

Digital Transformation's Foundation: Structural and Managerial Issues and Obstacles of Hybrid Work

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Abstract. The COVID-19 pandemic accelerated the global transition from traditional office-based work to remote and hybrid work models. Although hybrid work offers flexibility, improved work-life balance, reduced commuting time, and broader access to talent, its sustainable implementation remains a complex organizational challenge. Hybrid work affects not only the location of work but also technological infrastructure, managerial practices, organizational culture, communication systems, and employee well-being. The objective of this study is to examine the structural, managerial, organizational, and individual barriers encountered in hybrid work systems and to develop strategic recommendations for their sustainable implementation in the context of digital transformation. The study applies a qualitative conceptual and analytical approach based on a structured literature review and thematic synthesis. The analysis is grounded in the Job Demands-Resources theory and Conservation of Resources theory, which explain the relationship between job demands, organizational resources, employee well-being, and performance in digitally mediated work environments. Selected statistical evidence is also integrated to support the relevance of hybrid and remote work. The study identifies four main groups of barriers. Structural barriers include technological infrastructure limitations, physical workspace transformation, and cybersecurity risks. Managerial barriers concern insufficient digital leadership competencies, outdated performance evaluation systems, weak feedback mechanisms, and the trust-control dilemma. Organizational barriers are related to culture erosion, communication breakdowns, knowledge management problems, information overload, and perceived inequality in career opportunities. Individual barriers include technostress, burnout, blurred work-life boundaries, social isolation, quiet quitting, and health-related risks. Sustainable hybrid work requires strategic alignment between technology, leadership, organizational culture, fairness, and employee well-being. Hybrid work should be understood as a comprehensive organizational transformation rather than a temporary or purely technical arrangement. Future studies should focus on longitudinal effects of hybrid work, intergenerational differences, sectoral comparisons, cross-cultural contexts, and the impact of artificial intelligence and immersive technologies on hybrid work dynamics.

Keywords: hybrid work; remote work; digital transformation; digital leadership; organizational culture; employee well-being; work-life balance; technostress; cybersecurity; performance evaluation; trust-based management; Job Demands-Resources theory.

JEL Classification: M12; M15; M54; O33; J81

Formulas: 0; **fig.:** 5; **tabl.:** 6; **bibl.:** 39.

Introduction. The COVID-19 pandemic triggered a radical transformation in working life and made remote and hybrid work models a widespread organizational reality (Türkeş et al., 2024). What was initially introduced as an emergency response to public health restrictions has gradually become a permanent element of work organization, especially among knowledge workers and employees whose tasks can be performed through digital technologies (Javid et al., 2023). Hybrid work combines office-based and remote work and allows employees to divide their working time between the physical workplace and alternative work locations (Ferreira et al., 2017).

The relevance of hybrid work is explained by its dual nature. On the one hand, it creates opportunities for flexibility, autonomy, better work-life balance, reduced commuting time, and wider access to talent (Türkeş et al., 2024; Javid et al., 2023). On the other hand, it creates new risks connected with technology, leadership, communication, organizational justice, cybersecurity, and employee well-being (Junglas et al., 2022; Kyambade and Namatovu, 2025; Uysal and Kim, 2025). Therefore, the effectiveness of hybrid work depends not only on the availability of digital tools, but also on the ability of organizations to redesign work processes, managerial practices, communication systems, and organizational culture (Biea et al., 2023; Ferreira et al., 2017).

The post-pandemic development of hybrid work has shown that this model cannot be reduced to a simple combination of office and home work (Ferreira et al., 2017). It requires a coordinated transformation of technological infrastructure, management systems, performance evaluation, employee support, and physical workspace design (Mitchell & Brewer, 2022; Biea et al., 2023). Inadequate digital infrastructure (Junglas et al., 2022), weak cybersecurity (Balagopal & Mathew, 2024; Pigola & Meirelles, 2025), insufficient managerial competencies (Kyambade & Namatovu, 2025), unclear communication rules (Stray et al., 2025), and blurred work-life boundaries (Suh & Lee, 2017; Cheng et al., 2023) may reduce the positive effects of hybrid work and increase organizational fragmentation (Uysal & Kim, 2025).

Previous studies identify several groups of obstacles to hybrid work. Structural barriers are related to technological infrastructure, physical workspace transformation, and cybersecurity (Jin, 2024; Junglas et al., 2022; Pigola & Meirelles, 2025). Managerial barriers include the lack of digital leadership competencies, difficulties in performance evaluation, and the tension between trust and control (Cavalcanti et al., 2025; Kyambade & Namatovu, 2025; Laborie et al., 2026). Organizational barriers concern communication, organizational culture, perceived justice, and career visibility (Biea et al., 2023; Stray et al., 2025; Yin et al., 2023). Individual barriers include burnout, technostress, social isolation, quiet quitting, and health-related risks (Suh & Lee, 2017; Uysal & Kim, 2025).

In this context, hybrid work should be analysed as a key component of digital transformation. It changes how work is performed, coordinated, evaluated, and experienced. Consequently, organizations need a holistic understanding of the barriers to hybrid work and strategic mechanisms for their mitigation.

Literature Review. Hybrid work can be understood as a synthesis of office-based and remote work. It requires a semi-structured approach because organizations must simultaneously manage formalized work processes and informal interactions that are necessary for cooperation, learning, creativity, and organizational identity (Ferreira et al., 2017). Hybrid work also reflects the attempt of organizations to combine the stability of traditional work arrangements with the flexibility and knowledge-sharing advantages of agile and digital work practices (Cram & Marabelli, 2018).

The Job Demands-Resources theory provides an important conceptual framework for analysing hybrid work. According to this theory, employee well-being and performance depend on the relationship between job demands and job resources. In hybrid work, job demands may include constant digital availability, online meetings, self-management, technological complexity, communication overload, and role ambiguity. Job resources may include autonomy, managerial support, reliable digital tools, clear expectations, psychological safety, and ergonomic working conditions. When resources are sufficient, employees are more likely to remain engaged and productive. When demands exceed available resources, burnout and disengagement may increase (Demerouti, 2025).

