FACTORS THAT LIMIT THE ADOPTION OF TELEWORKING IN THE STRATEGIC IMPLEMENTATION OF PROJECTS: CASE STUDY TELECOMMUNICATIONS SECTOR DUITAMA BOYACÁ - COLOMBIA

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ABSTRACT

This study analyzes the factors limiting the adoption of teleworking in the strategic execution of projects within telecommunications companies in Duitama, Boyacá (Colombia). Using a qualitative case study approach with interviews and surveys applied to 20 employees, significant barriers were identified at three levels: organizational (lack of clear policies and limited technological resources), project management (deficiencies in communication, coordination, and performance evaluation), and individual (low autonomy, insufficient training, and poor time management skills). Despite these challenges, teleworking is perceived as an opportunity to improve productivity, quality of life, and the achievement of organizational goals. Recommendations include strengthening organizational culture toward teleworking, investing in technological infrastructure, implementing clear performance indicators, and promoting continuous training programs. The findings provide a reference framework for telework implementation in the telecommunications sector and offer insights for further research across other industries.

1. INTRODUCTION

Although telework has gained notoriety in recent years, it is not a recent modality, since its implementation began in the 1970s in developed countries, where, according to analysis of results, it has had significant achievements and impacts. However, since its inception, there are still pending challenges, such as standardization of policies, specific legislation and productivity measurement (Simeli et al., 2023).

The COVID-19 pandemic forced companies to adopt telework as a model to ensure operational continuity and health protection of their employees, thus preventing the spread of the virus. However, following the end of the pandemic, many organizations face challenges related to the return to face-to-face work, which has led to the adoption of various work models (Carillo et al., 2020).

In the current labor landscape, characterized by the continuous evolution of organizational dynamics and the growing influence of information technologies, telework is presented as a concept that transforms the traditional notion of work (Nakrošienė et al., 2019). In a context where flexibility and resource optimization are fundamental, this work modality transcends conventional boundaries, promoting an innovative approach in the management and execution of projects in organizations of the telecommunications sector as is the case of the municipality of Duitama, Boyacá, Colombia.

At this juncture of transformation, the adoption of telework is configured not only as an alternative of labor flexibility for employees, but also as a strategic response to the changing demands of the business environment (Contreras, et al., 2020). According to Gohoungodji et al., (2022), this modality transcends the category of trend, offering a vast horizon of opportunities for the optimization of processes, agility in decision-making and, particularly, the monitoring and fulfillment of projects. Through the effective implementation of telework, organizations in the telecommunications sector can improve their management capacity and achieve their goals more effectively and efficiently.

The need to reflect on the adoption of telework becomes crucial, especially in a sector as dynamic and technologically advanced as telecommunications. The challenges and opportunities in this industry demand a re-evaluation of traditional work practices and the exploration of new modalities that allow an agile and successful adaptation to a constantly changing environment (Silva et al., 2019). The International Labor Organization (ILO) reported a 4.9% increase in hourly productivity during 2020 in contexts where telework was implemented (ILO, 2021). It is therefore essential to consider how telework can influence synergy between teams, individual and collective productivity, and alignment with the strategic objectives of organizations.

From this perspective, the study advanced goes into a detailed and reflective analysis on the urgent need to adopt telework as an opportunity for labor flexibility and a strategy to optimize the management and implementation of projects in the telecommunications sector in Duitama, Boyacá. Through a critical and argumentative approach, the benefits that this modality can offer in terms of operational efficiency, job satisfaction, organizational adaptability and fulfillment of business objectives are explored. By examining how telework is intertwined with the changing demands of the world of work and the particularities of the telecommunications sector, this research seeks to provide a solid conceptual framework that contributes to a comprehensive understanding of this work modality and its transformative potential in local organizations.

2. LITERATURE REVIEW

In this research, the literature review focuses on identifying emerging work arrangements, understanding how telework has been implemented in the telecommunications industry and its influence on project management. In addition, by examining the limiting factors in the adoption of telework, the review provides a critical perspective that contributes to the formulation of strategies to mitigate the challenges associated with this work modality. By exploring the key concepts related to telework and its impact on project management, the basis is laid for a detailed analysis that seeks not only to understand the phenomena observed, but also to offer recommendations that can guide strategic decision making in the telecommunications sector.

