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REMOTE WORK AND THE PERCEPTION OF THE MANAGEMENT SYSTEM – EXPERIENCES AND CHALLENGES OF A MUNICIPAL ENTERPRISE IN POLAND

Abstract: The aim of this article is to analyze the perception of personnel management quality in a municipal sector enterprise in the context of the implementation of remote and hybrid work. The study sought to answer three research questions: (1) what are the possibilities and the actual scale of hybrid work implementation in the analyzed organization, (2) how does the mode of work (hybrid or exclusively onsite) affect the assessment of key aspects of personnel management, such as communication, team collaboration, supervisor support, and job satisfaction including work-life balance, and (3) what barriers related to the implementation of remote work were identified by employees and managerial staff. The study was conducted at Kraków Waterworks S.A. using a questionnaire-based research technique. The results indicate that the overall assessment of personnel management quality was moderately high, although employees working in a hybrid mode rated communication, collaboration, and work-life balance slightly lower than those working exclusively onsite. The analysis of barriers revealed discrepancies in perception between non-managerial employees and managers – the former emphasized technological and organizational limitations, while the latter pointed to challenges related to managing dispersed teams. The findings confirm the necessity of cautious implementation of remote work in organizations of high public importance and highlight the need for further research in the municipal sector.

Keywords: remote work, personnel management, municipal enterprises

1. Introduction

The development of remote work has progressed in parallel with advances in information technology. In 1965, full workdays performed from home accounted for less than 0.5% of all paid workdays in the United States. In subsequent decades, the share of remote work gradually increased, although in the 1970s, working from home primarily involved transferring folders filled

with paperwork, while in the 1990s, it was based mainly on telephone communication and the exchange of data via floppy disks. It was not until the rise of the Internet in the twenty-first century that remote collaboration became significantly more feasible. By 2019, the share of remote work had reached 7%, and a continued gradual increase appeared to be a natural trajectory. However, the COVID-19 pandemic caused remote work – previously relatively uncommon – to become a standard

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practice in many companies in recent years (Someran et al., 2025). In the United States, according to research conducted by Stanford University, 60% of employees continue to perform their duties exclusively on-site; however, these are primarily lower-wage workers employed in sectors such as retail, hospitality, tourism, and security. Hybrid workers account for approximately 30% of employees and typically belong to the highest-paid group, working in the office two to three days per week, most often from Tuesday to Thursday. The smallest group, slightly over 10%, comprises employees who perform their duties entirely remotely (Barrero et al., 2023). Estimates for the Polish economy indicate that approximately 35% of employees have the opportunity to work remotely, a figure comparable to the European Union average of 37% (Sidor-Rządkowska & Sienkiewicz, 2023).

Scientific research provides numerous arguments supporting the positive effects of remote work. According to the 2022 Future Forum report, employees who are able to work from home achieve, on average, 4% higher productivity compared to those working exclusively on-site. Even better results are associated with flexibility in scheduling work hours – employees who manage their own schedules demonstrate a 29% increase in productivity and a 53% improvement in concentration capacity (FFE, 2022). It has been shown that cognitive demands in flexible work such as structuring of work tasks and scheduling work times, act as significant job resources, which enhance job satisfaction and home-based performance (Barbieri et al., 2025). The literature also emphasizes that remote work facilitates the reconciliation of various life activities and enables the use of techniques that enhance focus on professional tasks (Pogorzelska et al., 2020). Additionally, employees often derive satisfaction from independently completing tasks that do not require constant consultation with supervisors or colleagues (Sidor-Rządkowska & Sienkiewicz, 2023).

However, research findings are not uniformly positive and also highlight the negative aspects of remote work, particularly in the context of declining productivity for tasks performed outside the office. Major challenges include difficulties in communication and coordination, the weakening of professional networks, and limitations in establishing new relationships. A decline in creativity has also been observed, partly resulting from multitasking and the loss of full engagement in direct collaboration with colleagues. Significant issues also pertain to reduced access to mentoring, limited opportunities for receiving feedback, learning from colleagues and supervisors, and a general decrease in discipline and self-control (Brower, 2023). In the context of human resource management, attention is drawn to the risks of prolonged working hours, the emergence of a sense of "invisibility" within the organization, and, consequently, exclusion from opportunities for professional development, training, or promotion. A frequent concern is also the lack of adequate support from supervisors and coworkers. Another important challenge is the need for effective communication in digital environments, which requires employees to be proficient in using so-called "digital body language" (Dhawan, 2022). An additional difficulty is achieving a state of deep work, which is crucial for creating new value and fostering professional development (Gulewicz, 2019; Newport, 2018).

The widespread adoption of remote work presents significant challenges for organizations in the area of personnel management. The manner in which work is organized and coordinated largely determines whether the difficulties characteristic of remote work will emerge or be effectively mitigated. Traditional management practices, developed primarily for on-site work environments, do not always prove sufficient under the new conditions (Wiatr & Skowron-Mielnik, 2023). Consequently, a shift in the work model - particularly the transition to remote or hybrid work – may influence

employees' perceptions of how personnel management is conducted within the organization. If employees' assessments of management deteriorate, it may indicate that the existing management practices are not fully aligned with the specific demands of remote and hybrid work, suggesting a need for organizations to adapt their management processes to the evolving work environment.