Conservation of Resources theory complements this interpretation by emphasizing that employees seek to preserve valuable personal and social resources, including time, energy, attention, autonomy, social support, and psychological stability. Hybrid work may increase some resources, such as saved commuting time and schedule flexibility. However, it may also reduce other resources, such as informal interaction, boundary clarity, mentoring, and direct access to organizational information. Therefore, the impact of hybrid work on employees is not automatically positive. It depends on whether organizations are able to design hybrid work in a way that protects and strengthens employees' resources (Demerouti, 2025).

The structural dimension of hybrid work includes technological infrastructure, workspace transformation, and cybersecurity. Technological readiness is a basic condition for effective hybrid work because employees need stable platforms, digital access, and technical support. Junglas et al. (2022) emphasize the importance of IT empowerment, which refers to employees' ability to control work processes through information technologies. Jo (2025) adds that digital tools must be aligned with organizational culture and leadership practices, especially in the public sector and other institutionally complex organizations.

Physical workspaces also require transformation. Offices are not only places where employees complete tasks. They are spaces for interaction, mentoring, socialization, and organizational culture. Digital screens cannot fully replace the social depth of physical presence (Horváth et al., 2021). Consequently, hybrid work requires offices to be redesigned as collaboration-oriented environments rather than fixed spaces for daily individual work. Architectural programming, flexible occupancy planning, and energy performance assessment must be adapted to changing patterns of workplace use (Gonzalez-Carreón et al., 2026; Jin, 2024).

Cybersecurity is another structural challenge. Remote access, cloud systems, personal devices, and distributed networks increase the risks of information security violations. Balagopal and Mathew (2024) show that remote and hybrid work environments may intensify insider threats and non-compliance with information security policies. In response, Zero Trust architecture has become increasingly important. It is based on the principle that every access request must be verified. However, its implementation requires investment, training, organizational discipline, and cultural adaptation (Pigola & Meirelles, 2025).

The managerial dimension of hybrid work is related to leadership, performance evaluation, feedback, and control. Hybrid work requires digital leadership, which is not limited to technical competence. It also includes openness to new forms of coordination, the ability to build trust in digital environments, transparent communication, and the integration of digital tools into organizational culture (Kyambade & Namatovu, 2025). Video technologies may support information sharing, but they may also create social disconnection, fatigue, and participation problems (Koponen et al., 2026).

Performance evaluation is one of the most sensitive managerial challenges (Cavalcanti et al., 2025). Traditional evaluation systems often rely on physical visibility and direct supervision (Microsoft, 2022; Laborie et al., 2026). In hybrid work, such approaches may create unfairness because employees who are physically present may appear more active than remote employees, even when their actual productivity is not higher (Biea et al., 2023; Cavalcanti et al., 2025). Cavalcanti et al. (2025) argue that feedback in remote software development teams requires multidimensional indicators and regular communication. Therefore, hybrid work needs performance systems that evaluate outcomes, quality, collaboration, and development rather than mere presence.

The trust-control dilemma is central to hybrid management. Managers may react to reduced visibility by increasing monitoring. However, excessive control can undermine autonomy, reduce satisfaction, and weaken trust. Laborie et al. (2026) show that enabling managerial control is more appropriate than restrictive control in teleworking situations. Bueechl et al.

(2023) also emphasize that trust and flexibility are among the most important factors affecting employee satisfaction in work-from-home contexts.

The organizational dimension includes culture, communication, knowledge management, information overload, and perceived justice. Hybrid work may weaken organizational culture if employees have fewer opportunities for informal interaction and shared experience. Stray et al. (2025) show that team composition and collaboration dynamics influence agile software development teams. Soroka-Potrzebna (2022) identifies knowledge management barriers in virtual project teams, including weak collaboration and unclear work plans. Yin et al. (2023) note that enterprise social media can support autonomy by improving access to information, but it may also lead to information overload.

Perceived justice and career opportunities are also important organizational issues. Remote workers may fear that lower physical visibility will reduce their access to promotion, mentoring, and recognition. At the same time, office-based workers may perceive that they carry a larger share of relational and coordination work. Bica et al. (2023) show that digitalization has changed recruitment and talent management, but the role of physical presence in career development remains uncertain. Thus, hybrid work requires transparent career criteria and equal access to development opportunities.

The individual dimension concerns employees' well-being, motivation, social connection, and health. Suh and Lee (2017) show that constant digital connection may cause technostress and reduce job satisfaction. Cheng et al. (2023) demonstrate that work e-mail activity may increase performance among anxious workers in the short term, but it may also contribute to emotional exhaustion. Uysal and Kim (2025) argue that social isolation and weak organizational dialogue may contribute to quiet quitting, where employees perform only minimum required duties. Brakenridge et al. (2025) also underline health risks related to prolonged sitting, high workload, and insufficient ergonomic support.

Generational and sectoral differences further shape the hybrid work experience. Generation Z employees often expect flexibility, transparency, development opportunities, and meaningful work. If these expectations are not met, organizations may face retention problems (Al-Twal et al., 2025). Sectoral differences are also significant because healthcare, education, technology, public administration, and manufacturing differ in the degree to which hybrid work is possible and desirable (Al Khatib et al., 2024). Therefore, hybrid work policies should be adapted to organizational context, job characteristics, and employee needs.

Aims. The aim of this study is to examine the structural, managerial, organizational, and individual barriers to hybrid work and to develop strategic recommendations for its sustainable implementation in the context of digital transformation. To achieve this aim, the study clarifies

the theoretical foundations of hybrid work through the Job Demands-Resources theory and Conservation of Resources theory, identifies key structural challenges related to technology, workspace transformation, and cybersecurity, and analyses managerial barriers concerning digital leadership, performance evaluation, feedback, and the balance between trust and control. The study also examines organizational issues linked to culture, communication, knowledge management, perceived justice, and career opportunities, as well as individual obstacles such as burnout, technostress, blurred work-life boundaries, social isolation, quiet quitting, and employee well-being risks. In addition, selected statistical evidence is used to demonstrate the relevance of hybrid and remote work, while practical recommendations are proposed for organizations and managers seeking to build sustainable hybrid work models.

Methodology. This study applies a qualitative conceptual and analytical methodology based on a structured literature review and thematic synthesis. The article does not present primary empirical research. Instead, it systematizes findings from scholarly literature, official statistical sources, and international research reports in order to develop a holistic understanding of hybrid work barriers and strategic responses.

The methodology consists of four stages.

First, the theoretical foundations of hybrid work were identified using the Job Demands-Resources theory and Conservation of Resources theory. These theories were selected because they explain how job demands, organizational resources, employee well-being, and performance interact in digitally mediated work environments.

