

LEADERSHIP IN A CHANGING WORLD

New Research on
**LEADERSHIP
STYLES AND
PERFORMANCE**



MARIA JOSÉ SOUSA • MARIA ASENSIO

LUCIANA APARECIDA BARBIERI DA ROSA • MARIA CAROLINA RODRIGUES

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Chapter 12

Digital Leadership and Virtual Performance

Paula Figueiredo^{1,*}
and Rosa Rodrigues²

¹Universidade Lusófona, Lisboa, Portugal

CinTurs - Research Center for Tourism Sustainability and Well-being, Faro, Portugal

²Instituto Superior de Gestão – Business and Economics School, Lisboa, Portugal

CEFAGE – Center for Advanced Studies in Management and Economics, Évora, Portugal

Abstract

Today's organizations face the challenge of digitization in a volatile, uncertain, complex and ambiguous (VUCA) environment. Organizational culture and leadership need to keep up with rapid changes for organizations to become more flexible and dynamic, contributing to employee performance, particularly in virtual environments. Digital leadership is the style that responds to the challenges of digital transformation, as it contributes to the successful implementation of digital processes that improve organizational performance. In addition, digital leadership plays a crucial role in engaging teams in internal processes and managing virtual teams. It is believed that through digital leadership the performance of teams is enhanced through a correct performance evaluation appropriate to the virtual environment.

Keywords: digital leadership, e-leadership, virtual leadership, virtual environments, virtual performance

Introduction

Talking about digitalization in companies requires a return to the use of computers due to the use of digital data. Then, digitalization lies in the automation of internal processes that leads companies to change their business models through various digital technologies, including the internet. The integration of new emerging digital technologies (e.g., Big Data, Cloud Computing, Social Media, Artificial Intelligence, Augmented Reality), is part of the so-called fourth Industrial Revolution (Industry 4.0). Digitalization in companies is a process considered

* Corresponding Author's Email: pcrisf@gmail.com.

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disruptive and comprehensive, including structures, processes, and business models, designated in the literature by the term digital transformation (Abbu, Mugge, Gudergan, et al., 2022; Galanti et al., 2023; Gudergan et al., 2021; Hanandeh et al., 2023; Klein, 2020; Kollmann et al., 2023; Oberer & Erkollar, 2018; Pereira et al., 2022; Sainger, 2018; Türk, 2023; Zhang et al., 2023). Digital Transformation has led the leaders' styles of influencing their members, enabling motivation, communication, and inspiring confidence to be affected as well as leading classical leadership practices to become ineffective and inadequate under changing environmental conditions (Oktaysoy et al., 2022).

Currently, organizations are thus facing a disrupted and uncertain environment, requiring leaders who respond quickly to volatile conditions. Such conditions require changes in traditional leadership and the construction of a new leadership recognized by contemporary literature as digital leadership (Kokot et al., 2023). In this context, the role of leadership becomes crucial for the success of companies (Cortellazzo et al., 2019), as well as the need to develop skills for the digital age (Sousa & Rocha, 2019). Globalization and the digital transformation of organizations have a strong impact on work and the tools used, thus enhancing more flexible working models (Figueiredo et al., 2022). Remote working and digital technologies have increased the significance of digital leadership (Topcuoglu et al., 2023). Furthermore, the role of digital leadership has been studied in virtual work environments and in improving sustainable organizational performance (Mollah et al., 2023; Shin et al., 2023).

Despite the extensive research on digital leadership that has been done over the last decade and driven by the COVID-19 pandemic and digital transformation, there is a need to explore the more direct impact of this leadership style on virtual performance. Given the sharp increase in publications on digital leadership, we consider it important to deepen and clarify the impacts on more operational performance about the virtual work carried out by employees and teams. Given the sharp increase in publications on digital leadership, we consider it essential to continue studying this leadership style due to its importance for organizations. Digital leadership and leading by mission are the same thing (Bach & Sulíková, 2021). However, due to the increasing presence of virtual organizational environments, it is important to deepen and clarify the impacts of digital leadership on the performance of virtual employees and teams. In this context, this essay considers recent developments on the importance of digital leadership in today's context, and the challenges and opportunities in virtual performance. Specifically, we will discuss the challenges and strategies for leading virtual teams and explore virtual performance monitoring and evaluation. These considerations provide the backdrop to compliment research on digital leadership, as well as the future of leadership education and development.

