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The Place of Technology in the Evolution of Modern Trade Fairs

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Abstract: This article analyses changes in the functioning of the trade fair sector resulting from the emergence of new technologies and identifies their place in the evolution of these business events. It considers particularly important the extent to which trade show stakeholders are prepared to use new technologies to achieve trade show objectives, which technologies are considered most beneficial and what prospects they have for development.

The paper reviews the relevant literature, analyses existing solutions and reports on interviews with representatives of trade fair organisers and operators. The choice of respondents was dictated by the fact that they have to plan well in advance for investments in new technological solutions to use at trade fairs in the future and therefore they carefully analyse market developments and the expectations and technological capabilities of their stakeholders.

The future of trade fairs depends on the resilience of the sector, which is facilitated by increased implementation of IT solutions at trade fairs. One trend is to use existing technologies in new ways (*e.g.* QR codes). One threat to the effectiveness of trade fair objectives arising from the presence of new technologies is the varying level of technological sophistication of individual participants – the high technological sophistication of some participants may make it challenging to build relationships with less advanced participants.

Implementing digital solutions involves large financial outlays during the initial implementation period. However, implementing them usually makes it possible to very quickly reduce the costs of trade fair participation (by better targeting activities), to conduct more accurate analyses of the effectiveness of activities and to optimise the allocation of financial resources (by more completely interpretating data and identifying the most effective strategies).

Traditional trade fair technologies associated with the construction of stands are a source of high costs and much waste after the event. Using modern technologies in trade fair management offers an opportunity to implement pro-environmental solutions in trade fair marketing.

The paper analysis how emerging technologies, particularly artificial intelligence, are reshaping trade fairs into highly coordinated, technology-driven business platforms. It offers unique, real-time empirical evidence from 2024–2025 Polish industry events, capturing evolving stakeholder expectations, opportunities, and barriers to technological adoption in this sector. Additionally, it introduces a novel perspective on balancing digital transformation with economic sustainability and highlights the need for future quantitative research to guide strategic investments in trade fair innovation.

This study is limited by its reliance on qualitative insights from industry practitioners, lacking comprehensive quantitative data from exhibitors, visitors, and other stakeholders, which restricts the generalisation of its conclusions. Rapid technological advancements in the trade fair sector also pose a challenge, as findings may quickly become outdated, reducing their long-term applicability for decision-making. Future research should focus on large-scale, coordinated quantitative surveys to better capture evolving stakeholder perspectives and guide sustainable investments in digital trade fair infrastructure.

Trade fairs will remain essential for relationship-building and networking, but future success will depend heavily on integrating digital tools to extend engagement beyond physical events. It highlights the need for long-term, well-planned technological investments despite high costs and rapid innovation cycles that risk making solutions obsolete too quickly. The findings emphasise that industry stakeholders must collaborate closely with research centers to guide digital transformation strategies and ensure sustainable, effective trade fair models in a post-pandemic, hybridised market.

The paper highlights that post-pandemic trade fairs are evolving into more technology-driven, strategically focused events, shifting from traditional “festival-like” gatherings to structured business tools that prioritise relationship-building. This transformation carries significant social implications, including the need for ongoing digital literacy among stakeholders and a

redefinition of networking experiences that balance physical and virtual interactions. However, the high cost and rapid obsolescence of emerging technologies may exacerbate inequalities between more important and smaller exhibitors, potentially reshaping power dynamics within the trade fair ecosystem.

Keywords: trade shows; trade fairs; digitalisation; trade fairs/shows technology; artificial intelligence; exhibitors; visitors.

JEL Classification: D29; M15; M30; L83; L86; O33.

Introduction

This paper analyses changes in the functioning of the trade fair sector resulting from the emergence of new technologies and identifies their place in the evolution of these business events. It considers particularly important the extent to which trade show stakeholders (primarily organisers, exhibitors and visitors) are prepared to use new technologies (in particular artificial intelligence) to achieve trade show objectives. Which tools/technologies are the most useful at these events, and what are the prospects for economical trade fairs? Changes in the experiences of trade fair visitors resulting from adopting new technologies in trade fair activities are also analysed.