2.1. Modes of Work

Currently, three main work modalities are recognized according to the place of execution: remote, telework and hybrid. Previously, a fully face-to-face work approach prevailed, in which the employee physically attended his or her place of work for the entirety of his or her working hours, in accordance with the stipulated contract.

The impact of COVID-19 has been profoundly significant in the telecommunications sector, as well as in other economic sectors in Colombia, Latin America and globally (Bonet et al., 2020). In the labor

sphere, and specifically in the telecommunications sector, various companies and institutions have adopted remote, telework and hybrid work modalities. This last modality, hybrid work, combines elements of face-to-face and telework, allowing greater flexibility in the execution of work tasks.

2.1.1. Remote Work

This work model allows the employee to perform his functions from any location, without the need to be physically present in the facilities of the company with which he is contracted. In the Colombian legal environment, regulation 2121 has been established by Decree 55 of 2022, which clearly defines the distinction between telecommuting and remote work. The Decree stipulates that remote work requires a voluntary agreement between the employee and the employer, providing the guarantees of an employment contract that enables the use of information and communication technologies to carry out tasks completely remotely. This modality represents a flexibility that allows working from any location, as long as a stable internet connection is available. It should be noted that employees working remotely are not required to reside near the company's main headquarters; however, they collaborate closely with other staff members of the organization (Díaz et al., 2021).

2.1.2. Teleworking

In the publication Libro blanco: El ABC del teletrabajo en Colombia de la Función Pública (2021), telework is defined as "a labor modality that involves the performance of paid tasks or the provision of services to third parties, making use of information and communication technologies (ICT) to establish communication between the worker and the company, without requiring the physical presence of the employee in a specific work location". A teleworker typically works outside the company's premises, but is distinguished from a remote worker in the sense that, under certain circumstances, the company may request his or her physical presence in the office. In addition, a teleworker is expected to be geographically close to the company's main headquarters, a characteristic that differentiates it from remote work, which does not impose this restriction (De Sousa Figueira et al., 2022). It is important to note that teleworking is subdivided into different modalities according to their particularities and contracting modalities.

- Self-employed

In this modality, individuals use their home, a remote office, a coworking space, a warehouse or other suitable environment to perform their work. Workers sporadically attend the company's headquarters.

- Mobile

Employees do not have a fixed location to carry out their tasks, as the only requirement is the use of information and communication technologies (ICT) on a mobile device. This allows them to move between different locations and continue with their work responsibilities.

- Supplementary

Employees work from home two or three days a week and the rest from the company's premises, according to previously established terms. However, the employer retains the right to modify this modality and require the employee to return to work at any time.

According to the International Labor Organization (ILO, 2021), teleworking has allowed companies to maintain their economic and operational activity, while enabling employees to keep their jobs.

- Hybrid work

Hybrid work is characterized by the alternation between the company's main office and external locations, such as home, other subsidiaries or coworking spaces. Working days are previously determined by the employer, based on organizational needs and using various schemes, such as 2x3, 3x2, 4x1, 1x4, among others, or according to the company's specific guidelines (Función Pública, 2021).

This modality offers substantial advantages for organizations, including a reduction in the amount of work space required, more effective occupancy control and a decrease in operating costs. In addition, it allows employees to spend more time with their families, attend to domestic issues and, consequently, improve their quality of life; in other words, hybrid work fosters emotional well-being and contributes to work-life balance. Despite the decline in the pandemic, the adoption of telecommuting and hybrid work models has increased in organizations. Although COVID-19 represented a health crisis and loss of life, it also catalyzed the development and implementation of new work models that have had positive impacts on workers' economics, as well as productivity and quality of life (Diaz et al., 2021). It is essential to analyze the impact of adopting these models. As an example, a study by Stanford University in 2015 revealed that the implementation of telework increased employee efficiency. Among the determining factors, the reduction of

interruptions during working hours and distractions are mentioned (Bonet, 2020). However, despite the benefits of teleworking, negative aspects must also be considered, such as worker isolation and possible reduction in salary remuneration (Rossi and Laren, 2022). In Colombia, according to the Ministry of Labor (2021), hybrid work models are considered important and effective at the socioeconomic and business level, although negative side effects have also been observed that affect the social and emotional life of workers due to changes in their communication and socialization habits. However, these aspects are not considered sufficient to prohibit this model. Additionally, there is a lack of regulation in different sectors, which generates deficiencies in the control and supervision of telework. According to Carrizosa (2022), companies continue to search for strategies to establish effective measurement procedures for telework. This regulatory gap affects the ability of organizations to implement adequate monitoring and evaluate the performance of telecommuting employees. Despite the challenges, the implementation of telework and hybrid work has had a positive impact on companies and employees, improving efficiency, productivity, the ability to recruit qualified foreign talent, and reducing environmental impact, among other aspects.