Digital Leadership and Digital Transformation

Technological advances are also important factors in today's context and have strong implications for how work is organized and how people are led in the organization (Lynn et al., 2023). The increasing influence of technology on leadership, a growing body of digital leadership has developed that draws on well-established human resources studies, but also takes new directions (Zhu et al., 2022). Leaders need to increasingly adapt to the uncertain environment and focus on developing digital skills to be better able to lead businesses

effectively. This is how the digital leadership style has emerged, as digital leaders are needed to help transform businesses and lead them to a brighter future (Türk, 2023).

Before we address the importance of digital leadership in today's context, we introduce the generic terms used in the literature that comprise this leadership style - e-leadership, virtual leadership, technology leadership and leadership 4.0. These concepts have similar meanings and can be used interchangeably (Karakose et al., 2022). Thus, in this research we will focus the literature review on the concept of digital leadership.

Some researchers describe digital leadership— specifically character and competency— that differentiate digitally mature organizations from digitally developing organizations (Abbu et al., 2020). Table 1 presents some recent definitions that help us demonstrate its relevance today.

Table 1. Digital leadership: definitions

| Definitions | Authors |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| A type of leadership that is informed about digital technologies that help the digital transformation of employees and businesses and is also fed by modern leadership theories. | Topcuoglu et al., 2023 |
| Digital leadership is accepted to be a leader who has a risk-taking culture, is flexible, can collaborate with customers and employees, adopts transformative strategies, and is open to innovation. | Sow & Aborbie, 2018 |
| Digital leadership refers to making the right strategic decisions to achieve digitalization and development in businesses. | El Sawy et al., 2016 |
| Digital leadership is regarded as a fast, cross-hierarchical, team-oriented, and cooperative leadership style, that keeps a strong focus on an organization's innovation. | Oberer & Erkollar, 2018 |
| Digital leadership reveals a digital mindset and skill set to inspire and help corporate employees adapt and adopt digital changes. | Magesa & Jonathan, 2022 |
| Digital leadership can be described as a combination of transformational leadership understanding and digital technology competence, which is a more comprehensive form. | De Waal et al., 2016 |
| Digital leadership thus includes a focus on new technologies; in this sense, it should be emphasized that digital leaders anticipate technical developments and communicate this internally as well as externally through a meaningful vision. | Bach & Sulíková, 2021 |
| Digital leadership demands essential skillsets that are centered around building the trust necessary for success in the digital age. | Abbu, Mugge, & Gudergan, 2022 |
| Digital leadership can be understood as a leadership strategy used by a leader in utilizing digital assets to achieve organizational goals. | Nurabadi et al., 2022 |
| Digital leaders as leaders who have new and creative ideas in the digital arena, can draw the attention of stakeholders to the digital environment in the context of organizational processes and activities, motivate them, maintain organizational continuity by keeping in touch with members in the digital area, and develop digital strategies which could provide a competitive advantage for the organization. | Balci et al., 2022 |
| Digital leaders who are also competent in digital technologies whilst being open to continuous learning, can apply digital technology to business processes, and adapt virtual technology to business processes. | Tutar & Guler, 2022 |

Through the definitions we found a great diversity of aspects that are considered for its characterization; therefore, some researchers refer that digital leadership is affected by many theories and models as well as many leadership understandings (Oktaysoy et al., 2022). Other definitions point to digital leadership as a way for organizations to respond to the challenges of

digital transformation and achieve their objectives and competitive advantages, contributing to the success of their business strategy. Empirical findings have shown that digital leadership combines transformational leadership with technology (De Waal & Heijtel, 2016).

Digital leadership is seen as an element that positively affects organizational culture and contributes directly and indirectly to organizational performance (Shin et al., 2023), have a positive impact on innovation (Niu et al., 2022; Wang et al., 2022) and organizational sustainability (Niu et al., 2022), in which organizational culture plays an essential role in the digital transformation process.

Finally, other definitions characterize the digital leadership style or strategy by identifying the essential competences and behaviors of the digital leader - flexibility, creativity and innovation, knowledge about digital technologies, open to continuous learning, and ability to influence and motivate for the integration of digitalization into the business strategy. Unlike transformational and transactional leadership, digital leadership can be acquired and must be maintained and understood as a third variant (Bach & Sulíková, 2021). According to researchers, a changed business environment forces companies to react, namely with a new way of leading - digital leadership. Digital leader needs to have a vision with a clear purpose, a strong ability to anticipate transformation processes and take risks. A traditional or no leadership can result in some risks (Contreras et al., 2020), which can be solved with the development of digital leadership.

