



## **Technological Innovation in Tourism and Events industry: A hybrid future of Events.**

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### **Abstract**

The technological innovation in applications and platforms for web and mobile, have changed the business tourism (MICE), specifically event industry, meetings and conferences, enabling event professionals to create significant event experiences, reach wider audiences and increase returns on investment. The research exploring the changing nature of MICE tourism and the Events industry due to COVID-19 examining the impact in relation to the evolution, development and benefits of virtual and hybrid events and the responding pivot to online events with the need to adapt to the virtual environment designing virtual and hybrid experiences. It posits that virtual and hybrid events are valuable in the continuity of MICE and Events tourism during the COVID-19 pandemic, providing a lifeline for event professionals and increasing the sustainable practices with green direction that provide sustainability for the future of MICE tourism and event industry.

Despite there is a gap in the academic perspective and lack of research on virtual events and particularly hybrid events, the research methodology examine and explore the benefits and best practice approaches for this new event context, That discussed as emerging from the pandemic crisis. Quantitative approaches will be followed include data collection through: researches, studies, questionnaires, survey and direct interviews with conferences attendees, Stakeholders and event professionals.

**Keywords:** Innovation, Technology, Virtual-events, Hybrid, COVID-19.

### **Introduction**

As a result of the rapid spread of the Coronavirus pandemic across the globe in early 2020, all governments worldwide implemented strict measures to limit the movements of their populations to prevent and limit increases in infections. These restrictions included regional and national lockdowns which severely restricted personal activities, with all but essential workers urged to work remotely from home, schools and universities closed and moved online. Many businesses and economies were affected by the lockdowns, travel, tourism, hospitality, and event industry most severely affected with collapse of international travel and tourism (Maga.C., 2020).

The traveling for Meetings, Incentives, Conferences and Exhibitions defined as MICE tourism and Events are a global industry and in most places, events were postponed or cancelled following announcement of a health emergency that presents an existential crisis threatening lives and businesses around the world which may take years to recover. Further, events are considered as one of the biggest transmission sources of infectious disease. Therefore, cancellation or postponement of the events is always mandatory decision when it comes to a pandemic situation (Ahmed & Memish, 2020; McCloskey et al., 2020).

However, there has been some sustainable shoots increase optimism for the future recovery of events and its industry. Sustainability in the event sector is much more than the greening of events and venues, it is important to recognize that sustainability is not an end state, but a process of continuous improvement on the long-term, the continued existence and prosperity of individual events and of managed event portfolios especially in times of crisis. The business events sector in particular has turned to digital augmentation to provide a platform for creating and delivering events (specifically meetings and conferences), providing continuity of service enhancing the consumer experience. Despite not at the same level of capacity as pre-pandemic live in-person events, the pivot to digitalization is providing a lifeline for events industry (EventMB, 2020).

The research aim to explore the MICE tourism and events sector in the context of the technological innovation, digitalization, benefits of virtual and hybrid events and the pivot to online. The present research is one of the very few studies shedding light on the impact of COVID-19 on events industry, building virtual and hybrid event experiences illustrating current trends of virtual and hybrid events and hypothesize the future direction of events emerging as new trend from the COVID-19 pandemic crisis.

