

Virtual Reality Adoption in Malaysia's Business Events Ecosystem: A Stakeholder Sensemaking Perspective

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Abstract: Virtual reality (VR) provides options to achieve higher levels of engagement, personalization, and service delivery in the industry of business events. However, to adopt it, it is necessary to meet the technology requirements, because its value for different stakeholders is perceived differently in the context of organizations and institutions. The present research studies the situation concerning the case of technology adoption in the business events industry in Malaysia from the perspective of stakeholder sensemaking. It studies how the actors in the process of technology adoption- organizers of events, providers of technology, and policymakers- perceive both the possibilities of VR and its challenges, and how their perceptions influence the adoption process. This paper presents a conceptual discussion based on the literature; primary data have not yet been collected. Semi-structured interviews, observations, and thematic analysis are proposed for future empirical investigation. The literature reviewed suggests a contradiction between the idea of the advantages of VR technologies and the difficulties connected with the implementation of these technologies. Besides, organizational readiness, digital capabilities, and cooperation of stakeholders are discussed as potential factors influencing the process. The paper emphasizes that VR technology adoption is a process of interpretation and cooperation rather than a simple technology choice. The researchers recommend gradual or phased adoption of VR technologies, training of staff, support policies, and greater cooperation between event organizers and technology providers.

Keywords: *Virtual reality, business events, stakeholder sensemaking, technology adoption, organizational readiness, immersive technology, Malaysia*

1. Introduction and Background

The application of Virtual Reality in the Meetings, Incentives, Conventions and Exhibitions industry in Malaysia is an essential step toward digital transformation driven by Industry 4WRD initiatives and demand for immersive experiences (Ibrahim et al., 2025). Nevertheless, successful implementation of new and immersive technologies depends on the perception of different stakeholders, such as government officials, organizers, and new technology providers (Asbollah et al., 2026; Ibrahim et al., 2025). With the implementation of the stakeholder sensemaking model, the research aims to analyze the process through which the stakeholders understand their activities in the context of the obtained standards and limited resources (comes et al., 2026). This approach goes beyond usual technology acceptance models and investigates how the actors evaluate the potential of VR spaces in the context of the unique socio-economic environment of Malaysia (Filimonau et al., 2024).

Such analysis helps to fill the gap in academic knowledge, since today's discussions focus on technical parameters only, paying little attention to behavioral and institutional aspects determining the long-term viability of innovations (Chen et al., 2023; Koohang et al., 2023). The current research focuses on the interdependent relationships amongst the stakeholders, indicating their distinct views on metaverse-related experiences with respect to priority strategic initiatives regarding the immersive facilities within the local MICE industry ecosystem (Paul & Rena, 2024; Radić et al., 2025). In particular, the role of differing beliefs regarding the usefulness of immersive technologies and social norms in constructing the conditions for or impeding alignment of local policies will be examined (Buhalis et al. 2023); Lau et al., 2024). The study also pursues an analysis of divergent perceptions to investigate the way different stakeholders compare the limitations imposed by immersive technologies to advantages offered in terms of facilitating participation and enhancing marketing efforts after the pandemic (An et al., 2025). The importance of this process is evident due to the pressing need to align consumers' face-to-face preferences with the need to gain consumer loyalty through digital means in the market (Tiong & Jamie, 2022).

Therefore, sensemaking will be considered as the major research approach in the study of stakeholders' attempts to overcome tensions between traditional means of service delivery and the deployment of virtual environments (Chen et al., 2025). The recognition of the importance of cognitive and social processes in the research allows for greater understanding of how established meanings can affect the course of digital innovation in the local market (Dewi & Darma, 2024; Zhong et al., 2024). This means that it is essential to carry out a specific study of how organizations' actors reconcile technological embodiments with ergonomic interventions to convert abstract digital capabilities into actual business opportunities (Balakrishnan et al., 2024).

2. Literature Review

The discussions regarding organizational innovation often rely on modeling frameworks such as the Technology-Organization-Environment framework, which highlights the interconnection between information technology preparedness, internal organizational structures, and external environmental pressure (Lu et al., 2024; Sousa et al., 2024). Several recent works have moved forward from the classical modeling framework of the Technology Acceptance Model and examined how the perceptions of users in terms of ease-of-use and usefulness influence the acceptance of new immersive platforms (Shamim et al., 2025). These models provide background to the adoption literature, but this paper does not apply them as additional analytical frameworks. Its focus is on how stakeholder interpretations relate to organizational adoption responses. However, despite the abovementioned achievements in the field, the literature does not publish a sufficient number of works addressing stakeholder relationships and collaborations in technology adoption in the case of any traditional industry (Saghafian et al., 2021).