2.2. Telework in the Telecommunications Sector

Telework has experienced a significant boom in recent decades, transforming the way organizations operate and how employees perform their jobs (Allen et al., 2015). In particular, the telecommunications sector, characterized by its high dependence on information and communication technologies, has witnessed an increasing adoption of remote work models. This trend has been influenced by the intersection of factors such as globalization, the digital revolution, and, more recently, the COVID-19 pandemic, which has accelerated the transition to telecommuting, the adoption of telecommuting models in this sector presents unique opportunities and challenges that affect both strategic project execution and employee work dynamics (Нагибина et al., 2019).

2.3. Impact on Productivity and Efficiency

Numerous studies have addressed the relationship between telework and employee productivity. Authors such as Bloom et al. (2015) have noted that, when implemented effectively, telework can increase efficiency by reducing the interruptions and distractions inherent in traditional office environments. This increased productivity can translate into more effective strategic execution of projects in the telecommunications sector, where speed and accuracy are crucial to remain competitive.

## 2.4. Impact on Flexibility and Work-Life Balance

Telecommuting also provides greater flexibility in time management and work-life balance. Authors such as Allen et al. (2013) have highlighted how this flexibility can increase employee satisfaction and reduce job burnout. In the telecommunications sector, where demands can vary dramatically by location and project, this flexibility can be essential to adapt to changing situations and improve workers' quality of life.

2.5. Challenges and Considerations in Telework Adoption

However, the adoption of telework in the telecommunications sector is not without its challenges. Authors such as Golden et al. (2019) have highlighted concerns related to effective communication, team collaboration, and information security in remote work environments. In addition, aspects such as employee isolation and differences in working conditions between those who work from the office and those who work from home must be considered. In general terms, the adoption of telework models in the telecommunications sector, particularly in the municipality of Duitama, Boyacá, poses a series of challenges and opportunities that affect the strategic execution of projects and the quality of life of employees.

2.6. Limiting Factors in Telework Adoption

Despite the obvious benefits of telework, its adoption in organizations, especially in the telecommunications sector, has faced a number of barriers and challenges. These limiting factors can range from technological issues to cultural and organizational concerns (See Figure 1). Understanding these barriers is critical to addressing them and promoting a successful transition to telework at the strategic level of project delivery.
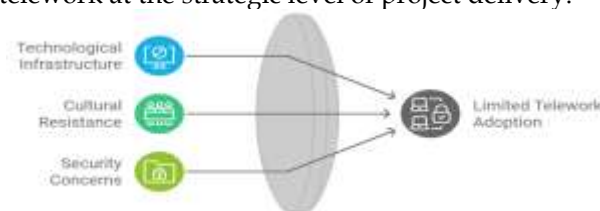
Figure 1: Barriers to Telework Adoption
Note: The figure illustrates the main factors limiting the adoption of teleworking.

2.6.1. Technological and Infrastructure Factors

One of the most obvious factors limiting telework adoption is the availability and quality of technological infrastructure. Authors such as Tavares (2017) have highlighted how the lack of reliable high-speed Internet access and the lack of adequate collaborative tools can hinder the effective implementation of telework. In the telecommunications sector, where connectivity is essential, these limitations can be especially problematic.

2.6.2. Cultural and Organizational Resistance

Organizational culture and structure can also act as significant barriers to telework adoption. Chua et al. (2018) has noted that cultural resistance on the part of employees and lack of trust in management can create reluctance toward telework. In hierarchical organizations such as those in the telecommunications industry, where direct supervision is common, cultural change can be particularly challenging.

