EVENT SAFETY AND SECURITY
TREND REPORT

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Mega-events have gained in importance within the scope of live communication in recent years. Events are an important instrument for experiential brand marketing and decisively form the perception and association of a visitor.

The so-called ‘eventisation’ of many areas of daily life makes events an important part of people’s life so that a life without mega-events, such as trade fairs, festivals, concerts, public viewings, or sport events, such as football matches in stadiums, or corporate events can hardly be imagined.

At the same time, event safety and security is being given increased attention by organisers, agencies and public authorities, last but not least because of the past terrorist attacks on concerts, mega-events and inner-city areas of large cities. Especially incidents like the Love Parade 2010 tragedy in Duisburg have also significantly changed safety and security awareness at events. And it goes without saying that smaller events are also repeatedly affected by safety and security risks that must be considered in the planning process.

“There is a precise point in time in this respect – before Duisburg and after Duisburg. A lot has changed in society since then. Both in terms of people’s awareness and, of course, on the legislation side.” (Peter Texter, Vogelsänger GmbH)

Overall, there has been a greater sensitivity to event safety and security topics due to the aforementioned, very different incidents. An increasing safety and security awareness and a more intensive addressing of safety- and security-relevant issues is particularly noticeable in the trade fair and event sectors, especially since last year. That is also evident, for example, at providers of event safety and security workshops and seminars that have recently enjoyed an increasing demand.

This report focuses on event safety and security trends and systematises relevant topic areas that are currently gaining in importance and will continue to do so in the future. Furthermore, causes of existing deficits in safety and security planning for events are addressed and taken into account.
There has to date been no unanimous opinion on how to define the scope of the event safety and security term. It is basically about the protection of life and health of event visitors and involves very different but relevant topic and risk areas. These include, for example, fire prevention and evacuation, crowd management, First Aid, accident prevention, health protection and safety and security communication. The safety and security requirements are defined in comprehensive statutory provisions and regulations. The individual components must be taken into account in the event planning process or within the scope of the production of a safety and security concept and thus form the basis of “safe and secure events”.

The study was based on a comprehensive secondary analysis and guideline-based in-depth interviews with important event safety and security experts from very different fields of work, for example from agencies and institutions, and technical and legal experts. Important experiences, developments and priorities could be discussed. The main objectives were to analyse and assess the current threat and danger situations at mega-events and to develop potential solutions.
On this basis, the following aspects were initially formulated to summarise important trends in event safety and security.

- The need for safety and security at mega-events significantly increased in the past few years. This development was primarily caused by recent terrorist attacks.

- The topic areas of event safety and security are diverse. Besides external risks (e.g., weather and attacks), basic internal risks (e.g., event equipment and fire systems) are getting increased attention.

- A reliable risk management must take even greater priority in the future. The analysis of possible danger scenarios and the determination of their occurrence probability are the starting point for sound safety and security concepts.

- Technical developments pose risks that were unheard of before. For example, drone vehicles pose a potential risk at events because they can crash and because they are able to carry up to two kilograms.

- Specific technologies and progress in digitalisation offer new opportunities for safety and security planning, danger prevention and effective response in emergencies.

- The right behaviour in an emergency requires defined responsibilities and unambiguous communication structures. The coordination between project partners must be further improved.

- Individual companies that act as organisers or agencies in the event market are increasingly developing a new, responsibility-driven safety and security culture. As pioneers in the sector, they can establish new safety and security standards and define essential event safety and security standards.

- Regular theoretical and practical further training is essential.

- A large number of guidelines and regulations cause both a lack of transparency and uncertainty. Associations such as FAMAB e.V. can provide a platform for the establishment of sector-wide standards.

The following information summarises the results of the analysis, highlights relevant topic areas for event safety and security and gives ideas for a more in-depth examination of specific areas.
2 Safety/Security Perception and Awareness

As already stated in the introduction, the perception and awareness of safety and security at mega-events has changed significantly in the recent past. That particularly applies to big public events, trade fairs or the general safety and security at public locations, airports and railway stations.