To fill this gap in the market, sensemaking theory can be applied for interpreting stakeholder interdependencies leading to the translation of the disruptive potential of the technology into reality (Hennig-Thurau et al., 2023). When referring to the sensemaking perspective, it should be noted that it means that sensemaking is a social activity that allows individuals to point out how people cognitively proceed with the technological change, which aligns with numerous works presenting users' behavioral intentions but states the reconstruction of their professional identity and job role in terms of this adoption process (Marchegiani et al., 2024). This concept is particularly useful in the context of the ecosystem of business events since it allows one to think about VR adoption as something fluid rather than a one-time action (Hakami et al., 2026). Examining these different interpretations makes it possible to gain insights into how the different parties involved are achieving a balance between the advances in metaverse technology and the changing environments of organizations and new service delivery needs (Dolata & Schwabe, 2023).

Moreover, while existing research mainly concentrates on the economic effects on companies due to this change, very often social and environmental problems related to the multi-stakeholder decision-making process are ignored (Polyviou & Pappas, 2023). This paper addresses these conceptual issues through stakeholder sensemaking, examining how actors interpret contextual conditions and use those interpretations to justify adoption responses (Weick et al., 2005). The current research is of great importance, as there is still a considerable volume of theoretical discussions (Baker et al., 2023; Laachach et al., 2024) but not many empirical investigations that would allow understanding of the real processes in Malaysia's business events (Sharma et al., 2025).

In addition to these organizational issues, the opportunities for the creation of new service environments for hospitality and tourism due to the technology of the metaverse should be mentioned, as the necessity of a completely new approach to the management of the value chain is evident (Foroudi et al., 2026; Jung et al., 2024). Managers' interpretations of emerging technologies may inform whether they regard implementation as relevant to their organizational priorities. This issue is considered within the sensemaking lens rather than through an additional upper-echelon framework. Apart from needing a deeper understanding of how different stakeholders negotiate conflicting interests since those actors are often torn between the two competing assertions regarding protecting innovation and assuring operational stability (Fazio et al., 2023).

Stakeholder motivations and perceived autonomy can be explored as part of their accounts of VR's relevance and feasibility, without introducing a separate motivational theory. The realization of the necessity to adopt

these platforms does depend heavily on the role of media richness and the users' sense of presence, which alters the nature of business events (Chin et al., 2023). At the same time, in the ecosystem, the process of sensemaking becomes even more complicated because of the need to match individual thinking with the strict limitations of existing networks (Comes, M., 2026).

Thus, the analysis of such a complicated process shows that organizations tend to regard virtual reality not just as a device, but rather as an instrument that changes the entire landscape of the industry (Ramdan et al., 2025). The course of negotiations is being affected by the third parties that are top managers whose models of thinking and systems of values determine whether the reality shall be regarded as innovation-based necessity or rather as a threat to the existing ways of doing business (Zhang, 2024). In addition to this, the participation of various stakeholders, including government representatives and industry experts, calls for a shift toward inclusive sensemaking, taking into account different levels of technological knowledge and relevance (Firman et al., 2025; Ledesma-Chaves et al., 2025).

In this context, the issue of digital inequality is particularly important because the unequal capacity of SMEs to cover technological costs and governance can either promote or hamper a fair distribution of technology (Izevbigie, 2026). It is only by taking into account the fact that perceived usefulness and social support are the key determinants of behavioral intention that participants in the adoption process can better match their strategies with the nature of different participants and their needs (Ariza-Montes et al., 2023).

This relationship between behavioral factors is important in view of the need to understand the importance of perceived value of investment for the process of making decisions about the viability of technologies (Çavuşoğlu et al., 2026). Alternatively, it is important to point out that adopting virtual technologies depends on the extent to which organizations are capable of combining technical simplicity of implementation with social pressures leaders of organizations experience in their working environment (Fares et al., 2024; Merz et al., 2025). Finally, the evolutionary trajectory emphasizes the importance of going beyond usual imposition methods for the specific needs of the firms that have unique dimensions in Malaysia's digital development (Jo & Park, 2023). In this regard, there is a need to eliminate the technological poverty of the platform by bringing the technology and companies to the same level (Loo et al., 2023; Chiew & Cheah, 2025). TOE is used here to organize the technological, organizational and environmental conditions surrounding adoption, while sensemaking examines how stakeholders interpret and negotiate those conditions (Baker, 2012; Weick et al., 2005). Finally, the activation of local companies through the provision of specific training programs will help to fill the gap between technological requirements and real practice in event management (Babolian Hendijani & Jaszus, 2024).

