Caribbean	70.5%
Middle East	69.2%
Oceania	67.4%
Asia	53.6%
Africa	39.3%

Source: 2020 Internet usage and populations statistics <https://www.internetworldstats.com/stats.htm>

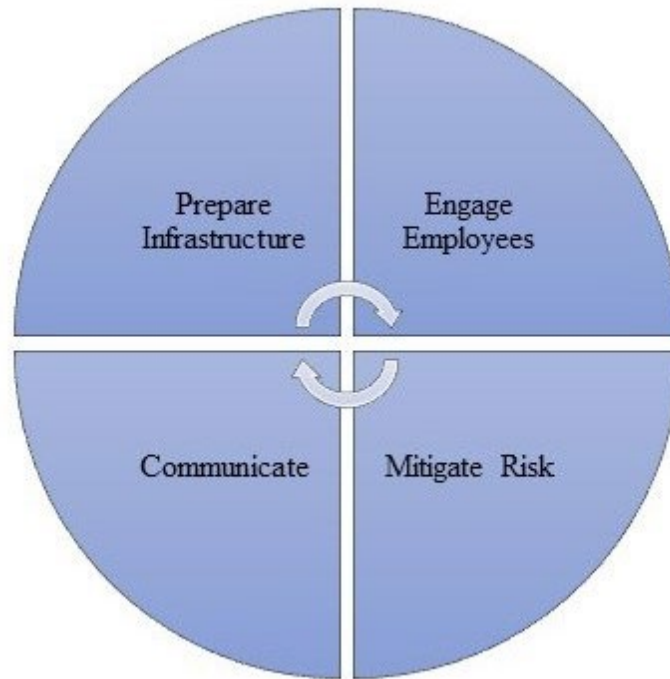
Coupled with the proliferation of access to the Internet, the fast growth of cloud computing enabled users to seamlessly access the employer's information systems directly. Moreover, working from home was further boosted by the high growth rate in video conferencing

Strategic Implementation of Teleworking

While many businesses may be planning to return to their original in-office arrangements once the pandemic subsides, there are a variety of reasons why they should reconsider. Businesses should not look at telecommuting as mandated by the pandemic but rather treat it strategically as an opportunity to gain a competitive advantage (Shah & Manna, 2020). Businesses should strategically implement telecommuting to become more efficient in terms of reduced costs, flexibility, and productivity.

In 2020, the Government of Ireland mandated that post-COVID, at least 20 percent of government workers would continue to work remotely (O'Dea, 2021). The government report stated that more remote work would lessen commuting resulting in fewer gas emissions, promote work-life balance, provide more job opportunities for people with disabilities as well as caregivers, and increase investments in small towns and villages across Ireland. In the report, Making Remote Work National Remote Work Strategy prepared by Ireland's Department of Enterprise, Trade, and Employment, a three-pillar strategy was presented. These pillars are creating a conducive environment for remote work, developing and leveraging a remote work infrastructure, and building a remote work policy (Government of Ireland, 2020).

Building on the Government of Ireland's strategy for implementing a three-pillar government employee remote work strategy, we propose a four-point telework strategy. Figure 2 below presents this strategy to create a sustainable telework plan for business organizations. The four-point strategy involves the preparation of the company's infrastructure, engagement of employees, mitigation of risks, and communication.

Figure 2: THE FOUR-POINT TELEWORK DEPLOYMENT STRATEGY

Prepare Infrastructure

In their study of the U.K. infrastructure sector, Jallow et al. (2021), propose several recommendations from lessons learned during the COVID pandemic. One recommendation is that management be open to changes and prepared for a culture shift due to remote work. “Change and dynamic relationships are integral to business systems, and the culture of an organization plays a vital role in driving the behaviours and attitudes that support rather than hinder change” (Jallow et al., 2021, p. 591). One lesson learned for many organizations was that neither their existing infrastructure nor the internet was prepared to support a significant shift to remote work (Feldmann, et. al., 2020). For an organization to effectively utilize teleworking, it should make the appropriate technology and software available. Currently, many businesses use virtual meeting software such as Zoom, WebEx, and Microsoft Teams, as well as virtual private network software (Grand-View Research, 2020). Employees should be trained on how to use the software. In addition, the business should invest in employee equipment such as Internet phones and ergonomic equipment. Equipping and/or compensating employees for wired or wireless, high-speed Internet as needed is also an important infrastructure investment.

A business whose information technology (IT) infrastructure is cloud-based faces fewer challenges (Adamuthe & Thampi, 2020). Therefore, a business considering the deployment of teleworking should consider migrating its IT services to the cloud as a prerequisite. Other investments can be made in VPNs to ensure cyber security and technology training.