The importance of digital leadership lies in achieving the integration between using information technology at the same time with using human resources in creative and new ways (Hanandeh et al., 2023). Through digitization in companies, access to information is facilitated, new forms of communication are created, changes in leadership training, decision-making based on the intelligent analysis of big data and new leadership functions are created due to the virtual teams.

In the context of artificial intelligence in business management, the term ‘artificial leadership’ appears for the first time as an added development of digital leadership. “Artificial Leadership” (or AI-Leadership) can be summarized as a leadership behavior that integrates the inner influences and patterns of the algorithms (by a machine) and transfers them into a data-driven leadership style (Kollmann et al., 2023). Conscious choices need to be made about what role humans are to play in the future of leadership (Quaquebeke & Gerpott, 2023), not only leadership research but also leadership education and development.

Challenges of Leading in Virtual Environments

Organizations need to move their businesses to the virtual environment to reduce costs, eliminate being physically tied to a place, benefit from a qualified workforce, and respond quickly to expectations (Tutar & Guler, 2022). The role of leadership is crucial in adapting to the conditions of the digital age and the virtual organizational structure. To integrate the competences of the digital age with the digitized world requires a digital leadership style because traditional (face-to-face) leadership is not as effective (Bouziri et al., 2020; Lambert et al., 2020). At the beginning of the twentieth century with the growth of virtual work environments, some researchers already presented the concept of e-leadership (Avolio et al., 2000; Avolio & Kahai, 2003; Van Wart et al., 2019). The equivalent of leaders in face-to-face

leadership is the concept of virtual leaders - leaders who direct people remotely to do work to achieve organizational goals (Fahmi et al., 2020).

COVID-19 pandemic has accelerated the process of workplace transformation. Organizations have enabled more employees to work from anywhere, reinforcing the phenomenon of the virtual or digital workplace, allowing them to do their work by connecting, communicating, and collaborating with other employees. To understand which leadership styles were best adapted to virtual environments, some studies pointed out transformational leadership (Figueiredo et al., 2022; Purvanova & Bono, 2009) and authentic leadership (Daraba et al., 2021) as predominant in virtual environments.

However, the virtual organizational structure emerged partially or entirely with digital technologies. Virtual organizations are structured in different places where employees do not gather in a particular place, participate in certain stages of the production of a product or service, and constantly communicate in digital environments (Tutar & Guler, 2022). The dynamic capabilities of organizations play an important role in enabling workplace transformation (Chatterjee et al., 2023), particularly in small and medium-sized enterprises (Putra et al., 2023). There is thus a clear interest among researchers, practitioners, academics and policy makers to understand the role of dynamic capability of organizations in the digital transformation of the workplace, as well as the role of digital leadership in improving organizational performance.

Leadership is vital to the success of organizations; however, it is essential to understand its role in the performance of employees and teams working in virtual environments (Dirani et al., 2020; Li et al., 2020), as the organizational culture itself must be more flexible and based on greater support and support from leaders (Figueiredo et al., 2022). Digital leaders have a large impact because new skill sets are needed to effectively lead sustainable organizations in a dynamic digital environment (Shin et al., 2023). The main challenge for leading virtual environments is to develop digital leaders who are skilled in digital technologies and promote a digital transformation strategy, while also having the skills to effectively manage their virtual teams.

Virtual Team Management: Leadership Strategies

The relevance of studying leadership in remote or virtual teams has been reinforced due to the pandemic and the need to prepare work environments for digital transformation (Trenerry et al., 2021). As technology has developed, concerns have been raised about the potential for technology to change existing knowledge about leadership in situations where electronic communication prevailed within virtual teams. The first results indicate that transformational and participative leadership behaviors show high importance in teams that work and relate to their leaders through technological means (Avolio & Kahai, 2002; Van Wart et al., 2019). A recent study shows that organizational culture can mediate the influence of digital leadership and transformational leadership on performance (Silalahi et al., 2023). If leaders lead in a transformational manner instead, possibly even together with other leaders at the same time, the leadership of virtual teams can be successful (Zeuge et al., 2020).