The research reviews the available literature, analyses existing solutions and reports on interviews with representatives of entities operating in the meetings industry during the 15th Winter Congress of the Polish Chamber of Exhibition Industry (10 December 2024) (https://pipt24zjazd.exposupport.pl/program24; accessed 10.03.2025) and the 2025 Event Industry Forum (FBE) (15 January 2025) (https://forumbranzyeventowej.pl/; accessed 10.03.2025). The rationale behind this selection of respondents was that they plan to invest in new technological solutions to use at trade fairs in the future and so they carefully analyse market changes and the expectations and technological capabilities of their stakeholders.

This paper introduces novelty by highlighting how digitalization and hybridization are fundamentally transforming trade fairs from traditional, festival-like gatherings into highly coordinated and technology-driven business tools. It provides original empirical insights from 2024–2025 industry events in Poland, offering a real-time perspective on emerging trends, opportunities, and challenges in the sector. It uniquely emphasizes the strategic role of long-term technological investments and research collaborations between industry and scientific centres to mitigate risks in a rapidly evolving tech landscape. Furthermore, it identifies a research gap in quantitative studies on digitalization's impact, proposing future empirical investigations to guide effective and sustainable trade fair innovation.

1. Research Background – Digitalisation as a Response to Challenges in Managing Trade Show Events

The rapid development of modern technologies and intensification of their presence in everyday life and the market activities of companies are increasingly visible (Malik and Janowska 2019). One manifestation of this is the increasing popularity of electronic communication and the digitalisation of business relationships (Braverman 2015) (Matovic, Knezevic and Papic Brankov 2015). On the other hand, the trade fair industry has drawn strength from face-to-face contact for years, which has helped develop relationships between stakeholders (Proszowska 2015; Tafesse and Skallerud 2017; Sarmento and Simões 2018). Therefore, the development of technology (in particular that enabling replacement of face-to-face contact with digital communication) was (and sometimes is) perceived as a threat to the development of trade fairs. However, the increasing activity in the trade fair sector confutes this assumption. When observing the activity of trade fair entrepreneurs, it can be seen that trade fairs are finding their way in digital development (Vitali *et al.* 2022). More detailed knowledge of new technological solutions at trade fairs will greatly benefit managers who make day-to-day trade fair decisions.

Contemporary trade fairs are a feature of the meetings industry, the main objective of which is to build relationships with stakeholders by creating interactions and generating engaging experiences related to brands and their offerings (Szromnik 2014; Proszowska 2016). Individual trade show events attract stakeholders interested in the industry who are looking for opportunities to increase their engagement with it. As individual attendees state, the specific objectives of trade show participation vary depending on the age and market position of the organisation (Singh, Shukla and Kalafatis 2017; Al-Edenat 2023). Sometimes it will be to present a product (new or existing), at other times it is to seek information about new market opportunities and it can also be to have specific discussions about developing cooperation (Menon and Manoj 2014; Crowther 2011). The history of trade fairs shows that the reasons for participating in trade fairs are constantly evolving (Sridhar, Voorhees and Gopalakrishna 2015; Srinath Gopalakrishna and Lilien 2012). Initially, the most important function of trade fairs was to provide information (Maroszek 1990; Golfetto and Rinallo 2015). Later, informing, marketing and educating became important (Blythe 2010). Today, the sales function of trade fairs is increasingly becoming marginalised, while the educational and relational functions are becoming more critical (Engblom 2014; Wiażewicz and

Gębarowski 2014; Gębarowski and Siemieniako 2016). In line with Marketing 6.0, trade fairs like other marketing activities are becoming increasingly immersive (Kotler, Kartayaja and Setiawan 2023). The accelerated adoption of online tools by the meetings industry results in a combination of online and offline activities (Kotler, Kartajaya and Setiawan 2021). Today's trade fairs are becoming less and less collections of static presentations visited by visitors one at a time. Increasingly, they provide opportunities to learn about a company and its products in engaging experiences and workshops both offline and online and both within and outside the trade fair space (Ling-yee 2010; Gong, Wang and Li 2019). They are adapting increasingly intensely and flexibly to the needs of their participants (Celuch 2021a). Event organisers know that a large number of stimuli mean that subsequent ones supersede previous impressions (Turner 2017). Therefore, the interactions generated should always offer opportunities to immediately deepen the relationship, *e.g.* by making an appointment or a purchase (Sarmento, Farhangmehr and Simões 2015).