Second, the literature was classified into four analytical dimensions: structural, managerial, organizational, and individual. This classification reflects the fact that hybrid work operates simultaneously through infrastructure, leadership, culture, and employee experience.

Third, selected statistical evidence was integrated into the Results section. The statistical indicators were taken from Gallup, the U.S. Bureau of Labor Statistics, Microsoft Work Trend Index, and Eurofound. These sources were selected because they provide current and institutionally recognized evidence on hybrid work, remote work, productivity confidence, and work-from-home patterns.

Fourth, the findings were synthesized into practical recommendations. These recommendations are based on the assumption that sustainable hybrid work requires strategic alignment between technology, leadership, organizational culture, fairness, and employee well-being.

Results. The results show that hybrid work is a multidimensional organizational phenomenon. Its effectiveness depends on the ability of organizations to balance flexibility and coordination, autonomy and accountability, digital tools and human interaction, productivity and well-

being. The findings are presented through statistical evidence, thematic summary tables, and conceptual diagrams.

Statistical evidence on hybrid and remote work. The following table presents selected statistical indicators that demonstrate the relevance of hybrid work in the post-pandemic labour market. These indicators show that hybrid work remains a preferred arrangement for many remote-capable employees, while leaders continue to face difficulties related to productivity confidence and managerial control.

Table 1. Selected statistical evidence on hybrid and remote work

Indicator	Result	Interpretation
Remote-capable employees who prefer hybrid work	60%	Hybrid work is the dominant preference among remote-capable employees.
Remote-capable employees who prefer fully remote work	About one-third	Fully remote work remains important, but it is less preferred than hybrid work.
Remote-capable employees who prefer fully on-site work	Less than 10%	A full return to traditional office work is not the preferred option for most remote-capable employees.
Employed people in the United States who did some or all work at home on working days in 2025	35%	Working from home remains a significant labour market practice.
Employed women in the United States who did some or all work at home on working days in 2025	38%	Women were more likely than men to work at home on working days.
Employed men in the United States who did some or all work at home on working days in 2025	31%	Men were less likely than women to work at home on working days.
Leaders reporting that hybrid work made it difficult to have confidence in employee productivity	85%	The trust-control dilemma remains a major managerial barrier.
EU telework and hybrid work trends	Uneven and changing across countries	Hybrid work requires evidence-based and context-sensitive policy responses.

Sources: Gallup (2026); U.S. Bureau of Labor Statistics (2026); Microsoft (2022); Eurofound (2024).

The statistical evidence confirms that hybrid work is not a temporary deviation from traditional work organization. It has become a significant and measurable component of contemporary work. However, the data also demonstrate that hybrid work creates managerial uncertainty. The high share of leaders who report difficulty in confidence regarding productivity indicates that trust, evaluation, and communication remain unresolved issues.

Structural barriers to hybrid work. The structural barriers of hybrid work are related to the technological and physical foundations of work. Without reliable infrastructure, secure access, and redesigned workspaces, hybrid work may increase fragmentation and risk.

Table 2. Structural barriers to hybrid work

Structural barrier	Main problem	Consequences	Strategic response
Technological infrastructure inadequacy	Digital tools, platforms, and networks may be unreliable or unevenly accessible.	Reduced productivity, exclusion of some employees, weak collaboration, and frustration.	Invest in stable digital platforms, IT support, digital access, and IT empowerment.
Physical workspace transformation	Traditional offices are designed for continuous presence rather than hybrid collaboration.	Inefficient office use, weaker interaction, and reduced organizational identity.	Redesign offices as spaces for collaboration, mentoring, socialization, and culture building.
Cybersecurity and data privacy risks	Remote access increases exposure to security threats and policy violations.	Insider threats, data breaches, compliance problems, and loss of trust.	Adopt Zero Trust architecture, cybersecurity training, and clear access protocols.
Fluctuating occupancy	Hybrid schedules change building use patterns.	Misleading energy performance comparisons and inefficient space planning.	Use dynamic occupancy-based planning and data-informed facility management.

Sources: Balagopal and Mathew (2024); Gonzalez-Carreón et al. (2026); Horváth et al. (2021); Jin (2024); Jo (2025); Junglas et al. (2022); Pigola and Meirelles (2025).

The structural results show that hybrid work depends on organizational readiness. Technology is necessary, but it is not sufficient. Digital infrastructure, cybersecurity, office design, and spatial planning must be integrated into one coherent strategy.

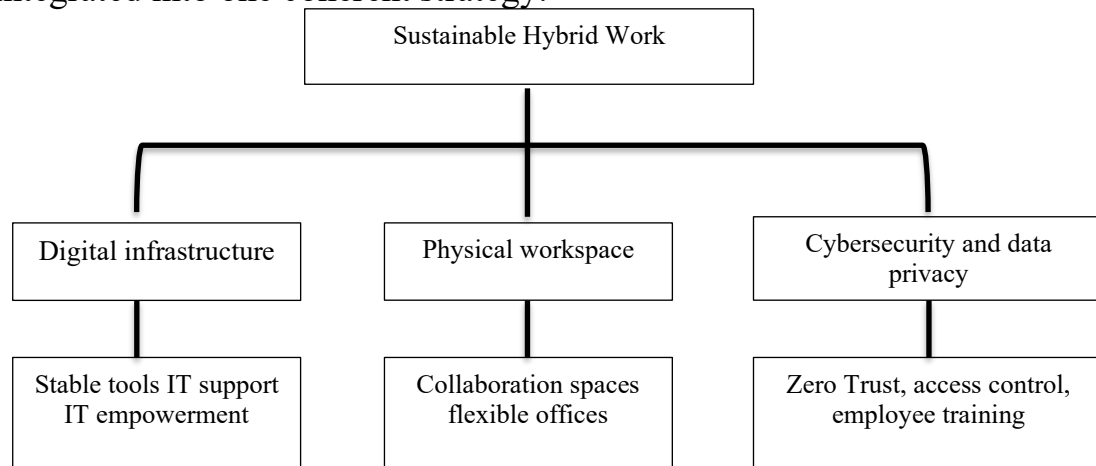


Figure 1. Structural foundation of sustainable hybrid work

Sources: developed by authors

Managerial barriers to hybrid work. Managerial barriers arise because hybrid work changes how managers lead, coordinate, evaluate, and support employees. Physical visibility becomes less reliable as a basis for management, while trust, communication, and outcome-based evaluation become more important.

