

HRM IN THE METAVERSE: VIRTUAL REALITY WORKSPACES AND THEIR IMPLICATIONS FOR ORGANIZATIONAL CULTURE

Sari Mariahma Nova Sipayung*¹

STMIK LOGIKA Medan, Indonesia
Email: sarisiumbrella87@gmail.com

Rustiyana Rustiyana

Universitas Bale Bandung, Indonesia
Email: rustiyana.unibba@gmail.com

Dyah Maharani

STIA Maulana Yusuf Banten, Indonesia
Email: dyah.maharani82@gmail.com

Abstract

The development of digital technology has encouraged organizations to adopt the metaverse as a virtual reality-based workspace that offers immersive and collaborative work experiences. This transformation has significant implications for Human Resource Management (HRM) practices, particularly in human resource management, work interaction patterns, and the formation and maintenance of organizational culture. This research aims to comprehensively examine the role of HRM in the metaverse context and analyze the implications of virtual workspace use on organizational culture. The method used is a literature review, examining various scientific sources, including journal articles, academic books, and relevant publications discussing the metaverse, virtual reality, digital HRM, and organizational culture. The results indicate that implementing the metaverse in the workplace has the potential to change communication dynamics, organizational values, employee engagement, and leadership practices and collaboration across geographic boundaries. Furthermore, this transformation also presents new challenges for HRM, such as employee identity issues, cultural adaptation, digital ethics, and the sustainability of social relationships in virtual spaces. This research is expected to provide theoretical contributions to the development of digital HRM studies and serve as a practical reference for organizations in designing human resource management strategies that are adaptive to metaverse-based work ecosystems.

Keywords: Human Resource Management, Metaverse, Virtual Reality Workspaces, Organizational Culture

¹ Correspondence author

INTRODUCTION

The development of digital technology over the past two decades has brought significant changes to the way organizations manage human resources. This transformation is marked not only by the adoption of personnel information systems, remote work, and digital collaboration platforms, but also by the emergence of virtual workspaces based on immersive technology. One innovation currently attracting global attention is the metaverse, a three-dimensional digital ecosystem that allows individuals to interact in real time through virtual representations with a high degree of immersion. The presence of the metaverse has the potential to revolutionize Human Resource Management (HRM) practices by creating virtual work environments that transcend the boundaries of space and time, while also introducing new dynamics in the formation and management of organizational culture (Shah et al., 2025a).

In the context of modern organizations, HRM is no longer understood solely as an administrative function focused on recruitment, payroll, and regulatory compliance, but rather as a strategic role that directly contributes to an organization's competitive advantage. Organizational culture, as a set of values, norms, and practices shared by organizational members, is a crucial aspect managed through HRM policies and practices. Organizational culture influences employee behavior, communication patterns, engagement levels, and individual and collective performance (Sharma et al., 2025a). Therefore, fundamental changes in the work environment, including the shift toward metaverse-based virtual workspaces, require a reconsideration of HRM approaches to building and maintaining an effective organizational culture.

The global COVID-19 pandemic has catalyzed the accelerated adoption of remote work and the digitization of organizational processes. However, while video conferencing platforms and online collaboration applications have helped maintain operational continuity, these technologies are often considered incapable of replicating the social interactions, emotional closeness, and collective experiences formed in physical workspaces. These limitations present new challenges for HRM, particularly related to a diminished sense of belonging, a weakening of organizational identity, and an increased risk of employee alienation (Lim et al., 2024). In this context, the metaverse offers a more interactive alternative to virtual workspaces, enabling the simulation of physical presence, nonverbal communication, and richer social experiences.

Virtual reality-based virtual workspaces within the metaverse allow employees to interact using avatars, attend meetings in three-dimensional

environments, participate in immersive training, and participate in organizational activities more deeply. This potential opens up new opportunities for HRM in designing recruitment processes, employee orientation, training and development, performance management, and strengthening organizational culture. Through strategically designed virtual experiences, organizational values can be communicated and internalized in a more contextual and experiential way than conventional approaches (Rozak et al., 2023). However, on the other hand, this transformation also raises critical questions about how organizational culture is formed and maintained when interactions between individuals are mediated by virtual technology.

Organizational culture is traditionally formed through repeated social interactions, physical symbols, work rituals, and shared experiences in physical workspaces. When these spaces shift to virtual environments, cultural elements are redefined. Organizational symbols are no longer limited to physical logos or office layouts, but are embodied in virtual world design, avatars, and digital interaction rules. Norms of behavior and work ethics may also change with increasing anonymity, identity flexibility, and differing perceptions of presence in the metaverse. This presents challenges for HRM in ensuring consistent values and behaviors that align with the organization's vision and mission (Dastane et al., 2024).

