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BEYOND DISRUPTION: SYSTEMIC RESILIENCE AND THE POST-PANDEMIC TRANSFORMATION OF MICE TOURISM

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Abstract

This article systematically analyzes the profound restructuring of the global Meetings, Incentives, Conventions, and Exhibitions (MICE) tourism sector triggered by the COVID-19 pandemic. Shifting the academic discourse from temporary disruption to systemic transformation, the study employs a documentary research methodology alongside a multi-dimensional framework encompassing demand, supply, institutional governance, technology, and environmental sustainability. Findings conclusively reveal that the pandemic exposed intrinsic structural vulnerabilities, acting as a powerful catalyst for the rapid adoption of hybrid event models, stringent hygiene protocols, and advanced digital ecosystems. Post-pandemic recovery extends far beyond returning to pre-crisis operational metrics; it necessitates a fundamental redesign of the MICE value chain. Future trajectories indicate a permanent integration of blended onsite-online formats, increasingly shaped by complex geopolitical and environmental variables. Ultimately, this research provides strategic insights for policymakers, academics, and industry stakeholders, advocating for a paradigm shift toward inclusive economic growth, equitable community integration, and robust sustainability to ensure systemic resilience in the 21st century.

Keywords: Mice Industry Restructuring, Post-Pandemic Recovery, Hybrid Event Models, Systemic Resilience, Inclusive Tourism Growth

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Introduction

Over the past two decades, Meetings, Incentives, Conventions, and Exhibitions (MICE) tourism has evolved from a niche segment of business travel into a strategic infrastructure of the globalized world economy. This industry plays a crucial role in connecting networks of international organizations, host cities, universities, professional associations, and the private sector with diverse tourism and service value chains, encompassing everything from travel, accommodation, and event venues to technology, creative industries, and local culture (Stoian & Muresan, 2016). An interregional input-output model study on the economic impact of the MICE industry in China demonstrated that large-scale exhibitions and conferences can generate multiplicative direct and indirect economic impacts from attendee spending and significantly affect inter-regional income distribution (Tiecheng et al., 2018). Furthermore, a structural study on "MICE city competitiveness" found that cost structure, transportation infrastructure, the density of MICE suppliers, and government support systems are key drivers of a city's ability to attract international events (Chen & Chen, 2019).

Prior to the COVID-19 pandemic, global research indicated that MICE Tourism was a primary driver of event tourism, making it a significant component of global economic growth. It was characterized by high dynamism as an "elite market segment" intrinsically linked to the business world, international organizations, and high-income travelers (Stoian & Muresan, 2016). Concurrently, MICE destination branding advanced beyond competition based on physical infrastructure, moving towards integrating cultural heritage and creativity as part of "creative MICE destination branding" through co-creation among urban stakeholders, as exemplified by New Orleans, USA (Kim et al., 2022). The trend of "sustainable MICE" also became increasingly prominent, with major event organizers investing in environmental practices, waste management, energy consumption, and community engagement, despite higher costs, as observed among organizers in Bali (Trisnayoni et al., 2022).

However, COVID-19 brought an unprecedented halt to the quantitative and qualitative structures of international travel. UNWTO (2020) reported a 72-75% global decline in international tourist arrivals in 2020 compared to 2019, leading to a loss of over 935 billion USD in tourism revenue. This marked the largest contraction since international tourism records began. While these statistics reflect the overall picture of tourism, the MICE sector, due to its reliance on cross-border travel and large gatherings, was more severely impacted than other tourism segments. Numerous studies have characterized the pandemic as a "structural shock" that challenged the quantitative growth paradigm of tourism and raised normative questions about the industry's sustainability and systemic vulnerability (Sigala, 2020; Fernández et al., 2021; Gössling et al., 2021).

