

## Article

# Towards a More Resilient Festival Industry: An Analysis of the Adoption of Risk Management Models for Sustainability

Katalin Lorincz <sup>1</sup>, Katalin Formadi <sup>1,\*</sup> and Ildiko Ernszt <sup>2</sup>

<sup>1</sup> Faculty of Business and Economics, Institute of Business Sciences, University of Pannonia, 8200 Veszprem, Hungary

<sup>2</sup> Institute of Applied Management Sciences, University of Pannonia Nagykanizsa—University Center for Circular Economy, 8800 Nagykanizsa, Hungary

\* Correspondence: formadi.katalin@gtk.uni-pannon.hu

**Abstract:** The COVID-19 pandemic has had a significant impact on numerous industries, including the event industry, resulting in widespread disruptions. The widespread cancellations of festivals have been a direct consequence of the pandemic, and, following the reopening, those that have taken place have had to implement changes in response to the new guidelines and regulations created as a result of the pandemic. In this study, we examine the experiences of festivals held in 2021 in the Veszprém–Balaton 2023 European Capital of Culture region (VEB 2023 region). The study aims to adapt the PwC Risk Management Model and identify its four pillars (1: detect; 2: protect; 3: react; 4: restore) in the case of festivals. Our study outlines how festival organizers have faced unprecedented challenges and risks (detect), how they survived in complete uncertainty (protect), what lessons they learned, and what risk management decisions they made as a challenge of the pandemic period from a consumer perspective (react). The present study utilized a qualitative research methodology and involved conducting structured interviews with a total of 19 event organizers from five different events. In addition, to gain a comprehensive understanding of the sustainable consumption habits of festival visitors, a questionnaire survey was administered yielding 1133 responses. The biggest challenges for the organizers during the times of the pandemic were uncertainty and unpredictability, with increased financial, human, and mental risks and burdens. However, the positive benefits of the pandemic period and the future developmental directions of sustainable festivals were also highlighted (e.g., small-scale, family-friendly events). Regarding the future, the aspects of greening aspirations, a need to reflect on the social-environmental criteria of sustainability, and more flexible management decisions to deal with uncertainty have emerged among the festival organizers (restore). The research has revealed that festival visitors themselves will be important allies in the introduction of sustainable measures. The research result helps festival organizers to adapt more effectively to the new socio-economic circumstances caused by the pandemic.

**Keywords:** economic challenges; risk; uncertainty; PwC Risk Management Model; sustainability of festivals



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## 1. Introduction

In 2020, the emergence of the COVID-19 virus had a significant impact on tourism, including the events and festival markets. This brought about social and economic changes, as well as changes in risk management and various governmental responses to the unpredicted situation such as mobility and travelling restrictions and strict control and social distancing measures (Pató et al. 2022). The pandemic also highlighted the vulnerability of the event industry (Janiszewska et al. 2021; Dragin-Jensen et al. 2022). In addition to business-type events, a large number of programs and festivals had to be canceled, completely redesigned, re-planned, or postponed indefinitely. The tourism sector has

been particularly affected by the ban on organizing events in the context of the European Union (Keller and Tóth-Kaszás 2021); in the first wave, 18 countries and then 14 countries banned all sports, leisure, and family events. Event and festival organizers attempted to organize and reschedule pre-announced programs in an environment that was uncertain and significantly shrinking in economic terms, with constantly changing restrictions and health regulations. Festivals were able to survive the crisis caused by the pandemic through the use of a resilient and flexible business model (Formadi et al. 2021; Bachman and Hull 2021; Smits 2021).

The decline in the desire to attend festivals, reduced solvent demand, additional expenses, and the challenges faced by festival organizers in Hungary were highlighted in a survey conducted by the survey of the Hungarian Festival Association (2020). The survey found that festival visitors view these events as a form of community gathering, where environmental sustainability issues, such as selective waste collection, reducing disposable plastics, and promoting the use of tap water, as well as social aspects such as community building and opportunities for social interaction and local attachment, were also emphasized. The research focused on the impact of the COVID-19 pandemic on five festivals within the scope of the Veszprém–Balaton 2023 European Capital of Culture project: the Veszprém Music Street Festival, the Valley of Arts, the Hungarian Film Festival, Bakony 200, and Bakony Expo. Due to the ongoing pandemic, the selection and organization of these festivals in 2021 were limited. Despite the challenges posed by the pandemic, all five targeted events were ultimately held, although at different times than originally planned.

The research methodology employed in this study includes both qualitative and quantitative methods. As part of the qualitative research, structured interviews with event managers/staff were used to gather data on the situation (risks, challenges, lessons learned) and on the organizer's approach to handling the pandemic and associated risks, as well as changes and management steps towards sustainable festivals of the future (Q4). Additionally, quantitative research was applied among festival attendees. A questionnaire survey was used to explore the sustainability of the five festivals from the demand side based on 1133 responses. The research aims to provide a comprehensive understanding of the impact of the COVID-19 pandemic on the events and festival market and to identify ways to improve the sustainability of festivals in the future. The contents of the visitor questionnaire aimed to survey the consumption habits of festival visitors and determine how the selected festivals can meet the expectations of visitors, residents, employees, and performers and assess the sustainability of the festivals.

The structure of the article is based on the following logic: the literature review deals with the impact of the pandemic on festivals and the risk associated with it, sustainability efforts and risk management indicators are presented within this. The methodological chapter describes the focus, aim, and main issues of the qualitative and quantitative primary research. The results of the expert interviews with the festival organizers, as well as the consumption habits, expectations, and opinions of the festival visitors related to sustainability are presented in the research results chapter in response to the specific research questions. The research result also aims to adapt the PwC (2020) Risk Management Model and identify its four pillars (1: detect, 2: protect, 3: react, 4: restore) in the case of festivals. This is followed by conclusions and concrete suggestions on how to handle risk and manage festivals in a more sustainable way. Finally, the summary explicitly highlights the lessons learned through the pandemic in terms of supply and demand for the festival market, which could be utilized in case of upcoming economic challenges.