In addition to cultural opportunities and challenges, the application of HRM in the metaverse also raises psychological, social, and ethical issues that require attention. Work experiences in immersive virtual environments can impact self-perception, interpersonal relationships, and work-life balance. HRM is required to understand the impact of virtual reality technology use on employee well-being, including the risks of digital fatigue, identity disorientation, and inequality in technology access. In terms of organizational culture, differences in digital literacy and technological readiness among employees have the potential to create cultural fragmentation or social exclusion in virtual work environments (Induji et al., 2024).

Furthermore, the adoption of metaverse in HRM also has implications for leadership and organizational structure. Leadership styles that are effective in physical workspaces may not be relevant in highly decentralized, technology-driven virtual environments. Organizational leaders need to develop new competencies in building trust, motivating employees, and managing conflict in the context of virtual interactions. HRM plays a crucial role in facilitating this transition through policy development, digital leadership training, and

designing communication systems that support a collaborative and inclusive culture in the metaverse.

Although discourse on the metaverse is growing in the technology and business literature, academic studies specifically addressing the implications of implementing HRM in the metaverse on organizational culture are still relatively limited. Most research focuses on technical aspects, economic potential, or user experience, while the social and cultural dimensions within the context of human resource management have not been comprehensively explored. These limitations create a significant knowledge gap, especially for organizations that are beginning to consider or have already adopted virtual reality-based workspaces as part of their digital transformation strategies (Buonocore et al., 2025a).

Therefore, research on "HRM in the Metaverse: Virtual Reality Workspaces and Their Implications for Organizational Culture" is crucial and relevant. This study is expected to provide an in-depth conceptual understanding of how HRM practices adapt in the metaverse environment and how virtual workspaces influence the formation, transformation, and sustainability of organizational culture. Through a literature review approach, this research seeks to synthesize previous findings from various disciplines, including human resource management, organizational behavior, information technology, and work psychology, to develop an integrative and contextual framework.

The results of this study are expected to not only contribute to the development of HRM theory and organizational culture in the digital era but also provide practical implications for practitioners and organizational policymakers. By understanding the cultural dynamics in metaverse-based virtual workspaces, organizations can design HRM strategies that are more adaptive, ethical, and oriented towards human resource sustainability. Thus, this research has academic and practical significance in addressing the challenges of human resource management amidst the evolution of the work environment towards an increasingly complex and immersive virtual world.

RESEARCH METHOD

This research uses a literature review with a qualitative approach to analyze the concept of HRM in the metaverse, specifically regarding the use of virtual reality-based virtual workspaces and their implications for organizational culture. The literature review was conducted by exploring relevant scientific sources such as reputable international journal articles, academic books, conference proceedings, and research reports that discuss digital human

resource management, the metaverse, virtual reality workplaces, and the dynamics of organizational culture in virtual work environments. The literature selection process was carried out systematically, considering topic relevance, publication novelty, and source credibility, thus obtaining a strong theoretical foundation for understanding the transformation of HRM practices in the metaverse context.

Next, data obtained from various literature sources was analyzed descriptively and analytically by identifying key themes, conceptual patterns, and the relationship between the implementation of virtual workspaces and changes in organizational values, norms, and behaviors. This analysis focused on how virtual reality technology influences employee interaction, leadership, team collaboration, and the formation of organizational identity and culture in immersive work environments. Through a synthesis of previous findings, this study seeks to formulate a comprehensive understanding of the opportunities, challenges, and strategic implications of implementing HRM in the metaverse for the development of an adaptive and sustainable organizational culture.

RESULT AND DISCUSSION

Changing Work Patterns and Employee Interactions in Virtual Workspaces

The rapid development of digital technology has brought about significant changes in how organizations manage work activities and foster interactions between employees. One of the most prominent changes is the shift from physical workspaces to virtual workspaces that utilize various digital platforms, such as video conferencing applications, cloud-based collaboration systems, and immersive work environments based on virtual reality and the metaverse. This transformation not only changes the work location but also shapes new work patterns that are more flexible, dynamic, and technology-driven. In this context, virtual workspaces have become the primary arena where employees interact, collaborate, and collectively construct work meaning, replacing many functions that could previously only be performed through face-to-face meetings (Aufegger et al., 2022).

