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Interactive Digital Posters Motivated by VFX and 360-Degree Video Technology: Enhancing MICE Experiences in a German Leisure Region

Dirk Hagen[1], Eberhard Hasche[2], Reiner Creutzburg[2,3]

[1]Hochschule Hannover University of Applied Sciences and Arts, Faculty III - Media, Information, and Design, Expo Plaza 12, D-30539 Hannover, Germany
[2]Technische Hochschule Brandenburg, Department of Informatics and Media, Magdeburger Str. 50, D-14770 Brandenburg, Germany
[3]SRH University of Applied Sciences Heidelberg, School of Technology and Architecture, Ludwig-Guttmann-Str. 6 69123 Heidelberg, Germany

Email: dirk.hagen@hs-hannover.de, hasche@th-brandenburg.de, creutzburg@th-brandenburg.de

Abstract

Rapid advances in imaging technology, particularly in the areas of visual effects (VFX) and 360-degree video technology, have the potential to transform the meetings, incentives, conventions and exhibitions (MICE) industry. Technological innovations such as Virtual Reality (VR), Augmented Reality (AR) and Extended Reality (XR) play a crucial role in the development of immersive environments designed to increase attendee engagement and satisfaction.

This study examines the implementation of VFX and 360-degree video technologies through interactive digital posters as part of experience trails in the Lüneburg Heath, a well-established leisure region in northern Germany. This paper presents the technological framework and discusses usability in the context of this case study.

The use of 360-degree panoramic video and VFX for interactive posters in specially equipped conference rooms, such as the Dortmund conference room at Hotel Park Soltau (Germany), illustrates the potential of these technologies to redefine traditional business event settings. The integration of these technologies offers new opportunities, particularly in using the environment to enhance the event experience and create unique value propositions in an increasingly competitive market.

By merging business and leisure elements, the Lüneburg Heath serves as a strategic asset for MICE stakeholders, allowing venues to offer differentiated experiences in line with global trends such as 'bleisure' (business and leisure) travel.

While these technologies offer opportunities, challenges such as high initial costs, specialised content production and adaptation to existing event formats need to be addressed. In addition, the study considers the potential of LED walls as a scalable alternative and provides insights into future developments in the implementation of immersive technologies in business events.

1. Introduction

1.1 MICE industry & business events: Digital transformation

Despite the long-standing availability of numerous digital tools, there has been a recent surge in the adoption of innovative solutions and event tools, particularly in the business events sector, which dominates the events industry [1]. Digital transformation has reshaped the MICE (Meeting, Incentive, Convention, Exhibition) industry's understanding of business gatherings by integrating advanced technologies such as virtual reality (VR), augmented reality (AR), visual effects (VFX) and artificial intelligence (AI) into more innovative event formats [2]. These technologies have not only enhanced the attendee experience but have also opened new levels of interaction and engagement. This shift has led to the creation of more dynamic and immersive event experiences that appeal to a wider audience and offer greater accessibility. Digital platforms driven by Artificial Intelligence (AI) now enable hybrid events that combine face-to-face and virtual participation, which has become increasingly important in the post-pandemic era. At the same time, they are an important factor in the industry's efforts to reduce CO2 emissions [3, 4].

The term 'MICE' is an acronym for Meetings, Incentives, Conferences and Exhibitions and is used in both the event industry and the tourism industry. In the tourism industry it is used to refer to a specific segment of the business events sector [5]. Business events, or the MICE industry, is an important sector within the global economy. The industry is characterised by events ranging from small corporate meetings to large international conventions. With a compound annual growth rate (CAGR) of 9% over the next decade, the global MICE market is forecast to reach $874.16 billion by 2024 and $2.07 trillion by 2034. Geographically, the Asia-Pacific MICE market is experiencing considerable growth [6].

Conversely, Europe continues to dominate as the leading MICE destination, accounting for over 50% of global MICE revenues due to its well-established infrastructure and numerous international business hubs [6]. The MICE sector in Germany generates approximately €130 billion in direct revenue, making it a key

economic driver and one of the most significant industries in the country [7].