2.6.3. Information Security and Compliance

Information security is a crucial concern in the telecommunications sector, and the adoption of telework poses additional challenges in this regard. The Dameri et al. (2018) study has noted the importance of ensuring sensitive data protection and regulatory compliance in a remote work environment. These considerations may limit the adoption of telework in highly regulated organizations.

In itself, this research has elucidated that the adoption of telework in the telecommunications sector in Duitama, Boyacá, is hampered by a number of factors ranging from technological limitations to cultural resistance and security concerns.

2.7. Materials and Methods

The present study is conducted using a qualitative approach, as noted by Hernández et al. (2014). This approach focuses on analyzing and understanding the opinions of the study participants. To achieve this objective, qualitative techniques such as interviews, focus groups, descriptions and observations are employed.

These techniques are used to interpret the perspectives and views of the informants, which include employees, managers and administrative staff in the telecommunications sector, in relation to labor flexibilization and the benefits of teleworking.

In terms of the scope of the research, a descriptive approach is adopted. This approach seeks to collect data that are based on what the informants have expressed. Finally, the research design is based on the case study method. As Martinez (2014) highlights, this approach allows us to delve into contemporary phenomena in the environment and explore them from diverse perspectives. This aligns with the purpose of the current study, which seeks to gather information from different points of view of the participants.

2.8. Unit of Study

The population under study in this research is made up of employees in the telecommunications sector in the municipality of Duitama, located in the department of Boyacá, Colombia. This population consists of a total of 60 workers. It is important to note that, for the purposes of this study, a purposive sample of 20 employees from this population was chosen. In the selection process of the target population, a convenience sampling method has been used, in which specific selection criteria have been established, as detailed in Table 1.

Table 1: Criteria for Sample Selection (Convenience Sampling).

Sample selection	Participant selection characteristics
For the present research, a purposive sample of 20 employees belonging to companies in the telecommunications sector in the municipality of Duitama, Boyacá, Colombia, was taken as the study unit.	The criteria assumed for the selection process are the following: - Employees who have a permanent job in the organizations. - Employees whose functions allow them to work under the modality of teleworking. - Workers who due to health issues or disability work in teleworking.

2.9. Study Categories

Since this study is characterized as qualitative in nature, categories, subcategories, dimensions and specific criteria have been defined to facilitate a detailed interpretation of the object of study. These aspects are more fully detailed in Table 2.

Table 2: Operationalization Study Categories.

CATEGORY	SUBCATEGORY	DIMENSION	INDICATOR
Organizational Factors	Organizational Culture	Acceptance and support of the teleworking culture.	Management perception of teleworking. Existence of telework policies.

	Resources and Technology	Access to teleworking tools and technology.	Availability of equipment and software for teleworking. Access to reliable internet connections.
Project Management Factors	Communication and Coordination	Effective communication between teams and teleworkers.	Communication tools used for projects. Coordination of activities among team members.
	Monitoring and Evaluation	Measuring project progress and performance.	Project tracking tools used. Evaluation of productivity and quality of remote work.
Individual and Human Resource Factors	Capacity and Autonomy	Ability of employees to work autonomously.	Time management and self-regulation skills. Level of autonomy and empowerment of teleworkers.
	Training and Support	Access to training and support for teleworking.	Availability of telework training programs. Existence of a support system for teleworkers.

The purpose of this study focuses on investigating the causes that influence the adoption of telework in companies in the telecommunications sector as a strategy for project management and the achievement of organizational goals. The categories identified are detailed below:

Organizational Factors: in this category, the disposition of employees in the telecommunications sector towards the telework culture is analyzed and it is evaluated whether the companies provide the necessary resources to facilitate the implementation of telework. To fulfill this purpose, techniques such as opinion surveys were used to interpret the perceptions, arguments and opinions of the participants.

Project Management Factors: The project management category aims to establish criteria that foster effective communication between members of the organization, focusing on the coordination of activities and collaboration between different areas. In addition, it seeks to define criteria for the evaluation and follow-up of project performance, taking into account productivity and quality of remote work.

Individual and Human Resource Factors: Finally, through the category of individual and human resource factors, we sought to understand each individual's ability to work autonomously and the availability of training programs. A detailed exploration of time management skills, autonomy and empowerment of employees in meeting organizational goals was carried out.

It is important to note that these categories and dimensions have been defined for a deeper understanding of the factors that influence the adoption of telework in the context of telecommunications companies in the municipality of Duitama, Boyacá - Colombia.