Changing work patterns in virtual workspaces are characterized by increased flexibility in time and place. Employees are no longer tied to conventional working hours and specific office locations but can instead complete tasks from various locations according to their individual needs and circumstances. This flexibility provides opportunities for improved work-life balance, while encouraging productivity based on results rather than physical presence (Tagliaro et al., 2022). However, these changes also require

employees to have a higher level of independence, self-discipline, and digital literacy. In a virtual workplace, direct supervision is replaced by a target-based performance management system, making clarity of roles, goals, and work expectations key factors in maintaining effective teamwork.

In addition to work patterns, employee interactions have also undergone a fundamental transformation. In a physical workplace, interactions often occur spontaneously through informal conversations, brief discussions during work hours, or unplanned meetings. In contrast, virtual workplaces tend to mediate interactions through technology, making communication more structured and scheduled. Virtual meetings, instant messaging, and online document collaboration have become the primary means of building working relationships. This shifts the dynamics of interpersonal communication, where nonverbal expression and emotional closeness are often diminished due to the limitations of digital media (Yamijala et al., 2025). Consequently, employees need to develop more explicit and empathetic communication skills to effectively convey messages without misunderstandings.

These changes in interactions in a virtual workplace also impact the formation of social relationships and a sense of community among employees. A sense of belonging to the organization, previously built through in-person interactions, office culture, and shared activities, must now be fostered through digital approaches. Organizations are required to design strategies that foster emotional engagement among employees, even when they are physically separated. Activities such as informal virtual meetings, cross-team discussions, and the use of interactive collaborative platforms are crucial for building a virtual work community. Without deliberate effort, virtual workspaces have the potential to create social isolation, decrease motivation, and weaken team solidarity ("Strategies for Transforming the Traditional Workplace into a Virtual Workplace in Smart Cities," 2022).

On the other hand, virtual workspaces open up new opportunities for collaboration across geographic and cultural boundaries. Employees from diverse backgrounds can work together on a single project without having to be in the same location. This fosters the formation of global teams with rich perspectives and expertise, and enhances the organization's innovation capacity. Cross-cultural interactions in virtual workspaces require a high level of cultural sensitivity and adaptability, as differences in values, communication styles, and work habits become more apparent. With proper management, this diversity can become a significant source of competitive advantage for organizations.

Changing work patterns and interactions in virtual workspaces also impact the roles of leadership and human resource management. Leaders no longer function solely as direct supervisors, but also as facilitators capable of building trust, providing support, and maintaining team connectivity virtually. A participatory leadership style based on open communication becomes increasingly relevant in this context. Human resource management is required to adapt policies, performance appraisal systems, and employee development programs to align with the characteristics of virtual work. Training in digital skills, time management, and virtual communication are strategic needs to ensure employee readiness for these changes (Fereydooni & Walker, 2020).

Overall, the shift in work patterns and employee interactions in virtual workspaces is a complex phenomenon with far-reaching implications for both individuals and organizations. On the one hand, virtual workspaces offer unprecedented flexibility, efficiency, and opportunities for global collaboration. On the other hand, challenges related to communication, social engagement, and employee psychological well-being require serious management. The success of implementing virtual workspaces depends heavily on an organization's ability to balance the use of technology with a humanistic approach that places employees at the center of work transformation. With the right strategy, virtual workspaces can become not only a technical solution but also a new social space that supports organizational productivity, well-being, and sustainability in the digital age.

Organizational Culture Transformation in the Metaverse Work Environment

The transformation of organizational culture in the metaverse work environment is an increasingly relevant phenomenon with the accelerated adoption of immersive technology in the modern workplace. The metaverse, as an interactive, three-dimensional virtual space, not only brings changes to the technical aspects of work but also has profound implications for values, norms, interaction patterns, and collective identity within the organization. Organizational culture, previously shaped by physical interactions, tangible visual symbols, and conventional work routines, is now shifting toward a digital culture mediated by virtual reality, augmented reality, and avatar systems. This change requires organizations to reinterpret the meaning of togetherness, collaboration, leadership, and loyalty within a workspace context that is no longer limited by geographic location (Shah et al., 2025b).

In the metaverse work environment, interactions between individuals no longer occur directly through physical presence, but rather through digital

representations in the form of avatars. This impacts how employees express themselves, build professional relationships, and understand the organization's identity. Organizational culture, previously reflected through body language, office layout, and physical symbols such as uniforms and workspace design, is transforming into digitally constructed virtual symbols. Virtual meeting rooms, three-dimensional offices, and even digital social spaces have become new tools for shaping and transmitting organizational values. In this context, organizational culture is no longer static but increasingly dynamic and flexible, adapting to technological developments and diverse individual preferences.

