

# Trade show visitors and key technological trends: from a literature review to a conceptual framework

*Veronica Vitali*

Department of Agricultural and Food Economics, Catholic University of the Sacred Heart, Piacenza, Italy

*Claudia Bazzani*

Department of Business Administration, University of Verona, Verona, Italy

*Annamaria Gimigliano*

Veronafiere, Verona, Italy

*Marco Cristani*

Department of Computer Science, University of Verona, Verona, Italy

*Diego Begalli*

Department of Business Administration, University of Verona, Verona, Italy, and

*Gloria Menegaz*

Department of Computer Science, University of Verona, Verona, Italy

## Abstract

**Purpose** – This study proposes a literature review and, based on the findings, the authors develop a conceptual framework, attempting to explain how technology may influence visitor behavior and eventually trade show performance.

**Design/methodology/approach** – The present research explores the role of visitors in the trade show context. The analysis specifically focuses on the variables that influence visitors' participation at business-to-business trade shows and how their satisfaction and perception can be related to exhibition performance. The authors also take into consideration technological trends that prior to COVID-19 pandemics were slowly emerging in the trade show industry.

**Findings** – The findings highlight a continuity between pre-, at and postexhibition phases. Visitors' behavior represents a signal of how a trade show is perceived as postexhibition purchases and next visit emerge as signals of an exhibition evaluation in relation to visitors' perception. Besides being urgent tools for the continuity of the sector due to the pandemics, emerging technological trends can be key elements in understanding visitors' behavior and in boosting their interest and loyalty toward trade shows.

**Originality/value** – The paper proposes a conceptual model including top notch and innovative technological trends to improve the understanding of visitors' behavior. Both practitioners in companies and academics might find the study useful, given the digital uplift generated by the pandemics.

**Keywords** Trade show, Visitors, Satisfaction, Exhibition, COVID-19, Literature review, Technological trends

**Paper type** Literature review

## 1. Introduction

According to the recent literature, trade fairs are, in some ways, the ultimate example of marketing excellence (Mora Cortez and Dastidar, 2022). In fact, these events represent points of contact among groups of managers held with a specific duration and where a large number of companies of one or more industry sectors have the possibility to propose their main product range (Kirchgeorg *et al.*, 2010; Mora Cortez and

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Dastidar, 2022). Hence, such events can be considered as an integral part of the marketing program of a firm (Kerin and Cron, 1987).

Literature brings critical attention to assessing their definition (Blythe, 2010; Kirchgeorg et al., 2010). The expression “trade show” can be often interpreted as a synonym of different types of events, such as fairs, expositions and exhibitions, nevertheless, the basic function of the activity represents a major industry marketing event (Herbig et al., 1997). To give an idea of the relevance of trade show business, according to the Global Association of the Exhibition Industry (UFI), in 2018, approximately 32,000 exhibitions took place, directly involving 303 million visitors and nearly five million exhibitors across more than 180 countries. In the same year, the total global economic impact of the exhibitions sector generated €275.1bn (\$325bn) in economic output (business sales) and €167.2bn (\$197.5bn) in global gross domestic product contribution (UFI, 2019). UFI has indicated Europe as the largest market in terms of exhibition participants (33%) in 2018, followed by North America (30.1%) and Asia/Pacific (26.9%).

Organizing and managing a successful trade show is not an easy task. Indeed, many exhibitors significantly invest in marketing and promotion strategies for such events, striving to attract and retain visitors (Chongwatpol, 2015). Due to the considerable contributions made by the exhibiting organizations, the sector bears a need to justify the commitment on trade shows. In evaluating these efforts, authors agree it is useful to acquire knowledge about visitors, their behavior as well as their activities, movements and experiences (Gopalakrishna et al., 2010; Rinallo et al., 2010; Pettersson and Zillinger, 2011; Gopalakrishna and Lilien, 2012; Chongwatpol, 2015). As Tafesse and Skallerud (2017) pointed out, trade show literature from 1980 to 2014 has been mainly focusing on the analysis of exhibitors’ perspectives rather than visitors’. Accordingly, we notice that especially examining performance of exhibitions, most authors considered the exhibiting organizations’ perspective, leaving little space to explore visitors’ satisfaction associated with such events (Hansen, 1999; Shoham, 1999; Hansen, 2004; Lee and Kim, 2008; Reinhold et al., 2010; Çobanoğlu and Turaeva, 2014; Sarmiento and Simões, 2018). However, exhibitors and visitors are two different modes of trade show participation, and the differences existing between such categories may converge into a gap between visitors’ expectations in attending a trade show and exhibitors’ motivations. In fact, as Haon et al. (2020) stressed, trade fair exhibitors are driven by transaction objectives, such as higher sales or marketing-oriented personnel, hence not complying with the preferences of visitors that are generally oriented toward information acquisition needs. The authors named such misalignment “disconnect” and demonstrated it holds regardless visitors come from business-to-business (B2B) vs business to consumer firms, come from small vs large firms, play a decision-maker vs influencer role in the purchasing decision process and are consistent in trade shows at both regional and national level (Haon et al., 2020).

Particularly, in their literature review related to trade show performance, Tafesse and Skallerud (2017) stated that “the visiting and the organizing modes present equally exciting

research opportunities” (Tafesse and Skallerud, 2017, p. 21). The call of deepening knowledge about the role of visitors’ needs and satisfaction on trade show performance is, as well, one of the main outcomes of the systematic literature review by Sarmiento and Simões (2018). Hence, we accredit that a more detailed analysis on visitor behavior and intentions would allow to discern and, consequently, to smooth the approaches to be adopted by researchers and managers whose activities pertain to the trade show domain.

The standpoint adopted in the present article focuses on exhibition environment that relates to a B2B context, where visitors are generally defined as “buyers.” It is remarkable that buyers play a paramount role in such context because they find themselves in the position to influence the purchasing decisions that occur in their firms (Rosson and Seringhaus, 1995; Godar and O’connor, 2001).

So, starting from considering research by Tafesse and Skallerud (2017) and Sarmiento and Simões (2018), for the first time in the literature, we attempt to examine findings on the figure of trade show visitors by conducting a broad review of sources focusing on visitors of exhibitions. We believe that exploring marketing strategies leveraging on the analysis of visitors’ behavior and motivations would set the basis for significant advantages for trade shows organizers and exhibitors, leading to a lift in the audience numbers and in visitors’ loyalty. Accordingly, we call for the need to provide a better picture on which factors may influence visitors’ behavior and their impact on trade show outcomes (Godar and O’connor, 2001; Smith et al., 2003; Gottlieb et al., 2011). Hence, in the first place, the objective of the present research is to critically examine, by means of a literature review, the variables which influence, along the trade show “journey,” visitors’ perceptions and decision-making processes and to accordingly develop a conceptual framework explaining visitors’ role and trade show performance.

Moreover, due to the current COVID-19 global pandemic, recognizing visitors’ behavior and preferences represents, in our opinion, a topic of utmost importance in a moment of drastic challenges. In fact, the trade show business has been largely exposed to the need to reinvent itself, notably enduring new strict sanitary norms, triggering a digital transition where trends that previously were explored mainly by industry pioneers, have spread globally; undeniably, it is under such unexpected circumstances that technology is acquiring a broader role in the exhibition industry. For instance, the combination of in-person and online participation at the moment is a choice adopted by many trade show organizers that are experiencing such a fast digital transition, pressing them to explore new paradigms and strategies to keep the business lucrative (Exhibitoronline, 2020).