Regarding the competences of the leader to manage virtual teams, there are some that are referred to as the most important - e-communication, e-social skills, e-team building, e-change management, e-technology skills, and e-trustworthiness (Van Wart et al., 2019). Another study shows that task- and relationship-oriented leadership behavior is needed to maintain employee

performance in a virtual environment (Bartsch et al., 2021). Other researchers also present two competencies as essential in these work environments: –“(1) leaders need good communication skills to share true information with empathy and optimism and (2) leaders need to be thoughtful and capable to handle change in uncertain situations ethically” (Chen & Sriphon, 2021). Due to the distance between leaders and followers and technology itself, emotional competencies are also a critical factor in organizational performance (Baporikar, 2020).

With COVID-19, concerns about employee well-being have increased (Dewi & Sjabadhyni, 2021; Mikus et al., 2021; Onesti, 2023; Teetzen et al., 2022) and virtual workplaces emerge to balance personal and professional life. Using a health-oriented leadership approach, researchers reinforce that leaders and employees should keep regular face-to-face contact also when mainly working from home (Klebe & Felfe, 2023). The results of the studies show positive relationships between team care and health, engagement, and job satisfaction. Digital leadership has a partial effect in determining individuals’ psychological well-being (Dewi & Sjabadhyni, 2021).

Overall, digital culture and employees’ digital capabilities partially mediate the relationship between digital leadership and organizational sustainability (Shin et al., 2023). In this sense, the role of digital leadership is not only crucial for team performance but also for sustainable organizational performance (Chen & Sriphon, 2021; Mollah et al., 2023; Shin et al., 2023).

Digital Leadership Development

Developing digital leaders is of paramount importance to ensure companies succeed in digital transformation initiatives, but we need better mechanisms for leaders to develop the skills that build the trust essential to digital transformation (Abbu, Mugge, & Gudergan, 2022). In this context, we need to assess the core competencies of digital leadership to help companies develop it to improve the organizational capability essential for successful digital transformation.

One of the attempts to present the competencies associated with digital leadership arises from the definition itself by distinguishing the aspects related to character and competence (Abbu et al., 2020). In this assumption, researchers have identified 15 specific skills that build trust and influence successful digital leaders’ performance (Abbu, Mugge, & Gudergan, 2022). Some authors present a set of digital leadership capabilities to develop the capacity of organizations to innovate (Brunner et al., 2023) and adopt new technologies (Brunner et al., 2021).

Munsamy recently developed a digital leadership competency framework that forms the present study’s foundation. A digital framework consists of six main themes: (1) embracing digital, (2) leadership facilitating the digital drive, (3) digital adaptiveness and resilience, (4) cultivating a digital culture, (5) digital skills and (6) digital competitiveness intelligence (Munsamy et al., 2023).

Finally, in addition to identifying digital competencies, there is also a concern with fostering digital learning (Gubbins et al., 2023). Only by investing in learning and development will leaders and team members be able to embrace the challenges of the digital age.

Virtual Performance: Challenges and Opportunities

Faced with the uncertainty and complexity that characterize the current labor market, organizations feel pressured to become more competitive (Jain, 2019). To face this challenge, it is necessary to hire the best professionals and understand whether they meet organizational needs and perform their tasks effectively (Nguyen et al., 2020). However, changes in working models, particularly those related to carrying out work activities remotely, not only require appropriate technology but also self-discipline (Thulin et al., 2019). In a virtual environment, it can be more difficult to manage time, and the tendency to procrastinate is much greater (Yao et al., 2023). In this context, Asmini et al., (2023) report that the evaluation of virtual performance is a task with many challenges, including the instability of the internet, which can prevent the effective accomplishment of tasks and impair the desired performance.

With the increase in online activities, the amount of personal and business data available on the internet has also grown exponentially, which has contributed to intensifying concerns about the security of the information made available (Zhen et al., 2022). Enhancing the security of work platforms and personal devices has largely raised the organization's costs. All internal information is confidential, and data related to employee performance is no exception, which may imply some constraints on how this information is transmitted by both the appraisee and the appraiser (Evangelakos, 2020). Figueiredo et al., (2021) add that the performance evaluation of employees in remote work is fundamental because it is necessary to ensure that tasks are being performed according to pre-established standards. This process helps the organization understand how each employee is working and how they can improve their performance (Johnson et al., 2023).