## 2. Theoretical Background

Festivals are popular meeting places in the 21st century, offering audiences the experience of stepping out of their everyday routine, recharging, and meeting friends. The social, economic, and cultural significance of these events (Gursoy et al. 2004), as well as the identity-creating power for the destination (Formadi and Hunyadi 2019; Rentschler and Lee 2021) and its image-enhancing effect, is evident.

### 2.1. The Role of Festivals in Promoting Sustainability

In addition to economic considerations, organizers of festivals and events prioritize sustainability efforts. This includes “reducing the amount of waste, implementing the selective collection of waste, treating and recycling generated waste; reducing water consumption; protecting and, where necessary, restoring the natural and built environment” (Mair and Smith 2021; Lorincz et al. 2021, p. 436; Liu et al. 2018; Zifkos 2015). The social pillar also plays an important role taking into account the “local” aspect: involving the local population and local/family businesses, building social networks, fostering community building, and addressing disadvantaged social groups (women, children, the elderly, minorities, and people with disabilities) (Valeri 2021; Dominus et al. 2021; Yolal et al. 2016; Black 2016; Bogdány et al. 2012; Csapody et al. 2021).

The festival-organizing profession has undergone significant changes recently, with a stronger focus on local events (Gold and Gold 2021; Rentschler and Lee 2021), and cooperation between stakeholders has become more important (Orea-Giner et al. 2022). In the future, values such as sustainability, social justice, and empathy will become more prominent (Salzburg Global Seminar 2021). Duffy and Mair (2021) argue that many challenges facing festival organizers today existed before the pandemic, but have been amplified by it. These challenges include climate change, increasing risks, and the use of technology in the festival world (Duffy and Mair 2021).

The attitudes and expectations of festival-goers also have changed due to increased environmental awareness and COVID-19 measures (Chi et al. 2021; Ye et al. 2020). Aside from physical well-being (health care, safety, food security, etc.), social and psychological well-being (entertainment, relaxation, magical moments of joy and pleasure, nostalgic moments, etc.) (Kang and James 2007; Ryff and Keyes 1995; Packer and Ballantyne 2010) is now more important in festivals. Festivals are now evaluated based on sustainability aspirations and indicators along with the three pillars of sustainability (economic, environmental, and social), which are summarized in Table 1.

**Table 1.** Pillars and indicators of sustainability.

Economic Sustainability	Environmental Sustainability	Social Sustainability
Encouraging the local economy through the spillover effect	Revitalizing waste-management programs—selective collection and recycling	Strengthening community building at the local level—the proportion of residents at the festival
Supporting and promoting the market appearance of local actors and service providers	Diminishing the use of plastic and disposable equipment	Enhancing local pride
Inspiring spending on the festival	Reducing pollution and CO <sub>2</sub> emissions—promoting reasonable and environmentally friendly modes of transport Minimizing noise pollution	Protecting and preserving local values
Increasing local tax revenues	Elaborate sustainable hospitality—alternative meat-free meals	Improving the quality of local life—expanding the range of programs (social- and psychological well-being)
Boosting event-related investments	Offering local products, local food	Raising the reputation of the settlement
Stimulating employment, job event-related creation	Ensuring the use of tap water	Supporting social responsibility initiatives
Escalating the number of guest nights		Providing child- and family-friendly events
		Assuring barrier-free transportation

Source: editor’s editing based on former research.

## 2.2. The Pandemic Conditions from the Perspective of the Event Industry

The COVID-19 pandemic has radically revolutionized everyday life, including changes in work and education practices, such as teleworking, online education, and also social distancing measures and a drastic decline in mobility. These changes also infected the economy, such as the need for mobile payments, virtual bills, and the raising of the prices of goods and services (Monge and Lazcano 2022); significant changes also happened in consumption patterns (Chi et al. 2021; Billore and Anisimova 2021) and leisure habits (Davies 2021). Several festivals have been postponed or canceled, and many creative events have been held online (Hanzlík and Mazierska 2021; Rentschler and Lee 2021; Khlystova et al. 2022).

The COVID-19 pandemic has impacted various regions and industries, causing varying degrees and types of damage and economic losses. The tourism, events, and festival industries have been among the hardest hit (Kalawapudi et al. 2021; Amar et al. 2021; Rentschler and Lee 2021). Due to cancelled events, many cultural professionals and festival organizers have lost their jobs and are seeking new careers (Betzler et al. 2020). The COVID-19 pandemic has had a significant impact on the event industry. Many events, including festivals, concerts, and conferences, have had to be postponed or canceled due to restrictions on gatherings and social distancing measures (Singh 2020; Keller and Tóth-Kaszás 2021; Ernszt et al. 2022; Formadi et al. 2022). This has resulted in significant financial losses for event organizers and suppliers (Nie et al. 2021; Papavasileiou et al. 2022; Ali and Balme 2022). Additionally, the shift towards virtual events has led to a change in consumer behavior and a decrease in demand for in-person events. The event industry is currently facing ongoing uncertainty and challenges as the world continues to grapple with the pandemic, but some segments such as virtual events have seen growth (Balestri et al. 2022; Bosworth et al. 2021; Margolies and Strub 2021; Bernat 2022; Nie et al. 2021; Shipman and Vogel 2022; King 2021; Ali and Balme 2022).

The pandemic has brought attention to various festival-related issues such as risk (Petrova and Tairov 2022; Pató et al. 2022), safety and security (Drury et al. 2021; Boccia 2021; Janiszewska et al. 2021; Xiaoting et al. 2021), travel restrictions and medical regulations (Rahman et al. 2021), risk management, (Petrova and Tairov 2022; Pató et al. 2022; Ludvigsen and Parnell 2021) crisis management (Miles and Shipway 2020; Estanyol 2021; Valeri 2022), and responsible and sustainable festival visitor behavior (Rowen 2020; Hutte et al. 2022). The context of COVID-19 has also been seen as a catalyst for an environmental revolution, prompting organizations to shift their focus toward sustainability initiatives (Hutte et al. 2022; Pató et al. 2022; Amar et al. 2021; Amui et al. 2017). Sustainability has become a key managerial trend in organizational strategies (Amui et al. 2017), with a growing emphasis on incorporating it into the core of the business and promoting innovation (Amui et al. 2017). The environmental sustainability of festivals became the focus of attention (Alonso-Vazquez and Ballico 2021; Ernszt et al. 2022; Formadi et al. 2022). Social sustainability also gained importance since festivals also serve as stimulants for social inclusion, connections, and cohesion, which are highly needed after the times of lockdown and isolation due to the restrictions of the pandemic (Gradinaru 2021; Davies 2021; Kádár and Klaniczay 2022; Roigé et al. 2021; Matzanos and Xanthacou 2021; Richards and Londoño 2022; Ernszt et al. 2022; Formadi et al. 2022).