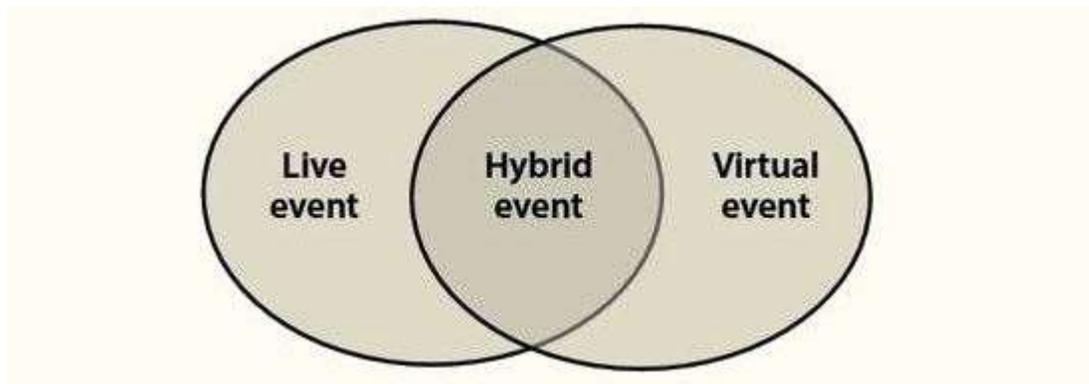
### **Virtual and Hybrid Events**

Technology has been vital and essential element within events industry for decades, and as the quality and capabilities of technology has enhanced so has the reliance on it to transform event experiences. The developments in web-based applications and platforms and mobile applications, have further changed the event, enabling professionals and organizers to design meaningful event experiences, reach wider attendees and enhance economies and businesses via returns on investment (Raj et al., 2017).

There are many definitions of the term event that is “a planned gathering with a purpose”. This definition is applicable to all kinds of events, irrespective of scale, scope or size and can therefore align to both in-person and virtual events, which are in contrast defined as "events represented on the internet." an online gathering with a purpose (McLoughlin, 2014, p. 242). Therefore, the main concept of virtual events is to establish a successful online environment where attendees can interact with each other and the event content. (Sa et al. 2019).

Given the relative ease with which these events can be planned and delivered virtually, the business events industry has benefited from virtual events more so than other event typologies, such as sporting events and fundraising events, which do not translate as well to a virtual context (Davidson, 2019).

Hybrid events can be defined as a physical event that includes virtual elements or has an online component as well (Sox et al. , 2017). The hybrid event should also be used to enhance the live event rather than to replace it, creating meaningful experiences for all participants (Fryatt et al., 2012). Hybrid events, therefore, lie at the overlapping point of where physical events and virtual events intersect and this is illustrated in the below Figure, which is an adaptation of the hybrid models suggested by (Fryatt et al. 2012).



**Figure 1: Hybrid event intersection.**

The growth of virtual events has been slower than predicted despite the technological development over the last 20 years. This is due to various key factors, first: the ambience and emotive response of a live event are difficult to replicate online (Getz & Page, 2020). Second: there is still a reluctance to use this instead of tried and tested event experiences whereas technology is embedded within our normal lives. Third: some event professionals and consumers suffer from lack of confidence in using technology for events as well as the perceived costs of designing and delivering online events. At last: It is difficult to

artificially create the networking and socialization that live events offer online. Therefore, the event industry, with the exception of the business events sector, has not fully realized the potential that virtual events can offer. (Davidson, 2019).

Since the introduction of videoconferencing as a platform for Events in the early 1980s, virtual events are not a new genre it have been around for almost 40 years. (Sox et al., 2017). It was not until the early 2000s, however, before virtual events began to create traction as a viable platform to build events, mainly meetings and conferences, in order to breakthroughs in reducing the size and speed of the data being transmitted, the reducing costs associated with using these platforms and ease of use. The 2008 financial crisis had a significant impact on the meetings and events sector, causing businesses to reduce their capacity and budgets for delivering or attending events (Goldblatt & Lee, 2012).

As a result, virtual events experienced an important growth to fill the gap that had emerged during this recession and demonstrated their potential as an active alternative to in-person events and were expected to become a dominant factor of the event industry (Briodagh, 2010; Shapiro, 2009). The value of virtual events was predicted to increase exponentially and would reach \$18.6 billion by 2015 (Sox et al., 2017). The technological possibilities in events blending virtual and live elements would be the norm. (Sadd, 2014).

Since people need to be together to socialize, celebrate, and conduct business, virtual events also have their critics who argue that these aspects of events cannot be replaced by technology and that all events are social in nature (Getz, 2020). Despite the technological advancements, it still does not permit complete connectivity and immersion, and face-to-face interaction, co-creation, and co-production are essential components of the event experience. Physical, technological, and sociological barriers exist that are preventing virtual events from fully integrating into the events sector. Despite the advantages of virtual events for business events, demand for in-person attendance has not entirely been replaced (Bladen et al., 2018).

### **Challenges Confronting Hybrid Events**

The impact of the COVID-19 crisis will be felt for years to come, with many industries being affected and transformed as a result. The events industry is no exception to this. Events, however, will return relatively quickly due to the human need for socialization and sharing of experiences (Getz & Page, 2020), whereas tourism and travel may be slower to recover (Mohanty et al., 2020).