Academically, the COVID-19 pandemic emerged as a critical turning point in tourism literature. Many researchers viewed COVID-19 not merely as a "temporary crisis" but as a window of opportunity to "reset" the industry's development trajectory towards a more sustainable, equitable, and resilient model (Gössling et al., 2021). Sigala's (2020) conceptual synthesis highlighted that COVID-19 exposed the "systemic vulnerability structure" of the tourism value chain, ranging from reliance on international demand and the concentration of major service providers to labor precarity. Meanwhile, critical discourse on post-COVID tourism recovery warned that choosing a "business-as-usual recovery path" would fail to genuinely address issues of inequality, vulnerability, and environmental impact (Fernández et al., 2021).

Against this backdrop, this article pursues three academic objectives. First, to synthesize the literature related to the impact of COVID-19 on the "MICE Tourism ecosystem," encompassing

quantitative, qualitative, and structural aspects, at both global and country-specific levels. Second, to synthesize the literature on the adaptations, strategies, and strategic innovations of key stakeholders in this industry, including international organizations, regulatory bodies, and professional associations, as well as operators, consumers, and event attendees. Third, to synthesize the current situation and future trends of MICE Tourism in the second quarter of the 21st century, specifically during 2024-2030, through a prognostic analytical framework concerning technological landscapes, management strategies, and long-term structural challenges.

The research approach of this article is documentary and secondary data review, using literature and statistical data produced by international organizations such as UNWTO, as well as academic research published in scholarly journals between 2016 and 2025, to cover the pre-pandemic, pandemic, and post-pandemic periods. The review focuses on three main categories: quantitative studies reporting on MICE demand, supply, and economic impact indicators; qualitative studies exploring stakeholder perceptions and adaptations; and conceptual and systemic studies discussing resilience, sustainability, and governance in the post-COVID context. The presentation of findings employs a descriptive-analytical approach, systematically linking theoretical findings with empirical case studies.

Guided by this approach, this article aims to present a synthesis that not only chronicles the damage incurred by the MICE industry post-COVID-19 but also highlights systemic restructuring, the emergence of new business models, and shifting power dynamics among stakeholders, which will shape the trajectory of MICE Tourism in the second quarter of the 21st century.

From Shock to Structural Transformation: An Analysis of the COVID-19 Impact on the MICE Tourism Ecosystem

COVID-19 served as a profound "stress test" for the MICE Tourism ecosystem, revealing both its structural vulnerabilities and the limitations of growth models reliant on international travel and mass gatherings. Global studies consistently highlight three critical dimensions of the pandemic's impact: quantitative effects on demand and supply, qualitative impacts on behavior and risk perception, and systemic ramifications for infrastructure and governance mechanisms.

Quantitatively, data from UNWTO (2020) shows international travel plummeting by over 70% in 2020 and remaining severely depressed in 2021-2022, particularly in the Asia-Pacific region. Given MICE's reliance on the "mass mobility" of experts, executives, and association delegates, it was particularly affected (Leimgruber, 2021). Research in Rwanda reported that the MICE industry lost approximately \$48 million USD within the first seven months of the pandemic due to the cancellation of nearly all meetings and exhibitions in Kigali (Rwigema, 2020). Similarly, a case study in Sibiu, Romania, showed a "zero events" shutdown during lockdown, leading to the near-total loss of revenue from events and related tourism (Nica & Laceanu, 2021). In Thailand, a policy paper on "Khon Kaen MICE City" reported that, despite economic stimulus measures through festivals and smaller events, overall MICE activity contracted by approximately 70% between 2020 and 2021 (Kovathanakul, 2024).

On the supply side, venue operators, hotels, convention centers, Professional Congress Organizers/Professional Exhibition Organizers (PCOs/PEOs), and technology suppliers faced a severe "supply shock" due to bans on gatherings and capacity restrictions. This virtually eliminated revenue structures previously based on venue rentals and onsite service sales in a short period. Research in South Africa indicated that most MICE organizations had to drastically

cut costs, renegotiate client contracts, and adapt service standards to survive (Lekgau & Tichaawa, 2021). Coupled with index data such as the COVID19tourism index, which tracks the recovery of aviation, hotels, and pandemic-related restrictions across over 50 countries, it became evident that the supply of meetings and business travel was "frozen" by public health factors and unprecedented regulations (Yang et al., 2020).