The crisis caused by the pandemic and its economic challenges have also forced destinations and festivals to redefine themselves, rethink their mission, and prepare for the unexpected. Several models have been developed to mitigate COVID-19 risks, drawing on earlier research and lessons learned (Aldao et al. 2021; Hanstad 2012; Leopkey and Parent 2009a, 2009b). Dragin-Jensen et al. (2022) proposed a model for event industry resilience, focusing on innovation, dividing it into three stages: sustaining, adaptive, and transformative innovation (Dragin-Jensen et al. 2022).

### 2.3. The Four Main Pillars of Effective Risk Management in PwC's Model

Overall, the PwC Risk Management Model is a flexible and comprehensive approach to managing risk that helps organizations make informed decisions about risk management and allocate their resources effectively. By using this model, organizations can proactively manage risks and build resilience to withstand future challenges. Furthermore, the PwC (2020) was previously widely used for mitigating COVID-19 risks in different settings in tourism and high-tech smart cities (PwC 2020; Petrova and Tairov 2022).

This model was reinforced to follow four key steps of risk management during any crisis (Petrova and Tairov 2022). The four main pillars are as follows:

- Detect—the anticipation of challenges, threats, and hazards; reviewing the risk indicators.
- Protect—strengthening vulnerabilities.
- React—responding efficiently and counteracting; applying risk mitigation.
- Restore—identification of key means of functioning at reduced capacity and applying lessons learnt for future management decisions.

### 3. Research Methodology

We applied a qualitative methodology to evaluate the supply side of our primary research, which is a uniquely sensitive and effective approach for obtaining information from interviewees in their own words. Our research included gathering the opinions of 19 event organizers (staff members) from May to September 2021, selected from the organizers of five events in the VEB2023 region, namely the Bakony Expo, the Hungarian Film Festival, the Valley of Arts, the Veszprém Street Music Festival, and Bakony 200.

All the expert interviewees were members of the event management team and were selected based on the recommendations from the main organizers, representing specific areas such as program management, marketing communication, technology, logistics, and hospitality. The expert interviews were conducted 1–2 weeks after the events and focused on the organizer's experiences with the already completed programs (as shown in Table 2). The questions for the expert interviewees were systematically compiled using a guideline that covered topics such as the introduction and changes related to the event-related in light of the pandemic. During the analysis of the structured interviews, we partially summarized their content and partially utilized the exact wording of the interviewees. While maintaining the anonymity of the interviewees, we did not mention their individual opinions, but, instead, we summarized and evaluated the opinions of the festival organizers using *italics* for the purposes of the research.

The questionnaire was completed by festival visitors during the events, while the expert interviews were conducted with festival staff members approximately one or two weeks after the conclusion of the festivals. In the year 2021, a questionnaire was administered and supported by interviewers at five festivals onsite, motivating festival attendees to participate in the survey and to gather information on visitor attitudes and sustainability issues. The questionnaire was made available in both paper and online forms, allowing for completion on-site or via the online interfaces of the events or the webpages of the VEB 2023 project and the University of Pannonia. Our online questionnaires provided a convenient and cost-effective way to collect data, as they could be easily distributed and completed by respondents. However, we noticed some limitations to online questionnaires, such as the potential for low response rates in certain age groups. In certain cases, the use of on-site (paper-based) questionnaires was found to increase effectiveness. The ratio between online and offline was 60–40%. A total of 1133 festival visitor questionnaires were completed in 2021. The questionnaire consisted of 29 questions, including both closed and open-ended questions. The closed questions utilized a Likert scale, either four or ten point, to elicit clear positions from the respondents and eliminate neutral responses. Validating the questionnaire involved a series of steps to ensure the accuracy and reliability of the results.

**Table 2.** The characteristics of the analyzed festivals in 2021 include the name, venue, timing, and interviewees.

	Date of Festival	Number of Visitors Included in the Questionnaire Survey	Position of Interviewees
BAKONY EXPO Veszprém	22–24 May 2021	228	1. initiator, chief organizer 2. programs and operational organizer 3. responsible for the construction and technical matters
HUNGARIAN MOVIE FESTIVAL Veszprém, Balatonfüred, Balatonalmádi	23–26 June 2021	254	4. project manager 5. program director 6. responsible for communication 7. responsible for technical matters
BAKONY200 cycling performance tour Bakony	27 June 2021	56	8. chief organizer 9. logistics, track designation 10. landscaping 11. administration, entry
VALLEY OF ARTS Kapolcs, Taliándörögd, Vigántpetend	23 July–1 August 2021	420	12. chief organizer, director 13. business director, logistics 14. communication 15. programs
VESZPRÉM STREET MUSIC FESTIVAL Veszprém	25–28 August 2021	175	16. chief organizer 17. organizer 18. director of Food Truck Show 19. expert responsible for child programs

Source: own compilation.

We validated the process by reviewing its content and format to ensure it covered all relevant topics. We conducted a pilot test with a small sample, followed by cognitive interviews to understand how respondents interpreted the questions. After making necessary revisions, we refined the process.