Whilst the pivot to virtual events has created a positive solution to the sudden void in events caused by the pandemic, it has not been able to provide opportunities for all event sectors, with meetings and conferences being the main beneficiaries so far. The learning and development of these virtual events, however, are providing a catalyst for the future of the entire events industry, with hybrid events being exemplified within the events industry as the future (Copans, 2020). As the future of events will depend on virtual components that cooperate with the live event. If done right, hybrid events will enable events professionals to create a more dynamic experience and reach larger attendees as well as new sponsors (Ahmed, 2020).

As regional and national restrictions begin to ease, the transition back to completely live in-person events is still not possible on the size and scale previously, due to social distancing requirements, venue capacity and concerns about infection rates persisting. The need for socialization is at the core of events and an intrinsic characteristic, virtual event cannot fully replace this (Getz & Page, 2020). Developing and delivering high quality hybrid events presents a crucial opportunity for event organizers to capture the ambience of the live elements and create meaningful and engaging event experiences for those attending in person, as well as those online (Dams, 2020; Fryatt et al., 2012).

Research undertaken by EventMB (2020) indicates that more than two-thirds of event professionals predict that hybrid events are the future direction to recover from any crisis facing the industry; with over 70% also outlining that digital strategies will continue to be critical for event delivery post-pandemic.

Hybrid events are not without their challenges, however, due to the technical capabilities and financial outlay required. Whilst consumers have an increased familiarity of virtual technology, tools and applications, due to working and engaging remotely because of the pandemic (Ritcher, 2020), not all event professionals are fully versed in designing and delivering the technically challenging demands of a high quality hybrid event with the exception of the business events sector, where more event professionals and venues will be proficient in the technical requirements of events (Cal, 2020). Other event sectors may require retraining and up skilling of staff to ensure they are technically proficient for the future directions of the industry (McLoughlin, 2014).

Despite these challenges, however, there is a greater willingness by consumers to engage and participate in online events, as people feel more confident with the technology (Ritcher, 2020), which was previously seen as a barrier (Sox et al., 2017). It is inevitable that social distancing will be the norm in many countries until 2022, reducing the capacity at live events, but rather than being a detractor it presents an ideal opportunity to transform events into a hybrid event experience (Cal, 2020). This will enable events to capitalize on larger global audiences, and if planned and managed correctly, should provide strong revenue streams (Martin & Cazarre, 2016). Hybrid events will continue to evolve in their design, delivery and interactivity, enabling event organizers to enhance the consumer experience as a result. Hybrid events now represent the future direction for the recovery of the events industry, with all sectors able to benefit as a result (Cal, 2020).



Figure 2

WTM Global Hub, a new website portal for the world's travel and tourism industry, was launched by World Travel Market in April 2020. The same goes with ATM for all further events to be Hybrid. Throughout the pandemic, such content hubs have delivered educational and motivational videos and webinars to help their consumers to prepare for recover in the crisis; blogs and news kept them up to date with developments; networking opportunities with industry professionals were provided; even personal and business advice on everything from career development to wellness were available. Although developed in quick response to customer needs, these content hubs were going to remain a permanent part of the WTM brand offering alongside in-person event (UNWTO, 2021). Within this content, event professionals created rich innovative tools, digital content and advanced technology platforms to add customer value and enhance the physical event experience, when returning to normality (Solaris, 2020).

### **Pros and Cons of Virtual and Hybrid Events**

As the technology has developed so have the range of benefits that virtual and hybrid events can provide. One of the most significant benefits is that they enable the event organizers to reach a wider audience who may not be able to attend otherwise, due to time constraints, travel logistics and cost (Sox et al., 2017; Rogers, 2013). Virtual events are becoming significantly cheaper to develop and deliver than conventional physical events and are estimated to be approximately 90% less in cost (Rogers, 2013). Virtual events are also faster to develop and get to market, meaning that event organizers can quickly develop and market events that reflect the needs of consumers. The interactivity of virtual and hybrid events also aids in engaging the audience and enabling real time questions, polling, and content sharing to take place, thereby enriching the overall event experience (Sox et al., 2017; Rogers, 2013).