Qualitatively, COVID-19 profoundly reshaped the "risk landscape" for both attendees and event organizers (Gössling et al., 2021). Tourism behavioral literature identified fear of contagion, uncertainty in travel regulations, and digital fatigue as complex contributing factors (Aldao et al., 2025). A study on international virtual academic conferences found a highly uneven distribution of online conference registration fees, with nearly a quarter offering free access. However, average fees increased over time post-pandemic (Falk & Hagsten, 2022), reflecting organizers' efforts to balance accessibility, financial sustainability, and perceived value for participants. Research on "hybrid scientific conferences" revealed that most attendees rated hybrid formats as "superior" or at least "not inferior" to fully virtual meetings, particularly concerning networking and interaction quality, while still acknowledging the unique, irreplaceable value of the onsite experience (Ehteshami et al., 2023; Ostler et al., 2025).

At a systemic level, COVID-19 severely tested the resilience of MICE infrastructure, encompassing both hard infrastructure (e.g., convention centers, airports, public transport) and soft infrastructure (e.g., regulatory frameworks, hygiene protocols, and cross-sectoral collaboration mechanisms) (Varzaru et al., 2021). Several conceptual syntheses proposed that COVID-19 necessitated a redesign of the "social contract" between event organizers, host cities, and attendees, framed by public health safety, crowd management, and social responsibility (Lukovic & Stojkovic, 2020; McCloskey et al., 2020; Roman et al., 2022). Studies on tourism competitiveness indicated that countries and cities with robust digital infrastructure, multi-channel market access, and flexible policies supporting small and medium-sized enterprises were more likely to maintain their competitiveness in the conference market (Fernández et al., 2021).

Concurrently, literature on "tourism and crises" underscored that COVID-19 differed from previous tourism crises in at least four aspects: its global scope, the severity of its economic impact, its protracted duration, and its potential to permanently transform fundamental structures and travel patterns (Sigala, 2020; Collins-Kreiner & Ram, 2021; Gössling et al., 2021). In the context of MICE, this implies that a "return to normal" in the 2019 sense is unlikely; instead, it will be replaced by a "new normal" where demand, supply, and governance structures are fundamentally reconfigured.

In summary, the impact of COVID-19 on the MICE Tourism ecosystem was not merely a temporary contraction of economic indicators; rather, it constituted a profound "reset" of the equation balancing risk, reward, and social legitimacy for an industry intrinsically linked to large-scale gatherings. This serves as a critical starting point for understanding the adaptation patterns and strategic innovations of stakeholders discussed in the subsequent section.

Adaptation and Transformation of Key Stakeholders: Strategic Approaches and Innovations

The post-COVID-19 survival of the MICE industry depended more on the "collective adaptability" of its key stakeholders than on the individual efforts of any single organization. Literature published since 2020 reveals distinct response patterns across four major groups:

international organizations and regulatory bodies, industry associations and professional networks, operators and suppliers, and consumers or attendees.

At the macro level, international organizations and tourism regulatory bodies issued diverse, yet characteristically similar, policy signals. National tourism strategy analyses during COVID-19 indicate that most states adopted an "evidence-based policy" framework, leveraging epidemiological data, travel statistics, and scenario models to determine easing measures and restrictions (Committee for the Coordination of Statistical Activities, 2020; Carswell et al., 2023). Within the MICE context, tourism and convention authorities in several countries, including South Africa and Thailand, introduced stringent hygiene standards, CHSE (Cleanliness, Health, Safety, and Environment) certifications, and social distancing event guidelines to foster a "seal of confidence" for host cities and venues (Collins-Kreiner & Ram, 2021; Lekgau & Tichaawa, 2021; Kovathanakul, 2024). This trend aligns with "destination crisis management" literature, which proposes integrating health, safety, and risk communication dimensions as core components of destination governance (Aldao et al., 2025).