The development of digitalisation, automation and artificial intelligence has become very helpful in implementing these and other trade fair activities (Romanova 2024). Thanks to the processes discussed above, it has become increasingly easy to monitor the activities of market participants, learn about their needs and prepare solutions dedicated to specific stakeholders (Ryan *et al.* 2020). The leading innovative solutions used at trade fairs include:

- interactive stands – to engage visitors (in addition to traditional tastings, classic product testing and the impacts of light and sound) they use among other things touch screens, multimedia presentations, virtual reality (VR) and autonomous solutions; in this way visitors explore exhibitors' product offerings on their own while engaging their emotions;
- mobile applications – software dedicated to a specific event enables easy access to information, the event agenda and networking opportunities with other attendees; attendees can therefore sign up for a trade show faster and more conveniently; they are provided with an event map that helps locate items of interest; they receive digital promotional materials and interact more easily with other attendees;
- artificial intelligence – the implementation of AI in the analysis of event data allows better understanding of visitor preferences and more effective planning of future editions;
- remote participation – new technologies make it possible to attend events remotely, which opens the door to global collaboration and increases accessibility by the general public (Różański 2024).

Databases modelled on CRM systems and applications dedicated to various events offer the possibility of repeatedly filtering and analysing information on attendees without direct contact with them well before the event or long afterwards (Jaywant Singh, Shukla and Kalafatis 2017). They also make it possible to communicate with selected groups of participants during the event and target them with incentives to visit a stand or participate in specific trade fair events (Prymon-Ryś 2023). The systems mentioned above make it possible to analyse the attendance at the stand and the level of involvement of event participants in real time and monitor the effectiveness of all the marketing activities carried out at the fair (Gottlieb, Brown and Ferrier 2014; Wong and Lai 2018).

Trade fair practitioners note that digitalisation of the trade fair sector is also often associated with finding new applications of existing technologies that have been used for different purposes ('The Future of Trade Shows: How Technology Is Transforming Trade Show Experiences' 2023). An example is QR codes, which have become the medium of choice for a great deal of information previously provided in print, such as flyers, business cards, product catalogues and price lists. The Japanese company Denso Wave invented the QR code in 1994 (Gregersen 2025). Initially, it was developed for the automotive industry as an improved version of the barcode to track the status of vehicles during the production process. It was only after some time that it was realised that the code could redirect to the most diverse information. When it became apparent that you could have a QR code reader on your smartphone its popularity in marketing immediately grew. For exhibitors, it is an invaluable tool.

Thanks to QR codes it is possible to reduce expenditure on advertising materials at the stand and the cost of transporting stand equipment to the trade fair and streamline the entire participation management process (Al-Edenat 2023). The same is true for wireless headphones to listen to lectures at the show (https://forumbranzyeventowej.pl/; accessed 20.02.2025). A traditional lecture requires an isolated room to give listeners a chance to focus while at the same time not distracting other attendees with content they do not want. The solution to eliminating the problem of listening to trade fair presentations and lectures is wireless headphones programmed to play a speech. This technique could only become popular when the problem of preventing the headphones being taken outside the exhibition space was solved.

Developing a precise programme of activities is necessary to make the most of the few days of a fair (Kourkouridis, Frangopoulos and Kapitsinis 2024). Prepared well in advance, the plan must be based on an

analysis of the presence and potential of the other participants in the event (Gopalakrishna & Williams 1992). The scenario should also include precisely prepared tools to help attract attention, make contact and arouse the interest of participants (Huang 2016). The higher the number of participants (exhibitors and visitors) the more difficult it is to build an optimal scenario and ensure minimal loss of benefits due to essential event elements being omitted (Gopalakrishna *et al.* 2010). In planning meetings, communicating with all stakeholders and organising side events, developing digital technologies greatly helps ('The Future of Trade Shows: How Technology Is Transforming Trade Show Experiences' 2023). Increasing the results of trade fair participation can be achieved if it is possible to extend the possibility of contact with trade fair participants into the periods before and after the trade fair (Hansen 2005) (Manero and Uceda 2010). Geolocation-based participant registration systems also offer such opportunities (Kartajaya, Kotler and Hooi 2019).

2. Research Methodology

The research process implemented is a search for answers to the following questions:

- How do the participants in the exhibitor-visitor-organiser triangle treat new technologies emerging at trade fairs?
- What changes in trade fair participation management have been generated by the evolution of technology?
- What opportunities and threats are presented by the changes taking place?
- What are the prospects for developing the sector in the context of new technologies?