Thus, the present analysis is also aimed at setting the grounds for defining strategies based on the observation of trade show visitor behavior to improve the exhibition performance in a novel scenario where the “conventional” state of the fairs is shifting toward an extensive adoption of technological tools.

In fact, as stated by Lacka et al. (2020), “there is a scarcity of research concerning technological innovation and B2B trade-related activities” (Lacka et al., 2020, p. 1). Accordingly, the present research aims at advancing the existing literature by exploring the emerging trends in the exhibition scenario,

extrapolating important aspects from areas related to the field under analysis, such as fairs open to the general public or tourism events, and we attempt to apply them to the trade show context. For instance, factors such as the exploitation of new tools made available by recent advances in information technology (IT) (Sarmiento and Simões, 2019), social media (Tafesse and Skallerud, 2017; Gopalakrishna et al., 2019), techniques for tracking attendants' paths (Pettersson and Zillinger, 2011; Chongwatpol, 2015; Mashhadi et al., 2016; Joppi et al., 2018; Gentilin et al., 2019) have up to now scarcely been exploited and observed in the trade show context. Hence, our further objective is to review emerging technologies which can be implemented in the trade shows business and to integrate them into our conceptual model, attempting to explain how these may influence visitor behavior and therefore trade show performance.

To summarize, the present study first reviews the role of visitors on trade show performance aiming at answering the following two research questions:

- RQ1. What are the different phases of visitors' participation in trade shows and what are the variables which influence visitors' journey?
- RQ2. How can trade show performance be addressed holding visitors' point of view?

However, with the objective of being as exhaustive as possible and of providing a modern overview of the variables that impact visitors' participation in the trade shows, we also raise the following important research question:

- RQ3. What are the main technological trends that can have an impact on business exhibitions?

Finally, we integrate results from the review of the literature into a conceptual model to answer our fourth research question:

- RQ4. How would the use of technology impact visitor behavior and, eventually, trade show performance?

The remainder of the paper is organized as follows. Section 2 exposes the context of trade shows and provides definitions of exhibition attending modes: organizers, exhibitors and visitors. Section 3 describes materials and methods used for the research, while Section 4 details the results of the literature review, namely, the factors influencing the experience perceived by visitors during the three phases of trade shows as observed by literature (pre-, during and post-event) and describes trade show performance perceived by visitors. Section 4 also discusses the results of the literature review regarding the emerging trends in the trade show domain that have been increasingly exploited following the outbreak and fast changes imposed by the COVID-19 pandemics and the related sanitary measures and that are enabled through the availability of modern technologies (e.g. Web, artificial intelligence [AI], customer profiling – physical and digital trade shows – and social listening); furthermore, the conceptual framework of the research is explained in such section. Section 5 reports the discussion of our results. Finally, managerial implications emerging from the proposed analysis,

the authors' conclusions and the suggested directions for future research are laid out.

## 2. Background

### 2.1 Trade show context

The Global Association of the Exhibition Industry (UFI) lays out criteria useful for defining expositions. Specifically, the terms “exposition” and “exhibition” can be considered as generic appellations, that define an event where two parties, buyers and sellers interact, displaying goods and services. From the point of view of trade show attending roles, three key participants may be identified: organizers, exhibitors and visitors, each having their own objectives, expectations, actions and achievements (Tafesse and Skallerud, 2015; Tafesse and Skallerud, 2017). For the purpose of this article, trade shows are interpreted as important market events of a specific duration, held at intervals, where a large number of companies present the main product range of one or more industry sectors (Kirchgeorg et al., 2010).

However, exhibitions can be considered as an integral part of a firm's marketing program (Kerin and Cron, 1987). Furthermore, they represent an important moment for market demand and supply meeting. To shed light on sales nurtured by exhibitions, Smith and Smith (1999) observed that distributors who were exposed to the trade show, tended to purchase larger volumes of the product than distributors who did not attend the exhibition. Also, they compared sales values between exposing and nonexposing distributors within each category of distributor and confirmed that sales per distributor were higher among the exposed group as compared to the unexposed group (Smith and Smith, 1999; Smith et al., 2003). Further, Smith et al. (2003) focused on the complementary effect of trade shows on personal selling and, through a field study with a group of industrial distributors, proved that follow-up sales efforts generated higher sales productivity when customers had already been exposed to the firm's product at a trade show. The study also confirmed better return-on-sales figures among show attendees than nonattendees; moreover, it demonstrated positive effects on customer purchase intentions generated by the trade show.

### 2.2 Trade show attending modes: organizers, exhibitors and visitors

In the literature, it is common to find research on trade shows perspectives combining one or more participating modes, i.e. organizers, exhibitors and visitors (Tafesse and Skallerud, 2017; Sarmiento and Simões, 2018).

To illustrate, organizers are service providers that make the event possible through marketing strategies which are aimed at creating a match between exhibitors and visitors based on information such as attitudinal, political, economic and/or sociocultural factors (Jung, 2005). Jiménez-Guerrero et al. (2020, p. 11) argued that “the organizer is responsible for conceiving the fair itself and dealing with all the complexities involved in its organization”; hence, it is an essential role for the success of the event itself. The authors analyzed the influence of organizers-related quality aspects that can impact the fulfillment of exhibitors' objective in attending an event. Two dimensions of quality are linked to the event organizers,

namely, event design (including aspects such as the event date and the promotion before the event) and quality of results (including aspects that define the reputation of a fair such as quality and number of exhibitors and visitors), have been demonstrated to be highly correlated with the final perceptions of exhibitors; furthermore, the research revealed that, if quality level offered by organizers is lacking, this will prevent exhibitors from reaching their participation goals.

Also, for organizers to achieve successful marketing strategies, monitoring customers' behavior and satisfaction are of extreme relevance (Reinhold *et al.*, 2010).

At trade shows, exhibitors and visitors interact for the purchase of displayed goods or services that can be realized at the time of presentation or consequently in the future (Lee and Kim, 2008). Generally, exhibitors participate at trade show mainly for selling products/services, reaching new business, increasing sales and evaluating the performance of the products offered for sale (Chu and Chiu, 2013; Silva *et al.*, 2021). Nevertheless, studies have also revealed the role of nonsales reasons such as building brand image, fostering new and servicing established relationships, checking-up on competitors and identifying market trends (Chu and Chiu, 2013; Sarmiento *et al.*, 2015a; Silva *et al.*, 2021). Silva *et al.* (2021) conducted a study to identify sources of information needed by exhibitors and proposed a model to describe exhibitors' trade fair intelligence process (activities related to the collection and analysis of information). The authors illustrated that the main sources of information that may help empowering exhibitors are related to: customer, product and market condition intelligence. The research demonstrated that, if exhibitors use well these three sources of intelligence, they can improve the management system related to the information useful for their business; furthermore, the strategic marketing will be strengthened, and as a result, they can boost their companies' competitiveness. Hence, the authors described that "an exhibitor creates competitiveness based on an intelligence process from trade fairs" (Silva *et al.*, 2021, p. 17).