1.2 The Lüneburg Heath Leisure Region: More opportunities for business events in a competitive industry

The Lüneburg Heath is a vast heathland in Lower Saxony, Germany. It is a unique and historically significant recreational area that combines natural beauty with modern tourism and business opportunities. Covering over 107,000 hectares, the Lüneburg Heath is one of the largest heathland areas in Europe and is recognised for its diverse ecosystems [8].

In the context of the MICE industry, the Lüneburg Heath's strategic location between Hamburg, Hanover and Bremen offers ideal accessibility for corporate events, conferences and incentive trips. Leveraging leisure and incentive opportunities for MICE delegates offers unique opportunities to create memorable business events. Integrating more leisure activities with business meetings enhances the overall experience and makes it more attractive to delegates. For example, the natural beauty and cultural heritage of Lüneburg Heath provides an ideal backdrop for incentive trips that combine work and leisure in a setting that promotes relaxation, creativity and team building.

In addition, the MICE industry is increasingly incorporating leisure elements as a competitive advantage. Lüneburg Heath's cultural heritage, including the annual Heath Blossom Spectacle, provides a unique backdrop for corporate retreats, team building activities and incentive travel programmes. This is in line with global trends in 'bleisure' (business + leisure) travel, where event attendees seek to extend their stay for leisure purposes, contributing to the regional economy [9].

Incorporating these elements into the MICE industry allows stakeholders such as conference hotels to offer more value-added services, differentiate themselves in a competitive market and attract a more diverse clientele. The unique blend of leisure, incentive and business components makes these events more attractive and ensures a higher return on investment for such stakeholders as conference resorts or hotels.

1.3 Immersive Technologies in MICE: The Impact of 360-Degree Videos and Digital Posters

The use of 360-degree panoramic video and VFX for digital interactive posters in specially equipped conference rooms, such as the "Dortmund" conference room at the Hotel Park Soltau (Germany), illustrates the ability of these technologies to transform traditional business meeting environments [10]. By facilitating the delivery of more immersive content, these tools can not only enrich the attendee experience, but also enable venues such as conference hotels to differentiate themselves in a highly competitive environment and positively impact various stakeholders. The distinctive combination of business and leisure elements, such as these hiking trails, through the use of innovative 360-degree video technologies has the potential to significantly increase the return on investment (ROI) for stakeholders.

Despite the promise of these technologies, they also present challenges, including the high cost of set-up and the need to produce specialised content for such VFX-driven interactive posters.

2. Case study and methodology

2.1 Description of the case study Hotel Park Soltau

The Park Soltau Hotel, located in the Lüneburg Heath region, is a remarkable conference and leisure facility that seeks to balance professional engagement with recreational opportunities [10]. The presence of environmentally friendly conference venues, combined with the region's extensive network of nature trails, wellness centres and cultural attractions, enables organisers to integrate leisure-based incentives into corporate meeting agendas.

In recent years, Park Soltau Hotel GmbH has continuously expanded its portfolio of services and offerings for the affiliated Hotel Park Soltau. The hotel is located in the immediate catchment area of the metropolitan areas of Hamburg, Hanover and Bremen, with a direct connection to a regional train station (Soltau-Nord). The hotel is situated on a spacious 47,000 square meter natural site and has 191 rooms and 350 parking spaces, 20 conference rooms and 7 group work rooms, as well as other facilities such as a swimming pool, sauna, bowling alley, etc. [11].

One focus of this development is on professional and technologically sophisticated conference technology, and a new type of conference technology has also been implemented in the Dortmund conference room. This conference room allows a 360 degree projection, which is not only continuously technically adapted and further developed, but is also used to create strategies and usage variants in the context of a highly competitive market with regard to customer orientation in the MICE industry.