Table 3. Managerial barriers to hybrid work

Managerial barrier	Main problem	Consequences	Strategic response
Lack of digital leadership competencies	Managers may lack skills for leading distributed teams.	Weak coordination, communication fatigue, reduced engagement, and low trust.	Develop digital leadership training focused on trust, communication, and team cohesion.
Incompatible performance evaluation systems	Traditional systems often reward visibility rather than outcomes.	Perceived unfairness, weak feedback, and uncertainty about expectations.	Use outcome-based, process-based, and multidimensional performance indicators.
Trust-control dilemma	Managers may respond to remote work with excessive monitoring.	Lower autonomy, reduced satisfaction, resistance, and weakened trust.	Adopt trust-based management with clear goals and accountability mechanisms.
Weak feedback processes	Digital channels make sensitive feedback more difficult.	Misunderstanding, delayed correction, and weaker development support.	Establish regular one-on-one meetings, structured feedback, and transparent communication.

Sources: Bueechl et al. (2023); Cavalcanti et al. (2025); Koponen et al. (2026); Kyambade and Namatovu (2025); Laborie et al. (2026); Raj and Gogoi (2024).

The managerial results indicate that hybrid work requires a transition from supervision-oriented management to trust-based digital leadership. Managers must evaluate results without relying on physical presence and must support employees without excessive control.

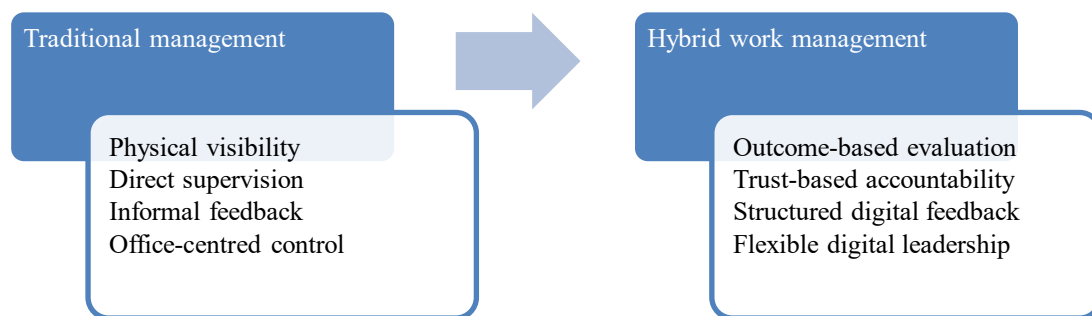


Figure 2. Managerial transition in hybrid work

Sources: developed by authors

Organizational barriers to hybrid work. Organizational barriers are connected with culture, communication, knowledge management, information overload, justice, and career visibility. Hybrid work may weaken informal connections if organizations do not intentionally maintain shared identity and inclusion.

Table 4. Organizational barriers to hybrid work

Organizational barrier	Main problem	Consequences	Strategic response
Erosion of organizational culture	Reduced face-to-face interaction may weaken shared identity.	Lower belonging, weaker informal learning, and reduced commitment.	Create intentional rituals, hybrid meetings, mentoring, and culture-building events.
Communication breakdowns	Distributed teams may experience fragmented communication.	Misunderstanding, knowledge gaps, delays, and reduced collaboration.	Define communication norms, meeting rules, documentation practices, and collaboration platforms.
Information overload	Enterprise social media and digital tools may increase communication volume.	Stress, reduced attention, and lower decision quality.	Set rules for digital communication, prioritization, and asynchronous work.
Perceived inequality in career opportunities	Remote workers may have lower visibility than office-based employees.	Perceived injustice, weaker commitment, and possible turnover intention.	Ensure equal access to promotion, mentoring, training, and recognition.

Sources: Biea et al. (2023); Ly et al. (2025); Soroka-Potrzebna (2022); Stray et al. (2025); Yin et al. (2023).

The organizational results show that hybrid work can increase flexibility but may also weaken cohesion if communication and culture are not actively managed. Hybrid culture must be intentionally designed rather than assumed to emerge automatically from digital platforms.

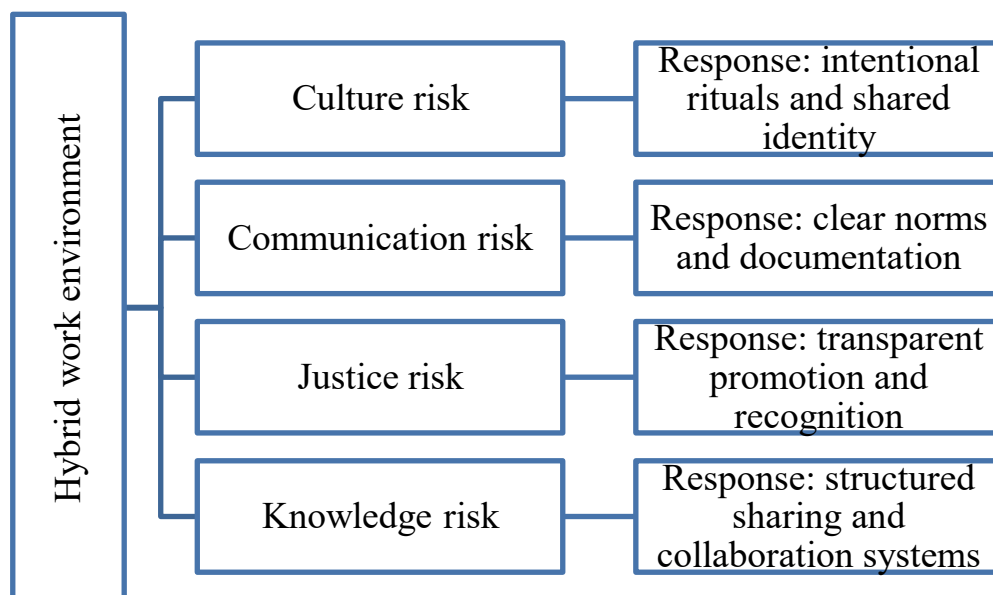


Figure 3. Organizational risks and responses in hybrid work

Sources: developed by authors

Individual barriers to hybrid work. Individual barriers reflect the employee experience of hybrid work. Flexibility may improve autonomy and work-life balance, but it may also increase technostress, isolation, burnout, and blurred boundaries.