Regarding visitors, trade shows offer them great opportunities to meet in person current and potential suppliers, to gain information about products, companies, industry and technology, new trends and inspiration for their activities (Bello, 1992; Berne and García-Uceda, 2008; Rinallo *et al.*, 2010; Gopalakrishna *et al.*, 2010; Bettis-Outland *et al.*, 2012; Menon and Edward, 2014; Tafesse and Skallerud, 2015), to receive advice from technical personnel (Rinallo *et al.*, 2010) and to establish relationships in a network where they feel part of a community and can experience leisure (Berne and García-Uceda, 2008; Rinallo *et al.*, 2010; Mensah and Lestyo, 2012; Sarmiento *et al.*, 2014; Tafesse and Skallerud, 2015; Jin and Weber, 2016). Indeed, visitors carefully plan their attendance, ahead of time, arranging for travel, establishing which suppliers to meet and reflecting about other activities to do at the show (Gopalakrishna *et al.*, 2019). We, thus, find it critical to systematically delineate the reasons behind the choice of visitors to participate in expositions and to observe in what manner they do so. To this end, we rely on the literature on the expositions that involve an interplay of actors in a B2B context, where visitors are generally defined as "buyers." Buyers are critical actors in the trade shows context because they are in the position to influence purchasing decisions within their firms,

making shows very attractive venues for sellers (Rosson and Seringhaus, 1995; Godar and O'connor, 2001). However, some authors pointed out that visitors of trade shows may not be necessarily labeled as "buyers" since their duty is not merely to receive information about a purchase or to carry out such task. Instead, they may attend for different reasons as for habit, for social and networking motives or to attend to seminars (Bello and Lohtia, 1993; Godar and O'connor, 2001). Accordingly, several studies on exhibitions find it essential to diversify among visitors' categories, adopting segmentation criteria, hence underlining visitors' heterogeneity (Godar and O'connor, 2001; Blythe, 2010; Gopalakrishna *et al.*, 2010; Gopalakrishna *et al.*, 2019).

### 3. Materials and methods

As we aim at exploring in detail literature research that specifically assumes the standpoint of the visitors who participate in the trade fair for job-related reasons, the selection of the articles for the present review is mainly based on an analysis of studies concerning visitors of business-related trade fairs. However, to provide an exhaustive and original perspective on visitor profiling, articles on consumer exhibitions, tourism, festivals and outdoor sports are also considered.

The process of the literature review starts by collecting data in January 2020. Moreover, as an attempt to make our search process replicable, we adopt a systematic collection of reports following the preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines (Snyder, 2019; Page *et al.*, 2021). The PRISMA analysis has been conducted on two online journal databases: Scopus and Web of Science; the process of literature review following the PRISMA guidelines is illustrated in Figure 1.

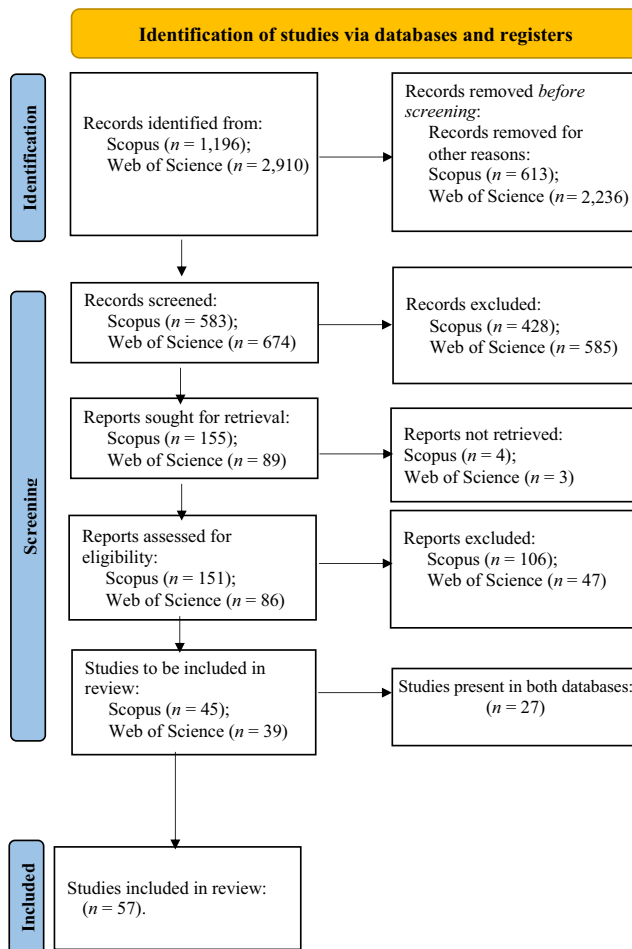
The research on Scopus has been conducted on April 20th, 2022, while on Web of Science has been conducted on May 2nd, 2022. The keywords used for the online research on the two scientific databases are the following: "trade show\*" and visitor\*; "trade fair\*" and visitor\*; "trade show\*" and effectiveness; "trade fair\*" and effectiveness; "trade fair\*" and performance; "trade show\*" and performance; "trade show\*" and "social media"; "trade fair\*" and "social media"; "trade show\*" and "covid-19"; "trade fair\*" and "covid-19"; "trade fair\*" and "digital"; "trade show\*" and "digital"; events and "gps-localization"; visitors\* and profiling; "virtual trade show\*"; "virtual trade fair\*" [1].

To adopt a consistent methodological approach and to gather robust and replicable results, the analysis has been conducted using the same search criteria in both databases. A number of 1,196 articles have been identified from Scopus and 2,910 from Web of Science. Hence, a total of 4,106 articles have been the first result of our research. Afterward, these articles have been filtered by means of screening through automation tools on the basis of:

- *subject areas*: Business, Management and Accounting; Computer Sciences; Social Sciences; Economics, Econometrics and Finance; Decision Sciences;
- *language*: only articles in English are included in the process; and finally
- *type of article*: Article; Conference Paper; Review are included.



**Figure 1** PRISMA 2020 flow diagram for the systematic review implemented in this study



The resulting number of articles removed before screening is: 613 in Scopus and 2,236 in Web of Science. The screened records after the filtering through automation tools are 583 in Scopus and 674 in Web of Science.

Consequently, a discrimination between the most interesting articles and nonpertinent ones has been conducted by examining titles, keywords and abstracts; such selection has been carried out by the two first authors, and it has included articles focusing on the following research topics:

- visitors and trade shows;
- the effectiveness and/or performance of trade shows especially considering the perspective of attendees;
- social media linked to trade shows and/or to topics of business and profiling use for sales;
- the COVID-19 pandemics situation and its consequences on the trade show or exhibition sector;
- digital tools at trade shows or exhibitions;
- virtual trade shows, exhibitions and events;
- trade shows, exhibitions and events using geo-localization techniques; and
- innovative techniques for profiling visitors of trade shows, exhibitions and events.

Thus, such passage has led to 428 articles excluded on Scopus and 585 excluded on Web of Science.

Then 155 articles from Scopus and 89 from Web of Science have been sought for retrieval: precisely, four articles from Scopus and three from Web of Science have not been retrieved.

Afterward, reports have been assessed for eligibility. From Scopus, 151 studies have been examined for deciding whether they could be eligible, and the number and motives of reports excluded have been identified as follows:

- 59 articles whose focus is not on visitors' of trade shows, exhibitions or events but rather on organizers and or exhibitors;
- 33 articles that do not cover innovative technologies for the objective of profiling visitors trade shows, exhibitions or events;
- 5 articles that are not business related;
- 5 articles that cover the topic of performance of trade shows but not from visitors' perspective; and
- 4 articles covering the topic of social media but not including the trade show environment.