2.2 Methodological approach

After a qualitative selection, the authors identified a number of trails in the immediate vicinity of the case study "Hotel Park Soltau". These were inspected in the course of field research and technical recordings were made. The next step was to check the feasibility of these trails (length, natural quality, etc.). The further step was to implement these trails as digital interactive posters for the conference room 'Dortmund'. Here, the authors determine the current state of the Dortmund conference room in order to present technical developments in an iterative process. These further developments, e.g. regarding the implementation of VFX-motivated interactive posters and the associated development of usability, are achieved through iterative experimental testing. In this process, use scenarios with the respective technical implementation are presented to the heads of the hotel departments (e.g. from the areas of technology, sales, marketing) and the management. Qualitative data in the form of evaluations, comments, etc. are collected in a simply structured documentation. In an inductive process, the overall results were developed into a usability use case, which is described below.

3. Interactive Posters: Technology Approach

3.1 Technology opportunities

3.1.1 Basic Concept

The Basic Concept is to offer an immersive experience by displaying digital hiking posters in a 360° room [12], allowing participants to explore interactive routes on a map. This setup is designed to engage users in a multi-sensory experience, where they can visualize and interact with various hiking paths, making the journey feel real and tangible. Integrated are videos and images of favorite locations, showcasing visuals and video footage of the landscapes, landmarks, and points of interest along the routes. This integration helps visitors envision themselves experiencing these places firsthand, creating a deeper emotional connection and appreciation for the outdoors (fig. 1).

Figure 1. *Hiking Posters in Hotel Park Soltau (Test setting)*

The posters are created to inspire people to move by introducing them to accessible hiking trails that encourage physical activity and exploration. The interactive nature of the experience fosters a sense of curiosity, motivating individuals to take that first step toward outdoor adventure, whether in nature or in a local park. The routes should start directly at the hotel, eliminating the need for extra transportation or planning. This convenience makes the experience user-friendly, ensuring guests can easily immerse themselves in nature without any logistical barriers (fig. 2).

The posters are shown before, during, or after a conference. This experience provides a dynamic way to break up the typical conference day. Whether used as a pre-event activity to energize participants, during the conference as a unique interactive break, or after sessions to relax and reflect, it adds a refreshing element that appeals to adventure seekers and those simply looking to unwind. This innovative approach provides a fresh alternative to traditional presentations or seminars and highlights the importance of wellness and exploration in the professional environment.

3.1.2 Common usage

The Posters are projected in a 360° room, creating an immersive environment where visuals of different hiking routes and destinations surround participants. The 360° projection offers a dynamic situation, enhancing the feeling of being physically transported into the landscapes displayed on the posters. People walk around and watch the posters, freely exploring the different routes and locations as they navigate the space. Visitors can pause at specific points of interest, creating a personalized journey through the displayed trails.

Then, the visitors can choose the appropriate ones for a leisurely, scenic stroll or a more challenging, adventurous hike. The nature of the experience allows participants to make informed decisions based on their fitness levels, time available, or specific interests, such as nature, photography, or scenic views. By scanning a QR code, each participant can easily access detailed information about the hiking routes by scanning the code on the posters. This action links them to the map provider, Kommot, a trusted platform for hiking route navigation, ensuring accuracy and ease of use. The QR code acts as a seamless bridge between the physical world and the digital hiking experience.

The map is transferred onto a smartphone, allowing individuals to carry the trail guide on their outdoor adventure. The app integrates essential information like distance, difficulty level, estimated time, and points of interest, all tailored to each route. People can use it as an interactive guide for hiking, giving them real-time guidance throughout their journey. The smartphone map is an intuitive, GPS-enabled guide that offers turn-by-turn directions, points of interest, and recommendations based on the user's preferences and location along the trail.

The guests may join colleagues on the same route or in the same area, fostering a sense of community. Participants can share their experiences, track each other's progress, and even coordinate meet-ups on specific trails. Whether hiking solo or with others, the app encourages social interaction and the sharing of the adventure, making it easy for people to connect over shared outdoor experiences.

Figure 2. *GPS-Map - Route starts and ends directly at the hotel*

3.1.3 Advantages using projected posters instead of traditional paper posters

Interactive projections can display changing content, such as videos, animations, and real-time updates, making them more engaging than static paper posters. This ability to update content instantly keeps the information fresh and relevant. Interactive features allow users to engage directly with the poster.