Foster A Culture of Engagement

Engagement plays an integral role in employees' attitudes and can be reflected in their work. Engagement contributes to employees' psychological well-being, leading to lower absenteeism, better services provided to customers, and higher contributions to productivity and profitability (Rothmann & Baumann, 2014). With a physical location change, a focus from physiological needs should shift to psychological needs (Sako, 2021). While an employer may provide water, snacks, and a consistent temperature in the office to assist employees, telework employees may require more engagement and communication to enhance their psychological well-being. Once the workers' psychological needs are met, they may be more engaged within the organization, thus reciprocating the employers' trust and respect, forming a more profound commitment to the company.

Mitigate Risks

Numerous benefits are associated with teleworking; however, it is critical to craft plans to attenuate the risks related to the implementation of teleworking. Flexible work arrangements such as telework are not beneficial for all employees and situations. Vega et al. (2015) posit that while some teleworkers report higher levels of performance, satisfaction, and creativity, a telework policy could have a negative effect if perceived by the employees as a mandated requirement. They continue to affirm the aspect of choice and volunteering versus required action as important.

In the office, managers can track productivity by visually observing employees working. Tracking productivity is a concern for various software and programs designed to measure metrics such as keystrokes and completed tasks of production-related work. The critical issue is nonproduction tasks, which can be difficult to measure (Meadows, 2008). Instituting a system of measurement for nonproductive tasks such as creative works may require more time and resources, and still shed some doubt on the productivity and engagement of the employee (Sauermann, 2016). The face-to-face time also subconsciously factors into evaluations. Since management is not able to actively observe work, the perception of the employee may be impacted. A control for this is to avoid trait-based evaluations (Elsbach & Cable, 2012) which may be difficult in nonproductive fields. Video conferencing and continuous communication can help mitigate some of these issues. Trust in the systems and procedures implemented are key; however, also trusting employees and measuring data where applicable will help compare to the productivity achieved in the office.

Also, it is important to provide alternative work arrangements. A significant benefit of telework is the employee does not have to leave their home. However, when home life is counterproductive, such as living in sub-par conditions or experiencing domestic abuse, productivity and motivation may be reduced (Manko, 2021). An employee's home condition must be a consideration factor during the implementation of teleworking. Another benefit, the ability to juggle home-life duties with work-life, may result in role conflict. Work and home life

have different demands and, if not appropriately addressed, can “lead to undesirable attitudes as well as negative outcomes in both situations” (Caillier, 2016, p. 393). Some employees may also seek firm boundaries between the workplace and home (Manko, 2021). To address the home and work-life conflict, companies can keep limited office space with unassigned offices, maximizing resource utilization.

Businesses must plan for changing threats in the external environment. Industry trends and standards may dictate how organizations react and change. These include laws and regulations that should be factored into business strategies. One example is labor laws involving telework due to COVID-19 safety precautions. Many companies elected to transition to more remote work during the global pandemic. However, many more were forced to transition due to state, local, or federal guidelines. State and local mandatory lockdowns required businesses to allow remote work. Globally, some governments issued strict regulations limiting in-person contact and forcing remote work (Huggler, 2020; O’Dea, 2021). In 2020, Germany passed legislation providing a legal right to work from home similar to Switzerland in 2016 (Huggler, 2020). These government policies indicate a shift in global views about the future of office work.

Another consideration may be that businesses that were reluctant to allow telework as accommodation for disabilities may be forced to reconsider their stance. In the past, courts have ruled in favor of businesses that denied accommodations based on the definition of traditional full-time positions framed by in-office work. Businesses that refused telework accommodation for disabled employees were often supported by the courts if it was seen as an unreasonable accommodation that interfered with operations (Travis, 2021). However, many of these same businesses were able to pivot to fully remote work as the government shutdowns were mandated. Travis (2021) argues that the courts will revisit many of these challenges.

Communicate

Communication is the key to implementing teleworking effectively. Communication at all levels of the organization will create more buy-in and thus a smoother implementation of the strategy.

1. Communicate, communicate, communicate to employees. Employers should have an honest discussion with employees about the benefits individually and for the organization. Benefits for employees may be less commute time, parking expenses, money spent for lunch, daily coffees, dry cleaning, and office attire. Global Workplace Analytics (2020) estimates the average worker could save at least \$2500 a year on these related expenses.
2. Communicate, communicate, and communicate with external partners. Be intentional in communication about privacy, security of data, and communication with clients.
3. Convert to a paperless office. This is good for the environment and the bottom line. Being 100% paperless is not realistic, however, making progress toward being paperless allows firms to share information timely and efficiently. The added benefit is fewer costs

related to paper, shredding services, printer ink, and printer repair. However, electronic document storage and scanners may offset these savings.