In the second place, reports assessed for eligibility from Web of Science are 86, and the number and motives of reports excluded are identified as follows:

- 1 result identified as a book chapter, which we had decided to exclude;
- 21 articles whose focus is not on visitors' of trade shows, exhibitions or events but rather, e.g. on organizers and or exhibitors;
- 12 articles that do not cover innovative technologies for the objective of profiling visitors trade shows, exhibitions or events;
- 6 articles that are not business related;
- 3 articles that cover the topic of performance of trade shows but not from visitors' perspective; and
- 4 articles covering the topic of social media but not including the trade show environment.

This results in 45 articles to be included in the review from Scopus and 39 from Web of Science. At this point, 27 records have been identified in both databases, resulting in 57 useful articles that are included in the present article as reference.

In addition to Scopus and Web of Science, we have used a cross-reference process, and further articles have been identified through Google Scholar, Emerald and Elsevier. This has helped us to improve the completeness of our literature review. Precisely, as a result, a total of 81 reports have been used for the present review.

As we aim at providing our paper with an updated perspective, most recent articles have been marked as paramount in the research process. Still, articles that are less recent are used as "seminal papers" with the aim of providing definitions.

Table 1 shows that, among the 81 articles selected for the study, 34 of them have been used in detail because they cover issues concerning trade show business visitors' behavior and variables affecting their participation and trade show experience (41.9%). In addition, 15 articles have been used because trade show performance is discussed (18.5%); 11 focus on virtual trade shows, exhibitions, events (13.5%); 8 articles discuss techniques for profiling visitors of trade shows,

Table 1 List of reviewed articles

Title	Authors	Year	Source	Area of literature review
1. Assessing trade show functions and performance: an exploratory study	Kerin, R. A., & Cron, W. L.	1987	<i>Journal of Marketing</i> , 51(3), 87-94	Performance of trade shows
2. Selecting and evaluating trade shows	Shoham, A.	1992	<i>Industrial Marketing Management</i> , 21(4), 335-341	Visitors and trade shows
3. Industrial buyer behavior at trade shows: implications for selling effectiveness	Bello, D. C.	1992	<i>Journal of business research</i> , 25(1), 59-80	Visitors and trade shows
4. Improving trade show effectiveness by analyzing attendees	Bello, D. C., & Lohtia, R.	1993	<i>Industrial Marketing Management</i> , 22(4), 311-318	Visitors and trade shows
5. Measuring trade show effectiveness: an effective exercise?	Herbig, P., O'Hara, B., & Palumbo, F.	1994	<i>Industrial Marketing Management</i> , 23(2), 165-170	Performance of trade shows
6. Visitor and exhibitor interaction at industrial trade fairs	Rosson, P. J., & Seringhaus, F. R.	1995	<i>Journal of Business Research</i> , 32(1), 81-90	Visitors and trade shows
7. Management and performance of international trade fair exhibitors: government stands vs independent stands	Seringhaus, F. R., & Rosson, P. J.	1998	<i>International Marketing Review</i>	Performance of trade shows
8. An internet based virtual exhibition system: conceptual design and infrastructure	Su, C. J., Yen, B. P. C., & Zhang, X.	1998	<i>Computers &amp; Industrial Engineering</i> , 35(3-4), 615-618	Virtual trade shows, exhibitions, events
9. Distributor and end-user trade show attendance objectives: an opportunity for adaptive selling	Smith, T. M., & Smith, P. M.	1999	<i>Forest Products Journal</i> , 49(1), 23	Introduction on exhibitors
10. Trade show performance: a conceptual framework and its implications for future research	Hansen, K.	1999	<i>Academy of Marketing Science Review</i> , 8(1999), 1-12	Performance of trade shows
11. Performance in trade shows and exhibitions: a synthesis and directions for future research	Shoham, A.	1999	<i>Journal of Global Marketing</i> , 12(3), 41-57	Performance of trade shows
12. Same time next year – buyer trade show motives	Godar, S. H., & O'connor, P. J.	2001	<i>Industrial Marketing Management</i> , 30(1), 77-86	Visitors and trade shows
13. The effect of successful trade show attendance on future show interest: exploring Japanese attendee perspectives of domestic and offshore international events	Smith, T. M., Hama, K., & Smith, P. M.	2003	<i>Journal of Business &amp; Industrial Marketing</i>	Performance of trade shows
14. Measuring performance at trade shows: scale development and validation	Hansen, K.	2004	<i>Journal of Business Research</i> , 57(1), 1-13	Performance of trade shows
15. Virtual exhibitions: an exploratory study of Middle East exhibitors' dispositions	Lee-Kelley, L., Gilbert, D., & Al-Shehabi, N. F.	2004	<i>International Marketing Review</i>	Virtual trade shows, exhibitions, events
16. Determinants of exhibition service quality as perceived by attendees	Jung, M.	2005	<i>In Journal of Convention &amp; Event Tourism (Vol. 7, No. 3-4, pp. 85-98). Taylor &amp; Francis Group</i>	Visitors and trade shows
17. Ongoing search among industrial buyers	Borghini, S., Golfetto, F., & Rinallo, D.	2006	<i>Journal of Business Research</i> , 59(10-11), 1151-1159	Visitors and trade shows
18. Criteria involved in evaluation of trade shows to visit	Carmen Berne, M.E. García-Uceda	2007	<i>Industrial Marketing Management</i>	Visitors and trade shows
19. Differential effects of determinants on multi-dimensions of trade show performance: by three stages of pre-show, at-show, and post-show activities	Lee, C. H., & Kim, S. Y.	2008	<i>Industrial Marketing Management</i> , 37(7), 784-796	Performance of trade shows
20. Online virtual exhibitions: concepts and design considerations	Foo, S.	2008	<i>DESIDOC Journal of Library &amp; Information Technology</i> , 28(4), 22	Virtual trade shows, exhibitions, events
21. Knowledge sharing in a trade show	Reychav, I.	2009	<i>The Journal of Information and Knowledge Management Systems</i>	Visitors and trade shows

(continued)