Notwithstanding the challenges mentioned, virtual performance assessment also has positive points because, as there are no physical barriers, people can develop or acquire skills from anywhere (Kim et al., 2021). Online learning significantly decreases the costs related to training as it dispenses with the costs related to renting physical spaces and traveling (Alfonso et al., 2020). In addition, performance can be assessed anytime and anywhere, which is an advantage for both the assessor and the assessee. Assessments can be easily scheduled and rescheduled according to the needs and availability of the participants (Aguinis & Burgi-Tian, 2021).

By eliminating physical travel, it saves time and resources (Figueiredo et al., 2021), and as virtual performance is usually documented digitally, it makes it easier to track the worker and their progress over time (Tziner & Rabenu, 2021).

Virtual Work Environments

Virtual work environments have gained great prominence in recent years, mainly due to the pandemic caused by the SARS-CoV-2 virus, responsible for COVID-19. Faced with this situation, many people started working from home, particularly those whose duties and availability of equipment allowed them to perform most of their tasks (Thulin et al., 2019). According to Brussevich et al., (2020), organizations have been forced to adopt remote work on a large scale in order to survive. Nevertheless, nowadays remote work remains a reality, as there is evidence (e.g., De Vries et al., 2018; Figueiredo et al., 2021; Hau & Todescat, 2018) that virtual work environments have numerous advantages.

On the one hand, tasks can be carried out from anywhere, which allows the employee to balance personal and professional life, which contributes to increasing their satisfaction levels and consequently their performance (Gálvez et al., 2020). Organizations, in turn, can reduce infrastructure-related costs (e.g., office rental, furniture purchase expenses, decreased electricity consumption; Ferreira et al., 2021). In addition, virtual workplaces allow hiring talent from anywhere in the world, as there are no geographical barriers (Bao et al., 2021).

Despite the advantages highlighted, virtual work environments also have their limitations because the lack of face-to-face contact can lead to misunderstandings and hinder coordination between team members and between team members and their direct manager. In addition, working virtually fosters social isolation, which can negatively affect workers' mental health (Vilarinho et al., 2021). It is also found that without the structure of a traditional office, some workers may find it difficult to manage their time and maintain productivity. As such, Kalra et al., (2021) argue that to overcome these challenges, organizations should implement strategies that create a strong virtual work culture and promote training on time management and work-life-balance.

Conflict Management and Problem Solving in Virtual Environments

Conflict management is a crucial aspect in any organization, whether in a physical or virtual context, because arguments and disagreements arise in any work environment, whether between peers, between the manager and his team members, or even between different teams or departments (Paresashvili et al., 2021).

In virtual environments, conflict management and problem solving are more challenging because the lack of face-to-face interaction often generates several misunderstandings (Gupta et al., 2023). However, there are strategies that can be adopted to effectively deal with these challenges, namely: (a) clear and objective communication that avoids ambiguous messages (Ramirez-Marin et al., 2019); (b) ensuring that all parties involved understand the information transmitted in the same way (Normore et al., 2019); (c) using tools that allow real-time interaction (e.g., videoconferences, chats, online platforms; Nikbakhsh, 2022); (d) establishing norms and rules of interaction (e.g., working hours, respecting rest time, meeting deadlines; Rahim, 2023); (e) holding regular meetings to jointly review processes, discuss problems and seek solutions (Kahlow et al., 2020); and (f) empathy and consideration for the needs and expectations of each team member (Klimecki, 2019).

When conflicts occur, it is important to resolve them in a fair and transparent way, so it is essential to listen to all parties and seek to understand the problem. Only when working together can a solution be found that is satisfactory to all (Durai & Thomas, 2022). Problem solving, whether in a physical or virtual environment, is the responsibility of everyone working in the organization, and everyone must develop skills that contribute to finding the best solutions (Nemteanu et al., 2021).

According to Newman and Ford (2021), there are five key steps to solving problems effectively: (a) identify the problem and analyze the situation carefully, because one situation may involve several problems; (b) the team leader should schedule an online meeting with each of the parties involved to define the problem more precisely, separating facts from opinions; (c) define the problem in specific terms and gather all the information needed to solve it; (d) brainstorm to identify possible solutions and then evaluate them, identifying the positive and

negative consequences of each; and (e) after the evaluation process is completed, the most advantageous solution (win-win) for all involved is selected.

At the end of the five steps, an action plan to implement the chosen solution (e.g., timeline, feedback channels) and its monitoring should be developed. It is important to reinforce that problem solving involves the contribution of all team members (Friedrich et al., 2019).