4. Companies will need to invest in collaborative software for groups of people to easily communicate. Collaborative software provides video conferencing, document sharing, and storage.
5. Assist with employees' remote workplace by allowing employees to take home computers, monitors, office chairs, etc.
6. Clearly define expectations regarding meetings (virtual or in-person) and be clear about everyone's work schedules. Some companies may choose to have their employees physically come to an office by rotating office days with workdays.

CONCLUSION

This paper has highlighted the benefits of telecommuting for businesses and an outline of an implementation strategy. The implementation strategy framework consists of four main points: infrastructure, employee engagement, risk mitigation, and a communication plan. Using this implementation strategy may provide the organization with a competitive advantage. This competitive advantage can vary based on the organization. It could be higher productivity, cost-benefit savings, environmental health, and/or continuity of business operations. Furthermore, the ability to work virtually helps companies in cases of natural disasters, or in recent times the COVID-19 pandemic. Telework offers a work environment protecting the employee and organization in times of health crisis while also having a positive impact on the environment. Data suggests as technology advances and evolves, a shift to telework is the future. Nonetheless, businesses must be intentional about the use of telework by approaching it strategically.

REFERENCES

- Abrams, Z. (2019). The future of remote work. *American Psychological Association*, 50(9). <https://www.apa.org/monitor/2019/10/cover-remote-work>
- Adamuthe, A. C., & Thampi, G. (2020). Forecasting technology maturity curve of cloud computing with its enabler technologies. *Journal of Scientific Research*, 64(2).
- Ansio, H., Käpykangas, S., & Houni, P. (2020). Community and collaboration in a shared multi-space office. *Nordic Journal of Working Life Studies*, 10(3), 63-83. <https://www.proquest.com/scholarly-journals/community-collaboration-shared-multi-space-office/docview/2447948462/se-2>
- Atoufi, H. D., Lampert, D. J., & Sillanpää, M. (2021). COVID-19, a double-edged sword for the environment: A review on the impacts of COVID-19 on the environment. *Environmental Science and Pollution Research*, 28(44), 61969-61978. <https://doi.org/10.1007/s11356-021-16551-1>
- Baskin, K. (2020). 4 lessons from COVID-19 to help fight climate change. *MIT Sloan School of Management*. Retrieved from: <https://mitsloan.mit.edu/ideas-made-to-matter/4-lessons-covid-19-to-help-climate-change>
- Caillier, J.G. 2017, "Do work-life benefits enhance the work attitudes of employees? Findings from a panel study", *Public Organization Review*, 17(3), 393-408.
- Chimote, N. K., & Srivastava, V. N. (2013). Work-life balance benefits: From the perspective of organizations and employees. *IUP Journal of Management Research*, 12(1), 62.
- Church, N. F. (2015). Gauging perceived benefits from 'working from home' as a job benefit. *International Journal of Business and Economic Development (IJBED)*, 3(3).