Table 1

Title	Authors	Year	Source	Area of literature review
22. Exhibitor satisfaction in business-to-business trade shows: understanding performance patterns from Vavra's importance grid perspective	Reinhold, M., Reinhold, S., & Schmitz, C.	2010	<i>European Marketing Academy</i>	Performance of trade shows
23. Objectives for successfully participating in trade shows	Kirchgeorg, M., Springer, C., & Kästner, E.	2010	<i>Journal of Business &amp; Industrial Marketing</i>	Performance of trade shows
24. Users of the world, unite! The challenges and opportunities of social media	Kaplan, A. M., & Haenlein, M.	2010	<i>Business Horizons</i> , 53(1), 59-68	Social media linked to topics of business and profiling use for sales
25. SmartEx: a case study on user profiling and adaptation in exhibition booths	Salem, B., Alves Lino, J., & Rauterberg, M.	2010	<i>Journal of Ambient Intelligence and Humanized Computing</i> , 1(3), 185-198	Innovative techniques for profiling visitors of trade shows, exhibitions, events
26. The role of virtual trade fairs in relationship value creation	Geigenmüller, A.	2010	<i>Journal of Business &amp; Industrial Marketing</i>	Virtual trade shows, exhibitions, events
27. The return on trade show information (RTSI): a conceptual analysis	Bettis-Outland, H., Cromartie, J. S., Johnston, W. J., & Borders, A. L.	2010	<i>Journal of Business &amp; Industrial Marketing</i>	Visitors and trade shows
28. Trade fairs as communication: a new model	Blythe, J.	2010	<i>Journal of Business &amp; Industrial Marketing</i>	Visitors and trade shows
30. An exploratory study of attendee activities at a business trade show	Gopalakrishna, S., Roster, C. A., & Sridhar, S.	2010	<i>Journal of Business &amp; Industrial Marketing</i>	Visitors and trade shows
31. Exploring visitor experiences at trade shows	Rinallo, D., Borghini, S., & Golfetto, F.	2010	<i>Journal of Business &amp; Industrial Marketing</i>	Visitors and trade shows
32. The influence of service quality and trade show effectiveness on post-show purchase intention	Gottlieb, U. R., Brown, M. R., & Drennan, J.	2011	<i>European Journal of Marketing</i>	Performance of trade shows
33. Trade fair visitors' relationship management based on their data analysis and appraisal	Shen, M., & Huang, B.	2011	<i>2011 2nd International Conference on Artificial Intelligence, Management Science and Electronic Commerce (AIMSEC) (pp. 2679-2682). IEEE Tourism Geographies</i> , 13(1), 1-20	Techniques for profiling visitors of trade shows, exhibitions, events
34. Time and space in event behaviour: tracking visitors by GPS	Pettersson, R., & Zillinger, M.	2011	<i>Proceedings of the 20th ACM international conference on Multimedia (pp. 1197-1200)</i>	Trade shows, exhibitions, events using the geo-localization techniques
35. Indoor and outdoor profiling of users in multimedia installations	D'Amico, G., Del Bimbo, A., Ferracani, A., Landucci, L., & Pezzatini, D.	2012	<i>Applied Geography</i> , 34, 659-668	Techniques for profiling visitors of trade shows, exhibitions, events
36. Analysing spatiotemporal sequences in Bluetooth tracking data	Delafontaine, M., Versichele, M., Neutens, T., & Van de Weghe, N.	2012	<i>Handbook on Business to Business Marketing</i> , 226	Trade shows, exhibitions, events using the geo-localization techniques
37. Trade shows in the business marketing communications mix	Gopalakrishna, S., & Lilien, G. L.	2012	<i>European Journal of Social Sciences</i> , 31(4), 496-506	Virtual trade shows, exhibitions, events
38. Visitors' objectives for attending a regional trade fair in Ghana	Mensah, C., & Lestyo, E.	2012	<i>Journal of Business &amp; Industrial Marketing</i>	Visitors and trade shows
39. Using trade show information to enhance company success: an empirical investigation	Bettis-Outland, H., Johnston, W. J., & Wilson, R. D.	2012	<i>International Journal of Business and Management</i> , 8(24), 64	Visitors and trade shows
40. Effective marketing strategies to attract business visitors at trade shows	Chu, M. C., & Chiu, S. M.	2013	<i>Procedia-Social and Behavioral Sciences</i> , 150, 762-771	Visitors and trade shows
41. Effects of the pre-show, at-show and post-show firm activities on trade show performance measurement	Çobanoğlu, E., & Turaeva, V.	2014		Performance of trade shows

(continued)

Table 1

Title	Authors	Year	Source	Area of literature review
42. Capturing crowd dynamics at large scale events using participatory gps-localization	Blanke, U., Tröster, G., Franke, T., & Lukowicz, P.	2014	2014 IEEE Ninth International Conference on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP) (pp. 1-7). IEEE	Trade shows, exhibitions, events using the geo-localization techniques
43. B2B interactions at trade fairs and relationship quality: a conceptual approach	Sarmiento, M., Simões, C., & Farhangmehr, M.	2014	Field Guide to Case Study Research in Business-to-business Marketing and Purchasing. Emerald Group Publishing Limited	Visitors and trade shows
44. Exhibitors and visitors' motivations at destination trade shows	Menon, S., & Edward, M.	2014	International Journal of Services, Economics and Management, 4, 6 (2), 193-208	Visitors and trade shows
45. Integration of RFID and business analytics for trade show exhibitors	Chongwatpol, J.	2015	European Journal of Operational Research, 244(2), 662-673	Trade shows, exhibitions, events using the geo-localization techniques
46. The role of B2B virtual trade shows and their effect on show performance	Gabisch, J.	2015	Proceedings of the 2010 Academy of Marketing Science (AMS) Annual Conference (pp. 339-339). Springer, Cham	Virtual trade shows, exhibitions, events
47. Applying a relationship marketing perspective to B2B trade fairs: The role of socialization episodes	Sarmiento, M., Simões, C., & Farhangmehr, M.	2015b	Industrial Marketing Management, 44, 131-141	Visitors and trade shows
48. A relationship marketing perspective to trade fairs: insights from participants	Sarmiento, M., Farhangmehr, M., & Simões, C.	2015a	Journal of Business & Industrial Marketing	Visitors and trade shows
49. Towards an exchange view of trade fairs	Tafesse, W., & Skallerud, K.	2015	Journal of Business & Industrial Marketing	Visitors and trade shows
50. Participating in business-to-business trade fairs: does the buying function matter?	Sarmiento, M., Farhangmehr, M., & Simões, C.	2015c	Journal of Convention & Event Tourism (Vol. 16, No. 4, pp. 273-297)	Visitors and trade shows
51. User interest profiling using tracking-free coarse gaze estimation	Bartoli, F., Lisanti, G., Seidenari, L., & Del Bimbo, A.	2016	2016 23rd International Conference on Pattern Recognition (ICPR) (pp. 1839-1844). IEEE	Techniques for profiling visitors of trade shows, exhibitions, events
52. Analysis of wireless information transmission in a trade fair through device to device communication under LTE network	Zakia, U., Nahar, M., Ruku, R. A., Nawrin, N., & Esha, I. J. K.	2016	2016 IEEE 7th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON) (pp. 1-6). IEEE	Techniques for profiling visitors of trade shows, exhibitions, events
53. How to find appropriate automobile exhibition halls: towards a personalized recommendation service for auto show	Guo, D., Zhu, Y., Xu, W., Shang, S., & Ding, Z.	2016	Neurocomputing, 213, 95-101	Techniques for profiling visitors of trade shows, exhibitions, events
54. Exploring space syntax on entrepreneurial opportunities with Wi-Fi analytics	Mashhadi, A., Acer, U. G., Boran, A., Scholl, P. M., Forlivesi, C., Vanderhulst, G., & Kawsar, F.	2016	Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing (pp. 658-669)	Trade shows, exhibitions, events using the geo-localization techniques
55. Exhibition destination attractiveness—organizers' and visitors' perspectives	Jin, X., & Weber, K.	2016	International Journal of Contemporary Hospitality Management	Visitors and trade shows
56. Grounds of visitors' post-trade fair behavior: an exploratory study	Sarmiento, M., & Farhangmehr, M.	2016	Journal of Promotion Management, 22(5), 735-750	Visitors and trade shows
57. The acceptance of "intelligent trade shows": visitors' evaluations of IS innovation	Hlee, S., Lee, J., Moon, D., & Yoo, C.	2017	Information Systems Frontiers, 19 (4), 717-729	Performance of trade shows