The research process was based on a review of available literature and studies, among which a series of reports prepared under the direction of the independent research institute IQS and MeetingPlanner.pl in cooperation with event agencies was considered the most significant. These reports (MeetingPlanner.pl 2021; MeetingPlanner.pl and Instytut Badawczy IQS 2023; MeetingPlanner.pl and Instytut Badawczy IQS 2024; Instytut Badawczy IQS and MeetingPlanner.pl 2025) provide the results of research into the transformation of the meetings industry and changes between 2020 and 2024. These changes followed, among other things, the increase in the use of technology in the management of promotional events, including trade fairs, caused by the COVID-19 pandemic (Piccioni *et al.* 2023). Complementing these reports is a study prepared by the infuture.institute (2022) and commissioned by the MTP Group.

Another source was interviews with representatives of entities operating in the meetings industry conducted during the 15th Winter Congress of the Chamber of the Exhibition Industry in Wroclaw (10 December 2024) and the 2025 Event Industry Forum in Warsaw (15 January 2025; EXPO XXI in Warsaw). Each event was dedicated to summarising activities by the participating industries and defining emerging trends. Practitioners of trade fairs and other areas of the meeting's industry attended both events. These people plan to invest in new technological solutions to use in future trade fairs. Therefore, they carefully analyse market developments, stakeholders' expectations and technological capabilities. As a result, they are a valuable source of information, and their statements are representative of the opinions of the entire market on the subject. A list of those whose opinions are used in this article is included in Appendix 1.

The results of the interviews are presented in synthesis and the event during which the issues mentioned were raised is identified. The quotations included in the next section are excerpts from statements made by the interviewees. They are not attributed to specific participants as they are statements supported by several of them. All the interviewees agreed on the prominent opinions presented in this paper.

3. Research Results and Discussions

Analysis of the secondary sources and statements by the participants in the interviews indicate that technological developments (digitalisation, AI, etc.) influence the nature of the contemporary exhibition market and the entire meetings industry. They also give the industry an entirely new dimension. Offline trade fairs combined with new technologies are becoming an increasingly attractive space for modern business.

3.1 The Place of Digitalisation and AI in the Development of Trade Fairs – A General Overview

In 2020, online meetings and events were recognised as key innovations and a necessity. Due to the constraints caused by the COVID-19 pandemic, the format of meetings and how they were organised changed. Paradoxically, the year of challenges that resulted from the total abandonment of live meetings also became the year of a new opening of live communication, consequently giving target clients the choice of an even wider range of tools. (MeetingPlanner.pl 2021) Almost all types of events were successfully transferred to virtual reality during this period. However, only a fifth of the clients surveyed considered an online event a sufficient tool for

marketing communication tasks. In a study in 2021 (MeetingPlanner.pl 2021), respondents predicted that future events would be hybrid, *i.e.* involving the physical presence of some participants and online participation by others. A change observed at the time was increased interest in working with a marketing agency to plan attendance (due to the higher technological requirements online).

The limitations of the pandemic era moved the trade fair industry to a much higher technological level. It was noted that creativity coupled with technological advances allows more complete achievement of objectives. In 2022, external economic, social and economic conditions and organisational costs exceeding marketing budgets were identified as the main barriers to event marketing (MeetingPlanner.pl & Instytut Badawczy IQS, 2023).

In the following years, companies were increasingly interested in participating in offline events and allocating more resources to event marketing (MeetingPlanner.pl and Instytut Badawczy IQS 2024). Analysis of the trade fair sector in 2024 makes it possible to observe at trade fairs on the one hand a presence of artificial interlinking (in the context of event marketing, this is primarily personalisation of events, automation of tasks and analysis of participant data). On the other hand, however, anthropocentrism of communication is observed, with human beings and their values at the centre.

In 2024, around 80% of those surveyed used artificial intelligence tools in event marketing. However, only 27% had developed their own proprietary tools (Instytut Badawczy IQS and MeetingPlanner.pl 2025). A barrier to developing the use of AI in event marketing is that almost half of companies (48%) (as assessed by an employee taking part in the survey) have little experience in using AI. A limitation to using AI-generated materials is copyright of the materials used, which raises many ambiguities. In addition, an inability to obtain exclusive rights to the materials created is a problem. For these reasons, the event industry's use of AI is limited. However, participants in the research had high expectations for the future of this technology. This is an area that will continue to grow. A significant concern related to the use of AI is the risk of violating customer privacy. A second concern is the threat of human-to-human contact due to the ubiquitousness of AI and solutions based on it. Table 1 summarises the opportunities, challenges and threats facing AI in trade fairs today.