Another significant benefit is the ability to archive and access content post-event (Martin & Cazarre, 2016). This means that attendees will be able to review elements of the event, such as a specific presentation or key note speech, as part of the attendee benefits, as well as creating an additional revenue stream for non-attendees who wish to access all or part of the content at a future point. The automated functions within the online platforms will also provide an invaluable tool for analyzing the data captured and even provide real-time analytics for events professionals to use (Dowson & Bassett, 2018).

The sustainability agenda will benefit significantly from the move to virtual or hybrid events, as both formats will generate less travel as well as an overall reduction in waste and CO<sub>2</sub> (Linthicum, 2020; Sarabipour, 2020). Whilst there will be attendees in person to hybrid events these will not be at the same volume as traditional wholly in-person events. This will reduce the need for venue space, catering, marketing collateral, amount of waste produced, and need for long distance travel (Beech et al., 2014). Whilst hybrid events will be more costly than a virtual event, due to the need for a physical space and costs associated with hosting a live audience and technical set up, they are still more cost effective than wholly in person events (Fryatt et al., 2012).

Despite the range of benefits for virtual and hybrid events there are several disadvantages which also need to be considered. First, whilst the carbon footprint is reduced due to reductions in travel, catering and other logistical requirements, there are still technical requirements that need to be factored in. For a virtual event this is essentially the energy production and resource consumption for powering the technology to deliver the event. For a hybrid event there will be additional logistical support and energy consumption required, although this does create an opportunity to develop hybrid events that are more environmentally sustainable, such as by utilizing renewable energy (Holmes et al., 2015).

Accessibility can also be a barrier if consumers do not have access to appropriate technology or devices, or lack internet access, to access or engage with the event (Sarabipour, 2020). Similarly, if the platforms do not have subtitling, live descriptions or good quality sound this could negatively impact attendees with disabilities (Leary, 2020). The technology can also now enable presentations and sessions to take place in multiple languages with the aid of captioning, translation systems, and transcripts, thereby creating a fully accessible global marketplace (Sarabi-pour, 2020). Engaging with disabled community groups will aid event professionals in ensuring online events, virtual or hybrid, are accessible and provide the appropriate support and mechanisms for everyone to participate (Leary, 2020).

For business events, particularly meetings and conferences, virtual events are, in principle, relatively easy and low cost to develop and deliver, they simply need a computer, webcam and microphone, which enable anyone to broadcast from anywhere and share material and ideas with ease (Shapiro, 2012). Hybrid events, in contrast, are more complex, as they require more technical know-how to provide a seamless and meaningful quality to the broadcast elements to enable both in-person and virtual attendees to be engaged (Dowson, R., & Bassett, D., 2018). A low-quality bandwidth for the event team and/ or delegates is a serious drawback (Martin & Cazarre, 2016; Sa et al., 2019). If the audience is unable to see, hear or interact with the content then this will result in a poor event experience. Therefore, ensuring venues (for hybrid events) have appropriate stable bandwidths is a critical requirement (Fryatt et al., 2012). Aligned to this is data consumption, which may affect some virtual attendees depending upon the platform or device they use to access the event.

From an experience perspective there can be disconnect between in-person and virtual attendees, particularly at hybrid events, and therefore developing the overall experience for hybrid events is fundamentally important (Sox et al., 2017). A further disconnect can arise due to additional technological distractions which compete for attention by attendees, who may be multitasking or engaged in other social media activities (Ritcher, 2020; Sa et al., 2019; Sox et al., 2017). Another issue linked to the experience is the quality of content and delivery. If done well this will result in an outstanding event and engaged audience. Therefore, investing in developing the content and delivery modes and methods is critical (Sa et al., 2019).

Finally, the lack of networking opportunities at virtual events is seen as a major drawback, as many business events excel at enabling business to be conducted, deals struck, and connections made, including the serendipitous meetings that often take place in between formal sessions, which cannot be replicated online (Rogers, 2013).