The transformation of organizational culture in the metaverse also impacts communication and collaboration patterns. Communication, which previously relied on face-to-face meetings, is now shifting to immersive communication, enabling simultaneous interaction in a shared virtual space (Paravastu et al., 2025). This opens up opportunities for more intensive cross-cultural and cross-national collaboration, but also presents challenges in maintaining alignment of organizational values and norms. Differences in employee cultural backgrounds, communication styles, and digital literacy levels can impact the effectiveness of interactions in the metaverse (Ramachandran et al., 2023). Therefore, organizations need to develop an inclusive culture that accommodates this diversity while ensuring that core organizational values remain consistently internalized in all virtual activities.

The leadership aspect of organizational culture is also undergoing significant transformation in the metaverse work environment. Leaders are no longer judged solely by their physical presence or formal authority, but rather by their ability to facilitate virtual interactions, build trust, and create meaningful work experiences in digital spaces. Leadership in the metaverse demands new competencies, such as the ability to manage virtual teams, understand employee psychological dynamics in immersive environments, and leverage technology to strengthen engagement and motivation. Organizational cultures that adapt to digital leadership tend to be better prepared for the changes and uncertainties inherent in the era of digital transformation (Hwang & Seo, 2025).

Furthermore, the transformation of organizational culture in the metaverse also influences how organizations build a sense of belonging and employee engagement. As the boundaries between workspace and personal space become increasingly blurred, organizations need to design virtual work experiences that foster collective identity and team solidarity. Virtual social activities, digital organizational rituals, and immersive experience-based

rewards are becoming new instruments for strengthening organizational culture. However, if not managed properly, the metaverse work environment also has the potential to lead to alienation, digital fatigue, and a decline in the quality of interpersonal relationships (Cong, 2024). Therefore, balancing the use of technology with attention to employee psychological well-being is a crucial element in organizational culture transformation.

Organizational culture transformation in the metaverse is also closely related to changes in work values and professional ethics. Transparency, trust, and accountability need to be redefined in the context of technology-rich virtual interactions. Data use, digital privacy, and information security are crucial issues that influence employee perceptions of organizational culture. Organizations that can firmly instill digital ethical values will more easily build trust and legitimacy among employees (Showkat et al., 2025). Conversely, the lack of clarity of rules and norms in a metaverse environment can trigger conflict, role uncertainty, and decreased organizational commitment.

Ethics, Data Privacy, and Information Security in Metaverse-Based HRM Practices

The transformation of metaverse-based Human Resource Management practices brings fundamental changes to the way organizations manage human resources, not only in terms of work efficiency and flexibility, but also from the perspective of ethics, data privacy, and information security. The metaverse, as an immersive virtual space, enables organizations to create digital work environments that mimic the real world through virtual reality, augmented reality, and artificial intelligence technologies (Buonocore et al., 2025b). In the HRM context, the metaverse is used for recruitment, training, performance appraisals, team collaboration, and even the formation of a virtual organizational culture. However, behind this innovative potential, serious challenges arise related to the protection of employee rights, the use of personal data, and the security of the information systems that form the foundation of metaverse operations.

From an ethical perspective, the implementation of metaverse-based HRM requires organizations to reexamine the moral principles underlying employment relationships. Virtual work environments enable the massive and continuous collection of employee data, including biometric data, facial expressions, body movements, communication patterns, and emotional responses during virtual interactions. Overly invasive data collection has the potential to violate individual privacy and create power imbalances between

organizations and employees (Barkat & Lalwani, 2024). Therefore, HRM ethics in the metaverse must emphasize the principles of respect for human dignity, fairness, transparency, and accountability in every technology-based data management and decision-making process.

Ethical issues also arise in the use of algorithms and artificial intelligence to support HRM functions in the metaverse. Automated systems used to assess performance, monitor productivity, or recommend promotions can contain biases that are not recognized by developers or management. If not properly monitored, these algorithms can reinforce discrimination based on gender, age, cultural background, or other personal characteristics. In a metaverse environment that relies heavily on data and avatar visualization, the risk of stereotyping and perceptual biases is even greater (Chhibber et al., 2024). Therefore, organizations are required to ensure that metaverse-based HRM systems are designed and operated ethically, with algorithm audit mechanisms, human involvement in strategic decision-making, and policies that guarantee equality and inclusivity.