For the open-ended questions, respondents were asked to briefly explain their characteristics and opinions, such as their experiences at the event, place of residence, origin, and perspective on matters of sustainability. The question about event experiences required a more detailed explanation compared to the others. The closed questions also included the option “Other” where necessary to accommodate specific responses that may not have been considered during the questionnaire design. The 2021 Festival Visitor Questionnaire covered the following main themes and topics:

- The socio-economic data of festival visitors, including demographic characteristics such as gender, age, education, and place of residence, as well as visitors’ happiness index based on the subjective quality of life question.
- Characteristics of the festival visit, including whether it was their first time attending, who they visited with, their mode of transportation, type of accommodation, length of stay, eating and food shopping habits, and opinions on the available food offers.
- Sustainability indicators of festivals, including its environmental and social aspects, such as water use, waste management, the importance of the local character of the event, the usage of local products, perception of sustainability issues, and opinions on sustainability initiatives at the events.
- Perception of the festival, including visitors’ views of the event and the level of motivation and attachment to the festival.

The study aims to answer the following research questions:

Q1: From the perspectives of festival organizers, what were the most significant risks and challenges encountered during the COVID-19 pandemic (in Hungary)? (Detect)

Q2: How serious has the impact of the pandemic been on the demand for festivals and events, and is there potential to grow? How can sustainability efforts be strengthened? (Protect)

Q3: What was the response of festival organizers to these changes? What are the key lessons and positive outcomes from these events? (React)

Q4: How is the future of festivals in the age of uncertainty? What part does management play in tackling these risks and challenges? (Restore)

#### 4. Research Results

The study analyzed the various aspects of festivals through the four key steps of the risk management' model: Detect, Protect, React, and Restore.

##### 4.1. Detect—The Impact of the Pandemic on Festivals and Events: The Risks and Challenges of Festival Organizers

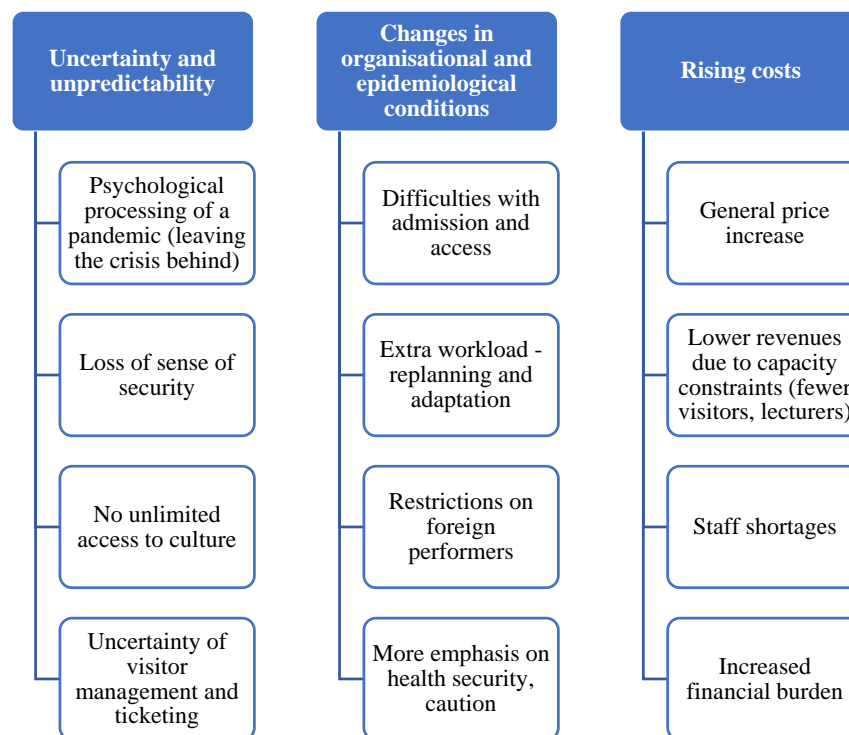
In the first research question (RQ1), the main focus was on the challenges and risks faced by festival organizers during the summer of 2021 due to the pandemic. Uncertainty was the main challenge cited by the majority of interviewees. In Hungary, the easing of epidemiological restrictions in May 2021, after 5 million people had been vaccinated, left festival organizers with doubts about the feasibility of organizing events and the conditions under which they could be held. The restrictions also meant limited access to culture and programs, making them only available to visitors under strict conditions. This high level of uncertainty created difficulty in predicting attendance at each event, leading to uncertainties in ticket sales and the audience management process. There were questions as to whether there would be an interest or, on the contrary, whether there would be a mass influx (the initial limit for outdoor events was 500 people), which made the situation unmanageable.

The changing epidemiological restrictions and the initial limit of 500 people for outdoor events made it challenging for festival organizers to manage the situation effectively. The constant need to re-plan and adapt, such as adjusting dates, registering visitors online, ensuring the necessary organizer staff, and purchasing supplies and souvenirs, added to the stress and workload for festival organizers. Government measures (in Hungary and Europe), as well as constant changes in organizational and epidemiological conditions in response to the pandemic, made festival management more challenging. During the third wave of the pandemic, international travel regulations and organizational conditions were constantly changing, making it difficult to reorganize programs and performers. This was particularly pronounced for festivals with foreign performers, as entry and exit rules were frequently modified depending on the actual pandemic situation, resulting in some foreign performers being unable to attend or being slow to respond to requests.

The interpretation of government regulations or compliance with the rules was a challenge for many festival managers. The legislative context was not clear, making it difficult to determine whether a certificate of immunity was required or if there were a restriction on events with less than 500 people. To address this, festival organizers had to become more cautious and place a greater emphasis on health and safety. This involved introducing new solutions for organizing events, such as demarcating the festival site and implementing access gates, to ensure the event was as safe as possible.

In addition to the uncertainty and changes to organizational rules, the summer of 2021 posed another challenge for festival organizers, which was the increase in prices and labor costs. One interviewee, a staff member of the Music Festival stated, *“Labor costs have skyrocketed, we have to pay double fees compared to two years ago, while we’re not earning any more money. Everything has gone up in price in our region”*. Additionally, there have been additional costs to comply with epidemiological regulations, including creating hygiene and safety conditions, providing disinfectants, and designating staff responsible for compliance. Festival organizers also faced a shortage of staff due to the increased

workload. However, despite these efforts, festival revenues decreased as the number of visitors was limited by the epidemiological regulations. Figure 1 shows the challenges faced by festival organizers.