2.10. Stages of the Research Process

The research is structured in three phases that are closely related to the objectives of the study.

o First Phase: Diagnostic Analysis: This stage focused on the collection and categorization of the information necessary to identify the causes that influence the adoption of teleworking. The identification of these factors constitutes the fundamental basis of the study, allowing a structured analysis of the problem to be addressed.

o Second Phase: Planning: The planning phase aims to define an improvement plan that includes guidelines and guidelines for the implementation of telework as a strategy to meet organizational projects and goals. This is presented as an opportunity to foster labor flexibility and increase commitment and self-management in the assigned tasks.

o Third Phase: Reflection: The third stage of this research consists of a reflection on the adoption of telework in organizations in the telecommunications sector, focusing on its role as a strategic tool to improve project management. This reflection is oriented to analyze how teleworking can facilitate the diversification of work modalities, allowing greater flexibility and efficiency in the processes of formulation, monitoring, control and closure of projects. In addition, it considers the need for the parties involved to be available and coordinated, ensuring a more agile and dynamic management of projects, especially in

an environment of constant organizational changes and challenges.

3. RESULTS

The results found during the development of the research process in this study are related to the central objective and each of the phases of the methodological design previously established.

Results of the diagnostic phase

During this phase the categories of study formulated for the collection and categorization of the information necessary to identify the causes that influence the adoption of telework in workers of the telecommunications sector are analyzed.

3.1. Category Organizational Factors

The results obtained from the research process allow to determine that one of the main barriers in the adoption of teleworking has to do with organizational factors. One of the limitations is the lack of acceptance and support to the culture of this modality of work, due to the perception of the management regarding the self-management of work and time of employees. Additionally, there is a lack of knowledge of the state policies that regulate teleworking.

On the other hand, it was found that the availability of the necessary resources and technology such as equipment, software and appropriate spaces to work at home is limited. Although organizations and workers recognize the importance of having all the elements and adequate spaces to promote proper work performance, the insufficiency of these basic requirements has hindered the adoption of teleworking in companies in the sector under study.

The informants have also highlighted the importance of having access to reliable internet connections and that the organizations assume all or part of the cost of the service, as they consider it is essential for the development of their work activities.

In general, the opinions of the informants of the telecommunications sector surveyed in the municipality of Duitama, Boyacá, indicate that organizational factors such as perception, support for the culture of teleworking, access to basic technological elements and adequate spaces, limit and directly impact the adoption of teleworking. These challenges represent the starting point to intervene, to achieve the implementation of teleworking as an opportunity for the fulfillment of organizational goals.

3.2. Project Management Factors Category

The workers under study indicate that, a point to take into account is the effective communication and coordination between teams and teleworkers. They highlight the need to have adequate communication tools and channels for the coordination of activities between team members in the implementation and management of projects.

From the perspective of the informants, it is crucial the monitoring and evaluation of the assigned projects taking into account the progress and performance of these, evaluating the productivity and quality of the work performed during teleworking. The findings indicate that workers feel more productive at work developing their activities remotely, since they reduce breaks, do not spend time and energy traveling to the office.

In addition, workers feel that the evaluation and measurement criteria are not focused on performance and fulfillment of goals, especially when it comes to work that can be performed both in person and from telework.

As a result of this category, it can be inferred the existence of barriers in effective communication between members of the organization and inadequate systems of measurement and evaluation related to the progress of projects. These difficulties should be addressed and overcome by developing strategies that allow the adoption of teleworking as a potential alternative to significantly impact the management and implementation of projects.

3.3. Category Individual and Human Resources Factors

Regarding the category individual factors and human resources, the study reveals that one of the challenges for the adoption of teleworking is the capacity and autonomy of employees. They highlight that some employees do not take into account the importance of time management and self-regulation to develop the assigned tasks. The informants agree that it is required that each employee has a certain level of empowerment and commitment to the organization in order to achieve the results and fulfillment of established goals.

On the other hand, the findings promote training and support for teleworking. Employees indicate that they do not have training programs and training on teleworking, so they do not know the aspects to be taken into account for the adoption of this modality. Additionally, they report that at the moment there is no support system for teleworkers, to provide advice on any problems that may arise during the development of their activities.