Table 1. Opportunities and challenges related to the presence of AI in trade fair marketing

Opportunities	Percentage of indications
intelligent analyses of data and trends	52
participant profiling and content matching	47
monitoring and analysis of social media	46
measuring and evaluating the effectiveness of marketing activities	43
reaching relevant target groups more effectively	42
integration of chatbots and virtual assistants	41
personalised notifications and interactions	34
personalised reporting and analysis after events	34
integration with CRM systems for better management of the customer base	32
improving marketing strategies through machine learning	27
dynamic adjustment of the event programme	24
personalised recommendations for participants	23
optimising the participant experience	23
proactive management of problems and crises	17

Risks and challenges	Percentage of indications
difficulties in assessing the reliability of materials	57
threat to participants' privacy	54
lack of authenticity of information	19
difficulty in personalising communication	19
I don't know; it's hard to say	19
other / no challenge	2

Source: authors, based on Instytut Badawczy IQS and MeetingPlanner.pl (2025)

The foremost opportunity arising from the use of AI is considered to be the possibility of generating more intelligent analysis of the data and trends collected as part of event participation management. The list of challenges and threats in Table 1 is shorter but it includes significant items. AI cannot be used indiscriminately.

3.2 Digitalisation and Sustainability at Trade Fairs

One of the key trends that is being taken into account in the development of the trade fair industry is sustainability (MeetingPlanner.pl and Instytut Badawczy IQS 2024). Entrepreneurs are increasingly emphasising their companies' concern for the environment. They are subordinating the idea of sustainability to the main areas of their activities, including participation in trade fairs (MeetingPlanner.pl and Instytut Badawczy IQS 2024). This is also a result of the emergence of the Environmental, Social and Governance (ESG) reporting requirement, which applies to an increasing number of companies. Indirectly, companies working in a supply chain with reporting organisations are also covered by this obligation. In the context of ESG and event marketing, companies must ensure that the partner with whom they undertake cooperation has the competence and experience to support, advise and organise an event consistent with the principles of ESG. Therefore, trade fair participants expect organisers to help them meet ever higher ESG standards regarding stand construction, communication with stakeholders and the organisation of accompanying events. This is linked to technological and organisational changes which are very much supported by digitalisation (*e.g.* AI in design, new technologies and materials for stand construction and trade fair hall equipment, digitalisation of the registration and participant handling process, hybridisation of events and their promotion in social media).

An example of a Polish trade fair facility using state-of-the-art technology is Pavilion 7A at the Poznan International Fair. This new event space opened on 1 December 2024. The building is located in the centre of Poznan in the most prestigious part of the Poznan Congress Centre. The exhibition area in Pavilion 7A is 3743 m^2. It is a component of the so-called four-pack, *i.e.* a complex of four exhibition pavilions at the Poznan International Fair (total area 20,000 m^2), in the centre of which is Linden Avenue with natural trees. Pavilion 7A is equipped with state-of-the-art technology. This gives it the flexibility to use many tools to influence event participants. The equipment in the facility includes 500 m^2 of LED screens, a 15m x 8m main screen on the stage, four side screens and seven additional screens on the side walls of the venue. Event organisers also have a holographic net at the front of the stage, a turntable on the stage, a driveway for car presentations (with loads up to 3.5 tonnes) and curtains to help keep the space quiet. Users hiring the space receive a package of 2 cameramen, two cameras, technical implementation and three multimedia presets. The high-tech sophistication of the facility completely changes the approach of exhibitors to trade fair stand design and company participation. Digitally designed trade show display elements provide a unique opportunity to be modified during the event, record and monitor attendees' reactions, and quickly start the planned show. For exhibitors, such a prepared facility means lower transport costs for display materials and stand elements, and time savings in stand preparation. The solutions used in Pavilion 7A offer the possibility of reducing waste generated during and after the event.