Projected posters are environmentally friendly. Since projections do not require printing on paper, they reduce paper waste and the need for resources used in traditional poster production (e.g., ink, transportation). Interactive projections can display large amounts of information on a single surface, saving physical space compared to using multiple paper posters. They also eliminate the need for storage or disposal of old posters.

Projections can be easily customized for events, campaigns, or audiences without printing new posters. This flexibility makes them ideal for dynamic marketing or informational environments. They are cost-effective in the long run. While the initial setup for interactive projections may be more expensive than printing paper posters, over time, the cost savings on printing and the ability to reuse the same system for multiple campaigns or events can be significant.

With high-quality visuals, interactive projections can create a more visually stunning and attention-grabbing display than paper posters. The improved quality can make a message stand out more effectively in crowded environments. Some interactive projection systems can track user interactions, providing valuable insights into user behavior, preferences, and engagement. This data can be used to refine future campaigns or designs.

Paper posters can get torn, damaged, or vandalized, leading to the need for frequent replacements. Interactive projections are not subject to physical wear and tear, offering a longer-lasting display.

3.1.4 Advantages of physical activities during a conference

Taking a break during a lengthy conference to perform physical activities offers several key benefits: Sitting for long periods can lead to mental fatigue and decreased focus. Physical activity, even for just a few minutes, stimulates blood flow to the brain, helping to refresh the mind and improve concentration when returning to the conference.

Physical activity can help combat the sluggishness that often accompanies long periods of sitting. A quick walk, stretch, or light exercise can boost energy levels and combat the mid-day energy slump, leading to better performance and attentiveness. Movement has been shown to stimulate creativity and problem-solving abilities. A physical break can allow attendees to think more clearly and approach discussions or brainstorming sessions with a fresh perspective.

Physical breaks provide an opportunity for informal networking and socializing with other attendees. A walk or light activity can be a great way to meet new people or have more relaxed conversations away from the formal conference setting.

3.2 Technical backgrounds

3.2.1 Technical background in Hotel Park Soltau

Hotel Park Soltau GmbH has spent the last few years designing and constructing a unique conference room. The "Dortmund" conference room features 360-degree projection, displayed across all four walls (Fig. 3). 12 projectors were mounted on the ceiling and creating continuous imagery. The presentation is managed by a server, which synchronizes three graphics cards to provide 12 HDMI output streams that control the projectors. The entire room can be controlled through a tablet, allowing users to adjust settings such as scenes, audio, lighting, and other parameters [13].

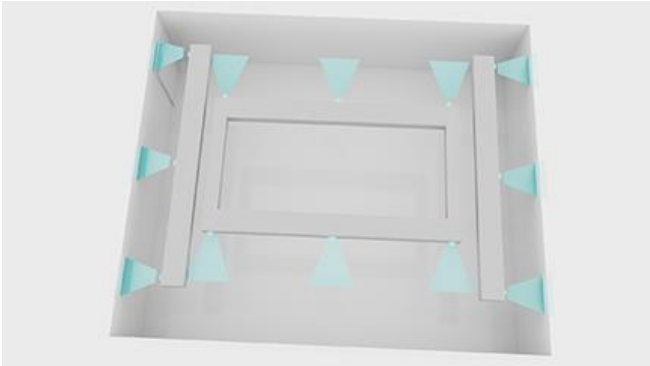

***Figure 3**. Arrangement of the projectors in "Raum Dortmund"*

Using this pre-installed 360°-degree projection technique, all posters can be displayed at the same time, allowing participants to explore a variety of hiking routes and landscapes all at once. Each poster represents a different trail or location, creating a dynamic and varied experience that keeps visitors intrigued and inspired as they navigate the room. The ability to view all options simultaneously gives them the freedom to compare different routes and choose the one that best suits their preferences or moods.

The hiking routes are displayed on the landscape map, providing a comprehensive, bird's-eye view of all the available trails in the area, displayed on the different posters. The routes on the maps show clear markings of each trail's starting point, key landmarks, and endpoints. The visual representation of terrain types, distance, elevation changes, and other key features helps participants decide which trail to explore next.