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Table 1

Title	Authors	Year	Source	Area of literature review
58. Exploring booth design as a determinant of trade show success	Bloch, P. H., Gopalakrishna, S., Crecelius, A. T., & Scatolin Murarolli, M.	2017	<i>Journal of Business-to-Business Marketing</i> , 24(4), 237-256	Visitors and trade shows
59. What is the value of networking? An examination of trade show attendee outcomes	Kitchen, E.	2017	<i>Journal of Convention &amp; Event Tourism (Vol. 18, No. 3, pp. 191-204)</i> . Routledge	Visitors and trade shows
60. A systematic review of the trade show marketing literature: 1980–2014	Tafesse, W., & Skallerud, K.	2017	<i>Industrial Marketing Management</i> , 63, 18-30	Visitors and trade shows; social media linked to topics of business and profiling use for sales
61. A three-component framework for trade show performance evaluation	Lin, Y., Jiang, J., & Kerstetter, D	2018	<i>Journal of Hospitality &amp; Tourism Research</i> , 42(6), 855-879	Performance of trade shows
62. From Web to physical and back: WP user profiling with deep learning	Joppi, C., Lovato, P., Cristani, M., & Menegaz, G.	2018	<i>International Conference on Web Engineering (pp. 126-135)</i> . Springer, Cham	Techniques for profiling visitors of trade shows, exhibitions, events
63. Virtual exhibitions: what do we win and what do we lose?	Wolf, K., Reinhardt, J., & Funk, M.	2018	<i>Electronic Visualisation and the Arts</i> , 79-86	Virtual trade shows, exhibitions, events
64. Dress for success: the effect of exhibitors' dress conformity and self-construal on attendees' approach behavior	Sun, J., Choi, C., & Bai, B.	2018	<i>Journal of Travel &amp; Tourism Marketing</i> , 35(6), 706-714	Visitors and trade shows
65. The evolving role of trade fairs in business: A systematic literature review and a research agenda	Sarmiento, M., & Simões, C.	2018	<i>Industrial Marketing Management</i>	Visitors and trade shows
66. Social media influence on the B2B buying process	Diba, H., Vella, J. M., & Abratt, R.	2019	<i>Journal of Business &amp; Industrial Marketing</i>	Social media linked to topics of business and profiling use for sales
67. Face recognition and smart people-counting system: cases of Asian trade shows	Chien, K. M., Wu, T. C., & Luor, T.	2019	<i>Journal of Internet Technology</i> , 20(2), 435-446	Techniques for profiling visitors of trade shows, exhibitions, events
68. Graph-based clustering of visitors' trajectories at exhibitions	Gentilin M., Lovato P., Minozzo M., Menegaz G. and Cristani M.	2019	<i>12th Classification and Data Analysis Group Meeting (CLADAG 2019) Cassino, 1113 September 2019</i> , 427-430	Trade shows, exhibitions, events using the geo-localization techniques
69. Trade fairs as engagement platforms: the interplay between physical and virtual touch points	Sarmiento, M., & Simões, C.	2019	<i>European Journal of Marketing</i>	Virtual trade shows, exhibitions, events
70. Effect of service-related resources on employee and customer outcomes in trade shows	Jha, S., Balaji, M. S., Ranjan, K. R., & Sharma, A.	2019	<i>Industrial Marketing Management</i> , 76, 48-59	Visitors and trade shows
71. Managing customer engagement at trade shows	Gopalakrishna, S., Malthouse, E. C., & Lawrence, J. M.	2019	<i>Industrial Marketing Management</i> , 81, 99-114	Social media and trade shows
72. Measurement of service quality in trade fair organization	Jiménez-Guerrero, J. F., Burgos-Jiménez, J. D., & Tarifa-Fernández, J.	2020	<i>Sustainability</i> , 12(22), 9567	Performance of trade shows
73. Technological advancements and B2B international trade: a bibliometric analysis and review of industrial marketing research	Lacka, E., Chan, H. K., & Wang, X.	2020	<i>Industrial Marketing Management</i> , 88, 1-11	Technological trends in business
74. Online exhibitions during the COVID-19 pandemic	Hoffman, S. K.	2020	<i>Museum Worlds</i> , 8(1), 210-215	Virtual trade shows, exhibitions, events
75. Understanding the learning and innovation model of exhibition visitors	Zhou, Y., Liu, J., Zhang, W., & Ju, P	2020	<i>American Journal of Industrial and Business Management</i> , 10(04), 824	Visitors and trade shows

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Table 1

Title	Authors	Year	Source	Area of literature review
76. Disconnect in trade show staffing: a comparison of exhibitor emphasis and attendee preferences	Haon, C., Segó, T., Drapeau, N., & Sarin, S.	2020	<i>Industrial Marketing Management</i>	Visitors and trade shows
77. Trade fairs as an intelligence process: the perspective of companies/exhibitors	Silva, P. M., Vale, V. T., & Moutinho, V. F.	2021	<i>Journal of Convention &amp; Event Tourism (Vol. 22, No. 3, pp. 242-270). Routledge</i>	Introduction on exhibitors
78. The integrated use of social media, digital, and traditional communication tools in the B2B sales process of international SMEs	Fraccastoro, S., Gabrielsson, M., & Pullins, E. B.	2021	<i>International Business Review, 30 (4), 101776</i>	Social media linked to topics of business and profiling use for sales
77. Virtual trade show: past assessment, present status, and future prospects	Gani, M. O., Takahashi, Y., Faroque, A. R., Mortazavi, S., & Alam, M. Z.	2021	<i>Journal for International Business and Entrepreneurship Development, 13(3-4), 286-310</i>	Virtual trade shows, exhibitions, events
79. Light at the end of the tunnel: visitors' virtual reality (versus in-person) attraction site tour-related behavioral intentions during and post-COVID-19	Itani, O. S., & Hollebeek, L. D.	2021	<i>Tourism Management, 84, 104290</i>	Virtual trade shows, exhibitions, events
80. Why are strangers trusted more during trade fairs? A literature review on the conceptual model of general trust formation	Jia, M., & Wan, C.	2021	<i>Journal of Business &amp; Industrial Marketing</i>	Visitors and trade shows
81. The environmental sustainability of an exhibition in visitors' eyes: scale development and validation	Li, X., Su, X., & Du, Y.	2021	<i>Journal of Hospitality and Tourism Management, 46, 172-182</i>	Visitors and trade shows

exhibitions, events (9.9%); 6 present trade shows, exhibitions, events using the geo-localization techniques (7.4%); 4 discuss social media use in business environments (4.9%) with one specifically discussing trade shows and social media. Finally, 2 articles have been adopted to make an introduction on exhibitors as part of the trade show context (2.5%); and 1 covers technological trends in business (1.2%).

Regarding methods commonly used for research on trade show visitors, we found questionnaires often used to investigate different issues under evaluation (Bello, 1992; Berne and García-Uceda, 2008; Sun et al., 2018; Gopalakrishna et al., 2019). Moreover, interviews to and conversations with visitors before, at or after a trade show have been exploited (Godar and O'connor, 2001; Rinaldo et al., 2010; Chu and Chiu, 2013). Researchers have also used field observations through which they were able to acquire notes and pictures (Borghini et al., 2006; Rinaldo et al., 2010).

## 4. Results

### 4.1 Analysis of the state of the art: factors influencing pre-, at, post-event behavior and trade show perceived performance

Since it is our goal to provide an overview of visitors' journey at trade shows as observed by existing literature, we categorize their behavior into three sequential phases: *pre-*, *at* and *post-* show examination. A three-step process has been consistently adopted by trade show literature for studying exhibitions (Herbig et al., 1994; Rosson and Seringhaus, 1995; Lee and Kim, 2008; Chu and Chiu, 2013; Çobanoğlu and Turaeva,

2014). Rosson and Seringhaus (1995) described that such process entails the combination of a series of activities that are conducted pre-, at and post-trade show (in terms of months/years for the pre- and post-phase, while in a frame of days for the at phase). They also argued that such stages diversify themselves in terms of visitors' behavior. The three-step unfolding represents a useful tool in examining visitors thoughtfully, for instance, by considering in a detailed manner their motivations, selection criteria, evaluation of the exhibitions as well as the outcomes of their participation to such types of events.