Virtual Performance Assessment and Monitoring

The evaluation and monitoring of performance in virtual environments is fundamental to ensuring the productivity and efficiency of remote work (Brown et al., 2019). Therefore, it is necessary to set clear and objective goals that can be measured, both at the individual level as well as at the team and organization level. Regular performance reviews are essential to identify aspects for improvement and provide feedback to team members (Madureira et al., 2021). In a virtual environment, it is more difficult to assess the levels of commitment and well-being of the team, so it is essential to meet individually with each member and then with the whole team to assess the group spirit and satisfaction with the work being done (Taboroši et al., 2020).

As with face-to-face, performance monitoring in virtual environments must balance the need to collect information with respect for people's privacy (Arroyo-Abad, 2021). It should be a transparent process and workers should be aware of how and why their performance is being monitored (Vuong et al., 2020).

Performance appraisal in a virtual context is a dynamic process that starts with the definition of the technical and behavioral competencies and the objectives that must be achieved during the previously defined period (Kassar, 2023). Nitika and Arora (2020) add that many virtual appraisal platforms allow the creation of forms based on specific data and metrics, which are usually developed by the organization and sent to employees and those responsible for their evaluation (e.g., self-assessment, direct manager, peers, subordinates) so that they can be answered in a timely manner. The use of technology can increase employee engagement in the appraisal process because the collected data is quickly analyzed and feedback is provided in real time. As a result, employees become aware of their strengths and areas for improvement (Johnson et al., 2023). When the appraisal process is well executed, people perceive that their appraisal is fair and tend to increase their effort towards achieving the organization's goals (Singh & Singh, 2018).

However, it is important to remember that virtual performance appraisal also presents challenges, namely the need to ensure that the technology is accessible and easy to use for all employees and that the data collected during the appraisal process is confidential (Thulin et al., 2019).

Performance Indicators for Virtual Teams

Evaluating the performance of virtual teams is somewhat more complex than when it is done in person (Newman & Ford, 2021). Nevertheless, there are several indicators that can be used to monitor the productivity and effectiveness of virtual teams, namely (Gheni et al., 2019): (a) the number of tasks completed; (b) the number of goals achieved; (c) the fulfillment of the

stipulated deadlines; (d) the quality of the work done; and (e) the collaboration between team members (e.g., response time to emails, holding virtual meetings).

The assessment of employee satisfaction and commitment levels is crucial, which can be measured through individual surveys or virtually conducted group activities. This is due to the fact that a team with high levels of commitment typically exhibits greater productivity and effectiveness (Taboroši et al., 2020). The ability to innovate and implement new ideas can also be an important indicator of team performance because it suggests that everyone is working towards a common goal to find a win-win solution (Morrison-Smith & Ruiz, 2020).

It is important to underscore that team performance is a complex, multi-dimensional entity that cannot be accurately gauged by a singular metric. Therefore, several indicators should be combined to make the assessment of staff performance more complete, fair, and transparent (Vuong et al., 2020). Sutherland and Janene-Nelson (2020) add that customer feedback is also a crucial performance indicator and can be measured through retention rates and satisfaction levels.

Therefore, it is crucial to invest in technical (e.g., information and communication technologies, digital platforms) and behavioral (e.g., negotiation, conflict management) training actions and to monitor the results over time to see if they contribute to improving workers' performance and productivity (Ismael et al., 2021).

Conclusion

Digital transformation has revolutionized the way organizations operate, making them more agile, adaptable, and customer-oriented. However, this transformation is not just about adopting technology. It requires leaders capable of guiding their teams down unexplored digital paths. Leadership in virtual environments requires building a relationship of trust, effective communication, and engagement since face-to-face interaction is limited.

Managing teams remotely requires an in-depth understanding of the individual needs of team members and the challenges they face in the virtual environment, so adaptability and continuous learning are essential. Virtual work environments offer flexibility and can increase productivity, but they also bring challenges, such as the possibility of isolation, the difficulty of maintaining a work-life balance, and the risk of conflicts arising. Without face-to-face interaction, conflicts can escalate quickly, which is why leaders have the important role of mediating disagreements and resolving problems in order to find a win-win solution.

In view of the above, it can be seen that although digital leadership and virtual performance present a number of challenges, they also offer many opportunities for growth for organizations that are willing to adapt to change and innovate in order to achieve a competitive edge over the competition.

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