In general terms, the remainders show that the

individual barriers are crucial challenges that must be intervened to successfully adopt teleworking. Overcoming each of the challenges such as time management skills, self-regulation and training for employees, could positively impact organizations in improving their processes and fulfillment of their projects.

3.4. Results of the Planning Stage

Taking into account the results of the diagnostic stage, it is essential to raise a series of strategic actions that allow employees to adopt teleworking for the development of their activities. It is essential that both employees and companies in the telecommunications sector in the municipality of Duitama, Boyacá, are willing to explore new ways of working as an opportunity for the fulfillment of organizational objectives from the labor flexibility.

Factors have been identified that limit the implementation of teleworking from the perception exposed by workers in the sector, from the study guidelines and guidelines aimed at supporting the adoption of the modality of remote work are raised. The approach of these strategies focuses on the use of new work trends and ICT, as a tool for improving the quality of life of the employee and encourage commitment and empowerment in the development of their work. These guidelines set out below, guide the way in which they can be applied in companies in the telecommunications sector in the municipality of Duitama, Boyacá:

- **Develop programs of organizational culture**: Establish programs for organizational culture focused on encouraging and supporting the culture of teleworking. The new trends in the modalities of work, encourages the application of teleworking in companies and seeks to improve the perception that is held about this modality, so it has advanced in policies that regulate teleworking and it is important that organizations take them as a guide.
- **Facilitate access to adequate resources and spaces**: Ensure that employees have access to all the technological resources necessary to develop their activities remotely. It is imperative to provide all the tools required in terms of equipment and software. Likewise, a reliable Internet connection should be requested and, if possible, a backup link in case of any failure that may occur. On the other hand, employees must have an adequate space for the development of their activities within their home, taking into account the suggestions related to the position of the body, angles, measures, luminosity, among others.
- **Promote communication and coordination:** Encourage communication between the different team members, as well as the coordination and equitable assignment of tasks and activities that allow integration for effective project management.
- **Evaluate the progress and performance of projects:** Establish indicators and carry out a follow-up to measure the progress of the projects, not only focused on the final result, but also allowing a progressive measurement taking into account that generally multiple projects are being worked on at the same time. Additionally, evaluate the productivity and quality of remote work.
- **Encourage autonomy:** Encourage employees to work autonomously, fostering time management skills and self-regulation of the work they perform. Encourage empowerment and commitment to the organization to fulfill assigned tasks and goals.
- **Develop training programs:** Implement training programs and training for employees who are oriented in strategies for the adoption of teleworking and proper development of their work activities. These programs should contain theoretical and practical workshops that encourage the achievement of goals and projects.

3.5. Results of the Reflection Stage

The third stage of this research focuses on a reflection on the need for organizations, particularly in the telecommunications sector, to adopt telework as a strategic tool for the diversification of the forms of project management. This modality of work, which has demonstrated its viability in various work contexts, is presented not only as a solution to contemporary challenges, but also as an opportunity to optimize project management through the flexibility of processes and the availability of the actors involved (Green et al., 2020).

First, it is evident that the adoption of teleworking allows a reconfiguration of the work environment, facilitating greater flexibility in the formulation, monitoring, control and closure of projects. Flexibility in work methods has been identified as a key factor contributing to operational efficiency and organizational adaptation in times of uncertainty (Zhu et al., 2021). Thus, telework, by enabling more dynamic and collaborative management, can foster efficiency in communication and coordination among geographically dispersed work teams,

reducing response times and improving the quality of decision making (Wang et al., 2022).

However, for telework to be effectively adopted, it is essential that organizations overcome the barriers identified in the previous diagnostic stages. Lack of cultural support and adequate technological resources, along with challenges in communication and performance evaluation, must be addressed with precise strategies that promote a more flexible and adaptive organizational culture. Recent research suggests that organizations that adopt a comprehensive approach to telework, including supportive policies, digital skills training, and clear evaluation mechanisms, achieve significantly improved project management and increased job satisfaction (Nguyen et al., 2019; Smith and Klein, 2021).

In addition, the need to diversify forms of project management becomes evident when considering the changing and complex nature of today's business environments. Telecommuting allows organizations to maintain continuity of operations by providing employees with the flexibility to work from remote locations, which is critical to respond nimbly to market fluctuations and unforeseen crises (Chen et al., 2023). This diversification is achieved through the use of digital management tools, asynchronous communication platforms and remote monitoring systems, which facilitate the constant tracking of projects and the immediate availability of relevant information (Gibson et al., 2022).