Table 5. Individual barriers to hybrid work

Individual barrier	Main problem	Consequences	Strategic response
Technostress	Constant use of digital tools and online availability increases pressure.	Lower job satisfaction, emotional exhaustion, and reduced well-being.	Provide digital workload rules, training, and boundaries for availability.
Blurred work-life boundaries	Home becomes a permanent work environment.	Emotional exhaustion, family conflict, and difficulty disconnecting.	Establish right-to-disconnect practices and clear working-time expectations.
Social isolation	Reduced physical interaction weakens social belonging.	Lower engagement and weaker organizational connection.	Strengthen community, peer support, mentoring, and purposeful office days.
Quiet quitting	Employees may reduce effort to minimum role requirements.	Lower discretionary effort and reduced organizational performance.	Build dialogue, recognition, psychological safety, and meaningful work.
Health and ergonomic risks	Prolonged sitting and inadequate home workspaces affect health.	Musculoskeletal problems, fatigue, and mental health risks.	Provide ergonomic guidance, health promotion, and workload management.

Sources: Brakenridge et al. (2025); Cheng et al. (2023); Demerouti (2025); Lemmetty and Riivari (2024); Suh and Lee (2017); Uysal and Kim (2025).

The individual results confirm that hybrid work cannot be sustainable if employee well-being is ignored. Flexibility must be accompanied by psychological support, ergonomic conditions, clear expectations, and practices that protect employees' time, attention, and social connection.

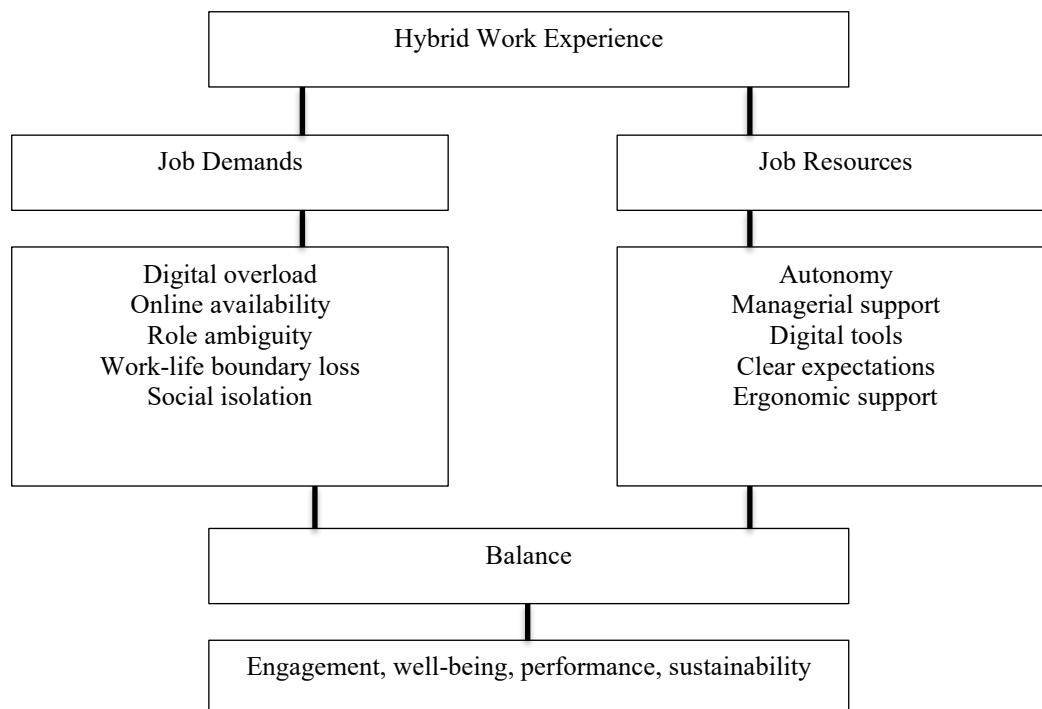


Figure 4. Job demands and job resources in hybrid work

Sources: developed by authors

Generational and sectoral differences. Hybrid work is not experienced equally across generations, professions, and sectors. Generation Z employees often expect transparency, flexibility, development opportunities, and meaningful work. Sectoral differences also affect the applicability of hybrid work because not all tasks can be performed remotely and not all industries face the same technological or coordination requirements.

Table 6. Generational and sectoral differences in hybrid work

Dimension	Key issue	Implication for hybrid work	Strategic response
Generation Z	Strong expectations for flexibility, transparency, and development.	Failure to meet expectations may increase talent loss.	Design flexible and development-oriented hybrid policies.
Healthcare	Complex operations and technology-intensive processes.	Hybrid work may be limited by service and operational requirements.	Adapt hybrid policies to role-specific and sector-specific needs.
Education	Digital work may support flexibility but requires pedagogical and social interaction.	Work-from-home success depends on productivity behaviours and institutional support.	Combine digital tools with pedagogical support and well-being policies.
Technology and software teams	Hybrid work affects communication, collaboration, and feedback.	Coordination and knowledge sharing are critical.	Use agile communication norms and structured collaboration practices.

Sources: Al Khatib et al. (2024); Al-Twal et al. (2025); Ly et al. (2025); Stray et al. (2025); Suhariadi et al. (2023).

The evidence shows that there is no universal hybrid work model suitable for all organizations. Hybrid work should be adapted to sectoral conditions, job roles, employee expectations, technological capacity, and organizational culture.