There exist multiple factors affecting pre-, at, post-event behavior and trade show visitors' perceived performance. In the following paragraphs, we outline such components, as detailed by exhibition literature. Considering methods used by trade show authors to study the three stages of exhibitions, it emerges clearly that a quantitative approach based on questioning actors involved in the exhibitions through surveys is the most prominent regardless of the stage.

#### 4.1.1 Pre-show

Identifying the criteria behind the choice of which event to attend constitutes a useful information for trade shows organizers and exhibitors to reach a large audience and for understanding the counterpart of their interaction (Berne and García-Uceda, 2008). In fact, trade shows have increased in number and variety; thus, visitors are offered a wide selection of exhibitions to pick from.

In each of the three considered phases, starting from the period prior to the exhibition, participants evaluate their

potential participation and start interrogating themselves on a possible event to attend. Rosson and Seringhaus (1995) provided a scheme considering visitors' questions and decisions in each of the three moments. Hence, they stated that in the pre-trade show phase visitors query themselves on issues the firm should attend, for what purpose, how many visitors and which ones should participate in the event.

When making a decision on which trade show to visit, visitors may hold different reasons/motivations, which we refer to as *endogenous factors*. Among these, seeking new products, sharing information regarding these products with experts, comparing alternative solutions and collecting new information have been considered as the main motives for visiting trade shows by Shoham (1992) and further confirmed by Haon et al. (2020). Indeed, the pursue of knowledge represents an essential element in motivating visitors, as both visitors who have purchasing goals and those who do not are involved in a continuous query for notions (Borghini et al., 2006). In fact, Haon et al. (2020) demonstrated that a great majority of trade show visitors are motivated only by information-acquisition objectives, for instance, comprising "to see and talk to current vendors/suppliers" or "to gain insights on industry conditions" (Haon et al., 2020, p. 12, article in press). Furthermore, information sources may vary according to the visitors' role positions in a company (Bello, 1992).

Additional reasons for participating to trade shows include: meeting regular suppliers, updating professional skills and improve the credibility of the organization they work for, feeling part of a community, taking part in an important event in the industry, being reassured during crises through meeting suppliers and customers (Borghini et al., 2006). For such reasons, trade shows constitute a networking site. Indeed, visitors often indicate participating in social events as well as attending industry briefings as means to establish and maintain networks (Rosson and Seringhaus, 1995; Godar and O'connor, 2001; Mensah and Lesty, 2012). Other factors such as confirming previous years participation have been described by literature as "buyers return in large numbers year after year" (Godar and O'connor, 2001, p. 79). Trust might be considered as a cardinal element in reaching a satisfactory relationship, in fact, as highlighted by Lacka et al. (2020), "trusting relationships are key in B2B international trade" (Lacka et al., 2020, p. 7). Jia and Wan (2021) explored the factors that may influence the generation of trust relationships at the trade show between exhibitors and visitors. The authors found that preconditions such as early experience, institutional trust in the environment and trust propensity may influence general trust patterns. Moreover, they have identified elements which can facilitate the establishment of trust between exhibitors and visitors, such as stakeholders' treatment, trust transfer, on-site restraints, reward and punishment expansion and on-site personnel arrangement. Loyalty also emerges as a key element in such frame as exhibitions are a tool to foster confidence in brands and to support customer loyalty (Kirchgeorg et al., 2010).

After having identified the motivations, it is important to determine the main criteria adopted by visitors when evaluating which trade shows to attend, that we name *exogenous factors*. Visitors increasingly depend upon information and their perceptions of fundamental exhibition attributes (Berne and

García-Uceda, 2008). Hence, visitors contemplate elements such as the type of trade show, its location and time convenience, its reputation and management, as well as the quantity and quality of attendance and of exhibitors (Godar and O'connor, 2001; Berne and García-Uceda, 2008). These elements are important to acknowledge when evaluating a trade show because they are directly related to the experience lived at the exhibition itself. Details directly linked to customer relations and trade show costs are also taken into account, including planning, budgeting and differential costs (the latter referred to the different costs that could be incurred at different venues). However, only the first two categories would be relevant for visitors (Berne and García-Uceda, 2008).

#### 4.1.2 At-show

Trade shows usually unfold during a period of days. In this time period, visitors make decisions considering motivations such as specific booths to visit, which information to collect and interact with exhibitors while formulating impressions about them (Rosson and Seringhaus, 1995). As this section takes into consideration factors influencing trade show performance according to visitors' point of view, it is paramount to underline that we refer to events that occurred prior to the COVID-19 pandemics, hence, a more general definition of the time period concerning the "at-trade show" phase specifically involving online or mixed modality (offline integrated with online modes) should be formulated and analyzed. At trade shows, visitors can meet in person current and potential suppliers, gain information about products, companies, industry and technology, new trends and inspiration for their activities (Bello, 1992; Berne and García-Uceda, 2008; Blythe, 2010; Rinallo et al., 2010; Gopalakrishna et al., 2010; Bettis-Outland et al., 2012; Menon and Edward, 2014), receive advice from technical personnel (Rinallo et al., 2010), interact in a network where they feel part of a community while establishing relationships and experiencing leisure (Berne and García-Uceda, 2008; Rinallo et al., 2010; Mensah and Lesty, 2012; Sarmiento et al., 2014; Jin and Weber, 2016).

During each visit to an exhibition, there may be several factors that can make the difference in the experience accomplished by visitors. To give an example, Jung (2005) identified the determinants of visitors' exhibition service quality perception. The author highlighted six dimensions: booth management, contents, registration, access, booth layout and function, exhibition and booth attractiveness. He particularly stressed "contents" such as number of participating exhibitors, quality of products or services exhibited, conferences, seminars and events organized as the most important item and observed that exhibition service quality perception was, unexpectedly, mostly dominated by booth layout and function. Salem et al. (2010) explored user profiling and adaptation in relation to exhibition booth. The authors adopted three criteria for the evaluation of exhibition booth: effectiveness (the amount of received information), efficiency (the measurement of time taken to collect the information) and affect (the perception of the experience and the mood booth visitors have during and after their visit). Bloch et al. (2017) investigated the relation between booth design and visitors' behavioral response in selecting booths by considering individual differences and agenda characteristics as moderating factors. According to their

findings, design elements such as shape, layout and surface decoration affect preference and the decision to visit a specific booth, but these preferences may vary depending on visitors' agenda breadth and a design-related trait (e.g. Centrality of Visual Product Aesthetics [CVPA][2]). Sun *et al.* (2018) explored the consequences of booth staff's clothing in determining visitors' approach to such areas. The authors categorized booth staff's clothing into conform and nonconform, referring to the general social acceptance of a way of dressing. The authors highlighted how conforming clothing leads to a greater willingness to approach the booths, hence to an increased desire of participants to enter, visit, interact and come back to an exhibition booth.