Industry associations and professional networks in meetings, exhibitions, and academic tourism played a crucial role in "normalizing the new normal" by issuing guidelines, offering online training, and fostering communities of practice (Ehteshami et al., 2023). A study on online academic conference fees in tourism revealed that professional associations initially tended to charge lower or waive registration fees during the early pandemic, gradually increasing them as familiarity with online formats grew and financial stability became a priority (Falk & Hagsten, 2022). Reports on the adaptation of specialized conferences, such as in medicine, engineering, and tech industries, indicate that many associations adopted hybrid models as a standard, blending onsite experiences with remote participation to expand reach and mitigate risks (Ha et al., 2021; Ostler et al., 2025).

At the operator and supplier level, numerous case studies reflect the "forced innovation" spurred by crisis pressure. A marketing strategy study of Phenom Event Indonesia demonstrated a business pivot from traditional onsite event organization to developing "virtual hybrid studios," utilizing CHSE certification as a tool for building credibility, implementing flexible pricing tailored to client budgets, intensifying digital marketing, and reinforcing client value through gifting and close relationship management (Halim et al., 2023). Research on "sustainable MICE event practices" in Bali indicated that operators who had invested in environmental initiatives pre-COVID-19 could effectively leverage their sustainability and health credentials as part of their post-COVID value proposition, despite incurring higher costs (Trisnayoni et al., 2022).

Furthermore, qualitative research in South Africa concluded that many MICE players' adaptation strategies began with "survival" tactics, such as cost reduction, negotiating event postponements or cancellations, and team downsizing. These then gradually shifted towards "business restructuring" through integrating virtual platforms, designing new services, and enhancing technological capabilities (Lekgau & Tichaawa, 2021). In Indonesia, research on the impact of COVID-19 on technology adoption in the MICE industry found that stakeholders, including event organizers, venue managers, and policymakers, agreed that investing in virtual reality technology, online conferencing systems, and attendee management platforms was an unavoidable "strategic imperative," despite potentially exacerbating digital disparities between major cities with robust digital infrastructure and outlying areas (Alfianto et al., 2025; Situmorang & Choirisa, 2025).

From the perspective of consumers and attendees, research on the skills and competencies required by the MICE labor market in the ICT context indicates that the post-COVID job market

prioritizes communication skills, innovation, technology management, and the ability to manage events in both physical and digital realms (Liu et al., 2022; Chompupor, 2023). This adaptation in competencies is linked to evolving attendee behaviors, characterized by a demand for increased flexibility, a heightened emphasis on hygiene and safety measures, and an evaluation of the "total value" of an event - encompassing content, networking opportunities, and sustainability - rather than merely traveling for "mileage accumulation" or corporate perks (Sigala, 2020). Some studies suggest that the demand for business and conference travel may recover in the medium term but will become more selective. High-value, unique-purpose travel (e.g., strategic negotiations, board meetings, critical academic conferences) will persist, while general operational meetings are likely to be replaced by online or hybrid formats (Christidis et al., 2021; Carswell et al., 2023; Aldao et al., 2025).

Considering the totality of these adaptations, it becomes evident that the COVID-19 crisis did not merely force MICE industry stakeholders into a "struggle for survival," but rather accelerated a "strategic reordering". As summarized in Table 1, this multi-level reordering blurred the traditional boundaries among onsite, online, and hybrid formats, thereby opening space for new business models, data-driven attendee experience management, and co-governance mechanisms involving government, the private sector, and professional networks.

Table 1 Strategic Adaptation Matrix of Key MICE Stakeholders (2019-2025)

Stakeholder Group	Crisis Response (2020-2021)	Post-COVID Strategic Innovation (2022+)
International Orgs. & Regulatory Bodies	Implemented stringent hygiene protocols, CHSE certifications, and capacity restrictions.	Evidence-based governance; integrating health, safety, and risk communication into destination branding.
Industry Associations & Networks	Shifted to fully virtual models; waived or reduced online registration fees.	Standardization of hybrid models; dynamic pricing; fostering continuous online communities of practice.
Operators & Suppliers (PCOs/PEOs, Venues)	Survival tactics: cost reduction, layoffs, and contract renegotiations.	Development of virtual hybrid studios; leveraging sustainability credentials; data-driven personalized experiences.
Consumers & Attendees	Postponed travel; experienced digital fatigue and fear of contagion.	Demand for flexibility, total value evaluation (networking + content), and preference for purposeful travel.