Among the many dimensions of human resource management within an enterprise, four areas appear to be of particular importance in the context of remote work: ensuring effective communication within the organization, maintaining proper relationships between employees and supervisors and providing them with appropriate support, fostering a positive atmosphere and promoting collaboration within work teams, as well as ensuring high levels of employee job satisfaction, including work-life balance (Aziz et al., 2021; Buonomo et al., 2024). These are areas where, under remote working conditions, both new opportunities and challenges, as well as threats, tend to emerge. Consequently, they can be regarded as key domains for assessing the functioning of the management system in organizations that implement remote or hybrid work models.

Under remote working conditions, the effectiveness of communication processes becomes particularly important, as access to informal interactions and spontaneous information exchange is significantly limited. Research shows that difficulties in digital communication – such as the absence of non-verbal cues, delays in information transfer, and information overload – can lead to a decline in team performance and a decrease in job satisfaction (Aburumman et al., 2021; Van Zoonen & Sivunen, 2021; Sanusi et al., 2023). Therefore, organizations must consciously design communication mechanisms that address both formal and informal information needs of employees and develop competencies in effective communication within digital environments. Assigning employees to remote work without

proper preparation and support in this area may cause them to perceive deficiencies that remained unnoticed during on-site work.

In remote and hybrid working environments, the role of supervisors as sources of feedback, motivation, and assistance in problem-solving becomes even more critical. The limited possibility of direct contact means that communications from supervisors may be perceived as less accessible or less supportive, which negatively affects employees' sense of security and their motivation to work. A lack of regular support and clear articulation of expectations by supervisors under remote working conditions contributes to decreased engagement, increased uncertainty regarding task execution, as well as heightened feelings of isolation and reduced job satisfaction (Eisenberger et al., 2020; Wang et al., 2021).

Remote and hybrid work significantly affects collaboration and relationships among members of work teams. The reduction of direct contact and the lack of daily, informal interactions can weaken the sense of community, diminish mutual support, and lead to a deterioration of the work atmosphere. Research indicates that employees working in dispersed teams are more likely to experience a lack of belonging, lower levels of support from colleagues, and greater difficulties in building trust (Gibson & Gibbs, 2006; Morrison-Smith & Ruiz, 2020; Bartsch et al., 2021). Satisfaction with being part of a team in remote working conditions may decrease significantly, which negatively affects the quality of relationships among coworkers. Maintaining a positive atmosphere and a sense of connection in dispersed teams requires the deliberate cultivation of an organizational culture that promotes openness, mutual support, and regular interactions not only of a task-related but also of a social nature (Contreras et al., 2020).

Job satisfaction and the sense of work-life balance are largely outcomes of the overall functioning of an organization's human

resource management system. Unlike areas such as communication, relationships with supervisors, or team collaboration, they do not constitute direct elements of management practices, but rather reflect the extent to which organizational and managerial practices meet employees' needs. Changes in the organization of work under remote and hybrid working conditions can both foster improvements in employee well-being and generate new sources of stress and dissatisfaction (Tavares, 2017; Wang et al., 2021). Employees' perceptions of job satisfaction therefore provide valuable insights into the effectiveness of the management system within the organization and the quality of working conditions in the changed organizational realities.

The implementation of remote work exerts a differentiated impact on organizational functioning depending on the sector in which the enterprise operates and the type of tasks it performs. Differences concern both the possibilities for introducing flexible work models and the associated challenges and managerial consequences. In some organizations, particularly in the public utilities sector, which perform important social functions or operate under strict regulatory conditions, changes in the work organization model require much greater caution due to a high aversion to organizational risk. In these organizations, given the strategic importance of the services provided and the necessity of ensuring their continuity, the tolerance for potential disruptions is minimal (Hood, 1991; Van der Wal et al., 2008; Osborne, 2010; Christensen & Lægread, 2020).

This group includes enterprises providing municipal services such as water supply, wastewater management, public transportation, and waste collection and disposal. These organizations fulfill a public mission aimed at ensuring the continuity, safety, and reliability of service provision, and their operations are subject to strict legal regulations and high quality standards (Bryson et al., 2014). Under such conditions,

any change in work organization, including the implementation of remote or hybrid work models, requires particular caution and a prior analysis of the potential impacts on the fulfillment of the enterprise's core tasks.

In the municipal sector, it is therefore particularly important to continuously monitor the impact of new organizational solutions on the functioning of the enterprise and to respond quickly to any disruptions. Effective personnel management directly influences an organization's ability to fulfill its mission and to maintain high-quality service provision under changing working conditions (Meier & O'Toole Jr, 2011). The following section of the article presents the results of a survey on perceptions of personnel management, conducted among employees of a municipal enterprise that has recently implemented flexible forms of work.