### **Total event emission impact from meeting format**

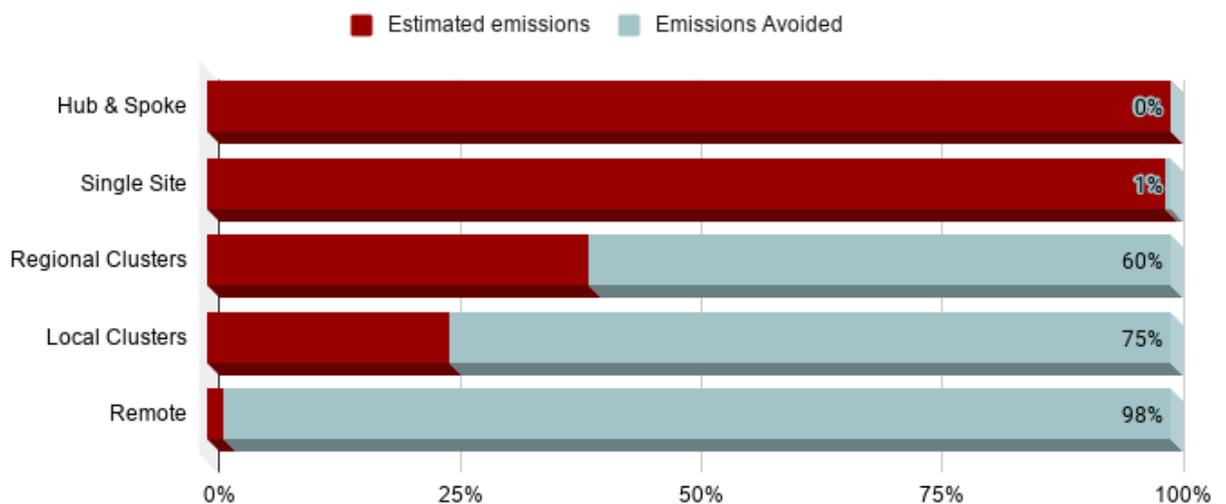
The main factor causing climate change is CO<sub>2</sub> emissions. Additionally, they have gotten worse over the past few decades, physical events contribute significantly to CO<sub>2</sub> emissions. Many events planners designed their events online due to the closure after COVID-19 pandemic. The change offers a crucial chance to discover how various meeting formats affect carbon emissions. Planners who have this knowledge at the beginning of the decision-making process can assess which models - online, hybrid or physical - best produce results with the least amount of carbon impact and achieving outcomes (Linthicum, 2020).

Five possible event types have been identified for Virtual and Hybrid events:

1. Hub and Spoke: The main event site broadcasts to other attendees who may attend from home or at a nearby venue with others.
2. Single Event Site: Thousand members travel to one host city. No virtual option is recommended.
3. Regional Clusters: This scenario involves a small amount of air travel.
4. Local Clusters: Members connect online and meet up in-person at a local location across several cities. In this scenario, there is no air travel.
5. Remote-Only: All participants join online from their homes, including the moderator, speakers, and sponsors. (UNWTO. 2022).

The potential emissions impact of each format can be resulted from:

1. Participant travel from/to the event
2. Remote viewers Streaming
3. Waste of venue and catering
4. Energy of Accommodation
5. Event freight (no exhibits)
6. energy of Venue
7. Meals at the venue
8. Consumables, such as paper
9. Onsite shuttles (McKinley, 2020).



Scenarios of Emissions for a conference event.

**Figure 3 (source: <https://www.epa.gov/eGRID/data-explorer>)**

In comparison to the Hub and Spoke model, which has the highest environmental impact, remote formats predict a 98% reduction in emissions. The projected reductions in emissions for local and regional cluster formats are 75% and 60%, respectively. The difference in total emissions impact between the highest and lowest scenarios for this example is equal to the climate pollution brought on by using 1009 barrels of oil, to put the data in more understandable terms (McKinley, 2020).

### **A Hybrid Event Case Study**

A quantitative study was designed in order to gain preliminary feedback from attendees in a Business conference for (the Egyptian orthopedic association) taking place in a hybrid form for the health care professionals. A comprehensive questionnaire addressed to participants in the virtual event served as the primary research tool. The survey was designed around four pillars:

- a. Identification of prior experiences with the association and reasons for not attending.
- b. Motives and initial expectations for their participation in the specific virtual event.
- c. Evaluation of their participation and future behavioral intentions concerning any Hybrid events.
- d. The company's profile.