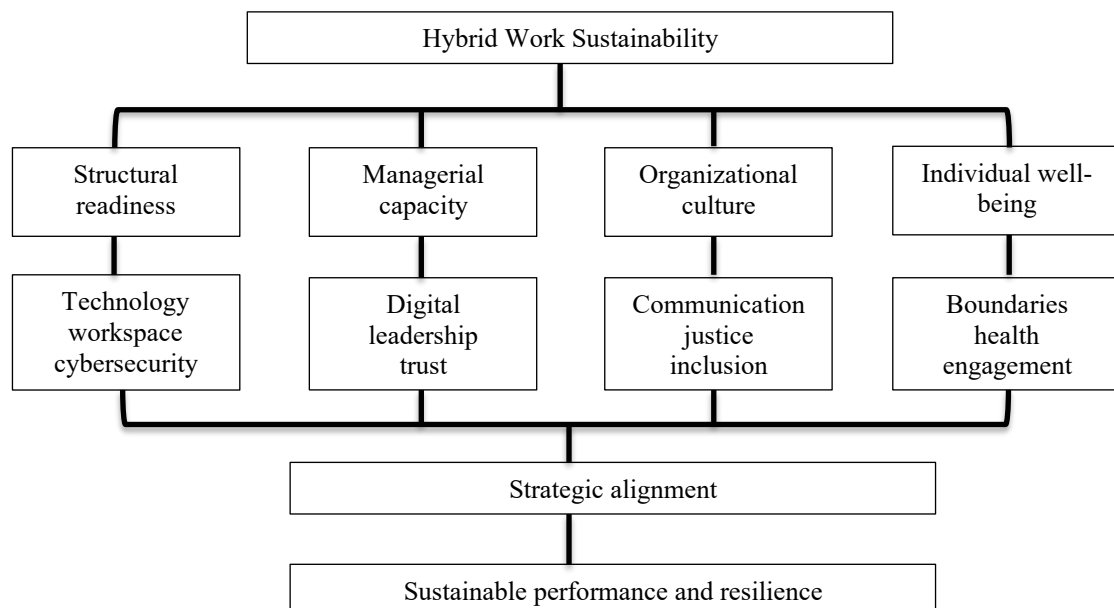


Figure 5. Integrated model of hybrid work sustainability

Sources: developed by authors

Discussion. The findings demonstrate that hybrid work should be interpreted as a systemic transformation of work rather than a flexible scheduling option. Its effectiveness depends on the interaction between structure, management, organization, and individual experience. The main theoretical implication is that hybrid work intensifies the importance of balancing job demands and job resources. In line with the Job Demands-Resources theory, hybrid work increases digital demands, self-management requirements, communication complexity, and online availability. At the same time, it may provide resources such as flexibility, autonomy, saved commuting time, and better work-life balance. The final effect on performance and well-being depends on whether resources are sufficient to compensate for demands (Demerouti, 2025).

Conservation of Resources theory also helps explain why hybrid work may produce both positive and negative outcomes. Employees may gain time and autonomy, but they may lose social support, psychological boundaries, informal learning, and direct access to organizational information. If employees feel that hybrid work consumes more resources than it provides, burnout and disengagement may increase. Therefore, organizations should not assume that flexibility automatically improves well-being. Flexibility must be designed and supported.

At the structural level, the findings confirm that technological readiness is a necessary but insufficient condition for hybrid work. Reliable platforms, cybersecurity, digital access, and IT support are essential. However, technology must be embedded in organizational processes and supported by leadership. The idea of IT empowerment is particularly important because digital tools should not merely monitor employees. They should increase employees' capacity to control their work processes, collaborate effectively, and solve problems (Junglas et al., 2022).

The redesign of physical workspaces is a critical component of successful hybrid models. In hybrid organizations, offices are no longer only places where employees perform daily tasks; instead, they serve as essential spaces for collaboration, mentoring, innovation, social connection, and culture building (Horváth et al., 2021). This shift means that office design should be strategically aligned with the specific purposes for which employees come to the workplace. If employees are required to come to the office only to perform individual digital tasks that could be done remotely, the hybrid work model may lose legitimacy. However, when office days are intentionally used for collaboration, learning, and social integration, physical presence creates significant added value that digital screens cannot fully replicate (Horváth et al., 2021; Jin, 2024).

At the managerial level, the discussion reveals the central role of digital leadership. Hybrid work requires managers to communicate clearly, build trust, define expectations, support autonomy, and maintain team cohesion. The trust-control dilemma is especially important. Excessive monitoring

may appear to solve the problem of productivity uncertainty, but it may create deeper problems of distrust, dissatisfaction, and resistance. Therefore, hybrid work requires a shift from presence-based control to goal-based accountability.

Performance evaluation systems should also be redesigned. In hybrid environments, visibility should not be confused with productivity. Employees who are physically present may not necessarily contribute more than remote employees. Remote employees should not be disadvantaged because they have fewer informal interactions with managers. Fair performance systems should combine measurable outcomes, quality indicators, collaboration behaviours, learning, and feedback. Regular and constructive communication is essential for preventing misunderstanding and perceived injustice.

At the organizational level, culture and communication require intentional management. Hybrid work reduces spontaneous encounters and informal conversations. These interactions are often important for trust, creativity, and knowledge sharing. Organizations should therefore create structured opportunities for informal communication, mentoring, onboarding, and community building. Digital tools can support communication, but they cannot automatically replace shared organizational experience.

Perceived justice is also a major concern. If remote workers feel invisible or excluded from promotion opportunities, hybrid work may create a two-tier organization. Similarly, if office-based employees feel overburdened by relational or coordination tasks, they may perceive hybrid policies as unfair. Transparent rules, equal access to development opportunities, and clear career criteria are necessary for preventing such tensions.

At the individual level, hybrid work must be connected with employee well-being. Technostress, blurred boundaries, and social isolation show that hybrid work may create hidden psychological costs. Organizations should provide support mechanisms, including mental health resources, ergonomic guidance, workload management, and right-to-disconnect practices. Employee well-being should be considered a strategic condition of sustainable performance rather than a secondary benefit.

The findings also indicate that hybrid work should be differentiated across generations and sectors. Generation Z employees may view flexibility and development opportunities as essential components of employment attractiveness. However, sectors such as healthcare, manufacturing, public service, education, and technology differ significantly in their capacity to implement hybrid arrangements. Therefore, hybrid work policies should be flexible enough to reflect occupational realities while remaining fair and transparent.

Future developments such as artificial intelligence, human-in-the-loop systems, and immersive environments may further transform hybrid work. Generative AI tools may support coordination, writing, decision-making, training, and knowledge management (Dwivedi et al., 2023). Human-guided collective AI systems may influence strategic planning and complex business processes (Kim et al., 2026). Immersive environments may reduce some forms of social disconnection, although their effectiveness and ethical implications require further investigation (Shahpure et al., 2025). These developments suggest that hybrid work will continue to evolve as digital technologies become more deeply integrated into organizational life.