Current Situation and Trends in the Second Quarter of the 21st Century: A Prognostic Analysis of MICE Tourism

As the period 2023-2025 unfolds, statistical data and tourism forecasting literature are beginning to paint a clearer picture of the "recovery trajectory" for the travel and MICE industries overall. Although demand levels in 2021-2022 remained significantly below 2019 figures, time-series models, such as ANN-Polynomial-Fourier series used for forecasting international tourist arrivals in Turkey, showed a gradual recovery trend, projecting over a 10% increase in international arrivals in 2021 from the 2020 baseline (Danbatta & Varol, 2022). Meanwhile, studies on global tourism scenario forecasting offer a framework that links tourism growth to

macroeconomic variables and consumer behavior (Wu et al., 2021). Connecting this to UNWTO and World Bank data, many researchers anticipate an asymmetric recovery in international travel, with regions relying on domestic markets and high-income economies returning to pre-COVID levels faster than developing countries (Sun et al., 2022; Zaika & Avriata, 2024).

Within the MICE context, national reports from countries such as Switzerland, Japan, and Vietnam, and across the European region, indicate that business and conference travel began to recover in 2022-2023 following the lifting of travel restrictions. However, travel patterns have undergone a distinct "reordering," with strategically essential events gaining prominence, while secondary events are either consolidated or shifted online (Kitamura et al., 2020; Leimgruber, 2021; Vu et al., 2022). Case studies of cities and regions strategically adopting "event-led recovery," such as Sibiu in Romania or tourist destinations in Egypt and Indonesia, demonstrate that large-scale MICE events were utilized as "confidence signals" to communicate that the city had safely reopened, and to build long-term destination branding (Nica & Lăceanu, 2021; Amara, 2022; Hastuti & Anggraini, 2022).

In the technological dimension, literature on "technology and COVID-19 in travel & tourism" consistently concludes that the pandemic significantly accelerated technology adoption across the tourism value chain, from online meeting platforms, contactless technologies, and artificial intelligence to virtual reality (VR) and extended reality (XR) (Boiko et al., 2022; Khupase et al., 2024). Specialized research on "tourism research after COVID-19" indicates that the development of smart cities and smart destinations will play a crucial role in setting new standards for crowd management, crowd tracking, and resource allocation in MICE events (Casado-Aranda et al., 2021). A study in Indonesia found that key players are using technology as a primary mechanism for building "hybrid resilience," both in terms of designing hybrid events and using analytical data to personalize attendee experiences and develop virtual products such as virtual tourism and virtual exhibitions (Alfianto et al., 2025; Situmorang & Choirisa, 2025). Meanwhile, a conceptual study on "destination resilience and sustainable event management" portrays destinations as "complex learning destinations" that use events as real-time testbeds for sustainability innovation, systemic learning, and local economic integration (Carswell et al., 2023).

Strategically and managerially, post-COVID-19 literature presents a critical "fork in the road" for the MICE industry, diverging into an "inclusive growth pathway" versus a "business-as-usual pathway" (Jeyacheya & Hampton, 2022). To conceptually visualize this systemic divergence, Figure 1 illustrates the trajectory of the MICE ecosystem from its pre-pandemic vulnerability through the 2020 structural shock, culminating in two potential futures. If MICE recovery is driven by the traditional quantitative growth logic (Business-as-Usual), structural vulnerabilities and environmental impacts will inevitably persist. Conversely, if policymakers and industry stakeholders leverage this recovery period to restructure markets—focusing on local SMEs, the creative economy, and reduced carbon footprints—MICE Tourism can achieve systemic resilience and transform into a robust instrument for inclusive growth in the second quarter of the 21st century.