2. Research methods

Taking into account the benefits, drawbacks, and managerial challenges associated with remote work, an attempt was made to identify the relationship between the implementation of remote work and the assessment of personnel management in a municipal sector enterprise in Poland. Accordingly, the following research questions were formulated:

- (1) What are the possibilities for implementing hybrid work and the actual scale of its application in the analyzed organization?
- (2) How does the assessment of personnel management quality differ between employees working at least partially remotely and those working exclusively on-site?
- (3) What specific managerial barriers emerged during the implementation of remote work in this organization?

To achieve the adopted research objectives, a survey was conducted at Kraków Waterworks S.A. (Wodociągi Miasta Krakowa S.A.). It is a municipal enterprise with the status of an autonomous municipally owned corporation

(MOC), belonging to a local government unit, operating outside the structures of the local bureaucracy, possessing its own tariffs and commercial revenues, and providing local public services (Voorn et al., 2017, p. 820). It is a large organization, employing nearly 1,200 staff members and serving over one million customers with water supply and wastewater services (WMK, 2022). Importantly, the company ranks among the global leaders in terms of water quality, reflecting its high technological and organizational standards. Professionalism in management practices was a key factor in selecting this enterprise as the subject of the analysis.

The survey method was employed in the study. The questionnaire was addressed to all employees of the enterprise, excluding members of the Management Board. Two separate questionnaires were used: one tailored for operational positions (both office-based and manual jobs) and another reflecting the specific responsibilities of managerial staff. The questionnaire was made available in two formats: paper-based and electronic, with the latter accessible via a link to an online form. To ensure anonymity and the integrity of the research process, employees were asked to complete the questionnaires individually and to provide responses in accordance with their own views. In the online version, respondents were not required to provide email addresses or any other identifying information, thus guaranteeing full anonymity. Employees were also requested not to disclose the content of their responses to colleagues or supervisors.

The data collected through the paper-based questionnaires were entered into an electronic database by the research team and subsequently analyzed together with the responses from the online version. The survey forming the basis of this article was conducted in February 2025, and the overall response rate reached approximately 44%. The analysis also partially incorporated results from a previous survey conducted in the same company in March 2023. That

earlier study was based on a slightly different questionnaire and was carried out during the specific context of the COVID-19 pandemic. Therefore, this article does not provide a full comparison of the results from both survey editions.

The core part of the analysis, concerning the assessment of the personnel management system, is based on respondents' answers to several detailed questions divided into four areas: communication within the organization, supervisor support, team collaboration and atmosphere, and job satisfaction including work-life balance, in line with the findings presented in the theoretical section. Responses were provided using a five-point Likert scale (very poor – rather poor – no opinion – rather good – very good). The conversion of responses into a numerical scale (1–5) made it possible to calculate arithmetic means for each analyzed area, as well as an overall synthetic score for the personnel management system for individual employees and identified employee groups.

3. Results

3.1. Remote work at WMK S.A.: capacity, employee preferences, and practical implementation

Given the operational nature of activities carried out by Wodociągi Miasta Krakowa (Krakow Municipal Waterworks), one might assume that the scope for implementing remote or hybrid work models within the company is highly limited. A significant portion of employee tasks are technical in nature and require physical presence either on site or in the field. However, the results of the survey do not fully confirm this assumption. Only 40% of respondents indicated that none of their duties could be performed remotely, which means that the vast majority of employees see the possibility of carrying out at least part of their work outside the traditional workplace.

As expected, these assessments vary depending on the nature of the position held. Among operational staff, 43.2% reported no possibility of working remotely, compared to just 29.6% among managerial staff. These differences stem from the distinct characteristics of each role – managerial positions more often involve administrative, coordinative, or analytical tasks, which are generally more amenable to remote execution.

A detailed analysis of the distribution of responses shows that 19.5% of respondents estimated they could perform approximately 25% of their duties remotely, 12.6% — around half, 16.3% — about 75%, and 11.6% — nearly all tasks (Figure 1). This distribution is relatively even, with no clear concentration of responses around a single value, which suggests significant diversity both in job roles and in the nature of the tasks performed within the organization.

These findings point to a real potential for implementing differentiated and flexible work models — in particular, hybrid solutions that take into account the specific characteristics of individual positions as well as employee preferences. Organizational flexibility in structuring work could thus serve as a response to the company’s internal operational diversity while also supporting a better alignment of working conditions with the evolving needs of its workforce.

A comparison of survey results from 2023 and 2025 indicates relative stability in employees’ assessments regarding the feasibility of performing tasks remotely. This may reflect a fairly accurate understanding and confidence among respondents in evaluating this aspect of their work. Across the entire workforce, the proportion of employees declaring that at least part of their duties can be performed remotely remained unchanged at 60%.