Conclusions. Hybrid work emerged as a necessary response to the COVID-19 pandemic, but it has now become an important component of the future of work. This study shows that hybrid work offers important advantages, including flexibility, autonomy, improved work-life balance, and access to wider talent pools. However, these advantages can be realized only if organizations address the structural, managerial, organizational, and individual barriers that accompany hybrid work.

At the structural level, the main barriers include inadequate technological infrastructure, insufficient transformation of physical workspaces, cybersecurity risks, and difficulties in managing fluctuating office occupancy. Organizations should invest in reliable digital infrastructure, IT empowerment, Zero Trust cybersecurity, and collaboration-oriented office design.

At the managerial level, the main barriers include insufficient digital leadership competencies, outdated performance evaluation systems, weak feedback processes, and the trust-control dilemma. Managers should move from presence-based supervision to trust-based leadership, clear accountability, outcome-oriented performance management, and regular communication.

At the organizational level, hybrid work may weaken culture, reduce informal knowledge sharing, create communication breakdowns, and produce perceived inequalities in career opportunities. Organizations should intentionally build hybrid culture, establish communication norms, ensure equal access to promotion and development, and prevent information overload.

At the individual level, hybrid work may increase technostress, burnout, social isolation, blurred work-life boundaries, quiet quitting, and health-related risks. Sustainable hybrid work therefore requires psychological support, ergonomic guidance, workload regulation, community building, and respect for employees' need to disconnect.

From the perspective of the Job Demands-Resources theory and Conservation of Resources theory, the sustainability of hybrid work depends on the balance between increasing digital job demands and sufficient organizational resources. If organizations provide autonomy, support, trust,

clear expectations, digital tools, and well-being mechanisms, hybrid work may improve both employee experience and organizational performance. If these resources are absent, hybrid work may intensify stress, disengagement, and inequality.

The study concludes that hybrid work should not be treated as a temporary or purely technical arrangement. It is a comprehensive organizational transformation that requires strategic alignment between technology, leadership, culture, fairness, and human well-being. Future research should focus on longitudinal studies of hybrid work outcomes, intergenerational differences, cross-sectoral comparisons, cross-cultural analyses, and the influence of artificial intelligence and immersive technologies on hybrid work dynamics.

Conflict of interest. The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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References:

1. Al Khatib, I., Alasheh, S., & Shamayleh, A. (2024). The drivers of complexity in inventory management within the healthcare industry. *International Journal of Service Science, Management, Engineering, and Technology*, 15(1), 1–22. <https://doi.org/10.4018/IJSSMET.347332>
2. Al-Twal, A., Jarrar, D. M. F., Bedevian, V., & Eblan, M. (2025). Unlocking potential: Examining Generation Z's vision for career growth in the Jordanian context. *International Journal of Organizational Analysis*, 33(11), 4419–4443. <https://doi.org/10.1108/IJOA-10-2024-4887>
3. Balagopal, N., & Mathew, S. K. (2024). Exploring the factors influencing information security policy compliance and violations: A systematic literature review. *Computers & Security*, 147, Makale 104062. <https://doi.org/10.1016/j.cose.2024.104062>
4. Biea, E. A., Dinu, E., Bunica, E., & Jerdea, L. (2023). Recruitment in SMEs: The role of managerial practices, technology and innovation. *European Business Review*, 36(3), 361–391. <https://doi.org/10.1108/EBR-05-2023-0162>
5. Brakenridge, C. L., OPazo-Bardi, T., Gunning, K., Winkler, E. A. H., Fjeldsoe, B. S., & Dunstan, D. W. (2025). Barriers, facilitators and acceptability of health promotion initiatives and behaviours in contact centre workers: A systematic review. *Safety Science*, 191, Makale 106945. <https://doi.org/10.1016/j.ssci.2025.106945>
6. Bueechl, J., Härting, R., Beltempo, L., Bühner, C., & Drechsler, M. (2023). Impact of COVID-19 on employee satisfaction and trust with focus on working from home. *Procedia Computer Science*, 225, 2567–2574. <https://doi.org/10.1016/j.procs.2023.10.248>
7. Cavalcanti, A. B., Alves, C., & Araújo, J. (2025). Exploring the impact of feedback on remote software development teams. *Information and Software Technology*, 179, Makale 107649. <https://doi.org/10.1016/j.infsof.2024.107649>