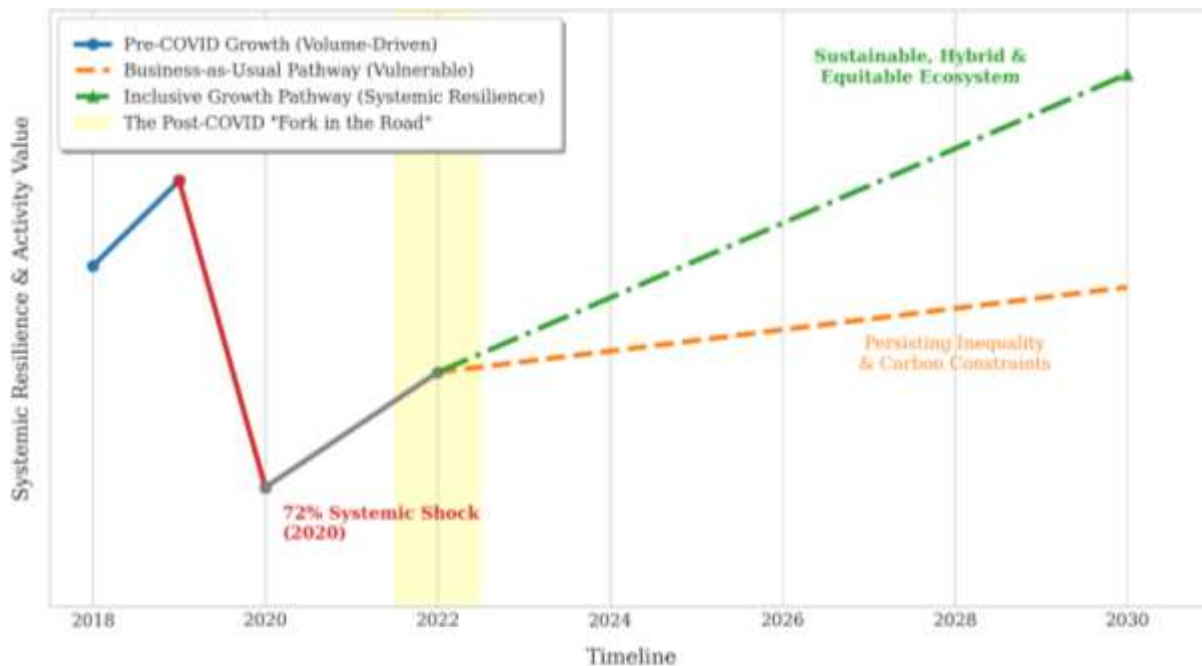


Figure 1 Conceptual Trajectory of MICE Tourism: From Shock to Systemic Resilience (2018-2030)

In terms of long-term challenges, analyses of transport and mobility warn that shifts towards remote work, online meetings, and altered perceptions of health risks may permanently prevent business travel from returning to pre-COVID levels. This would necessitate airlines, railways, and transportation infrastructure to adapt their revenue models, intensifying competition among MICE participants for the "travel time" of executives and experts. Concurrently, geopolitical uncertainties, climate change, and carbon pressure from the aviation sector are systemic variables that could significantly affect the format of events that rely heavily on intercontinental attendees from 2030 onwards (Christidis et al., 2021; Gössling et al., 2021; Manca et al., 2023). The confluence of these trends suggests that in the second quarter of the 21st century, MICE Tourism is likely to transition into a new paradigm characterized by four key features: permanently becoming a blended onsite-online-hybrid ecosystem; functioning as a "knowledge and innovation infrastructure" for cities and regions rather than merely a tourism segment; being governed by stricter health, safety, and sustainability standards; and operating under increasingly uncertain geopolitical and environmental conditions. A critical understanding of these four dimensions is therefore crucial for stakeholders in designing future policies and strategies.

Critical Conclusion and Vision: Towards a Resilient, Inclusive, and Sustainable MICE Tourism Ecosystem in the Second Quarter of the 21st Century

The synthesis of literature and case studies from 2016-2025 leads to the conclusion that COVID-19 primarily "accelerated" and "amplified" existing transformational processes within the MICE industry, rather than initiating entirely novel dynamics. Prior to the pandemic, MICE Tourism had already emerged as a high-value market segment, intimately linked to urban and regional competitiveness, destination branding, and the propulsion of the knowledge economy. However, this growth paradigm was fundamentally reliant on air travel, mass gatherings, and

precarious labor supply chains. COVID-19, therefore, acted as a magnifying lens, bringing these systemic vulnerabilities into sharp focus.