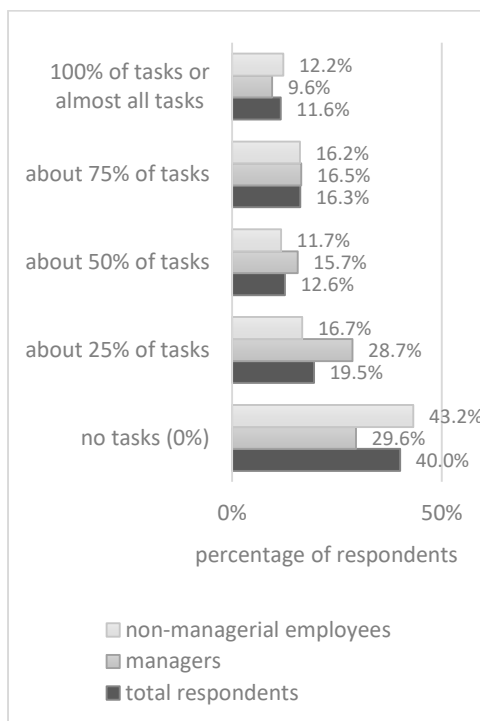


Figure 1. Employees’ opinions on the share of their tasks that can be performed remotely (2025 survey)

Source: Own study based on survey data

However, some variation is observed when analyzing specific job groups. Among operational employees, a slight upward trend is noticeable — in 2025, a somewhat higher share of respondents recognized the potential for remote work compared to two years earlier. In contrast, the opposite tendency is evident among managerial staff: whereas in 2023 more than 80% of managers indicated that some of their responsibilities could be performed remotely, in 2025 this share declined to 70.4%. This decrease may reflect a growing awareness of the challenges associated with managing teams in remote or hybrid environments. As managers gain more experience with remote work, they may increasingly recognize its limitations and difficulties, leading to a more cautious assessment of its applicability.

The results of the employee survey indicate that the actual use of remote work remains limited in the analyzed company (Table 1). In 2025, only about 40% of employees whose tasks could potentially be carried out remotely had actually worked in this mode over the previous two years. Notably, the differences between operational employees and managerial staff in this regard are relatively small.

It is worth noting that in the previous survey, covering the period from 2020 to 2023, remote work was significantly more widespread. However, it should be emphasized that this was a time of the COVID-19 pandemic, during which remote work was often imposed by necessity. The substantially different institutional and organizational context of that period makes it difficult to directly compare the data from both time frames.

Table 1. Employee preferences and practical implementation of remote work

	2023 (N=497)	2025 (N=492)
The percentage of respondents who work remotely at least partially		
non-managerial employees	78.1%	39.6%
managers	91.8%	42.0%
total respondents	81.5%	40.3%
The percentage of respondents who want to work remotely or hybrid		
non-managerial employees	63.8%	73.0%
managers	53.4%	54.3%
total respondents	61.2%	67.8%

Source: Own study based on survey data

The proportion of employees who would like to perform at least part of their duties remotely is clearly higher than the proportion of those who actually do so. In 2025, more than two-thirds of employees whose tasks can be carried out remotely expressed a desire to work in this mode. Interestingly, this preference was more frequently reported by

operational employees than by those in managerial positions.

It is particularly noteworthy that among operational employees, interest in remote work increased significantly – from 63.8% in 2023 to 73.0% in 2025. In contrast, among managerial staff, the declared willingness to work remotely has remained stable, hovering around 54%. This may reflect differing motivations between the two groups, as well as varying perceptions of the benefits and limitations of remote work depending on their role within the organizational structure.

In summary, the level of interest in remote work among employees is lower than the potential for its implementation, yet significantly higher than the actual extent to which it is practiced. This discrepancy points to the existence of barriers hindering the broader adoption of remote work models within the company. Importantly, these obstacles do not stem solely from the nature of the tasks performed – as evidenced by the fact that a considerable number of employees recognize the possibility of working remotely but do not do so – but also have organizational, technical, and likely social or cultural roots.

This raises an important question: to what extent, and in what ways, does limited access to remote work – as well as employees' experiences with it – influence their perceptions of management quality within the company? Particular attention will be given to areas such as communication, relationships with supervisors, team collaboration, and overall job satisfaction.

3.2. Remote work and employee perceptions of people management

The research results indicate that the overall perception of management quality in the analyzed organization is at a moderately high level. The average score for all employees was 3.93 on a five-point scale, suggesting that respondents generally assess the personnel management practices and the functioning of

key organizational processes positively. An analysis by professional roles shows that managers evaluate management more favorably (average score of 4.06) than non-managerial employees (average score of 3.90). This may reflect differences in access to information, decision-making autonomy, or direct experiences related to task execution and communication at higher organizational levels.