- Compensation. (2010). The controller's report, (8), 3-5. Retrieved from: <https://www-proquest-com.ezproxy.lib.apsu.edu/docview/645288566?accountid=8437>
- Dey, M., Frazis, H., Loewenstein, M. A., & Sun, H. (2020). Ability to work from home: evidence from two surveys and implications for the labor market in the COVID-19 pandemic: *MLR. Monthly Labor Review*, 1-18. <http://ezproxy.lib.apsu.edu/login?url=https://www-proquest-com.ezproxy.lib.apsu.edu/docview/2420171904?accountid=8437>
- Dizaho, K. E., & Othman, F. (2013). *Antecedents of work life balance and its impact on loyalty, satisfaction and performance*. A conference paper presented at the Global Conference on Business, Economics, and Social Research, Kuala Lumpur.
- Elsbach, K., & Cable, D. (2012). Why showing your face at work matters. *MIT Sloan Management Review*, 53(4), 10-12.
- Environmental Protection Agency. (2018). Greenhouse gas emissions from a typical passenger vehicle. Retrieved <https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle#:~:text=typical%20passenger%20vehicle%3F-A%20typical%20passenger%20vehicle%20emits%20about%204.6%20metric%20tons%20of,8%2C887%20grams%20of%20CO2>.
- Feldmann, A., Gasser, O., Lichtblau, F., Pujol, E., Poese, I., Dietzel, C., Wagner, D., Wichtlhuber, M., Tapiador, J., Vallina-Rodriguez, N. and Hohlfeld, O., 2020, October. The lockdown effect: Implications of the COVID-19 pandemic on internet traffic. In Proceedings of the ACM internet measurement conference (pp. 1-18).
- Ferguson, S. (2022, October 31). *Understanding America's Labor Shortage: The Most Impacted Industries* from <https://www.uschamber.com/workforce/understanding-americas-labor-shortage-the-most-impacted-industries>
- Fuller, R. (2016). The paradox of workplace productivity. *Harvard Business Review*, 1-6. Retrieved from: <https://hbr.org/2016/04/the-paradox-of-workplace-productivity>
- Fu, M., Kelly, J.A., Clinch, J.P., & King, F. (2012). Environmental policy implications of working from home: Modelling the impacts of land-use, infrastructure and socio-demographics, *Energy Policy*, Volume 47, pages 416-423, <https://doi.org/10.1016/j.enpol.2012.05.014>. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0301421512004119>
- Gálvez, A., Tirado, F., & Jesús, M. (2020). Work-life balance, organizations and social sustainability: Analyzing female telework in Spain. *Sustainability*, 12(9), 3567.
- Global Workplace Analytics. (2020). Telework savings calculator lite. Retrieved from: <https://globalworkplaceanalytics.com/roi>
- Government of Ireland (2020). Making Remote Work National Remote Work Strategy Prepared by the Department of Enterprise, Trade and Employment. <https://enterprise.gov.ie/en/Publications/Publication-files/Making-Remote-Work.pdf>
- Grand-View Research. (2020). Video conferencing market size, share & trends analysis report by component (hardware, software, services), by deployment, by enterprise size, by end use, by region, and segment forecasts, 2020 - 2027. Retrieved from <https://www.grandviewresearch.com/industry-analysis/video-conferencing-market>.
- Heckman, J. (2022, July 21). OPM says federal employees 'agency-hopping' to telework-friendly offices. Federal News Network. <https://federalnewsnetwork.com/hiring-retention/2022/07/opm-says-federal-employees-agency-hopping-to-telework-friendly-offices/>
- Hetler, A. (2022, September 1). *Quiet quitting explained: Everything you need to know*, from <https://www.techtarget.com/whatis/feature/Quiet-quitting-explained-Everything-you-need-to-know#:~:text=Quiet%20quitting%20is%20a%20way,they%20are%20treated%20at%20work>.
- Huggler, J. (2020, October 1). *Germany to give staff the legal right to work from home*. The Telegraph. Retrieved from: <https://www.telegraph.co.uk/business/2020/10/01/germany-give-staff-legal-right-work-home/>
- İlhan, Ü. D. (2021). A rapid implementation of remote work as a strategy in response to COVID-19: An examination in terms of work-life balance. In *Management Strategies to Survive in a Competitive Environment* (pp. 335-347). Springer, Cham.