The first key finding underscores that the impact of COVID-19 on MICE Tourism cannot be adequately described solely by the contraction of demand and supply; instead, it must be understood as a "structural paradigm shift" for the entire ecosystem. The temporary cessation of on-site activities created opportunities for virtual and hybrid formats to emerge, simultaneously challenging traditional MICE value chain dynamics, from the roles of airlines, hotels, and convention centers to those of technology platforms and content providers. Consequently, post-COVID recovery is not merely a "return" to 2019 levels but rather a "systemic redesign" that necessitates critical decisions about which components to retain, abandon, or innovate.

The second key finding highlights that the responses of key stakeholders revealed both the system's inherent capabilities and limitations. International organizations and regulatory bodies swiftly spearheaded initiatives for hygiene standards, safety protocols, and crisis management in numerous instances. However, they encountered limitations in effectively supporting labor and small-scale operators at the lower tiers of the value chain. Professional and industry associations played a pivotal role in piloting hybrid and virtual models and sustaining academic and professional communities. However, they grappled with challenges related to equitable access, pricing strategies, and maintaining interaction quality. A subset of operators and suppliers successfully transformed the crisis into an opportunity by developing virtual studios, leveraging CHSE certifications, and repositioning their brands as "hybrid and sustainable MICE specialists." Nevertheless, a significant number of others were unable to adapt and consequently exited the market.

The third key finding reveals that trends in the second quarter of the 21st century indicate MICE Tourism will confront "novel structural constraints" stemming from geopolitical, environmental, and societal factors. While business and conference travel are projected to recover during 2024-2030, this resurgence will occur under increasingly stringent conditions related to carbon emissions, health governance, and public pressure for sustainability and equitable benefit distribution. Furthermore, heightened adoption of digital technology and flexible work arrangements will increase the "opportunity cost of travel." Decisions to participate in onsite events will necessitate justification by demonstrably superior value compared to online alternatives, encompassing enhanced interaction quality, access to unique localized resources, and non-replicable strategic opportunities in the digital realm.

Based on these findings, this article proposes a "policy and operational vision" for MICE Tourism in the second quarter of the 21st century, articulated across three intrinsically linked dimensions. The first dimension involves fostering "systemic resilience" by diversifying risks across markets, technologies, and geographies. Cities and nations heavily reliant on long-haul markets and a limited number of mega-events should consider expanding their portfolio to include regional markets, niche segments, and creative events integrated with local economies, thereby mitigating risks from future downturns and disruptions. The second dimension focuses on promoting "inclusivity and equity" across the MICE value chain. This entails implementing policies that support diverse, skilled labor within the industry, creating platforms that enable small-scale operators and local communities to participate in the value chain, and establishing tiered fee structures and access models for academic and professional events that reduce barriers for participants from lower-income countries. The third dimension calls for elevating "sustainability and social responsibility" from a "brand enhancement" to a structural prerequisite for event organization. This encompasses carbon footprint reduction, designing events that are

congruent with the host city's absorptive capacity, and integrally weaving health, social, and cultural dimensions into the core of attendee experience design.

Ultimately, the post-COVID trajectory of MICE Tourism will not be defined solely by quantitative metrics such as traveler numbers or conference revenue. Instead, it hinges upon three normative questions that policymakers, industry leaders, and academic communities must collectively address: what kind of growth will MICE Tourism engender, for whose benefit, and under what conditions of sustainability and equity? If the "lessons learned from COVID-19" can genuinely catalyze the architectural redesign of a resilient, inclusive, and sustainable MICE ecosystem, then the second quarter of the 21st century could indeed mark a pivotal era where MICE Tourism transcends its role as merely a business tool and a lever of inter-city competitiveness. Instead, it could transform into a vital social and knowledge infrastructure, thereby facilitating a more positive post-crisis global transition.

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