Top locations are highlighted along the route, offering a more in-depth exploration of specific points of interest. As visitors follow a trail on the map, specific landmarks or scenic stops are dynamically highlighted, signaling important places to check out along the way, like popular viewpoints, hidden gems, or natural features such as waterfalls, rock formations, or wildlife observation points. When users interact with these highlights, they can learn more through detailed descriptions, videos, or even 360° images, allowing them to envision what they will experience when they get there in person. These interactive elements spark curiosity and excitement about the destinations within the hiking routes.

Videos and panned image panoramas are displayed to enhance the attraction to go out and walk, further immersing visitors in the experience. High-quality videos provide a virtual preview of what it is like to walk through the trails, showcasing the changing scenery, weather conditions, and the atmosphere of the environment. The panoramas offer sweeping views of the landscapes. These visuals are strategically displayed alongside the map and route information, drawing attention to the beauty and appeal of the hiking locations. The aim is to inspire people to act by highlighting how rewarding and invigorating it can be to explore these landscapes on foot (fig. 4).

Figure 4. *Hiking Poster in Hotel Park Soltau*

3.2.2 Technical background in Visual Effects (VFX)

The poster concept uses ideas presented and used in the visual effects (VFX) industry, drawing inspiration from the innovative techniques that have revolutionized storytelling and immersive environments in film, gaming, and other media. By leveraging VFX principles, this concept merges the cutting-edge technology used in visual storytelling with the engaging, outdoor-focused experience of hiking and exploration. Blending digital and physical worlds creates a unique space where participants are not only spectators but active participants in a transformative, interactive experience.

Modern concepts in the VFX industry aim to use large projections of high quality (e.g., LED walls), bringing dynamic and lifelike visuals to life on a scale never before experienced in a conventional setting (fig. 5). Large LED walls allow for an expansive, high-resolution display that wraps around participants, much like an immersive movie set. The clarity, brightness, and scale of these projections are unparalleled, delivering crisp, vibrant imagery that enhances the realism and excitement of the experience. This setup mirrors modern film and television advancements, particularly in high-profile productions where LED walls have replaced traditional green screens for more seamless and engaging visual effects.

By incorporating these VFX-driven ideas, this concept brings the latest interactive and immersive technology advancements to life. It provides a flexible, sustainable, and deeply engaging experience tailored to various environments and user needs. It perfectly fuses cutting-edge digital design, interactivity, and environmental responsibility.

Figure 5. *Displaying large content in Las Vegas Sphere*

3.3 Problems with the concept

3.3.1 Technical disadvantages

In a multifunctional room with projection systems, covering the windows with curtains is essential to get a surface on which to project the imagery. These curtains can sometimes introduce problems. Independent of the stiffness of the fabrics, they can create a wavy appearance due to their material, folds, or installation. These waves distort the clarity of projected images. This distortion interferes with the precision of visuals.

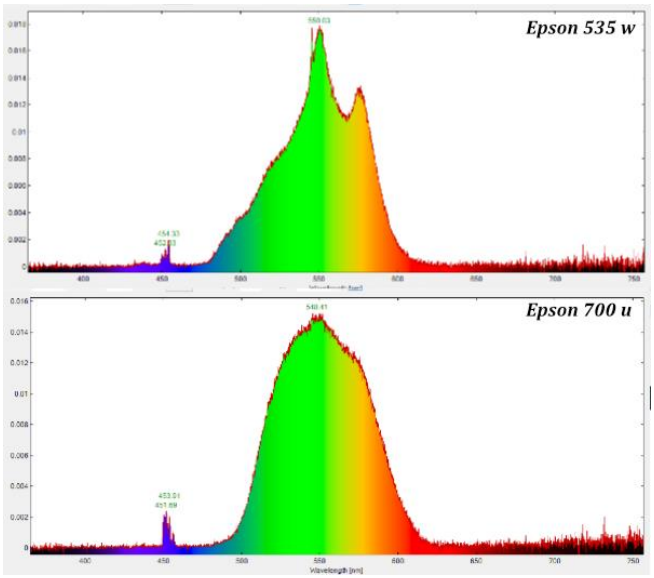

Figure 6. *Spectrum of Green Channel of the two Epson projectors used*

The effect can lead to a warped or rippled appearance on the surface, making the projection less immersive or professional (fig. 6).