**Figure 1.** The biggest challenges of COVID-19 for festival organizers. Source: own research, 2021.

#### 4.2. Protect–Strengthening the Sustainability Initiatives of the Festival

- As we discussed in the theoretical part, the context of COVID-19 could represent an environmental turning point. We aimed to assess whether it could strengthen the sustainability efforts of festivals. To do so, we analyzed the attitudes and behaviors of festival-goers toward sustainability, based on a sample of 1133 people. The results of the demographic analysis of festival participants are presented in response to RQ2.
- Women outnumbered men at each of the five festivals, with a proportion of 63% women to 37% men.
- The average age of festival visitors across the five festivals was 32.1 years, with a wide range of visitors from 1 year old to 80 years old. There was only a slight variation, the Valley of Arts and the Veszprém Street Music Festival attracted a younger crowd, with a lower average age of festival attendees. Likewise, the majority of festival-goers were in the 18–30 age group (54%), followed by the 31–49 age group (32%). Only 14% of festival attendees were over 50 years old.
- Looking at the educational level, the majority of festival visitors at all five festivals had higher education (58%).
- On average, festival participants traveled 77 km to attend the festivals surveyed in 2021, with a regional impact as most visitors arrived within a 100 km radius. The exception was the Valley of Arts Festival, which attracted visitors from an average distance of 122 km (from Budapest).

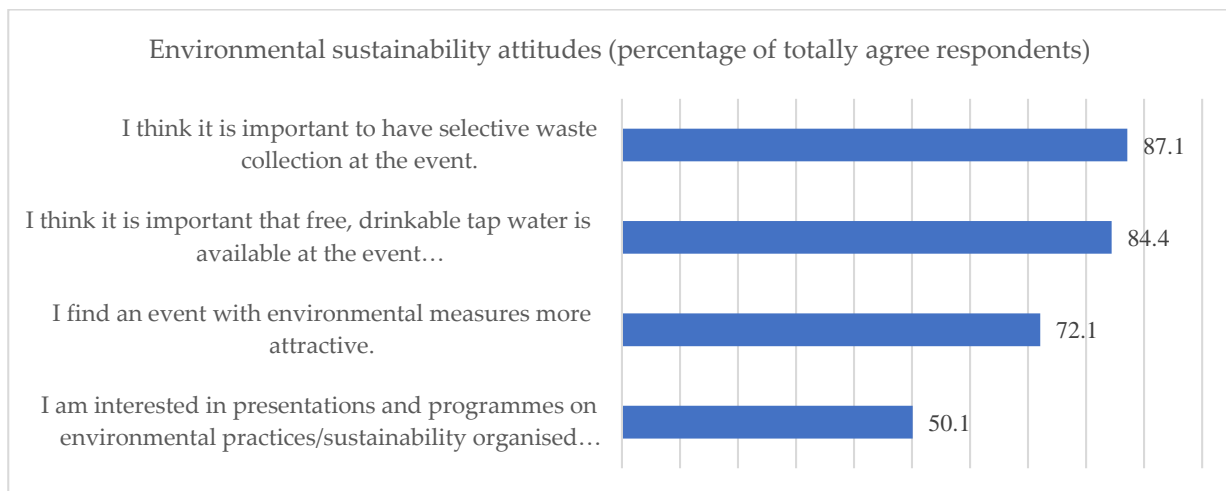
The sustainability-related consumption behavior of festival visitors was characterized by some environmental issues, such as the means of transportation, type of accommodation, dietary habits and food options available at the festival, the drinking water consumption, the waste management, and the visitor attitudes towards environmental sustainability:

- Looking at the means of transport, the majority of festival visitors (63%) arrived at the festival by car. The second most frequently used means of transport was the bus (17%).



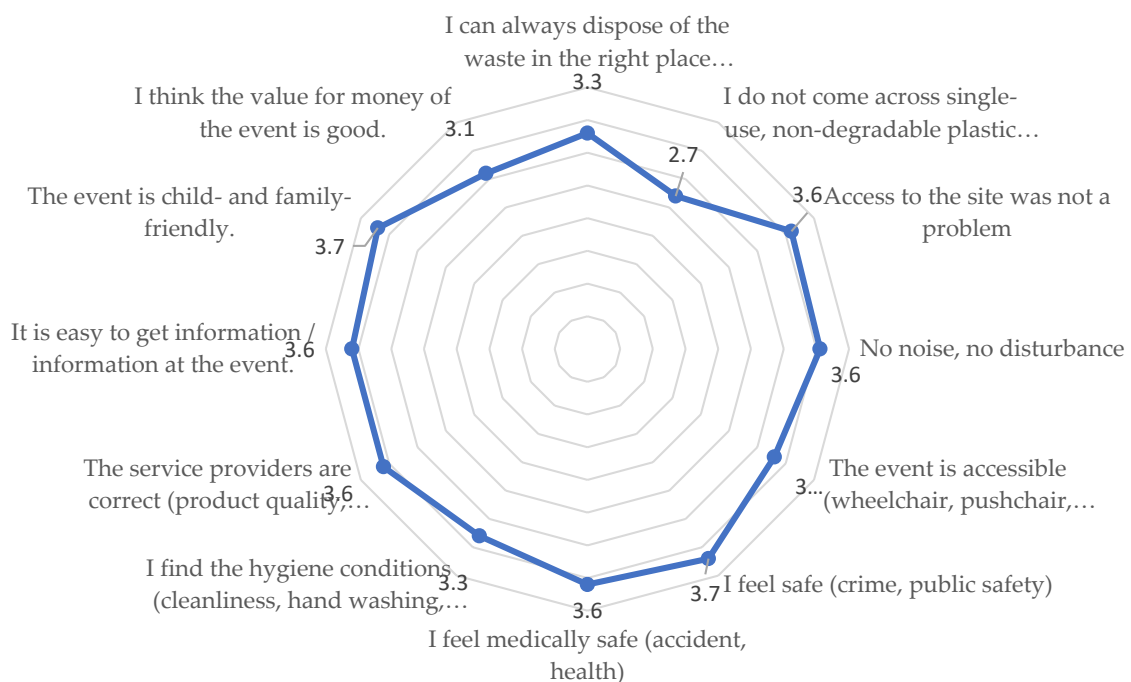
The proportion of visitors who arrived by walking was 12%, mostly from within a 6 km radius. However, festivals with a predominantly local audience, such as the Veszprém Music Street Festival and Hungarian Film Festival, saw a higher number of attendees walking to the event. The other means of transportation used included a combination of train and bus. The mean distance covered by train and bus was 150 km and 110 km, respectively.