### **Methodology of the study**

The field study applies the quantitative method that was carried out through direct interviews and questionnaires distributed on a sample of 300 of participants that had attended the conference in visual or hybrid environment. Based on findings from 150 respondents on a survey, practical implications and recommendations for event professionals and organizers are discussed. The Event took place on NOV 12, 2022, immediately following the virtual event, a link of the questionnaire was sent to those attendees who had given their consent to be contacted for feedback. The process of self-completion was anonymous and after sending reminders to increase response rates a response rate of 50% was reached, i.e. 150 fully completed questionnaires.

### **Discussion**

The sample profile of participants included: Health care Professionals 48%, Medical & Pharmaceutical companies representatives 15%, Tourism and Events company's representatives 12% and 11% representing other tourism organizations. Local governmental organizations representatives 14%.

By analyzing the responses of participants, there were more than one third (34.3%) of them attending for the first time the specific conference, while (16%) of them had practically no previous experience with any other conferences. The main reason for not attending the Association events before were: insufficient financial resources (57%), lack of time (18%), other marketing priorities (13%), lack of appropriate marketing plans and tools (12%) and Over 85% of the first time attendees mentioned that the pandemic had a major influence on them to find additional sources of extroversion to grow their businesses and make valuable business and professional connections.

According to their stated reasons for attending the particular event, 44% of respondents indicated that their main goal was to find new business opportunities, 31% that they wanted to expand their knowledge and networks, 20% that they wanted to close deals and achieve promotion and sales for a particular Orthopedics product, and 5% that they wanted to stay up to date on emerging market trends. Nearly half of the respondents had average initial expectations for their participation, while 32% said they had high initial expectations for the event and its effectiveness.

In terms of overall satisfaction, 62% reported being satisfied with the event, while 38% reported having limited satisfaction with their virtual event experience. The main reasons for dissatisfaction included the virtual event's limited scope in comparison to a physical event, technical difficulties and disruptions appearing both from their side and the organizers platform and limited networking opportunities.

Only 10% of participants stated that virtual conference was as effective as the physical conferences, and 61% said it was less effective, 29% of the participants stated that they had no prior experiences to compare it to. In terms of the extent of their participation actually improved their networking and knowledge, 53% said that it was limited or even nonexistent while 47% said that the contribution was significant.

It appears that the match-making systems of the events professionals plays important and critical role for virtual and hybrid events, based on the responses of virtual attendees. Additional requirements for successful Business Events, punctuality in the length of appointments and user friendly platforms.

### **Results and Conclusion**

The COVID-19 pandemic has created a pivotal moment for the global events management industry, and related hospitality and tourism sectors. The immediacy of the impact created by event closures across the world resulted in job losses in unprecedented scales, which may take years to recover from. Events have been a vibrant industry for decades which play an important role within people's lives through the socialization and sense of belonging that they help to generate.

The future of meetings and events would include a lot of virtual events. Many meetings that don't require networking experience (e.g., Staff Meetings, Advisory Board Meetings, Board of Directors Meeting, Employment Interviews, etc.) would be moving to virtual meeting platforms.

Whilst the transition to virtual events has aided the business events sector in particular, other parts of the events industry have struggled to pivot so easily. The impact of COVID-19, therefore, will have far reaching implications for the future of the industry. It can be hypothesized that there will be a significant evolution that takes place to ensure the safe return of events, which incorporates the use of technology, enhanced professional skills, capabilities and innovation in design and delivery.

Social distancing will continue to be reviewed and analyzed as crowd density at events can result in the rapid spread of infections and increased safety protocols will no doubt continue to evolve in response to this. For example, the use of temperature monitors, rapid infection testing, enhanced track and trace systems, directional flow systems for consumers at events, and sanitizer stations, may all become a norm for events.

The supporting tourism and hospitality sectors which are integral to the events industry will also take time to recover, with international events being the most affected due to a reduction in air travel and capacity and hence why hybrid events offer the perfect solution to this, as a global audience can still be engaged, as well as developing new markets. The public may also be more cautious to return to events, as concerns about the transmission of COVID-19 will linger despite major vaccine programs being developed.

The move to hybrid events will also increase sustainable practices due to decreased travel and logistics and through the integration of event applications which will create paperless events due to the fully online content. Finally, the incorporation of event technology will enable events to engage directly with a wider audience who have, in general, become more technologically adept and more willing to engage in virtual activities and the technological innovations will also result in increased accessibility and inclusivity at both virtual events and hybrid events.