- Internet-World-Stats. (2020). Usage and population statistics. Retrieved from <https://www.internetworldstats.com/stats.htm>
- Jallow, H., Renukappa, S., & Suresh, S. (2021). The impact of the COVID-19 outbreak on the United Kingdom infrastructure sector. *Smart and Sustainable Built Environment*, pp. 581-593.
- Kidwai, B. (2022, August 15). How much money employers can save when they switch to remote or hybrid work? Fortune <https://fortune.com/2022/08/15/how-much-money-employers-save-switch-remote-hybrid-work/F>
- Lenahan, S. T. (2016). How telework programs enable affective organizational commitment (Order No. 10192503). Available from ABI/INFORM Collection. (1845877283). <https://www-proquest-com.ezproxy.lib.apsu.edu/docview/1845877283?accountid=8437>
- Liu, J. (2022, February 1). Roughly 47 million people quit their jobs last year: 'All of this is uncharted territory' from <https://www.cnn.com/2022/02/01/roughly-47-million-people-quit-their-job-last-year.html>
- Manko, B. A. (2021). Considerations in the Use of Work-From-Home (WFH) for Post-Pandemic Planning and Management. *Management*, 25(1), 118-140. <https://doi.org/http://dx.doi.org/10.2478/manment-2019-0062>
- Mas, A., & Pallais, A. (2017). "Valuing alternative work arrangements." *American Economic Review*, 107(12): 3722-59. DOI: 10.1257/aer.20161500
- Matz, C. J., Stieb, D. M., Egyed, M., Brion, O., & Johnson, M. (2018). Evaluation of daily time spent in transportation and traffic-influenced microenvironments by urban Canadians. *Air Quality, Atmosphere, & Health*, 11(2), 209-220. <http://dx.doi.org.ezproxy.lib.apsu.edu/10.1007/s11869-017-0532-6>
- Mayer, K. (2016). Telecommuting benefits cited as a key factor in worker happiness: Telecommuting benefits cited as key factor in worker happiness. *Employee Benefit Adviser (Online)*. Retrieved from: <https://www-proquest-com.ezproxy.lib.apsu.edu/docview/1911926588?accountid=8437>
- McKee, A. (2014). Being happy at work matters. *Harvard Business Review*. Retrieved from: <https://hbr.org/2014/11/being-happy-at-work-matters>
- Meadows, V. (2008). Versatile bureaucracy: A telework case study. *Public Manager*, 36(4), 33-37. Retrieved from: <https://www-proquest-com.ezproxy.lib.apsu.edu/docview/236183660?accountid=8437>
- Meenakshi, S.P., Subrahmanyam, C.V., Ravichandran, K. (2013). The importance of work-life balance. *IOSR Journal of Business and Management*, 14(3), 31-35. E-ISSN: 2278-487X
- Morgan, R. E. (2004). Teleworking: an assessment of the benefits and challenges. *European Business Review*, 16(4), 344-357. DOI: <http://dx.doi.org/10.1108/09555340410699613>
- Nairn, G. (2009, Mar 12). Telework cuts office costs. *Financial Times*. Retrieved from: <https://www-proquest-com.ezproxy.lib.apsu.edu/docview/250185898?accountid=8437>
- O'Dea, B. (2021, June). Government asks employers to make remote working a permanent feature, *Silicon Republic*, Retrieved <https://www.siliconrepublic.com/careers/remote-working-campaign-ireland>
- Rosenberg, M. (2014). How much admin expense should accounting firms incur? Retrieved from: <https://www.cpapracticadvisor.com/firm-management/news/12028310/how-much-admin-expense-should-accounting-firms-incur>
- Rothmann, S., & Baumann, C. (2014). Employee engagement: The effects of work-home/home-work interaction and psychological conditions. *South African Journal of Economic and Management Sciences*, 17(4), 515-530.
- Rupietta, K., & Beckmann, M. (2018). Working from home. *Schmalenbach Business Review*, 70(1), 25-55.
- Sako, M. (2021). From remote work to working from anywhere. *Communications of the ACM*, 64(4), 20-22.
- Sauermann, J. (2016). Performance measures and worker productivity. *IZA World of Labor*. DOI: 10.15185/izawol.260
- Shah, J. A., & Manna, I. (2020). An empirical assessment of telework readiness on Indian industries. *Journal of Organisation and Human Behaviour*, 9(1), 50-60.
- Sonnemaker, T. (2021, May 31). IBM's CEO predicts a hybrid remote-work model for 80% of employees post-pandemic. *Business Insider*, <https://www.businessinsider.com/ibm-ceo-hybrid-remote-work-for-most-employees-post-pandemic-2021-3>
- Strain, K. (2019). How telecommuting saves money and the planet, too. *Premiere Global Services*. Retrieved from: <https://www.pgi.com/blog/2019/11/how-telecommuting-saves-money-and-the-planet-too>

- Tollefson, J., (2021). COVID curbed carbon emissions in 2020: But not by much, *Nature*, 589(7842): 343-343.
DOI: 1038/d41586-021-00090-3
- Travis, M. A. (2021). Post-Pandemic Antidiscrimination Approach to Workplace Flexibility. Washington University *Journal of Law & Policy*, 64, 203-230.
- Tremblay, D.G., & Thomsin, L. (2012). Telework and mobile working: Analysis of its benefits and drawbacks. *International Journal of Work Innovation*, 1(1), 100-113.
- Vafin, A. (2021). The Impact of Remote Work on Firm's Profitability: Optimizing Virtual Employee Productivity and Operational Costs Research. *Berg Review of Science and Technology*, 1(1), 50-68.
- Vega, R.P., Anderson, A.J. & Kaplan, S.A. (2015). "A within-person examination of the effects of telework", *Journal of Business and Psychology*, 30(2), 313-323.
- Westfall, R. D. (2004). Does telecommuting really increase productivity? *Association for Computing Machinery. Communications of the ACM*, 47(8), 93-96.
- Wright, A. D. (2017). Technology allows Cisco to work with the best, no matter where they are. *HRNews*. Retrieved from: <https://www.virtualvocations.com/blog/telecommuting-job-search-help/history-of-telecommuting-remote-work/>