Moreover, due to the additional efforts of the governmental authorities that provide regulatory and financial support, these projects will become more active because the intervention of the government would significantly lower the entry barriers for resource-scarce organizations (Doe et al., 2022). The support of the industry is considered to be important since it will give organizations the possibility to go further than simply experimenting with technologies (Sarfraz et al., 2023).

In this context, the promotion of digital connection by the Malaysian government, including the financial aspect of it, like the Industry 4WRD Intervention Fund, shall serve as a prerequisite for firms to move from occasional use to digital maturity (Yong, 2023). Despite this, however, technological limitations and a recurring absence of collaborative diffusion in the broader network continue to hinder this shift, limiting the conversion of these large-scale measures into success in the industry (Hossain et al., 2024). Therefore, bringing this gap to a close requires those organizations and firms providing the support to go beyond financing and instead develop effective collaborative networks, as the absence of these structures currently limits the possibility of achieving spillover on the ecosystem-wide level (Costa & Moreira, 2022). In this sense, increasing the effectiveness of these interactions calls for universities and technical colleges to make curricula more relevant so as to eliminate existing weaknesses in Malaysia's supporting infrastructure, which currently prevents large-scale industrial uptake (Leang & Rasiah, 2023).

In addition, it is important to enable interdisciplinary knowledge exchange involving academic researchers, industry practitioners, and decision-makers to create the required local innovation for sustainable ecosystem

growth (Shalihah, 2024). These collaborative initiatives would also focus on creating necessary digital skills through structured education, ensuring that companies possess the competencies to use immersive technologies (Amuso et al., 2021). Moreover, these capacity-building initiatives should go hand in hand with the idea of fighting the Pilot Trap, according to which organizations need to prioritize long-term organizational readiness over isolated technology-driven experiments (Akbaba et al., 2026). As firms navigate the uncertain world of new technologies, they need to develop capabilities that are flexible and causative, as sometimes it is more useful for nontraditional actors to act opportunistically than to have a rigid plan (Zabel et al., 2023). For that reason, when dealing with virtual reality, one should avoid taking it as a definitive technological solution and see it rather as a complicated ongoing process, which is affected by different social, psychological, and organizational factors (Al-Sharafi et al., 2024).

The sensemaking lens directs attention to the meanings event professionals attach to VR and how these meanings may inform their adoption responses (Weick et al., 2005). This is a sensemaking process that shows that digital transformation can be viewed as a social process based on the idea that meanings of virtual reality are co-created during interaction and build relationship capital (Pelletier & Cloutier, 2019). Thus, organizational resistance can result from a different understanding of technologies since perceived value is determined by the lack of internal backing and expertise (Jalo & Pirkkalainen, 2024). In order to overcome this obstacle, companies need to adopt an approach that is user-oriented, allowing them to pay priority attention to technological adherence and proper training of specialists. In addition to achieving internal consistency, organizations need to consider the dynamics between technological innovativeness and cultural compatibility, as these are fundamental factors for proper implementation in tourism and event industries (Hasan et al., 2025). It is worth mentioning that culturally specific factors like collectivism and power distance can shape how firms perceive trust and risk, which is essential for firms to establish the way by which they utilize immersive technologies in their operations (Zhang et al., 2025). This confirms that well-known adoption models such as the Technology Acceptance Model and Theory of Planned Behavior need to be amended so that they ensure reliable forecasting of organizational behavior by including elements of social context (Han et al., 2019). Moreover, the application of the Technology, Organization, and Environment framework will enable people to understand better and analyze how pressure from outside institutions in conjunction with firms' internal readiness avails the strategy implementation of VR technologies (Cham et al., 2024; Tuyen & Hanh, 2025).