In this connection, an increasing sensitivity of the population to safety and security aspects that are also gaining in importance within the scope of events can be noticed and is primarily due to high media coverage of events. Social media play a vital role in this connection and cause the younger generations to develop a greater awareness of potential risks.

Against this backdrop, the population’s understanding for safety precautions and security checks is increasing.

Overall, the interviewed experts are in agreement that event safety and security topics have considerably gained in importance.

Nevertheless, the performed secondary analysis and the expert interviews give a differentiated picture that reveal some blatant deficits in event safety/security and risk management. Deficits can primarily be found in the planning process before the actual event, for example, in that only an insufficient risk analysis and assessment is carried out or in that existing safety precautions are intentionally or unintentionally ignored. Reasons for that are, for example, a lack of knowledge or insufficient experience and consequently difficulties in the application of regulations and time and cost pressure.

These results are based on a scientific examination that investigated the causes of the ignorance of safety and security aspects.¹

“I often come across event concepts in which ‘safety and security’ aspects are only rudimentarily taken into account. or not at all. They are often not adequately budgeted for and problems therefore arise with in-house safety and security functions and the involved regulatory and supervisory authorities during the event realisation” (Olaf Jastrob, Technische Unternehmensberatung Jastrob Ltd. & Co. KG)
In the opinion of the interviewed experts, both event agencies and organisers that currently still have a lack of sensitivity to event safety and security aspects have development potential. The concept and the staging of events frequently take priority. At the same time, clients often fail to provide an adequate budget for safety-relevant costs. Sometimes the reason is insufficient awareness of potential danger situations and safety and security risks. Safety and security standards are more often ignored within the scope of smaller events although safety and security risks, which can pose danger to life and health of the visitors, can equally arise there.

However, very positive changes in safety and security awareness could also be seen in the event sector during the recent years. An increasing number of event agencies have positioned themselves as pioneers in terms of safety-relevant aspects. There is also a greater interest in, and a greater willingness to consider, safety and security topics among institutional providers of locations, specifically for exhibition sites or convention centres. At the same time, a rethinking process has started in event-organising companies. A safety and security culture, which results from a (safety- and security)-oriented corporate culture, is being developed in cooperation with agencies. A greater focus on safety and security can therefore create a unique position for agencies.

2.2 Event Safety/Security Topics
Safety and security primarily means 'the protection of lives'. (Event) safety and security are associated with very specific topic areas that mainly focus on fire prevention, evacuation, engineering and construction safety, First Aid, accident prevention and health protection, and of course, a comprehensive legal framework, which specifies laws, rules and regulations and thus sets essential standards for the safe staging of events. However, the large number of laws, rules and regulations, the lack of transparency, local or inconsistent provisions and discretionary powers in the interpretation of laws make it difficult to deal with event safety and security topics. This situation even causes safety and security regulations to be ignored or intentionally circumvented to save time and cost.

Furthermore, the appropriateness and reasonableness of official event approval procedures and conditions are also being questioned, particularly after specific incidents.
Against this backdrop, professional qualifications of staff in event agencies and event-organising companies and many years of experience in risk analysis and risk assessment for mega-events represent crucial challenges and important fields of action. The associated issues are, for example:

- Who does the risk assessment?
- Which authorities and experts are consulted for the planning?
- Which laws and regulations are applicable for the respective event?
- Is a safety and security concept required?
- Who will produce the safety and security concept?
- Which professional qualifications are required?

The interviewed experts therefore especially recommend an increased focus on event safety/security topics. The great attention currently given to safety and security topics by the media primarily offers the opportunity of not only taking into account relatively new risk potentials (e.g. due to terrorist attacks) but also including basic principles of event safety (e.g. fire prevention, evacuation) to a greater degree and investing in the training of skilled labour.
2.3 Danger and Threat Situations

Events basically involve different risks that can be divided into internal and external risk potentials. External risks are predominantly not influenceable and are based on technical risks (e.g. power failure, stage technology) and force majeure risks (e.g. natural disasters, violence, terrorism and terrorist attack risks). Internal risks are primarily based on directly project-related risks resulting from decisions and actions in the event planning process (e.g. faulty project management, lack of safety-specific qualifications and misjudgements). These risks can usually be controlled quite well by specific measures in the event planning process.