The parameters of the facility and the uncommonness of the events that can be organised there are impressive. Interview participants (EIF interview) pointed out that the facility has some limitations, however, as the basic infrastructure (walls, screens and platforms) is static. Subsequent trade fair events in this space will be repetitive. Maintaining the high level of attractiveness of Pavilion 7A for the participants in the events held there will require a highly creative approach to the planning of subsequent events. Respondents (EIF interview) also pointed out that the high-tech space for exhibitors and their visitors requires them to be digitally advanced and able to use the available technology.

Innovation is not the only area of sustainability that is helped by implementing new technologies in exhibition spaces. Trade fair organisers and operators are undertaking several initiatives concerning many of the sustainable development goals in UN Agenda 2030. For reasons of space related activity areas cannot be listed here. Examples include membership of and working for the UN Global Compact, the Net zero carbon events project, the Green Roofs project and the IDEA Expo Ecotechnologies project (https://www.mtp.pl/pl/zrownowazony-rozwoj/; accessed 10.03.2025).

3.3 Technological Developments and the Management of Trade Fairs: Conclusions and Opinions of Interviewees – PCEI Interviews and EIF Interviews

For trade fair organisers and operators (EIF interview), one of the most critical issues is choosing a reliable tool to communicate with participants and event partners. They use, for example, property management systems (PMS) for the hospitality industry (such as Oracle Hospitality OPERA) or event-specific applications. The advantage of management systems is that it is easy to get started, as the existing stakeholder base and communication system assumptions can be used. In the case of trade fair applications, the ability to quickly locate and contact selected participants is an added advantage. The system shows organisers and other participants whether the person they are interested in is a direct participant in the event and how to contact him or her. It is possible to communicate

with the person (to send messages about additional activities at the fair) in real time – not only to invite him or her but also to answer questions, clarify doubts and help with registration. “Event apps open up all stakeholders to meeting new people attending the event.” “Apps allow us to monitor visitor traffic during events and thus enable us to assess which event elements best attract and focus the attention of trade visitors.”

The participants in the interviews (PCEI and EIF interviews) were enthusiastic about using modern technology at trade fairs and other events. However, they drew attention to the risks involved. First and foremost, it is essential to remember that “the technology used must not exclude less tech-savvy trade show visitors.” It must also not overwhelm participants. Respondents (EIF interview) pointed out the phenomenon of technology fatigue, which is also known as digital or screen fatigue (a state of mental and physical exhaustion resulting from excessive screen time and reliance on digital devices and tools). They stressed that technology should be as invisible as possible – it should not change reality but should help to achieve aims. In this way its full potential can be realised, and technology fatigue can be avoided.

4. The Future of the Exhibition Industry

Members of the Polish Chamber of Exhibition Industry (PIPT interview) were concerned about less interest in attending trade fairs than before the pandemic, among both exhibitors and visitors (Hooshmand *et al.* 2023). Indeed, the post-pandemic trade show industry is recovering slowly and is unlikely to return to the scale it was before 2020. However, the quality and level of engagement of trade show participation today is much higher than before 2020. Most trade fair analysts and practitioners are convinced that by skilfully harnessing the potential inherent in modern technology, trade fairs will remain an essential and effective business tool.

A significant burden for the sector is the cost of new technologies. “Technology requires long-term funding and an idea of long-term use.” Interviewees (EIF interview) pointed out that with the very rapid development of new technologies, there is a risk that some already existing solutions will be pushed out of the market by newer ones before they depreciate. There is a need for in-depth research on the future of the exhibition sector to minimise the risk of making ill-advised investment decisions. This indicates that business centres will have a growing role in bringing together exhibition organisers (*e.g.* the Polish Chamber of Exhibition Industry) and scientific centres to research the functioning of the industry. It may also be assumed that companies investing in developing trade fair infrastructure and implementing costly technological solutions will even more strongly seek ways to make fuller use of this space (growth in the popularity of trade fair co-opetition, renting, etc.).

Conclusions and Further Research

One of the most critical needs realised by visitors and exhibitors at trade fairs is the need to network and develop relationships with others (infuture.institute 2022). Modern trade fairs are still attractive platforms for direct contact between companies in the industry (Alberca, Parte and Rodríguez 2018). The dynamic digitalisation of the surrounding reality is a fact that also affects the trade fair industry. To enhance the resonance of face-to-face meetings, members of the trade fair community are using digitalisation, among other things, to communicate with their audiences, to find partners, contractors and customers, to automate appointments, to extend the life of products and services on event-related platforms and to build a community around the event on social media.