Data privacy is a central issue in metaverse-based HRM practices because the intensity and type of data collected are far more complex than in conventional HRM systems. Metaverses enable real-time tracking of employee activity, from the duration of virtual presence and social interactions to non-verbal behavior recorded through VR devices. This type of data is highly sensitive and potentially misused if not managed with strict privacy policies. Employees can feel overly monitored, ultimately leading to stress, discomfort, and decreased trust in the organization (Pandey et al., 2025).

In the context of privacy, the main challenge lies in defining the boundary between the organization's need to improve performance and the individual's right to maintain personal space. Metaverse-based HRM must be able to transparently explain what types of data are collected, the purposes for which they are used, the duration of their retention, and who has access to that data. Employee consent must be given consciously and voluntarily, not simply an administrative formality. Furthermore, organizations need to provide mechanisms for employees to access, correct, or delete their personal data in accordance with modern data protection principles.

Data privacy issues are also closely related to compliance with applicable regulations and legal standards. In a global context, organizations operating metaverses often involve employees from various countries with varying data protection regimes. This creates complexity in ensuring compliance with regulations such as personal data protection, cross-border data transfers, and

data subject rights. Metaverse-based HRM must be able to integrate adaptive privacy policies aligned with international and local legal frameworks, thus not only protecting the organization from legal risks but also ensuring employee rights on an ongoing basis (Krytynskaya et al., 2025).

Information security is another crucial aspect of metaverse-based HRM practices. Virtual environments connected online and reliant on complex digital infrastructure are highly vulnerable to cyber threats, such as hacking, data theft, malware, and digital identity manipulation. HR data stored in metaverse systems includes strategic organizational information as well as personal employee data, which is highly valuable to unauthorized parties. Data leaks not only result in financial losses but also damage the organization's reputation and employee trust.

Information security in metaverse-based HRM cannot be understood solely as a technical issue, but also as part of organizational governance. Security systems must be designed in layers, encompassing technological infrastructure protection, user access management, data encryption, and continuous activity monitoring. However, sophisticated security technology must be balanced with employee digital awareness and literacy. Human error, such as the use of weak passwords or negligence in maintaining VR devices, is often a key vulnerability in information security breaches.

In addition to external threats, information security in metaverses also faces internal risks related to abuse of authority and data access. In HRM practices, not all parties require full access to employee data. Therefore, the principle of limiting access based on roles and responsibilities is crucial. Internal oversight, regular audits, and strict sanction policies are necessary to prevent data misuse by individuals within the organization. This approach emphasizes that information security is not solely the responsibility of the IT department, but rather a collective commitment of all organizational elements (Aydın et al., 2025).

The integration of ethics, data privacy, and information security in metaverse-based HRM requires a paradigm shift in human resource management. Organizations must no longer focus solely on efficiency and technological innovation; they must also place human values at the heart of digital transformation. HRM in the metaverse ideally functions as a facilitator, balancing business interests with employee well-being and rights. With an ethical, transparent, and secure approach, the metaverse can become a virtual workplace that is not only productive but also equitable and sustainable (Vibhanshu & Gulati, 2025). Ultimately, the success of implementing metaverse-

based HRM depends heavily on the organization's ability to build trust. This trust arises when employees feel that their data is respected, their privacy is protected, and the technology used does not compromise their dignity and autonomy as individuals. Ethics, data privacy, and information security are not barriers to HRM innovation in the metaverse, but rather fundamental foundations that ensure digital transformation is carried out responsibly and human-centrally. If you wish, I can also adapt the language to be more academic, suitable for international journals or organizational policy contexts.

HRM Innovation Opportunities Through the Metaverse to Increase Employee Engagement

The rapid development of digital technology has brought significant changes to human resource management practices. One innovation that is now gaining widespread attention is the use of the metaverse as an immersive virtual workspace. The metaverse is not merely understood as entertainment technology, but rather as a three-dimensional digital ecosystem that enables real-time social interaction, collaboration, and work activities through virtual representations (Buonocore et al., 2025c). In the context of HRM, the presence of the metaverse opens up strategic opportunities to create more engaging, participatory, and meaningful work experiences for employees. This is particularly relevant given the challenges facing modern organizations in maintaining employee engagement amidst the rise of remote work, flexible working hours, and the demands of an increasingly diverse workforce.

Employee engagement is a crucial factor that directly impacts productivity, loyalty, and overall organizational performance. Employees who feel engaged tend to demonstrate a higher emotional commitment to their work and organizational values. However, in conventional digital work environments dominated by two-dimensional text- or video-based communication, interactions often feel limited and impersonal. The metaverse offers innovative opportunities to overcome these limitations by creating virtual workspaces that allow employees to interact more naturally through avatars, three-dimensional environments, and social simulations that approximate face-to-face experiences. This allows HRM to design work experiences that are not only functional, but also emotional and social (Chaudhary et al., n.d.).