Especially the incidents of the last few years show that compared to 10 years ago, additional and very different event risks must currently be expected. Whilst risks in crowd management played a major role a few years ago, such risks can now be mitigated by using specific technologies and planning tools. Instead, attention is now shifting to weather and terror incidents which very much determine the perception of risk potentials. For example, the ‘Rock am Ring’ festival had to be interrupted and evacuated in the past two years because of weather warnings or terror warnings.

“The terrorist attack risk and the weather currently represent the major imponderabilities and are the most difficult to control.” (Ralf Stroetmann, VPLT)

Against this backdrop, the experts are of the opinion that it is still important not to neglect the fundamental safety risks resulting from planning mistakes or a non-assessment of risks. A holistic risk management is therefore of paramount importance in this connection.
Risk Management and Event Technology

Risk management is a part of the event planning process with the aim of identifying risks and damage scenarios and determining their occurrence probability. That also involves measures to mitigate risks or completely avoid them. This process first looks at the general event risks that should always be the basis of the planning process and primarily include fire prevention, crowd management and evacuation, engineering and construction safety, health protection or even communication aspects.

For example, technical developments in crowd management during the last few years have allowed important improvements to be achieved in terms of space calculations, barriers, visitor traffic and evacuation. Projects and tools that perform a simulation-based evacuation and escape analysis additionally support the planning process. The RIMEA project, for example, developed a guideline for escape analysis. The objective was to determine a method for the production of a simulation-based escape analysis and thus define basic modelling standards. The market penetration of such systems can be estimated as still relatively low – cost aspects and a lack of knowledge are also the main causes of that situation.

The engineering and technical safety also has a high relevance within the scope of events because of the often complex stage rigging and comprehensive equipment, which set high requirements for the structural and technical safety and demand the presence of chief carpenters or comprehensive documentations (e.g. design calculation check).

Overall, the above-mentioned partial lack of safety and security awareness in the planning process poses a substantial risk for event safety and security. In this connection, the experts particularly pointed out the need in the future to increase the awareness of, and sensitivity to, dangers and risks, to strengthen the training and qualification of skilled labour in agencies and to encourage the cooperation with consultants and experts.
Weather Conditions
Weather impacts and thunderstorm phenomena are further relevant risk scenarios in event safety. Open-air events – above all in combination with stage or tent rigging – are especially affected by that. The relevance of such incidents increases because the thunderstorm phenomena have significantly increased in recent years.

Heavy rain, hail, lightning strike and storm are much feared threats. Although a good assessment of the situation through the use of technical instruments (e.g. anemometers) and the communication and coordination with weather services that watch the local weather conditions allows the achievement of a good assessment of the situation, it is nevertheless possible that such occurrences make it necessary to stop an event and evacuate a site, which then makes suitable evacuation scenarios and panic-avoiding communications with visitors necessary.

Terrorist Threats and Risk Posed by Drones
The above-mentioned terror threats can be regarded as trigger for an intensified safety and security debate and pose a latent and hardly calculable risk. Although emergency management measures that fall under attendee management and admission control can be taken and barriers and roadblocks can be used, the safety feeling of visitors at open-air events or football stadiums has nevertheless changed considerably. People develop vague fears within large crowds and that results in a significant risk in terms of panic situations. Special psychological and communication measures are necessary and sensible.

“How do I deal with people? How do I prevent many people from getting scared? That is a communication issue.”
(Peter Texter, Vogelsänger GmbH)
Another scenario on which greater importance will have to be placed in the future is unmanned aerial vehicles (drones). On the one hand, drone flights over a crowd of people generally pose a risk, for example in the event of a crash. At the same time, terrorist attack risks emanate from drones. Experts are intensively working on potential solutions for danger prevention which are currently aimed at the surveillance of both the site and persons. The potential capture or jamming of signals with interfering transmitters is also being discussed. On the other hand, the use of drones by the event organisers also allows the surveillance of mega-events. Any arising risks such as sources of fire can be identified quicker and therefore combated more efficiently.