It is clear that maintaining relationships with an industry community (often identical to the community of a particular trade show) must also occur outside regular meetings in the trade show space. With digitalisation of the trade show participation process it has become much easier to plan to sustain relationships with industry stakeholders outside the trade show (Celuch 2021b).

Implementing digital solutions requires a lot of money in the initial implementation period. However, they usually make it possible to very quickly reduce the costs of trade fair participation (through better targeting of activities), conduct a more accurate analysis of effectiveness and optimise the allocation of financial resources (through more complete interpretation of data and identification of the most effective strategies) (Ryan *et al.* 2020).

The future of trade fairs will depend on the resilience of the sector (infuture.institute 2022). Observing the development of leading trade shows, it is clear that they are adapting seamlessly to changing conditions regardless of their scale and strength. The technologies used at trade shows are tools to assist exhibitors to present their products and services. They support the presentation and understanding of the information provided rather than being an attraction in themselves. The hybridisation of trade fairs makes individual events increasingly accessible (at least virtually) by visitors from increasingly distant locations. These developments suggest that trade fairs will continue to be an essential element of relationship-building in individual sectors for a long time to come. However, they will be events of a completely different nature. They will irrevocably lose the character of

carefree festivals and become full-scale, coordinated and planned business tools with an increasingly large scope and a more extended period of more precise and direct impacts on stakeholders.

Although the pandemic forced some activities to move to the online world, today's technologies still do not allow us to have a complete multi-sensory experience of the digital world. However, work on developing these technologies is ongoing. The changes are so dynamic that it becomes a significant challenge to educate visitors and exhibitors in this area and to implement solutions during trade shows so that integration of elements of the metaverse world in the MICE industry is seamless and based on the needs of real-world audiences (the need for multi-sensory relationship-building engaging experiences).

A limitation of the analysis presented here is a lack of current quantitative research on the subject. This makes it challenging to infer fully conclusively all exhibitors' and visitors' opinions on the subject. However, the opinions quoted in this paper come from practitioners in the trade fair market, who can look at the industry more synthetically and more precisely isolate the trends that determine its development. A further step in analysing the place of digitalisation in the development of trade fairs is a quantitative survey of exhibitors, visitors and other stakeholders in these events. To increase the reliability of the results, it would be necessary to coordinate surveys of different stakeholder groups and conduct them simultaneously. This would eliminate the impact of changes in the industry's level of digitisation, which is rapidly progressing. Deepening this research is particularly important for future investment decisions by exhibition operators and organisers. The level of digitalisation of the exhibition space and the tools available will be one of the most critical factors in the success of trade fairs in the future.

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Credit Authorship Contribution Statement

Anita Proszowska: one author (conceptualisation, investigation, methodology, project administration, software, formal analysis, writing – original draft, supervision, data curation, validation, writing – review and editing, visualisation);

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Declaration of Use of Generative AI and AI-Assisted Technologies

The authors declare that they have not used generative AI or AI-assisted technologies in the writing process before submission, but only to improve the language and readability of their paper and with the appropriate disclosure.

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Appendix 1.

List of interview participants and authors of opinions used in the described research (opinions collected in the described research process are presented synthetically, without attributing their authorship to individuals).

Interview ID used in the text of the article	The event at which interviews were conducted and opinions collected (date)	Participants whose statements and opinions were used in the research (in parentheses, positions and names of companies they represent)
PCEI interview	15th Winter Congress of Polish Chamber of Exhibition Industry in Wroclaw (10th of December 2024)	Wiesława Galińska (CEO – PCEI) Marcin Gębarowski (honorary member of PCEI, UEK Krakow) Robert Jurczak (Extend Vision Sp. z o.o.) Tomasz Kobierski (President of the PCEI Council, President of the Management Board of MTP Group) Andrzej Mochoń (Vice-President of the PCEI Council, President of the Management Board of Targi Kielce) Jan Studencki (Deputy Director of PCEI) Ewa Woch (Targi w Krakowie sp. z o. o.)
EIF interview	Event Industry Forum (FBE) 2025 in Warsaw (15th of January 2025)	Wojciech Cłapiński (Vice President of the Management Board El Padre sp. z o. o.) Dominik Górka (Live Age) Łukasz Gumowski (Plej) Magdalena Jędrusiak (Allegro Brand Experience Agency) Karina Mąkolska (MICE sales manager, Mercure Szczyrk Resort) Rafał Mrzygłocki (CEO firmy Aram) Rafał Nowicki (event director w agencji Bespoke) Krzysztof Paradowski (Creative Director and Vice President of the Management Board Blu Experience) Rafał Kupidura (Imagine Nation) Magdalena Kondras (MeetingPlanner.pl) Katarzyna Piwowar (KDK Events) Tomasz Piekarski (Creative Pro PL) Sabrina Żymierska (Director of Poznan Congress Center)