- The majority of festival visitors (50%) stayed at their place of residence and did not use commercial accommodation during the event. Additionally, 9% of visitors stayed with friends or acquaintances and 5% stayed in their own holiday homes. Camping was the most popular form of commercial accommodation, with 25% of visitors staying there. Bed and breakfast and guest houses were used by 6% of visitors, while hotels were used by only a few (3%) percent of those visitors surveyed.
- In terms of environmental impact, it is important to examine the festival-goers' dietary habits, their satisfaction with the food offered, and how well a festival can cater to their needs and preferences. Only a small percentage of visitors (7%) follow a special diet, such as being fully vegan or vegetarian. A tenth of visitors eat meat only once a week. Most festival visitors reported eating meat 2–3 times a week and a further 27% eat meat almost every day. Two thirds of visitors to events had a mixed diet. There was also evidence of a shift towards a more plant-based diet, with visitors purchasing more non-meat options. For example, at one event in Veszprém, the availability of beef burgers, which have a high carbon footprint, was limited. Compared to a regular weekday, a higher proportion of visitors (almost 10%) of festival visitors opted for a vegan or vegetarian meal on a weekday.
- Visitors used a four-point scale to rate their satisfaction with the food options available at the events. On average, participants gave a rating of three, indicating that they were satisfied with the choices and that they could find something to suit their everyday diets and food allergies, regardless of the event. When asked about their preferred eating habits, 20% of them did not care about the origin of the food, while 32% of festival participants preferred local food when it was available, and nearly a quarter always sought it.
- In terms of drinking water consumption habits, 17% of respondents indicated that the issue is not relevant to them. However, access to tap water was deemed very important at the event for almost two thirds of respondents (58%). Access to tap water is important regardless of the distance from the place of residence. However, a quarter of visitors (25%) purchased bottled water, with the average purchase being 2.5 bottles (0.5 dL). The largest proportion of festival visitors buying bottled water, one third of them, bought 2 pieces of 0.5 dL bottles (mode). It was observed that a greater proportion of visitors refilled their bottles at events that emphasized providing information about the availability of water.
- In terms of attitudes towards environmental sustainability, the majority of visitors (88%) believe that proper waste management, including selective waste collection, is crucial at events, as is access to free, drinkable tap water (84%). Environmental measures at events are attractive to visitors, and some mentioned these initiatives as a positive aspect in their feedback. However, only half of the visitors showed interest in attending presentations or programs related to environmental practices and sustainability during the festival (Figure 2).



**Figure 2.** Measuring environmental sustainability attitudes. Source: own research, 2021.

- Visitor attitudes towards environmental sustainability were assessed in a questionnaire such as how they perceive the sustainability efforts at the events, how satisfied they are with them, and what problems they identify (Figure 3). Results showed that visitors were most satisfied with personal and public safety measures, as well as the child and family friendliness of the festivals surveyed but rated accessibility much lower. However, as shown in Figure 3, most visitors have no problems with access to accurate information, fair service, venue accessibility, or noise levels, (scoring an average of 3.6). The main challenges they faced in terms of environmental sustainability were the widespread use of single-use, non-degradable plastic utensils, insufficient and separate waste bins at events, and poor hygiene conditions.

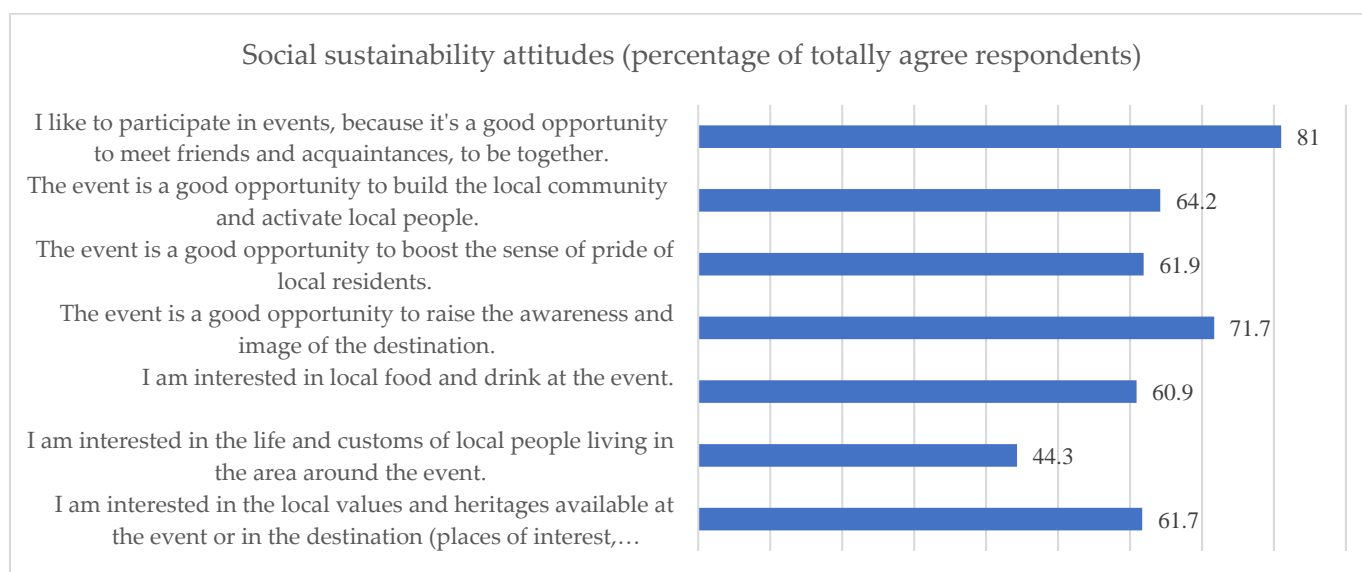


**Figure 3.** Assessing the sustainability efforts of festivals. Source: own research, 2021.

The social sustainability of festivals was analyzed by surveying visitors’ attitudes towards the role of the event in their social lives and the community, as well as their interest in local aspects of the festival. The festivals provided a good opportunity to meet friends

and acquaintances and spend time together. In addition, events are a good way to build and activate the local community. They help to build a sense of pride among local people and are also a good opportunity to raise awareness and image of the destination.