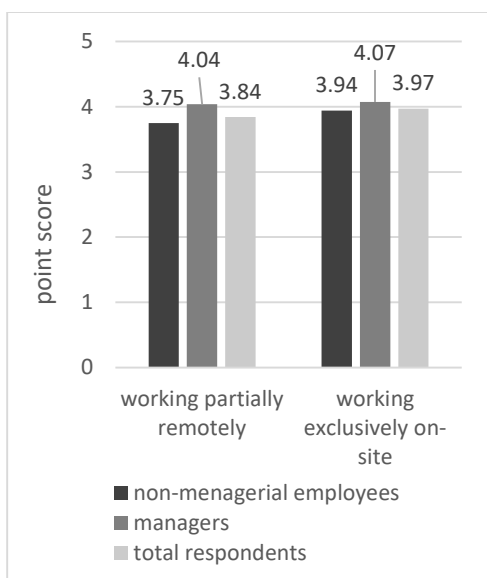


Figure 2. Remote work experience and the synthetic assessment of the personnel management system

Source: Own study based on survey data

The analysis of the relationship between the work mode and the perception of management quality shows that employees working at least partially remotely assess management in the organization slightly lower (average score of 3.84) compared to those working exclusively on-site (average score of 3.97). Although the difference is small (0.13 points), it may indicate the presence of certain difficulties and challenges associated with maintaining management quality within a hybrid work model. Among managerial staff, the difference between the assessments of those working exclusively on-site and those working in a hybrid mode is

minimal (0.03 points). Among non-managerial employees, the difference is more pronounced – Individuals with remote work experience rated management 0.19 points lower than those working exclusively on-site (Figure 2).

To gain more detailed insights, an analysis was conducted of the individual components that make up the perception of personnel management, namely respondents' opinions on organizational communication, supervisor support, team collaboration, and job satisfaction including work-life balance (Table 2).

Table 2. Remote work and the assessment of different management areas

Assessment area	Work mode R – remote/hybrid O – on-site	non-managerial employees	managers	total respondents
		point score (on a 1–5 scale)		
commu- nication	R	3.63	3.95	3.72
	O	3.82	3.95	3.84
supervi- sor support	R	3.79	4.07	3.87
	O	3.87	4.16	3.93
collabo- ration	R	3.67	4.17	3.82
	O	3.96	4.10	3.91
job satisfa- ction	R	3.91	3.99	3.94
	O	4.23	4.09	4.21

Source: Own study based on survey data

The research results indicate that respondents working exclusively on-site assess the quality of internal communication more positively than those performing part of their duties remotely – with a difference of 0.12 points on a five-point scale. A detailed analysis distinguishing between professional roles reveals additional patterns. Among managers, communication assessments remain at a similar level regardless of the work mode. However, among non-managerial employees,

a noticeable difference emerges: those working remotely rate most aspects of communication lower than their on-site colleagues. The greatest discrepancies concern the flow of information between organizational units, which may suggest limited effectiveness of horizontal communication in the remote work model.

It is also worth noting that newly hired employees – regardless of their work mode – rate organizational communication relatively highly. This may result either from a lack of prior professional experience (in the case of early-career employees) or from the fact that the current organization compares favorably with previous workplaces, particularly regarding the functioning of information channels and the communication culture.

The survey did not reveal significant discrepancies in the assessment of supervisor support between employees working remotely and those who do not use this form of work — both among managers and non-managerial employees. The observed differences are minimal and may be of a rather indicative nature. Managers rated their relationships with their own supervisors higher than non-managerial employees, regardless of work mode, which may result from greater autonomy, direct access to information, or specific relationship dynamics at higher management levels.

A detailed analysis shows that the greatest divergence concerned opinions regarding the clarity of goals and tasks – in this area, remote workers gave slightly lower ratings. Another interesting finding is the relatively small difference in perceptions of the fairness of performance evaluation criteria. This may suggest that concerns about the "invisibility" of remote employees' efforts are not present in the analyzed organization.

The research results indicate that the work mode (hybrid or exclusively on-site) has a limited impact on the perception of team collaboration. The average assessment of collaboration was slightly higher among employees working exclusively on-site (3.91)

compared to those working in a hybrid model (3.82).

A detailed analysis of specific aspects of collaboration revealed that the greatest differences concerned the perceived fairness of task allocation – hybrid workers rated this aspect significantly lower than their on-site colleagues (a difference of 0.18 points). This may suggest that in teams operating in a hybrid model, it is more difficult to maintain a sense of equitable workload distribution, or that communication regarding task assignments is less clear to employees performing part of their duties outside the office. Some differences were also noted in the assessment of support from other team members, where hybrid workers gave slightly lower ratings. The atmosphere within teams was assessed very similarly in both groups, suggesting that the organization effectively maintains a positive team climate regardless of the work mode.

An analysis considering professional roles showed that managers – both those working on-site and those working in a hybrid mode – assessed team collaboration more positively than non-managerial employees. Importantly, among managers, hybrid work did not lower collaboration ratings; on the contrary, managers working in a hybrid model rated collaboration even slightly higher than their exclusively on-site counterparts. In the non-managerial group, the differences were more pronounced – hybrid workers rated team collaboration noticeably lower than employees working exclusively on-site.

In summary, the findings suggest that although hybrid work does not disrupt team collaboration, it may be associated with certain challenges regarding the perception of fairness in task distribution and team support.