One of the key opportunities for HRM innovation through the metaverse lies in creating a more immersive and inclusive work environment (Mettu & Katyal, 2025). In the metaverse, employees can participate in various

organizational activities without being limited by geographic location. Team meetings, project discussions, and even informal activities like virtual coffee breaks can take place within the same ecosystem. This fosters a stronger sense of community and social presence than traditional online work platforms. For remote employees, this experience can reduce feelings of isolation and increase their sense of belonging to the organization, ultimately positively impacting their engagement levels.

Furthermore, the metaverse provides opportunities for HRM to develop more interactive and contextual employee training and development programs. Simulation-based training in a virtual environment allows employees to learn through hands-on experience, rather than simply passively receiving material. For example, training in leadership, customer service, or workplace safety can be simulated in realistic scenarios that require decision-making and collaboration. This approach not only increases learning effectiveness but also fosters employee motivation and enthusiasm for participating in self-development programs. High engagement in the learning process contributes to increased self-confidence and job satisfaction.

Another innovation opportunity arises in managing communication and collaboration between employees. The metaverse enables more dynamic cross-departmental and cross-cultural interactions. HRM can facilitate virtual collaborative spaces specifically designed for creative discussions, brainstorming, or cross-functional teamwork. These environments can be tailored to the organization's needs, both in terms of space design and interaction features. When employees feel they have a safe and engaging space to express their ideas, their level of participation and engagement in organizational processes increases. This also fosters a culture of sustainable innovation (Sharma et al., 2025b).

From an employee experience perspective, the metaverse opens up opportunities for HRM to personalize work interactions. Through customizable avatars and virtual environments, employees have the freedom to creatively express their identities. This personalization can enhance a sense of ownership and emotional attachment to the work environment. HRM can also leverage interaction data within the metaverse to understand employee preferences, collaboration patterns, and participation levels. This information provides the basis for designing policies and programs that are more relevant to employee needs, so that engagement is no longer generic, but rather contextual and individualized.

The metaverse also has the potential to be an effective tool for strengthening organizational culture. A company's values, vision, and mission can be embodied in virtual symbols, activities, and rituals consistently presented in the metaverse space. New employee orientations, milestone celebrations, and internal events can be designed as immersive experiences that leave a lasting impression. When organizational culture is not simply conveyed through documents or presentations, but experienced directly, employees are more likely to understand and internalize these values. This internalization process contributes to long-term engagement and alignment between individuals and the organization.

However, the opportunities for HRM innovation through the metaverse are not without challenges that must be managed wisely. Differences in digital literacy levels, infrastructure readiness, and the potential for digital fatigue are all aspects that must be considered. Therefore, the role of HRM is not merely as a technology user, but also as a manager of organizational change. A gradual, inclusive, and employee-centered approach is key to ensuring that metaverse utilization truly increases engagement, rather than fostering resistance. With the right strategy, the metaverse can be a transformational tool that enriches the work experience and strengthens the relationship between employees and the organization (Shah et al., 2025c).

Overall, the metaverse offers significant opportunities for HRM innovation in enhancing employee engagement through more immersive, interactive, and meaningful work experiences. By strategically leveraging this technology, HRM can create a work environment that supports not only productivity but also the psychological and social well-being of employees. Amidst the ever-changing dynamics of the workplace, an organization's ability to innovate in managing employee engagement through the metaverse will be a key determinant of long-term sustainability and competitiveness.

CONCLUSION

The conclusion of this study shows that the implementation of Human Resource Management in the metaverse through the use of virtual reality-based virtual workspaces brings fundamental changes to the way organizations manage human resources and shape organizational culture. Virtual work environments enable new interaction patterns that transcend the boundaries of space and time, increase work flexibility, and open up opportunities for more immersive cross-regional collaboration. In the context of organizational

culture, the metaverse functions not only as a technological medium but also as a digital social space that influences shared values, norms, and work practices. Interactions mediated by avatars and virtual spaces contribute to the redefinition of professional identity, a sense of community, and how employees construct meaning at work in modern organizations.

Furthermore, this study confirms that the success of HRM implementation in the metaverse depends heavily on the organization's readiness to manage aspects of culture, ethics, and digital leadership. Without an adaptive HRM strategy, the use of virtual technology has the potential to create challenges such as weakened emotional attachment, a digital inclusivity gap, and ambiguity in organizational values. Therefore, HRM in the metaverse era needs to be designed holistically by integrating policies, competency development, and human-centric cultural management practices. This approach is expected to ensure that the transformation towards a virtual workspace not only increases organizational efficiency, but also strengthens a sustainable and meaningful organizational culture.