In this regard, managers need to find some kind of balance between their understanding of VR as a business solution and the real existence of such resources like technical support and experience that are important preconditions for adoption (Sousa et al., 2023). It is obvious that businesses need to take into account how their internal characteristics impact their competitive position and the wishes of the customers regarding the use of virtual reality (Sousa et al., 2024). The current synthesis of organizational capabilities and the environment necessitates universal adoption of implementation methodology as a means to overcome the information gaps and strategic isolation characteristic of the hospitality and travel industry (Law et al., 2009). Such models highlight that successful technology adoption is not only due to the technology's performance but rather a response to the competitive environment and legislation governing the Malaysian commercial events industry (Wang et al., 2024). The organizational responses are also affected by managerial self-efficacy and technological preparedness, which are important psychological factors to implement strategies into practice in various local hospitality settings (Mammadov & Wald, 2025). Apart from the psychological factors of the individual actor, sensemaking of stakeholders in this ecosystem is affected by the concept of the "promised opportunities of development," which is an understanding of the future possibility of the use of technologies (Tran, 2025).

This indicates a transition in which the technological incentives are not just applied by imitation but are adopted through proactive management that matches operational readiness with market conditions (Lara et al., 2017). By implementing this alignment, adoption becomes an intentional action in which the management of the organization makes use of the technological benefits (Ismail et al., 2025). Employee support is considered an organizational condition within TOE and a concern that stakeholders may interpret when assessing implementation feasibility. This kind of commitment is very important since performance expectancy often comes out to be the main predictor of technology adoption and changes the attitudes of employees to immersive technologies in the business world (Alkhwaldi & Alshammari, 2026; Rahmad & Rachman, 2025). Furthermore, companies can take advantage of the principles of organizational behavior in order to deal with

the correlation between the roles of individuals in their jobs and the systems of technology implementation effectively, as evidenced by the influence of employees' hierarchy on their perception of usefulness (Mogaji et al., 2024). In addition, the development of a tech-friendly culture through training programs plays a crucial role in turning individuals' perceptions into organizational capacity (Buhalis et al., 2024).

Within this approach, observation, experience, and confidence are considered aspects of stakeholder interpretation and learning rather than reasons to introduce a separate social cognitive framework. Moreover, this process is improved in the course of assessing the advantages of using virtual reality, regardless of the risks of information security and management that define the pace of integration (Hradecky et al., 2022). Thus, the balance should be achieved through implementing an integrated approach that will allow not only addressing different aspects of technical, organizational, and environmental implementation but also being able to reach the ocean of maturity (Jalo et al., 2022). The formation of initial trust among event planners, tech vendors, and attendees is crucial for reducing ambiguity and promoting joint implementation within this ecosystem. By assisting this collective conceptualization, stakeholders can create better correspondence between enabling circumstances and organizational requirements, facilitating infrastructural and instrumental assistance to lower the threshold of implementation (Boel et al., 2023). Thus, the relationship between these multifaceted contributors suggests that the pre-implementation phase is important in decreasing barriers to resistance, especially in the context of budget planning and consensus among stakeholders (Lodhi et al., 2024).

Implementing gradual, pilot-based implementation strategies can help organizations gather local evidence regarding the instructional and commercial feasibility of new immersive platforms prior to full-scale implementation (Ji et al., 2026). Acceptance research provides background on performance expectations and social influence, but UTAUT is not applied as an additional framework in this paper. These concerns are explored within stakeholder accounts and their contextual conditions. Together, the contextual and interpretive perspectives suggest that the current organizational models should change from static implementations to dynamic assessments of readiness for implementing new technologies (Sharma, 2025; Toyoda et al., 2023). The importance of the change in this respect is especially prominent in the context of Malaysia, where the government initiatives, such as Industry 4WRD, aim at narrowing the gap between the existing technological infrastructure and unrealized opportunities for immersive industries implementation (Ibrahim et al., 2025). As industry leaders reconcile macro-level policy enablers with micro-level organizational agility in the context of their business moments, they can gain a better understanding of how to make the transition from testing new models to becoming an accepted operational method (Ibrahim et al., 2025; Kumar et al., 2023). The successful transition is indicative of the shift in strategic thinking where, nowadays, conference organizers start to value job relevance more and prioritize playfulness when dealing with environmental pressures in the realm of business events management (Sangkaew et al., 2019).

Sensemaking is the central theoretical lens in this paper, consistent with its focus on how stakeholders interpret VR adoption. TOE provides a supporting structure for technological, organizational, and environmental conditions (Weick et al., 2005; Baker, 2012). The connection is explicit: contextual conditions provide opportunities and constraints; stakeholders interpret and negotiate their significance; these interpretations inform responses such as piloting, adaptation, postponement or continued use. Experience may then prompt reconsideration of earlier interpretations. For example, a limited budget may be understood as a reason to postpone implementation or to seek a partner for a smaller pilot. This is an illustrative possibility, not a finding. The relationship is exploratory and iterative rather than a tested causal model. Other frameworks mentioned in the literature provide background only and are not separately applied.