The work mode (hybrid or exclusively on-site) has some impact on respondents' perceptions of job satisfaction and work-life balance. Interestingly, the average assessment of this aspect of management was higher among employees working exclusively on-site (4.20) than among those working in a

hybrid model (3.94). Moreover, this difference is more pronounced than in the previously analyzed areas, such as communication or team collaboration.

The greatest differences between employees' ratings were observed in the area of work-life balance. Employees working exclusively on-site were less likely to report the need to work overtime or to take work home – the differences amounted to 0.34 and 0.55 points, respectively, on a five-point scale. Higher scores in these areas indicated less pressure to perform duties outside of regular working hours. These results suggest that in the hybrid model, the boundaries between private and professional time are more blurred.

Regarding the sense of purpose in tasks, awareness of the impact of work on organizational success, and overall job satisfaction, higher ratings were also observed among employees not working remotely, although the differences were smaller (ranging from 0.09 to 0.18 points).

When analyzing the results by professional role, it can be observed that non-managerial employees rated their job satisfaction higher than managers, regardless of the work mode. In both groups (managers and non-managerial employees), those working in a hybrid model rated their satisfaction slightly lower than those working exclusively on-site. Among non-managerial employees, the difference between hybrid and on-site workers was more pronounced (4.23 vs. 3.91) than among managers (4.09 vs. 3.99).

The analysis of responses suggests that in the hybrid work model, non-managerial employees in particular may experience greater difficulties in maintaining a high level of job satisfaction and work-life balance. When implementing flexible work models, the analyzed enterprise should pay special attention to providing support in work time organization and to strengthening employees' sense of purpose and impact, especially among lower-level employees.

3.3. Barriers to Remote Work

As part of the survey, respondents were asked to identify the main barriers hindering the effective implementation of remote work within the organization. Employees could select from several options addressing different aspects of remote work – ranging from technological and infrastructural limitations, through communication and supervisor support issues, to decision-making aspects. Table 3 presents the six most frequently indicated barriers, both among non-managerial employees and managerial staff. Respondents could select multiple options; therefore, the percentage of responses does not add up to 100%.

Among non-managerial employees, the main barriers to remote work primarily concerned organizational and technological aspects. Respondents pointed to difficulties in accessing necessary documents, technological limitations, and the lack of appropriate equipment enabling effective task performance outside the office. They also indicated insufficient support from supervisors, as well as a perceived reluctance of the managerial staff to adopt the remote work model. Communication issues were mentioned in their responses; however, they were not emphasized as strongly as infrastructural and organizational challenges.

Managers, on the other hand, perceived remote work primarily through the lens of challenges related to team management. They most frequently pointed to difficulties in integrating employees, problems with maintaining effective control over task execution, and limitations in internal team communication. Concerns were also noted regarding building trust and sharing knowledge in a dispersed work environment, as well as maintaining adequate levels of support and motivation among subordinates. Thus, among the barriers reported by managers, aspects related to the effectiveness of management and coordination of team-based work prevailed. An interesting observation is also the difference in the

perception of communication: for managers, it was one of the key barriers, whereas non-managerial employees mentioned it less frequently.

Table 3. Key barriers to remote work identified by managers and non-managerial employees

Six key barriers reported by managers	
barrier	percentage of respondents
difficulties with integration	74.2%
difficulties with control	60.4%
difficulties with communication	50.0%
difficulties with trust-building	46.7%
difficulties with providing support	42.9%
difficulties with motivating employees	42.9%
Six key barriers reported by non-managerial employees	
barrier	percentage of respondents
supervisors' resistance	46.6%
limited access to documents	45.1%
technological limitations	37.5%
lack of equipment for remote work	37.5%
difficulties with supervisor support	23.3%
difficulties with communication	23.3%

Source: Own study based on survey data

These discrepancies suggest that the effective implementation of remote work requires not only adequate technological infrastructure but also the development of managerial competencies in building trust and managing distributed teams. In the context of a municipal enterprise performing strategic tasks in the provision of public services, the identified barriers become particularly significant. Technological limitations, difficulties in team coordination, and challenges related to maintaining high-quality communication and effective support from managerial staff can directly impact the fulfillment of the organization's key functions. These findings confirm that in

entities of high public importance, the implementation of remote work must be approached with particular caution. Such organizations should closely monitor organizational processes and adapt management tools to the specific requirements of a distributed work environment.

4. Conclusion

The development of remote and hybrid work, although accelerated by the COVID-19 pandemic, is deeply rooted in the technological and social changes that have taken place over recent decades. The literature indicates that remote work promotes greater flexibility, improves the balance between professional and private life, and can positively influence productivity, particularly among employees who have the opportunity to autonomously manage their working time. On the other hand, research also shows that the remote work model carries the risk of weakening communication, limiting access to support from supervisors and colleagues, and creating difficulties in building team cohesion and managing dispersed personnel. In the context of organizations with high public importance, such as municipal enterprises, these risks become particularly significant, as they can directly affect the continuity and quality of services provided.