The visitors’ safety feeling is especially linked to attack scenarios. A strong safety feeling is an important event success factor. Against this backdrop, measures that give visitors a safety feeling although they cannot ensure any ‘real’ safety (e.g. barriers and roadblocks) seem to be relevant. It goes without saying that measures that actually prevent danger are also still required.

Overall it must not be forgotten that there will always be a residual risk despite an optimum planning process and a holistic risk management. It is however most important that the current debate results in a significant improvement in elementary safety and security standards for events. A higher safety and security awareness will be a good starting point.

“The more one considers potential risks, the more one will fall back on expert knowledge, safety and security concepts and existing laws and standards. The incidents force us to do that.” (Michael Hosang, Studieninstitut für Kommunikation GmbH)
The event sector is becoming increasingly aware of the safety and security topic because of the developments and incidents of the past few years. The responsibility of event organisers and agencies for meeting the higher safety and security requirements is therefore also increasing. It is therefore even more necessary to develop solutions for danger prevention and reduce the safety and security risks. The interviewed experts have identified several pivotal fields of action for event safety and security that will gain in importance in the future and are therefore examined in greater depth below.

The safety and security experts are therefore convinced that there will be increasing requirements for safety and security concepts and assume that they will be given greater attention in the planning of safe events. Detailed safety and security concepts must already be produced today for an event size of 1,000+ visitors. The experts expect that this threshold will reduce to 500 visitors in the foreseeable future. The focus will especially be on events at 'new' locations (e.g. factory buildings) or in outdoor areas that are not specifically recognised as event sites. A large number of additional sources of danger have to be taken into account in such cases. Potential damage or attack scenarios must be analysed in depth in order to be able to assess both external risk potentials (e.g. weather, attacks) and internal risk potentials (e.g. event equipment/technology, fire prevention) and take adequate preventive actions. Comprehensive guidelines and regulations already exist.

“Safety and security concepts must be exactly tailored to the location and theme. The early involvement of the approval authorities and all institutions responsible for safety and security is a basic precondition for that.” (Alexander Schmidt, evenco GmbH & Co. KG)

The requirements for the production of effective safety and security concepts are high because existing sets of standards must be tailored to the specific situation. The compliance with these requirements requires not only knowledge of the guidelines but also the know-how for an adequate implementation.

The importance of practical and theoretical further training will increase in the future to ensure that. In this connection, the experts see potential at organisers and agencies that can be improved by the use of safety- and security-orientated training offers. Agencies need to deliberately expand their knowledge base to increase their know-how. That should ideally be done by sending employees to regular practical and theoretical further
training courses. According to the experts, especially agencies should provide a specific budget for further training in the long term in order to keep up with the dynamic developments in event safety and security. Alternatively, it is possible to get support from external specialists who can give advice to agencies and organisers on specific topics. The relevant topic areas are so diverse that even training in, for example, industrial health and safety also plays an important role. Particular attention should be given to the proper operating of work equipment such as (electrical) tools, fork-lift trucks or aerial platforms. According to the experts, event safety and security should play an early and much greater role in apprenticeships and courses of studies relating to the event sector.

“For event safety and security, agencies and organisers should introduce rules on how much budget should be allocated to further training and at which intervals employees should be trained.” (Elmar Funke, FMR Rechtsanwälte)

The communication between all relevant players responsible for the safety and security of events is another topic area that should be given greater attention in the future. Effective cooperation can significantly reduce safety and security risks. The main participants here are especially the organisers, agencies, service providers, security forces, authorities and the police and medical teams. Although communications between the project partners have already improved in the past few years, there is still need for further improvement. The establishment of a central coordination office that can control everything is important for all events because that is the only way organisers can make the right decisions in an emergency within a short time. A prerequisite for that is an efficient and transparent communication structure, which all project parties know about, and which is deliberately installed and already integrated in the safety and security concept.
“Is there a central communication office? Which communication channels are available? Greater attention must be given to how you can communicate quickly and effectively.” (Ralf Stroetmann, VPLT)

The installation of communication channels and a communication hierarchy must take into account that the involved parties often do not speak the same 'language' see event safety and security from different angles. It is therefore very important for organisers to bring together all parties involved and to coordinate the different views and interests.