8. Cheng, B. H., Zhou, Y., & Chen, F. (2023). You've got mail! How work e-mail activity helps anxious workers enhance performance outcomes. *Journal of Vocational Behavior*, 144, Makale 103881. <https://doi.org/10.1016/j.jvb.2023.103881>
9. Cram, W. A., & Marabelli, M. (2018). Have your cake and eat it too? Simultaneously pursuing the knowledge-sharing benefits of agile and traditional development approaches. *Information & Management*, 55(3), 322–339. <https://doi.org/10.1016/j.im.2017.08.005>
10. Demerouti, E. (2025). Job demands-resources and conservation of resources theories: How do they help to explain employee well-being and future job design? *Journal of Business Research*, 192, Makale 115296. <https://doi.org/10.1016/j.jbusres.2025.115296>
11. Dwivedi, Y. K., Kshetri, N., Hughes, L., Ribeiro-Navarrete, S., Chang, J. R., Stornaiuolo, A., Duan, Y., Deng, Y. H., Jansen, B. J., Shah, J., Tan, T. M., Chiu, P.-S., Chang, H.-W., Jeng, B.-C., Lin, S.-J., Hsu, Y.-T., Shah, M. H., Al-Busaidi, A. S., Al-Sharji, A., . . . Yan, M. (2023). Opinion paper: "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, 71, Makale 102642. <https://doi.org/10.1016/j.ijinfomgt.2023.102642>
12. Eurofound. (2024). *Teleworking and hybrid work*. European Foundation for the Improvement of Living and Working Conditions.
13. Fextra, F., Faria, J., Azevedo, A., & Marques, A. L. (2017). Product lifecycle management in knowledge intensive collaborative environments: An application to automotive industry. *International Journal of Information Management*, 37(1), 1474–1487. <https://doi.org/10.1016/j.ijinfomgt.2016.05.006>
14. Gallup. (2026). *Global indicator: Hybrid work*. Gallup.
15. Gonzalez-Carreón, K. M., Martínez-Molina, A., Arroyo-Cabral, J., & Dutton, S. M. (2026). From annual benchmarks to dynamic behaviour: A scalable multi-level analysis framework for energy performance in buildings. *Energy and Buildings*, 353, Makale 116894. <https://doi.org/10.1016/j.enbuild.2025.116894>
16. Horváth, D., Coskun, A., Ögüt, O., Coskun, H., & Kim, B. (2021). Will interfaces take over the physical workplace in higher education? A pessimistic view of the future. *Journal of Corporate Real Estate*, 24(2), 108–123. <https://doi.org/10.1108/JCRE-10-2020-0052>
17. Javid, R. J., Nejat, A., Moradi, E., & Khajeh-Hosseini, M. (2023). Impacts of the COVID-19 pandemic on urban infrastructure. *Advances in Transport Policy and Planning*, 12, 91–115. <https://doi.org/10.1016/bs.atpp.2023.09.001>
18. Jin, S. (2024). Interdisciplinary perspective on architectural programming: Current status and future directions. *Engineering, Construction and Architectural Management*, 32(11), 7332–7372. <https://doi.org/10.1108/ECAM-04-2024-0408>
19. Jo, H. (2025). Interplay among collaborative culture, empowerment leadership, and IT work environment in the public sector: A mixed methods study. *International Journal of Information Management*, 82, Makale 102883. <https://doi.org/10.1016/j.ijinfomgt.2025.102883>
20. Junglas, I., Goel, L., Rehm, S.-V., & Ives, B. (2022). On the benefits of consumer IT in the workplace: An IT empowerment perspective. *International Journal of Information Management*, 64, Makale 102478. <https://doi.org/10.1016/j.ijinfomgt.2022.102478>
21. Kim, S., Park, J., Lee, H., & Choi, Y. (2026). Human-guided collective LLM intelligence for strategic planning via two-stage information retrieval. *Information Processing & Management*, 63(1), Makale 104288. <https://doi.org/10.1016/j.ipm.2025.104288>
22. Koponen, J., Salin, L., & Cortellazzo, L. (2026). Dual edge: Exploring technological affordances and constraints of video technology in e-leadership. *Information Technology & People*, 39(8), 1–31. <https://doi.org/10.1108/ITP-09-2024-1157>
23. Kyambade, M., & Namatovu, A. (2025). Transforming the public service via digital leadership in Uganda. *International Journal of Public Leadership*, 21(1), 37–53. <https://doi.org/10.1108/IJPL-07-2024-0080>
24. Laborie, C., Srimani, S., Dumas, M., & Naro, G. (2026). The benefits of an enabling managerial control style in a teleworking situation: A latent profile analysis. *European Management Journal*, 44(1), 145–155. <https://doi.org/10.1016/j.emj.2024.12.005>
25. Lemmetty, S., & Riivari, E. (2024). Managers' perceptions of meaningfulness in the future work. *Journal of Advances in Management Research*, 22(2), 219–237. <https://doi.org/10.1108/JAMR-09-2023-0281>
26. Ly, D., Overeem, M., Brinkkemper, S., & Dalpiaz, F. (2025). The power of words in agile vs. waterfall development: Written communication in hybrid software teams. *Journal of Systems and Software*, 219, Makale 112243. <https://doi.org/10.1016/j.jss.2024.112243>
27. Microsoft. (2022). *Hybrid work is just work. Are we doing it wrong?* Microsoft Work Trend Index.

28. Mitchell, A., & Brewer, P. E. (2022). Leading hybrid teams: Strategies for realizing the best of both worlds. *Organizational Dynamics*, 51(3), Makale 100866. <https://doi.org/10.1016/j.orgdyn.2021.100866>
29. Pigola, A., & Meirelles, F. S. (2025). Zero trust in cybersecurity: Managing critical challenges for effective implementation. *Journal of Systems and Information Technology*, 27(4), 517–564. <https://doi.org/10.1108/JSIT-08-2024-0326>
30. Raj, G., & Gogoi, A. (2024). What we do not see, does exist: Exploring the realities of work engagement in virtual teams. *International Journal of Organizational Analysis*, 33(9), 3246–3271. <https://doi.org/10.1108/IJOA-03-2024-4362>
31. Shahpure, N. H., Rekha, P. M., & Varsha. (2025). Metaverse: A detailed review. *Advances in Computers*, 139, 327–348. <https://doi.org/10.1016/bs.adcom.2025.03.019>
32. Soroka-Potrzebna, H. (2022). Barriers of knowledge management in virtual project teams: A TISM model. *Procedia Computer Science*, 207, 800–809. <https://doi.org/10.1016/j.procs.2022.09.135>
33. Stray, V., Moe, N. B., Hoda, R., & Sjøberg, D. I. K. (2025). Teamwork in agile software development: A mixed-method study of gender diversity and collaboration dynamics. *Information and Software Technology*, 187, Makale 107840. <https://doi.org/10.1016/j.infsof.2025.107840>
34. Suh, A., & Lee, J. (2017). Understanding teleworkers' technostress and its influence on job satisfaction. *Internet Research*, 27(1), 140–159. <https://doi.org/10.1108/IntR-06-2015-0181>
35. Suhariadi, F., Herachwati, N., Suminar, D. R., & Rahaju, S. (2023). Work from home: A behavioral model of Indonesian education workers' productivity during COVID-19. *Heliyon*, 9(3), Makale e14082. <https://doi.org/10.1016/j.heliyon.2023.e14082>
36. Türkeş, M. C., Dumitru, I., Pavel, C., & Stancu, A. (2024). Changes in the labour market: The perceptions of Romanian employees regarding the use of telework in the post-pandemic period. *Employee Relations*, 46(3), 585–621. <https://doi.org/10.1108/ER-06-2023-0317>
37. U.S. Bureau of Labor Statistics. (2026). *American Time Use Survey: 2025 results*. U.S. Department of Labor.
38. Uysal, N., & Kim, Y. (2025). Why go the extra mile? Re-engaging quiet quitters through dialogic communication and community building in the workplace. *Public Relations Review*, 51(1), Makale 102537. <https://doi.org/10.1016/j.pubrev.2024.102537>
39. Yin, P., Wang, W., Wang, C., & Liang, L. (2023). Does enterprise social media use in the post-acceptance stage improve employee autonomy? *Industrial Management & Data Systems*, 123(8), 2055–2078. <https://doi.org/10.1108/IMDS-10-2022-0656>