The results of the survey conducted at Kraków Waterworks S.A. largely confirm the findings from the literature. The overall perception of personnel management quality in the analyzed organization was found to be at a moderately high level. Respondents generally rated the functioning of communication, team collaboration, supervisor support, and their own job satisfaction positively. The differences between employees working in a hybrid model and those working exclusively onsite were relatively small but consistently appeared across all the analyzed aspects. Employees performing part of their duties

remotely rated the quality of communication (especially interdepartmental communication), supervisor support (particularly the clarity of goals and tasks), team collaboration (especially the fairness of task allocation), and work-life balance slightly lower. The greatest differences were observed in the area of work-life balance, suggesting that the hybrid model carries a risk of blurring the boundaries between private and professional life. It is worth noting, however, that in some areas, hybrid employees provided equally good or even slightly better ratings (for example, managerial assessments of team atmosphere and collaboration), indicating that the organization has effectively implemented measures to minimize the negative effects of remote work.

The analysis of barriers to remote work identified by respondents revealed that non-managerial employees primarily perceived technological limitations, organizational problems, and insufficient support from supervisors. In contrast, managers emphasized challenges related to team integration, task execution control, and maintaining communication and motivation in a dispersed work environment. The divergence in the perception of barriers between employee groups indicates that the effective implementation of remote work requires a multifaceted approach: not only investments in technology but also the development of managerial competencies in building trust, organizing team-based work, and maintaining communication under conditions of limited direct interaction.

In the context of a municipal enterprise carrying out strategic tasks in the provision of public services, the implementation of remote work should be approached with great caution

and subject to continuous monitoring. In organizations of high public importance, technological limitations, difficulties in team coordination, and potential weakening of communication can have direct consequences for the execution of the organization's core functions and mission. Therefore, the introduction of flexible work models should be carefully planned, taking into account not only operational efficiency but also employee needs, operational security, and the high quality of services provided.

In summary, the study conducted at Kraków Waterworks shows that although remote and hybrid work can be successfully implemented in public utility enterprises, it requires particular attention in the area of personnel management. Organizations of this type should not only invest in appropriate technological infrastructure but also strengthen managerial competencies in managing distributed teams, building employee engagement, and maintaining organizational culture under conditions of limited direct interaction. The case study of the analyzed company provides valuable insights for other organizations in the municipal sector; however, due to the limited scope of the study, these findings should be interpreted with caution. Broader research in this area is recommended, taking into account the specific characteristics of remote work in the municipal sector, which — although of strategic importance — remains relatively underexplored in the context of flexible work models.

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References:

- Barbieri, B., Bellini, D., Batzella, F., Mondo, M., Pinna, R., Galletta, M., & De Simone, S. (2025). Flexible Work in the Public Sector: A Dual Perspective on Cognitive Benefits and Costs in Remote Work Environments. *Public Personnel Management*, 54(1), 99-129. doi: 10.1177/00910260241275241
- Aburumman, N., Gillies, M., Ward, J. A., & Hamilton, A. F. D. C. (2022). Nonverbal communication in virtual reality: Nodding as a social signal in virtual interactions. *International Journal of Human-Computer Studies*, 164, 102819. doi: 10.1016/j.ijhcs.2022.102819
- Aziz, A., Ahmad, M. K., & Suppiah, S. M. (2021). Remote work: New normal communication challenges. *European Proceedings of Social and Behavioural Sciences*. doi: 10.15405/epsbs.2021.06.02.1
- Barrero, J. M., Bloom, N., & Davis, S. J. (2023). The Evolution of Work from Home. *Journal of Economic Perspectives*, 37(4), 23–50. doi: 10.1257/jep.37.4.23
- Bartsch, S., Weber, E., Büttgen, M., & Huber, A. (2021). Leadership matters in crisis-induced digital transformation: how to lead service employees effectively during the COVID-19 pandemic. *Journal of service management*, 32(1), 71-85. doi: 10.1108/JOSM-05-2020-0160
- Brower T. (2023). *The Productivity Problem with Remote Work*. Retrieved from <https://www.forbes.com/sites/tracybrower/2023/08/06/the-productivity-problem-with-remote-work/>
- Bryson, J. M., Crosby, B. C., & Bloomberg, L. (2014). Public value governance: Moving beyond traditional public administration and the new public management. *Public administration review*, 74(4), 445-456. doi: 10.1111/puar.12238
- Buonomo, I., De Vincenzi, C., Pansini, M., D’Anna, F., & Benevene, P. (2024). Feeling Supported as a Remote Worker: The Role of Support from Leaders and Colleagues and Job Satisfaction in Promoting Employees’ Work–Life Balance. *International Journal of Environmental Research and Public Health*, 21(6), 770. doi: 10.3390/ijerph21060770
- Christensen, T., & Lægreid, P. (2020). Balancing governance capacity and legitimacy: how the Norwegian government handled the COVID-19 crisis as a high performer. *Public Administration Review*, 80(5), 774-779. doi: 10.1111/puar.13241
- Contreras, F., Baykal, E., & Abid, G. (2020). E-leadership and teleworking in times of COVID-19 and beyond: What we know and where do we go. *Frontiers in psychology*, 11, 590271. doi: 10.3389/fpsyg.2020.590271
- Dhawan, E. (2022). *Cyfrowa mowa ciała. Jak skutecznie komunikować się w cyfrowym świecie*, Kraków: Znak.
- Eisenberger, R., Rockstuhl, T., Shoss, M. K., Wen, X., & Dulebohn, J. H. (2020). Perceived organizational support: Why caring about employees counts. *Annual Review of Organizational Psychology and Organizational Behavior*, 7, 101–124. doi: 10.1146/annurev-orgpsych-012119-044917
- FFE (2022). *Executives feel the strain of leading in the ‘new normal’*. Retrieved from <https://futureforum.com/wp-content/uploads/2022/10/Future-Forum-Pulse-Report-Fall-2022.pdf>