3. Research Design

This paper is conceptual and draws on a narrative discussion of literature on VR adoption, stakeholder interpretations and organizational readiness. No interviews or observations have yet been conducted, and no participant sample or empirical coding results are reported. The literature is considered in relation to technological, organizational and environmental conditions and the ways stakeholders may interpret those conditions. This discussion does not constitute a systematic review or establish the prevalence of adoption barriers in Malaysia. A future qualitative investigation is proposed to examine bounded VR adoption initiatives. Participants would be selected purposively for direct involvement in decisions or implementation, including

relevant organizers, venue representatives, technology providers and supporting institutions. Semi-structured interviews could be supplemented by documents and non-participant observations, subject to permission. Thematic analysis would examine contextual conditions, interpretations, negotiations and adoption responses, while allowing additional themes to emerge. An audit trail, reflexive notes, comparison across sources and examination of contradictory accounts would support research quality. Ethics approval, informed consent, confidentiality and secure data storage would precede collection. The actual sample, collection procedures, genuine participant extracts and coding examples must be reported after this work has been completed.

The literature reviewed identifies a tension between anticipated benefits of immersive technologies and concerns about implementation. Organizational XR research addresses perceived value, resistance and adoption intention (Jalo & Pirkkalainen, 2024), while tourism VR research identifies limited knowledge and experience, doubts about usefulness and reluctance to invest (Sousa et al., 2024). These observations originate from the cited studies and are not findings from Malaysian participants. They provide a basis for exploring how stakeholders interpret VR's relevance and feasibility, but do not establish local adoption patterns.

4. Conceptual Synthesis

The conceptual synthesis distinguishes three connected elements: contextual conditions, stakeholder interpretations and adoption responses. TOE organizes conditions such as technology requirements, organizational resources and external expectations; sensemaking directs attention to how stakeholders understand these conditions and justify action (Baker, 2012; Weick et al., 2005). A constraint does not imply a single response: actors may consider adaptation, collaboration, a smaller trial, or postponement. These alternatives illustrate the proposed relationship rather than empirical outcomes. Future analysis should connect documented conditions to genuine stakeholder accounts and subsequent action, retain contradictory accounts, and consider alternative explanations such as decision authority or resource limits. No participant quotations, coding breakdown, or validated relationships are presented because primary data have not been collected.

Discussion

The literature-based concerns can be organized through TOE, but contextual categorization alone does not explain the responses stakeholders develop. Sensemaking adds attention to how actors interpret the relevance and feasibility of VR and negotiate implementation responsibilities (Baker, 2012; Weick et al., 2005). The proposed contribution is therefore a connection between context, interpretation and action. For example, identifying a skill shortage would describe an organizational condition; explaining a response would also require understanding why stakeholders favor training, external support or postponement. This example is illustrative. The framework also allows experience to reinforce or revise earlier interpretations, rather than assuming adoption is a one-time decision. It remains provisional: agreement cannot overcome every technical or financial constraint, and stakeholders with greater decision authority may proceed despite disagreement. Training, partnerships, and phased implementation are possible implications to investigate, not interventions demonstrated to improve adoption in Malaysia. Future empirical research must establish these relationships through traceable evidence and examine cases that challenge the proposed account.

5. Conclusion

The literature reviewed suggests that to positively implement VR technology in Malaysia's business event sector, it is important to correctly synchronize the deployment of the technology with the awareness of the business context (Akmal et al., 2025). For this purpose, it is crucial to go beyond experimentation and utilize universal models of implementation, which are based on the user-centered approach while considering the technical and financial aspects of the local market (Raji et al., 2024). Future research should aim to study the combination of VR technology and physical spaces to get better estimates of the perceived authenticity of the technology (Tan, 2024; Lodhi et al., 2024). Furthermore, researchers should study the evolution of consumer attitudes towards the Metaverse and new technologies using a longitudinal or experimental design (Morrison et al., 2024). In addition, academic research should address the effectiveness of collaboration tools between technology developers and event managers, which will allow keeping digital improvements relevant in terms of cultural values and operational capability (Alkhwaldi & Alshammari, 2026; Zhu & He, 2025).

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