Often, multiple projectors are required to cover larger spaces or provide multiple angles of view. However, color consistency can be challenging when using different projector models or brands. Each projector has its color calibration settings, and even slight differences in brightness, contrast, and color saturation can result in mismatched projections, creating a visual dissonance in the room, particularly if the projection spans multiple surfaces or screens. Balancing the color output across various projectors is a challenge, and advanced calibration techniques or software may be required to maintain a uniform appearance across all displays (fig.7).

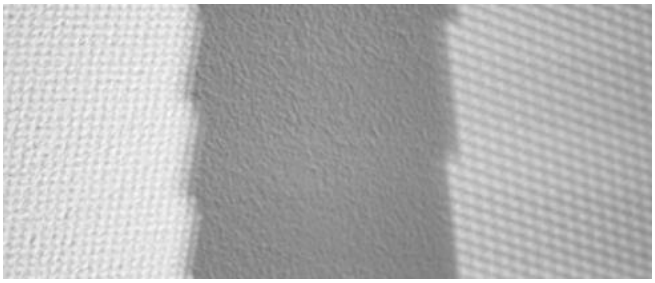

Figure 7. *Transition from plaster wall to curtain*

Cooling systems, particularly the fans used within projectors or external cooling units, can produce substantial noise during operation. The conference participants perceive the loud hum or whirring sound of fans as disturbing. It can distract users from the projected content, especially in cases where audio quality is critical to the experience. Managing fan noise or finding quieter cooling solutions is often a concern, particularly when the room needs a serene or focused environment.

Many projectors have limitations on how long they can operate continuously due to heat buildup, power limitations, or internal hardware wear. Running projectors for long hours can cause them to overheat, leading to automatic shutdowns or component damage. This limitation becomes particularly problematic in spaces where long presentations, extended media showings, or immersive experiences are needed. Frequent breaks for cooling or projector replacement may be required, which disrupts the continuity of use and can be cumbersome in busy settings.

Even the most precise projectors can experience lens distortion, uncommonly when projecting onto large surfaces or at wide angles. This effect, known as barrel distortion or pincushion distortion, can cause the projected grid or images to appear skewed or misaligned at the edges. The distortion can significantly impact applications requiring exactness, such as aligning visual elements in a grid format. The area of the corners or the transition from plaster walls to curtain-covered windows is critical. While some projectors have built-in distortion correction features, achieving a flawless result often requires additional calibration or optical adjustments due to the lens distortion caused by the heat, which can be time-consuming and challenging in large or complex projection setups.

3.3.2 Technical disadvantages

A significant drawback in the application of projection-based systems in various spaces is that participants often do not realize the existence of these important elements. Often, projections are incorporated into the environment in a way that assumes the audience will actively engage with them. However, without clear signage or direction, participants may not be aware of the projections, causing them to miss out on valuable information or context. This lack of visibility reduces the overall effectiveness of the projection system, leaving the intended messages or imagery unnoticed by a significant portion of the audience.

One of the primary usability concerns with the projection system is that it often requires manual initiation to function. Staring the projection can be cumbersome and time-consuming, particularly in settings where multiple users are involved or when there is a need for quick setup and switching between different presentations. Starting the system may involve multiple steps, such as powering the projectors, adjusting settings, ensuring that content is loaded correctly, and sometimes even troubleshooting hardware connections. In a fast-paced or multi-functional environment, this manual setup can lead to delays and reduce the system's overall efficiency. Furthermore, participants unfamiliar with the technology may find this process intimidating, adding complexity and potential frustration to the user experience.

Another disadvantage lies in the content selection process. Once the projection system is started, the correct content must be chosen for the specific event or presentation. This step is not always straightforward, especially if there are multiple files, media formats, or presentations to select from. In environments where multiple users or event organizers are involved, this step may require coordination to ensure the content is suitable, timely, and relevant. The time and effort spent on selecting and preparing the right content can be a cumbersome process, especially if quick decisions need to be made or if there is a lack of familiarity with the projection system.