- Gibson, C. B., & Gibbs, J. L. (2006). Unpacking the concept of virtuality: The effects of geographic dispersion, electronic dependence, dynamic structure, and national diversity on team innovation. *Administrative science quarterly*, 51(3), 451-495. doi: 10.2189/asqu.51.3.451
- Gulewicz, M. (2019). *Jak odzyskać utraconą skuteczność? Zarządzanie sobą i produktywnością firmy*. Warszawa: Infor.
- Hood, C. (1991). A public management for all seasons?. *Public administration*, 69(1), 3-19. doi: 10.1111/j.1467-9299.1991.tb00779.x
- Meier, K. J., & O'Toole Jr, L. J. (2011). Comparing public and private management: Theoretical expectations. *Journal of Public Administration Research and Theory*, 21(suppl_3), i283-i299. Retrieved from <https://www.jstor.org/stable/25836124>
- Morrison-Smith, S., & Ruiz, J. (2020). Challenges and barriers in virtual teams: A literature review. *SN Applied Sciences*, 2(6), 1096. doi: 10.1007/s42452-020-2801-5
- Newport, C. (2018). *Praca głęboka. Jak odnieść sukces w świecie, w którym ciągle coś nas rozprasza*. Warszawa: Studio EMKA.
- Osborne, S. P. (2010). *The New Public Governance? Emerging Perspectives on the Theory and Practice of Public Governance*. Routledge.
- Pogorzelska, A., Wójcik, B., & Wójcik, P. (2020). *Jak pracować zdalnie i nie zwariować?* Gliwice: Helion.
- Sanusi, B. O., Ola, O. I., Adaramola, T. (2023). Communication Challenges and Strategies in Remote Work Settings, *International Journal of Management, Social Sciences, Peace and Conflict Studies (IJMSSPCS)*, 6(3), 75-86.
- Sidor-Rządkowska, M., Sienkiewicz, Ł. (2023). *Cyfrowy HR. Organizacja w warunkach transformacji technologicznej*. Warszawa: Wolters Kluwer.
- Someran, L., Noieng, C., Kitsrivichien, P., & Kulachai, W. (2025). Navigating the new normal: quality of work-life balance and stress influences on remote work efficiency among Thai employees during COVID-19. *International Journal for Quality Research*, 19(2), 639-654. doi: 10.24874/IJQR19.02-19
- Tavares, A. I. (2017). Telework and health effects review. *International Journal of Healthcare*, 3(2), 30-36. doi: 10.5430/ijh.v3n2p30
- Van der Wal, Z., De Graaf, G., & Lasthuizen, K. (2008). What's valued most? Similarities and differences between the organizational values of the public and private sector. *Public administration*, 86(2), 465-482. doi: 10.1111/j.1467-9299.2008.00719.x
- Van Zoonen, W., & Sivunen, A. E. (2021). The impact of remote work and mediated communication frequency on isolation and psychological distress. *European Journal of Work and Organizational Psychology*, 31(4), 610-621. doi: 10.1080/1359432X.2021.2002299
- Voorn, B., van Genugten, M. L., & van Thiel, S. (2017). The Efficiency and Effectiveness of Municipally Owned Corporations: A Systematic Review. *Local Government Studies*, 43(5), 820-841. doi: 10.1080/03003930.2017.1319360
- Wang, B., Liu, Y., Qian, J., & Parker, S. K. (2021). Achieving effective remote working during the COVID-19 pandemic: A work design perspective. *Applied Psychology*, 70(1), 16-59. doi: 10.1111/apps.12290
- Wiatr, A., & Skowron-Mielnik, B. (2023). Hybrid team management: The long and winding road. *Organizational Dynamics*, 52(1), 100936. doi: 10.1016/j.orgdyn.2022.100936

WMK (2022). *Raport roczny 2022*. Retrieved from https://wodociagi.krakow.pl/brepo/panel_repo/2024/07/24/g4wbip/wmk-raport-roczny-2022.pdf (accessed: 12.04.2025).

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