The social impact included an analysis of the visitors' interest in the local character of the event, and what they were most interested in (local products, local people's daily life, local attractions, or local food). The results (Figure 4) showed that visitors were most interested in the local values, programs, and attractions available at the event or the surrounding area and that they were interested in local food and drink. The people who visited the festival were least interested in local people's daily life: two fifths of the visitors were interested in the daily life and habits of the locals. 61% of visitors showed interest in local food and drink, as well as local values and craft activities available at the event.



**Figure 4.** The social sustainability of festivals. Source: own research, 2021.

#### 4.3. React–Changing Demand and Preferences of Festival Visitors from the Organizers' Perspective

Demand for festivals and events has changed in the wake of the pandemic, but the trends are unclear. Festival organizers overwhelmingly reported that there were no particular, specific demands from participants, but a growing interest in festivals as an opportunity to relax, have fun, recharge, and escape the effects of the pandemic. There were only a few instances where visitors failed to adhere to the regulations or held the organizers responsible for the restrictive measures.

There were many questions regarding the entry conditions for foreigners and children that needed clarification. Some festival organizers reported that the uncertainty around these conditions led to decreased attendance, as they received numerous inquiries about the acceptance of foreign immunity cards and how children could attend the festival. According to an interviewee: *“we received a lot of questions about the foreigners' immunity card, what and how we accept it. Also, for a long time, it was not clear how children could come to the festival.”*

During the pandemic, audiences and visitors have been driven towards the online world and electronic solutions such as working from home, distance learning, and home offices. This shift has brought benefits in terms of online registration, making it easier for participants to pre-register and become more informed and aware of festivals in advance. One of the biggest advantages of the pandemic concerning online solutions has been the adoption of contactless payment. The majority of festival visitors have requested cashless payment options instead of using cash, and this trend is expected to continue in the future.

#### 4.4. Restore—The Positive Outcomes of the Pandemic for Festival Organizers

The pandemic period has brought about several positive changes for festival organizers in terms of sustainability. Many organizers reported a shift towards a more environmentally conscious mindset, which has reinforced efforts toward environmental sustainability. These efforts include implementing a refillable cup system, reducing or prohibiting the use of plastics in catering, implementing a selective waste collection system, providing drinking water to fill bottles, promoting the use of public transportation, and offering vegetarian food options. The pandemic situation has forced both visitors and organizers to be more conscious and aware. Visitors are paying greater attention to health and safety, and organizers have reported a shift in mindset and organization, often towards a more economically sensitive, frugal approach. *“Popular festivals tend to focus on building everything up. However, with the older festivals, we sit down and start talking about the principle of less is more.”*

The pandemic has transformed the range of programs offered, highlighting the local character and promoting a more familiar atmosphere and, in many cases, more conscious use of outdoor spaces. A sports event organizer reported that the event drew more visitors, and the organizer of a film festival noted that it was able to hold many premiere screenings. Outdoor, community film viewings have also become more popular, partly due to health and safety concerns, but also *“because the outdoor cinema is experiencing a resurgence”*. The pandemic has also resulted in an increased proportion of national/local performers (e.g., 95% of performers are domestic), which has been well received by audiences. It has also led to a “democratization process” towards the rural areas: *“It is a lesson that COVID-19 has also contributed to the democratization process towards rural population, as we tend to be at the forefront of everything in the country, including events.”* (Interviewer)

The pandemic has had several positive outcomes. The audience appreciated the efforts of the organizers to make events possible despite the challenging circumstances. Several festival organizers reported feeling appreciation and love from the audience and a sense of emotional fulfillment in their work. *“We felt only great gratitude and love from the audience. Finally, it is possible to come.”*

#### 4.5. Restore—The Future of Festivals in the Age of Uncertainty

The interviewees in the study concurred that they had effectively navigated the first three COVID waves and had adapted to rapidly changing circumstances in a resilient manner. Festival organizers anticipate future changes and evolutionary trends in the future:

- *“Normalization”* is expected, with medium- and small-scale events having a bright future, as *“they are expected to thrive”*.
- In the future, quality and modern technology will be key, and the online world will play a larger role in festivals and events. Technical support will be a crucial factor for success.
- The risk communication strategy must be perceived and considered.
- Health issues and (public) safety will become even more prominent: *“Although safety has always been an important issue, the pandemic has made it even more crucial. This is also a key aspect in maintaining visitors’ attendance and encouraging return visits to our event”*.
- A wide range of risk mitigation measures must be utilized and adapted by the festival organizers to ensure public safety.
- Opinions are divided on sustainability efforts. On the one hand, economic survival may push them into the background as cost reduction becomes a priority. On the other hand, they stressed that it was finally time to rethink everything—including sustainability. In their view, they are moving towards reuse, reducing waste and recycling, energy efficiency, and more conscious design. *“Greening is more about producing less municipal waste, turning off the lights. We can’t use a Molino again in its original function, but we can put it on the counter on the other side and get a clean surface—we recycle. Tap water can also be drunk while bottled water will remain due to profitability.”*

## 5. Conclusions and Implications

As a way to enhance the innovative aspect of the study's findings compared to previous researches on the PwC model, we emphasized the wider context and significance of the results by providing additional background information. Our findings offer insights into the adoption of risk management models for sustainability. The results also have practical implications and offer recommendations for festival organizers.