When using projection systems for events or presentations, there is often a tight schedule to adhere to, which can reduce the amount of time available for other activities. The setup time required to get the projection system operational, combined with the time spent on content selection and adjustments, can lead to reduced time for the actual content delivery or other interactive elements. This can be especially problematic in events with a limited time frame, as the audience may not have the opportunity to fully engage with the projected content or interact with the system as intended.

3.4 Technical Conclusions

3.4.1 Common advantages of using an LED wall in Hotel Park Soltau

The installation of an LED wall in the Böhme-Saal, the largest event room at Hotel Park Soltau, presents several significant benefits that enhance both the functionality and the appeal of the venue. These advantages can be divided into technical, aesthetic, and operational aspects, all of which contribute to the overall value of the space.

The decision to install a large LED wall in the Böhme-Saal is not accidental. As the largest room in the hotel, it naturally serves as the centerpiece for significant events such as conferences, banquets, weddings, and exhibitions. Placing the LED wall in this high-profile space ensures the technology is immediately accessible and highly visible to many attendees. This central location maximizes the utility

of the screen, making it an integral part of the room's design and event experience.

The Böhme-Saal, the main event space at Hotel Park Soltau, attracts substantial foot traffic and attention from visitors. When the LED wall is installed here, it becomes the room's focal point. Its presence naturally draws the gaze of all attendees, making it an ideal location for showcasing high-impact visuals, videos, branding, and other multimedia content. This central positioning ensures that attendees can easily view and engage with the displayed content no matter where they are in the room.

The sheer scale and clarity of the LED wall in a large room significantly enhance the visual impact of any presentation or performance. Whether for live event coverage, branding, or promotional videos, the LED wall's impressive size ensures that the content is visible from a long distance and commands attention. The high resolution and bright, vibrant colors delivered by modern LED technology make the displayed content more compelling and memorable, ensuring that audiences remain engaged throughout the event. The amplified visual impact makes a stronger impression on visitors and participants, reinforcing the event's significance.

Figure 8. *Planned size (blue outlined) of a LED wall in Hotel Park Soltau*

3.4.2 Common advantages of using an LED wall in Hotel Park Soltau

The technical advantages of incorporating an LED wall into the event space of Hotel Park Soltau extend beyond its aesthetic appeal, offering several practical benefits that enhance the venue's functionality, efficiency, and overall experience. The following points expand upon the key technical advantages of using an LED wall in the hotel's Böhme-Saal, emphasizing ease of use, flexibility, and performance quality:

- No Arduous Set-Up of the Display
- Two Independent Playback Sources
- Bright Display (No Room Darkening Needed)
- No Additional Curtains
- Continuous Color Display
- Easy to Use
- Easy to Integrate in the Event Work Schedule (Projection is Already in Progress)

In conclusion, the technical advantages of using an LED wall in the Böhme-Saal at Hotel Park Soltau offer substantial benefits in terms of efficiency, visual quality, and flexibility (fig. 8). From the ease of installation and operation to displaying vibrant, explicit content in any lighting conditions, the LED wall enhances the event experience for both organizers and attendees. The system's ability to handle multiple content sources, deliver consistent color accuracy, and integrate effortlessly into event schedules makes it a highly valuable asset for the hotel's event management and technical teams.

5. Conclusion and recommendations

The integration of VFX-driven and 360-degree video technologies into conference environments, as demonstrated in the Lüneburg Heath leisure region, represents a promising approach for the MICE industry. This study shows how interactive digital posters can increase attendee engagement and offer venues a strategic advantage by combining business and leisure experiences. The case study of the Dortmund conference room at Hotel Park Soltau illustrates the feasibility of such implementations and provides a practical framework for further adoption within the industry.

Despite these benefits, challenges remain, notably high initial investment costs, the complexity of content production and technological constraints. Maintaining high quality immersive environments requires expertise and resources, while usability and long-term maintenance must be considered for sustainable implementation. Future research should assess user engagement metrics and analyze the wider economic impact of these technologies in MICE environments.