REFERENCES

- Aufegger, L., Elliott-Deflo, N., & Nichols, T. (2022). Workspace and Productivity: Guidelines for Virtual Reality Workplace Design and Optimization. *Applied Sciences*, 12(15), 7393. <https://doi.org/10.3390/app12157393>
- Aydın, Ö., Karaarslan, E., & Narin, N. G. (2025). Artificial Intelligence, VR, AR and Metaverse Technologies for Human Resources Management. *International Journal of Management Information Systems and Computer Science*, 9(2), 77–94. <https://doi.org/10.33461/uybisbbd.1681947>
- Barkat, H., & Lalwani, S. (2024). Security Threats and It's Mitigation for Metaverse in HR Management. 2024 *International Conference on Cybernation and Computation (CYBERCOM)*, 178–183. <https://doi.org/10.1109/CYBERCOM63683.2024.10803159>
- Buonocore, F., de Gennaro, D., & Del Barone, L. (2025a). Exploring Metaverse Innovations in Public Administration: A Focus on Human Resource Management. In F. Schiavone, N. Omrani, & H. Gabteni (Eds.), *Advanced Perspectives and Trends in Digital Transformation of Firms, Networks, and Society* (pp. 35–46). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-80692-6_4
- Buonocore, F., de Gennaro, D., & Del Barone, L. (2025b). Exploring Metaverse Innovations in Public Administration: A Focus on Human Resource Management. In F. Schiavone, N. Omrani, & H. Gabteni (Eds.), *Advanced Perspectives and Trends in Digital Transformation of Firms, Networks, and Society* (pp. 35–46). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-80692-6_4

- Buonocore, F., de Gennaro, D., & Del Barone, L. (2025c). Exploring Metaverse Innovations in Public Administration: A Focus on Human Resource Management. In F. Schiavone, N. Omrani, & H. Gabteni (Eds.), *Advanced Perspectives and Trends in Digital Transformation of Firms, Networks, and Society* (pp. 35–46). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-80692-6_4
- Chaudhary, A., Khandelwal, S., Deshpande, P., & Panjabi, P. (n.d.). An intriguing convergence between metaverse and sustainable human resource management. *SA Journal of Human Resource Management*, 23(1), 2699. <https://doi.org/10.4102/sajhrm.v23i0.2699>
- Chhibber, S., Rawat, B., Tyagi, S., & Gupta, A. (2024). Assessing the Practical Implications of Integrating Blockchain Technology into Human Resource Management in Digital Era: An Empirical Study. *2024 Sixth International Conference on Computational Intelligence and Communication Technologies (CCICT)*, 157–163. <https://doi.org/10.1109/CCICT62777.2024.00036>
- Cong, A. (2024). Essential skills needed for employees in an industrial metaverse working environment – perceptions of experts from Finland. <https://aaltodoc.aalto.fi/handle/123456789/129317>
- Dastane, O., Rafiq, M., & Turner, J. J. (2024). Implications of metaverse, virtual reality, and extended reality for development and learning in organizations. *Development and Learning in Organizations: An International Journal*, 38(5), 27–32. <https://doi.org/10.1108/DLO-09-2023-0196>
- Fereydooni, N., & Walker, B. N. (2020). *Virtual Reality as a Remote Workspace Platform: Opportunities and Challenges*. <https://www.microsoft.com/en-us/research/publication/virtual-reality-as-a-remote-workspace-platform-opportunities-and-challenges/>
- Hwang, I., & Seo, R. (2025). Organizational support for digital transformation in the metaverse: A contingent pathway from user experience to digitalization resistance. *R&D Management*, 55(2), 420–437. <https://doi.org/10.1111/radm.12706>
- Induji, R. T., Somasundari, K. M., VinothKumar, K. R., Swapna, S., Brindha, S., & Kumar, S. K. (2024). Entry of the Metaverse in Human Resource Management: A Paradigm Shift in Workplace Dynamics. In R. El Khoury (Ed.), *Anticipating Future Business Trends: Navigating Artificial Intelligence Innovations: Volume 1* (pp. 73–80). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-63569-4_7
- Krytynskaya, A., Fiałkowska-Filipek, M., & Maj, J. (2025). POTENTIAL APPLICATIONS OF METAVERSE IN HUMAN RESOURCES MANAGEMENT. *Humanities and Social Sciences*, 32(3), 31–41. <https://doi.org/10.7862/rz.2025.hss.28>