The results of the study can inform future research on sustainability in the festival industry by highlighting the challenges and successes of adopting risk management models for sustainability.

Based on the professional interviews, it can be said that the organizers have learned a lot from the experiences of the past period. The need for flexibility, quick adaptability, creativity, and resilience was the most frequently emphasized. The pandemic situation and the uncertain economic challenges have led to increased use of online solutions, which can be adapted to the world of festivals through communication, registration, and contactless payment. It has been discovered that events can also be organized online and that these events can sometimes attract more foreign and local visitors. However, the digital world cannot replace the personal and shared experiences that are integral to the festival experience.

It was also noted that trust in staff has become more important and that a positive mindset is essential to keep the event industry thriving. The lesson learned is that event managers must exercise more caution when organizing festivals and that it is prudent to make decisions with a long-term perspective. The pandemic situation has reinforced the need to communicate constantly both with staff and the public by keeping them informed of the constantly evolving conditions. One of the interviewees reached a surprising and contrasting conclusion from past practices: *"It is not necessary to continually come up with something new"*, as visitors often seek familiar experiences. It was also revealed that, in the context of music festivals, inviting foreign performers is not mandatory as Hungarian performers are capable of *"shouldering the event"*. It was noted that *"it cannot be stated that having foreign performers is not necessarily required"*. Open-air festivals and events have demonstrated their compatibility with COVID-19 measures, as the crowd is spread out, resulting in a geographically dispersed concentration of visitors.

In general, the pandemic and its resulting circumstances have also led to several positive developments on both the organizer and visitor sides that promote sustainability. The heightened awareness and willingness of key organizers have resulted in an expansion partnership, the greater involvement from local communities, businesses, and suppliers.

The use of risk management in (more) sustainable festivals has become increasingly important in the post-pandemic era, as the events industry faces new challenges in ensuring the health and safety of attendees. Effective risk management strategies can help prevent the spread of diseases like COVID-19, increase public confidence in the festival industry, and reduce the environmental impact of large-scale events. The integration of technology and data analysis in risk management can enhance its accuracy and efficiency, while a risk-based approach can improve decision-making and ensure the long-term viability of events. In the context of sustainable festivals, risk management can also help organizers make informed decisions about event planning, operations, and sustainability initiatives (organizers can assess the potential environmental impacts of an event and implement measures to mitigate them).

Additionally, sustainable festival risk management can include emergency planning and responses, such as developing contingency plans in case of natural disasters, public health emergencies, or other unexpected events. This helps to ensure the safety and security of attendees and protect the reputation of the festival industry. In conclusion, the use of risk management in sustainable festivals after COVID-19 is crucial for ensuring the health and safety of attendees, promoting sustainability, and ensuring the long-term viability of events in a rapidly changing landscape.

Overall, the study's findings can lead to the formation of best practices and effective strategies for managing sustainable events and provide recommendations for festival organizers and industry stakeholders to enhance their efforts in promoting sustainability in the industry.

## 6. Future Studies

The shift in approach is steering festivals away from a linear economy towards a circular economy, which will be the focus of our future research. We aim to chart the extent of regional supplier involvement and their cooperation at festivals and examine the waste management process at one festival as a model. This will allow us to devise strategies to minimize the environmental and waste impact. It is evident that the success of festival organizers' sustainability and greening efforts relies heavily on educating attendees to become more environmentally conscious and changing their attitudes. Our future research will continue to study the development of sustainability efforts in events, with special emphasis on the outcomes of implemented measures. A particular focus will be on social sustainability, including involvement of local communities, promotion of local pride, enhancement of local attachment to the festival, raising awareness, and improvement of social- and psychological well-being.

Having social connections and spending time with friends is important for mental and emotional well-being and should be a sustainable habit because it helps foster a sense of community, provides support and companionship, and can also contribute to overall happiness and satisfaction with life.

## 7. Lessons of the Pandemic from More Sustainable Festivals' Point of View—Summary and Limitations

In our primary research, we explored the challenges and lessons posed by the pandemic from the perspectives of festival organizers and festival visitors at five festivals held in the VEB2023 region in 2021.

First, we researched what kind of difficulties were caused by the pandemic situation, and how this has affected sustainability efforts in the VEB2023 region. Our research has also revealed that the entire event management profession has been severely impacted by the pandemic both financially and mentally. The organizers' consensus was that the biggest difficulties posed by the pandemic were its unpredictability, the need to constantly adapt to changes in health regulations, the frequent need for re-planning, and the resulting increased financial, human resources, and mental strain.

Our second research question looked at how demand for festivals has changed due to the pandemic. The organizers felt that there was a growing need among visitors to recharge themselves, get out of their homes, and socialize after the prolonged lockdown caused by the pandemic. No unique, specific demands from visitors were reported due to the pandemic. Online applications such as online registration, and cashless payment were welcomed; however, some attendees reported that epidemiological measures such as a slower entry system caused some tension.

For the future of festivals, a positive outcome of the pandemic is that festival organizers have become more cognizant of the challenges, more receptive to sustainable solutions, and more adaptable in managing risk and uncertainty. This newfound awareness and flexibility will be reflected in management decisions as well. Festival organizers reported a preference for locally sourced, smaller-scale, human-centered, family-friendly, and/or multi-generational events utilizing local performers. This trend will support the social pillar of sustainability.

This study came with certain limitations to the research on sustainable initiatives and risk management in festivals, such as the lack of standardization in terms of framework used to assess sustainability and risk management in festivals, making it difficult to compare findings across studies. Additionally, time constraints and the complexity of festival can all impact the accuracy and reliability of research findings. Furthermore, the

different cultural context and environmental conditions can limit the scope and scale of the studies by impacting the prioritization of initiatives, regulation, and policies. Limited data availability can also limit the generalizability of findings and hinder the development of new and innovative solutions. However, despite these limitations, ongoing research efforts are crucial in advancing our understanding of the role of festival in promoting sustainability and managing risk and can provide valuable insights into the ways to improve festival operations.

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