### **Recommendations**

1. Stakeholders and Event professionals need to give close attention to their virtual image. Stay Professional in virtual events, adhering to punctuality, well prepared company presentations, press kits and high quality electronic materials are also mandatory tools for virtual attendees.
2. In order to increase the added value of the virtual and hybrid events and enlighten exhibitors by presenting new trends and cutting-edge practices, virtual and hybrid events benefit from their advantage of reduced travelling expenses to bring together professionals from all over the world. These events must also include valuable presentations and keynote speeches with industry professionals and experts.
3. Platforms content may be accessed synchronously or asynchronously. The protection of participant personal and organizational data as well as permissions for content use should receive special consideration in this virtual environment.
4. When selecting a meeting format, a variety of factors must be carefully taken into consideration. Selecting the model that best produces the desired results is the organizers' responsibility. Event planners can choose the least polluting options and be better informed about the climate impacts associated with their decision by examining the potential emissions impacts of various event models at the earliest stages.
5. The marketing and promotion of the events have to be very innovative to ensure the customers are getting exactly what they want. It is critical to promote the meeting's or event's duty of care to assure potential attendees' safety. If possible, use influencers to promote and inspire people to the meeting or event.

### **Further Researches**

1. While the event industry has been experimenting and providing guidance and best practice advice, there is still a gap in the academic perspective with little exploration of virtual events and particularly hybrid events, in the current academic literature, and this remains the case. Whilst more researches are being dedicated to technology, future trends and virtual events, there is possibility for developing this literature further and exploring hybrid events.
2. The unexpected shift to virtual events and obvious growth and focus in hybrid events will probably result an increase in research and this offer an opportunity for industry and academia to cooperate to explore best practice approaches and the benefits for new trends in events.
3. For the immediate future, this development will continue to be led by the event industry which continues to produce a significant output in content covering this topic. Whatever the future may hold, hybrid & virtual events will be a critical component of the new event context.

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### الإبداع التكنولوجي في سياحة المؤتمرات: مستقبل هجين للفعاليات

#### المستخلص

التطور والابتكار التكنولوجي لبرامج وتطبيقات في شبكة المعلومات العنكبوتية وتطبيقات الهاتف المحمول أدى إلى تغيير في صناعة الفعاليات والأحداث في السياحة، مما مكن المتخصصين من إقامة فعاليات تمكنهم من الوصول إلى شريحة جماهيرية أوسع بالتالي زيادة في عوائد الإستثمار. يناقش البحث الأحداث والمؤتمرات السياحية فيما يتعلق بالتطور في الأحداث الافتراضية عبر الإنترنت والهجينة (التي تمزج بين الافتراضي والواقعي) وفوائدها. يدرس بشكل خاص تأثير أزمة كورونا على صناعة الأحداث كتوجه جديد من خلال الإنترنت عن طريق تصميم تجارب افتراضية وهجينة. يفترض أن الأحداث الهجينة ستكون حجر الزاوية في مشهد سياحة الفعاليات الجديد ، مما يوفر شريان حياة للمتخصصين في الصناعة ويزيد من الممارسات المستدامة مع التوجه الأخضر الذي يوفر بعض التفاضل لمستقبل صناعة الحدث.

على الرغم من وجود فجوة في المنظور الأكاديمي ونقص البحث حول الأحداث الافتراضية وخاصة الأحداث الهجينة ، فإن منهجية البحث تحاول كشف فوائد وأفضل أساليب استخدام التكنولوجيا والتوجه الجديد في صناعة الأحداث والفعاليات في السياحة ، والتي نوقشت على أنها انبثقت خصوصاً من أزمة وباء كورونا. يتم استخدام المنهج الكمي في جمع البيانات من خلال: الأبحاث والدراسات والإستبيانات التي تم توزيعها على حضور فعليين لمؤتمر هجين والمقابلات المباشرة مع المشاركين في المؤتمرات وأصحاب المصالح والمتخصصين في الصناعة، ودراسة الظروف الجديدة لبيئة افتراضية أو هجينة.

الكلمات الدالة: الإبتكار ؛ التكنولوجيا ؛ الأحداث الافتراضية ؛ الهجينة ؛ أزمة كورونا.