LED walls offer a high-resolution, durable alternative to projection-based systems and address some of the challenges associated with traditional immersive setups. Their enhanced brightness, reliability and interactive capabilities make them a scalable solution for venues looking to make a long-term investment in digital transformation. At Hotel Park Soltau, LED walls were able to simplify setup processes while improving visual clarity and engagement.

As digital innovation continues to shape the MICE industry, ongoing research and technological advancements will be critical to unlocking the full potential of immersive experiences. By embracing these developments, MICE stakeholders can position themselves at the forefront of industry transformation and create more engaging and competitive event environments.

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Author Biographies

Dirk Hagen is a Professor of Business Administration with focus Principles and Processes of the Event Industry at the University of Applied Sciences and Arts in Hannover, Germany. Previously, he was Professor of Business Administration - Trade Fair, Congress and Event Management and Head of Studies at the Baden-Wuerttemberg Cooperative State University and Head of the International Tourism and Event Management Programme at the SRH Berlin University of Applied Sciences. He also teaches at the Shanghai University of International Business & Economics (a joint venture with the University of Applied Sciences Osnabrück, Germany). For over a decade, he has held senior positions in the Congress and Event Industry for various companies and is holding leading positions in various institutions, including Chairman of the Scientific Advisory Board of degefest, the Association for the Seminar and Congress Industry. His research focuses on immersive technologies, as well as developments and new business models in the field of digital and sustainable transformation of the Event Industry.

Eberhard Hasche is a Retired Professor for audio and video technology at Technische Hochschule Brandenburg in Brandenburg, Germany. He received his diploma in electrical engineering from the Technical University of Dresden (1976). Then he studied double bass, composition, and arranging at Hochschule für Musik „Carl Maria von Weber" in Dresden (state examination 1989). He is focused on image compositing (certified Nuke Trainer by The Foundry in 2012) and ACES color workflows. He has been a member of the Visual Effects Society since 2018.

Reiner Creutzburg is a Retired Professor for Applied Computer Science at the Technische Hochschule Brandenburg in Brandenburg, Germany. Since 2019 he has been a Professor of IT Security at the SRH Berlin University of Applied Sciences, Berlin School of Technology. He has been a member of the IEEE and SPIE and chairman of the Multimedia on Mobile Device (MOBMU) Conference at the Electronic Imaging conferences since 2005. In 2019, he was elected a member of the Leibniz Society of Sciences to Berlin e.V. His research interest is focused on Cybersecurity. Digital Forensics. Open Source Intelligence (OSINT), Multimedia Signal Processing, eLearning, Parallel Memory Architectures, and Modern Digital Media and Imaging Applications.

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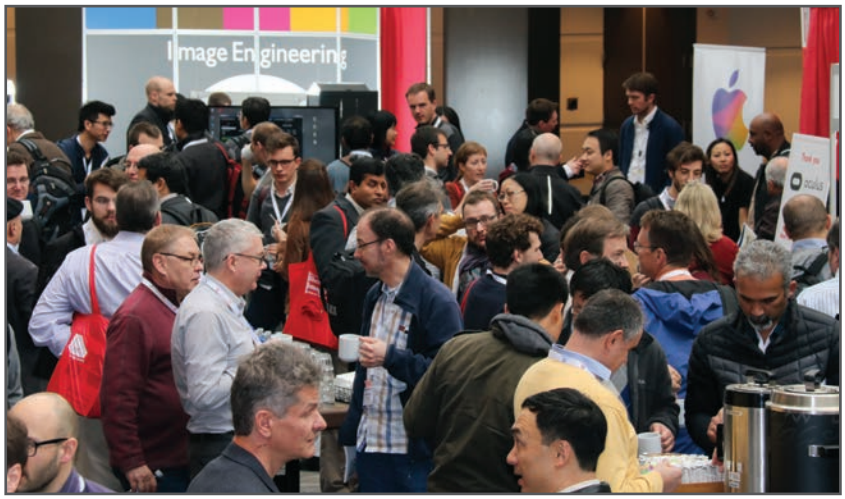

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