Finally, based on the findings of the study, the need for a paradigm shift in organizational management is highlighted, especially in sectors such as telecommunications, where innovation and adaptability are crucial for competitiveness. The implementation of telework should not only be seen as a response to current contingencies, but as a sustained digital transformation strategy that enhances responsiveness and organizational resilience (Martin and Eisenberg, 2018).

Ultimately, to successfully adopt telework as a standard practice in project management, organizations must develop a holistic approach that includes cultural adaptation, investment in technology infrastructure, and ongoing human capital training. By doing so, they will be in a better position to face current and future challenges, optimizing their processes and ensuring the fulfillment of their strategic objectives.

4. FINAL DISCUSSION

The research conducted has identified several barriers that hinder the adoption of telework in the telecommunications sector of Duitama, Boyacá, categorized into organizational, project management, and individual and human resources factors. Despite the potential of telework to improve efficiency and job satisfaction, resistance to change and lack of institutional support limit its implementation. According to recent studies, organizations must build an organizational culture that fosters trust and self-management, critical factors for telework success (Gajendran and Harrison, 2021; Wang et al., 2020). Overcoming these barriers requires the establishment of clear policies that promote telework and investment in adequate technological resources.

In relation to organizational factors, lack of acceptance by managers and fear of losing control over employees' work are recurrent barriers (Kurland and Cooper, 2020). This coincides with the findings of this research, where an absence of support towards teleworking from top management is perceived. To mitigate this situation, it is essential to foster a culture of trust and commitment, where leaders actively support this modality, promoting internal policies that facilitate access to tools and technological resources necessary for its implementation (Contreras et al., 2022).

Regarding project management factors, the results show the need to improve communication systems and coordination between teams, as these are essential for successful teleworking. Previous studies highlight that lack of effective communication can lead to decreased productivity and poor coordination in project execution (Olson et al., 2020; Kniffin et al., 2021). Therefore, it is essential to develop strategies that include the use of appropriate technological tools for remote communication and collaboration, and to establish performance monitoring and evaluation systems that are adapted to the dynamics of remote work (Grant et al., 2019).

In the area of individual and human resource factors, the lack of time management skills and self-regulation stand out as significant barriers to the adoption of telework. This is in line with Pignata et al. (2020), who suggest that the success of remote work depends largely on the ability of employees to self-manage and remain productive without direct supervision. It is therefore necessary for organizations to develop training programs that prepare employees to meet the specific challenges of telecommuting, such as time management, effective communication, and remote problem solving (Mulki et al., 2019).

To overcome the identified barriers, it is crucial to implement concrete actions that integrate both staff

training and the strengthening of the technological infrastructure. The adoption of telework should not be seen solely as a response to current circumstances, but as a strategic opportunity to improve project management and organizational productivity (Coenen and Kok, 2020). Collaboration between employees and employers, as well as shared commitment to organizational goals, are critical to ensure a successful transition to remote work.

Ultimately, the findings suggest that for telework to take hold as an effective practice in the telecommunications sector, the above barriers must be overcome through a combination of organizational support, improvements in project management, and individual competency development. This implies not only the modification of internal policies and processes, but also a cultural change that values and promotes telework as a legitimate and effective way of meeting organizational goals.

5. CONCLUSIONS

The conclusions obtained from the research project highlight the importance of the adoption of

telework as an opportunity for the improvement in the quality of life of workers and the achievement of objectives in the development and management of projects, enabling employees to meet the challenges that may arise.

Instead of continuing to opt for 100% face-to-face work modalities, in jobs whose tasks can be performed without the need for physical presence in an office, a telework model based on labor flexibility can be implemented in order to obtain maximum performance and performance of each of the collaborators, providing the opportunity to work from the comfort of their homes and sharing family time.

It is essential that employees are willing and committed to work effectively remotely, as if they were carrying out their activities from the office. Promoting a culture of trust and empowerment is fundamental to obtain results oriented project management.

Finally, the study highlights the importance of using information and communication technologies to drive organizational development, as it represents the new era of labor trends and digital transformation.

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