- Lim, D. H., Lee, J. Y., & Park, S. (2024). The Metaverse in the Workplace: Possibilities and Implications for Human Resource Development. *Human Resource Development Review*, 23(2), 164–198. <https://doi.org/10.1177/15344843231217174>
- Mettu, N. M., & Katyal, D. M. (2025). *Strategic Hr Innovation in the Metaverse: A Conceptual Framework for Technology-Driven Organizational Transformation* (SSRN Scholarly Paper No. 5325873). Social Science Research Network. <https://doi.org/10.2139/ssrn.5325873>
- Pandey, A. K., Tripathi, P., Shukla, P. S., & Upadhyay, P. K. (2025). Metaverse Enabled Sustainable HRM Practices: Managing ESG for Business Resilience and Corporate Performance. In W. Leal Filho, S. Kautish, & V. P. Gupta (Eds.), *Metaverse and Sustainability: Business Resilience Towards Sustainable Development Goals* (pp. 1–18). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-89545-6_1
- Paravastu, N. S., Simmers, C. A., & Anandarajan, M. (2025). The Role of Metaverse Platforms in Organisational Transformation. In M. Moussa & A. McMurray (Eds.), *The Palgrave Handbook of Breakthrough Technologies in Contemporary Organisations* (pp. 161–173). Springer Nature. https://doi.org/10.1007/978-981-96-2516-1_13
- Ramachandran, K. K., Lakshmi, K. K., Singh, J., Prusty, A., Panduro-Ramirez, J., & Lourens, M. (2023). The Impact of the Metaverse on Organizational Culture and Communication. 2023 3rd International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE), 1009–1014. <https://doi.org/10.1109/ICACITE57410.2023.10182655>
- Rozak, H. A., Fachrunnisa, O., Sugiharti, Taswan, & Fitriati, I. R. (2023). Metaverse and Modification Needs of Human Resources Management Practices and Policies: An Overview. In L. Barolli (Ed.), *Advances in Intelligent Networking and Collaborative Systems* (pp. 285–294). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-40971-4_27
- Shah, R., Shah, S., & Pathak, P. (2025a). Metaverse work culture: The emergence of virtual-first companies and HR's role. *Strategic HR Review*, 24(5), 195–200. <https://doi.org/10.1108/SHR-03-2025-0029>
- Shah, R., Shah, S., & Pathak, P. (2025b). Metaverse work culture: The emergence of virtual-first companies and HR's role. *Strategic HR Review*, 24(5), 195–200. <https://doi.org/10.1108/SHR-03-2025-0029>
- Shah, R., Shah, S., & Pathak, P. (2025c). Metaverse work culture: The emergence of virtual-first companies and HR's role. *Strategic HR Review*, 24(5), 195–200. <https://doi.org/10.1108/SHR-03-2025-0029>
- Sharma, A., Kalita, R., Mishra, P., & Hazarika, M. (2025a). *Metaverse in Human Resource Management: Opportunities and Challenges for Virtual Workplaces*. 2(8).

- Sharma, A., Kalita, R., Mishra, P., & Hazarika, M. (2025b). *Metaverse in Human Resource Management: Opportunities and Challenges for Virtual Workplaces*. 2(8).
- Showkat, M., Nagina, R., & Baba, M. A. (2025). Transforming workplaces with metaverse technologies: Employee perspectives from emerging economies. *International Journal of Organizational Analysis*. <https://doi.org/10.1108/IJOA-02-2024-4305>
- Strategies for transforming the traditional workplace into a virtual workplace in smart cities. (2022). *ORAȘE INTELIGENTE ȘI DEZVOLTARE REGIONALĂ*, VI(01), 35–54.
- Tagliaro, C., Zhou, Y., & Hua, Y. (2022). Work Activity Pattern and Collaboration Network: New Drivers for Workplace Space Planning and Design. *Sage Journals*. <https://doi.org/10.1111/joid.12226>
- Vibhanshu, & Gulati, D. (2025). Gamified International Human Resource Management in the Metaverse. In *Addressing Practical Problems Through the Metaverse and Game-Inspired Mechanics* (pp. 47–76). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3693-8886-0.ch003>
- Yamijala, S. M., Nimbrain, N., & Bansal, R. (2025). Enhancing Remote Workspaces: The Role of Virtual Reality in Shaping the Virtual Work Environment. In *Optimizing Virtual Reality and Metaverse for Remote Work and Virtual Team Collaboration* (pp. 171–190). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3693-6839-8.ch009>