Source: authors, based on own experiences and event organiser materials.

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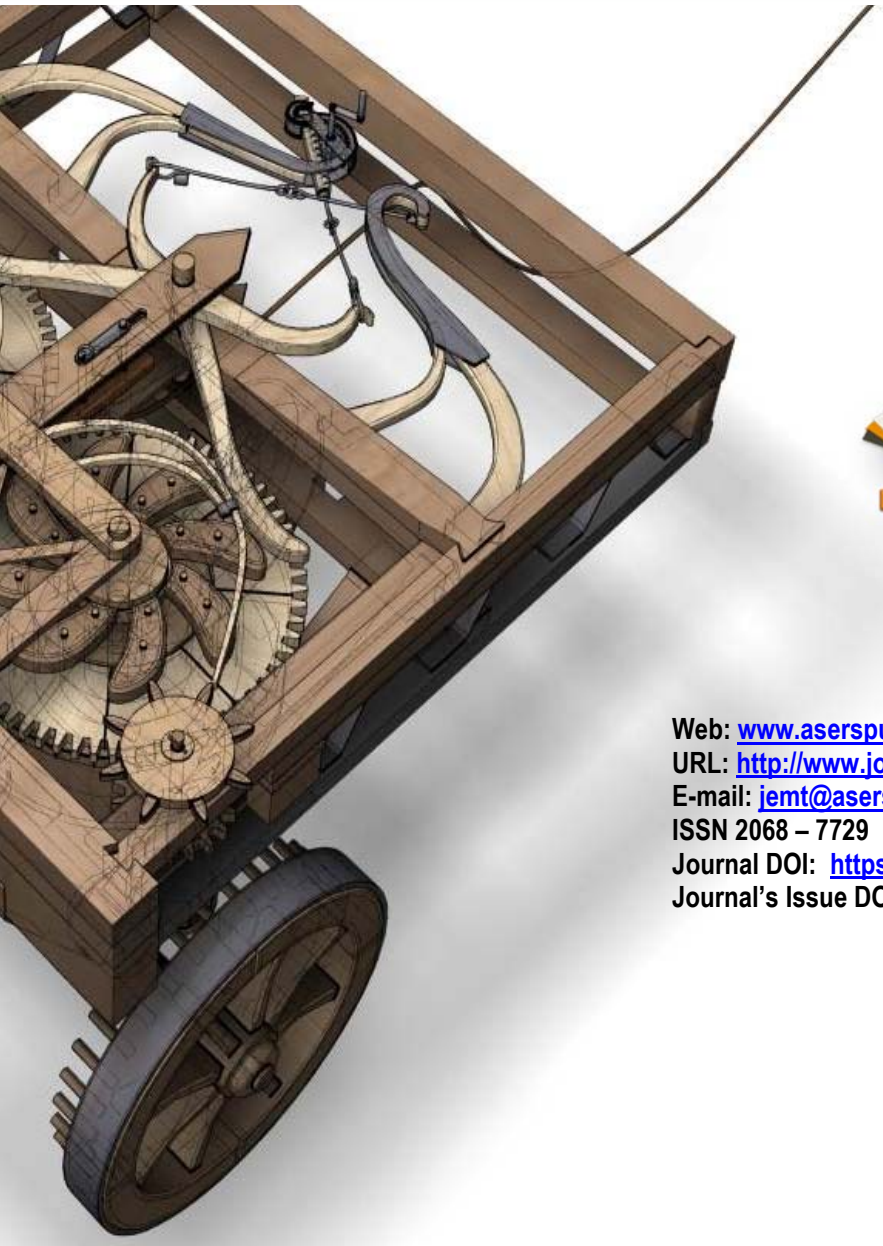

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