Technical solutions promise a considerable support potential for the promotion of event safety and security. Use of state-of-the-art technologies offers extensive possibilities for increasing event safety and security. New sensor technologies, can, for example, not only count the number of participants but also recognise conspicuous behaviour of persons and draw the security staff's attention to untypical situations in the event of danger and thus allow quick intervention. RFID chips can be used for locating people.

“Name badges with integrated RFID chip can help locate persons and bring them to safety in an emergency. I think that idea goes in the right direction.” (Peter Blach, BlachReport)

Mobile fence systems and so-called crash barriers (e.g. concrete barriers) were developed in the past few years to prevent external risks, particularly attacks. The experts however also remarked that the effectiveness of such measures is mostly limited in a danger situation. Although fences and barriers increase the safety perceived by event visitors, they cannot provide any actual safety in cases of doubt. Safety- and security-related communications with the visitors during the event are also gaining in importance. For example, LED monitors are increasingly used to draw the participants’ attention to emergency exits or escape route plans. Social media also play an important role in this context. Although participants in events appreciate this sort of measures given the current threat situation, the reasonableness of safety- and security-related visitor communications must be taken into account so as to not cause a feeling of insecurity.
The safety and security awareness has significantly increased in society and therefore also in the event sector during recent years. Particularly mega-events and trade fairs are subject to a higher danger potential due to the large number of participants in a confined space. As live communication simultaneously becomes ever more important, the players in the event sector will in the future have to deal with the topic areas of event safety and security in even greater depth.

“Previously, you could always hear people say: ‘That won’t happen to me.’ That is no longer the case. Now, people are more sensitive and say: ‘That might also happen to me.’ I think that’s good.” (Bülent Ergün, TSE AG Technik und Service für Events AG)

This trend report examines the relevant areas of event safety and security and shows that safety and security at events covers a large number of fields of action. It becomes very evident that despite increasing external risks, internal safety- and security-relevant aspects must not be neglected. Both organisers and agencies must adequately implement the existing guidelines and regulations in order to comply with the increasing requirements for safety and security concepts. In this connection, the authorities should take on not only a supervisory but also a supporting and advisory role. The underlying basis for safe event concepts lies in the know-how of organisers and agencies and that know-how must be expanded by means of theoretical and practical training to ensure a comprehensive understanding of aspects relevant to event safety and security.

Due to the large number of topic areas and guidelines that formulate very different requirements from one German state to the next, sometimes even from one municipality to the next, there is an inconsistent, partly non-transparent situation that can result in orientation difficulties and uncertainty among organisers and agencies. A major objective of the event sector should therefore be the formulation and implementation of harmonised standards for safety and security concepts. To this end, organisers and large agencies would have to jointly develop an orientation framework for measures covering the planning and implementation of safe events and such framework should subsequently be established as event standards. The FAMAB e.V. Communications Association, in its capacity as a sector association, could provide the necessary platform to bring the entire sector togeth-
er. Against the backdrop of increasing digitalisation, the result could be a platform or app that acts as a mobile adviser and supports event planners and agencies in the development of the safety and security concept and precisely guides them through the jungle of relevant guidelines and regulations. The experts however unanimously point out that although the approach for the development of event concepts can be partly standardised, the specific interpretation of guidelines and regulations and the specific risk assessment always require the involvement of experts.

Event safety and security will increasingly become a major sector topic in the future. A new safety and security culture is required. It must include clear company rules on how to handle safety and security issues. That goes hand in hand with a learning process of how common objectives, standards and values can be developed and how suitable behaviour patterns can be implemented.

“I see an increasing responsibility of organisers and agencies as being a starting point for a new safety and security culture that can make the trade fair and event sector more safety- and security-oriented.”
(Prof. Dr. Cornelia Zanger, Chemnitz University of Technology)

Organisers and agencies must therefore establish structures and processes to effectively and efficiently implement the necessary measures and thus fulfil the increasing need for safety and security.
Increasing Sensitivity to Event Safety and Security

Safety and Security as a Unique Position Feature

Specialist Knowledge and Communication as Challenges

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Sources:
1 Reinhardt, Pia, Safety and Security Awareness in the Event Sector, Master’s degree thesis at TUCed 2016

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