Rinallo *et al.* (2010) observed business visitors' behavior at trade shows through an approach based on "experiential perception in marketing" (Rinallo *et al.*, 2010, p. 249). This approach is based on the analysis of observations and interviews, identifying the most appreciated experience for both organizers and exhibitors. "Presence of products" and "competent personnel" were depicted by the respondents as the most valuable services provided by the organizers. Furthermore, concerning exhibitors, "selection of exhibitors and distribution of exhibitors in the exhibition space according to visitors' search processes, trend and rest areas, and social and technical events" were depicted by respondents as the most appreciated provided services (Rinallo *et al.*, 2010, p. 253). Jha *et al.* (2019) studied the effects of service-related resources on exhibitors personnel attitudes and visitor responses. They demonstrated a positive effect of service leadership (commitment of top-management of the exhibitor) and service technology (tools available for customer services) in developing a customer-oriented service strategy with satisfied exhibition employees. The study also found service-related resources influencing job satisfaction of exhibitor personnel and visitors' responses, for instance, concerning booth interaction quality, satisfaction and word-of-mouth intentions. Zhou *et al.* (2020) determined that different job positions of visitors participating to trade fairs (e.g. sales staff, functional department staff, middle and senior management and personal) have an influence on visitors' learning style. To illustrate by administering questionnaires, the authors determined that middle and senior managers used direct talks more than buyers with the aim of acquiring knowledge. Further, visiting forms carried an impact on both learning behavior and its effects since visitors that participated in groups communicated more with different exhibition participants than those visiting alone. Also, the authors found observation as a relevant mean for acquiring knowledge, more important than direct conversations; they found explanations for such factors in the limited time of the visit, numerous tasks and objectives of visitors; hence, a selection would be made by visitors on most significant communications.

Sarmiento *et al.* (2015a) focused on the relational aspect of exhibitions. The authors observed a shift from a transactional to a relationship marketing perspective by combining observation of relational dynamics among participants and research interviews. In fact, according to the authors, "the transactional approach no longer responds to the current business context" (Sarmiento *et al.*, 2015a, p. 591). Through their research, Sarmiento *et al.* (2015a) demonstrated that

interaction and networking at trade shows help developing relations among multiple subjects, thus going beyond the point-to-point exhibitor-visitor relationship. Furthermore, the authors stressed that thanks to interchanging points of view of many actors in the exhibition environment, trade fairs constitute a place for generating innovative solutions to problems. Sarmiento *et al.* (2015b) further investigated the issue of socialization in the trade show context by examining buyer-seller interactions. The authors highlighted that socialization at exhibitions is encouraged by the trade show atmosphere that facilitates the creation of bonds and commitment. Further, Sarmiento *et al.* (2015c) explored the reasons for participating in B2B trade shows and for visitors' interaction with suppliers; their study shows that visitors "do not highlight buying at these events and the most experienced visitors are the ones who devalue most buying at trade fairs" (Sarmiento *et al.*, 2015c, p. 273).

The knowledge sharing and learning at trade shows has been investigated by Reychar (2009), Sarmiento *et al.* (2015b) and Zhou *et al.* (2020). Reychar (2009) explored supplier learning and knowledge acquisition in trade shows through knowledge sharing. By depicting exhibition as "an important source for creating learning and continuous processes with external sources for both suppliers and customers" (Reychar, 2009, p. 143), the author observed that knowledge sharing about customer adaptation (defined as efforts to adapt to the other part to engage into more effective relationships) and knowledge sharing about joint actions (namely, moves toward mutual customer and supplier adaptation) are critical to knowledge acquisition in both visitors and exhibitors' perspectives. Furthermore, customer and supplier learning would be boosted by sharing knowledge concerning joint actions. This highlights the importance of customer-supplier relationships at trade shows. Also, the more knowledge on joint actions is shared by suppliers, the more likely they are to enhance their process of knowledge acquisition at exhibitions. Moreover, by distinguishing different types of exchanges, Sarmiento *et al.* (2015b) observed that when a relationship between buyer-seller is in its infancy, social exchange is more critical than information exchange. On the contrary, when the relationship gets older, the focus of the liaison would lie in sharing reciprocal knowledge. Finally, Bettis-Outland *et al.* (2012) conducted an exploratory study of "Return on Trade Show Information" (RTSI) variables. RTSI summarizes the information that visitors gather during the trade shows and can be valuably used in their organizations. The authors underline the intangible, long-term benefits of introducing the acquired information to the firms after participating in a trade show and collecting information (Bettis-Outland *et al.*, 2010; Bettis-Outland *et al.*, 2012).

Lacka *et al.* (2020) called the attention on previous research concerning key elements in trade at multiple levels and, at the international level, the authors have corroborated the role of culture in B2B exchanges and its impact on satisfaction in buyer-seller relationships. Hence, we deduct that differences in cultures between exhibitors and visitors, in parallel to ways of dressing, may impact visitors' stay at the exhibitions.

Finally, Li *et al.* (2021) focused on visitors' perceptions toward environmental sustainability (ES) in the context of exhibitions. The study found that visitors' ES perception of an



exhibition is generally based on the following aspects: technology-based consumption reduction, reduction of exhibition supplies, recycling and emissions reduction, green food and beverage and strengthening the concept of sustainability.

#### 4.1.3 Post-show

This stage of the process usually entails further efforts by exhibitors who engage visitors through follow-up activities, leveraging on techniques including personal e-mail thank-you note, a personalized letter with further information, a personal visit, a reminder of the final expiration date for a special offer, etc. Thus, these elements are the ones affecting post-show phase and have been found crucial by [Chu and Chiu \(2013\)](#), who argued they entail a positive influence on image-building, sales-related and information-gathering performances of exhibitors.

Furthermore, after the participation to a trade show, visitors establish how to report their experience, question themselves over the evaluation of the event and decide how to react in terms of what actions to take ([Rosson and Seringhaus, 1995](#)).

## 4.2 Evaluation of trade show performance

The activity of evaluating trade show performance in the literature, as mentioned above, has been focused mainly on exhibitors' side ([Kerin and Cron, 1987](#); [Seringhaus and Rosson, 1998](#); [Reinhold et al., 2010](#); [Kirchgeorg et al., 2010](#)). The success of a trade fair depends on the collaboration between organizers and exhibitors with visitors ([Jiménez-Guerrero et al., 2020](#)). Different ways of defining measures of performance have been defined: for instance, by identifying and differentiating *outcome-based* dimensions, comprising evaluation of sales-related activities, from *behavior-based* dimensions, namely, information-gathering activities, image-building activities and relationship-building activities ([Hansen, 1999](#); [Hansen, 2004](#); [Lee and Kim, 2008](#); [Çobanoğlu and Turueva, 2014](#)). It is possible to mention some of the measurement scales used for defining such dimensions ([Lee and Kim, 2008](#)):

- *Sales-related performance*: secure sales lead from existing clients, secure sales leads from new clients, secure contracts with existing clients, secure contracts with new clients, create new prospective clients and expectations for sales increase.
- *Relationship-building performance*: build relationship with new clients, enhance relationship with existing clients, contacts with major decision-makers, enhance relationship with core clients and create new distributors.
- *Information gathering performance*: collect market information and collect information on competitors.
- *Image building performance*: corporate recognition reinforcement, corporate image improvement, brand recognition reinforcement and brand image improvement.

Such studies have determined that nonsales activities at a trade show might influence the choices of potential buyers in the long-term. Accordingly, "the sales performance effects can last over a longer period of time than the show itself" ([Chu and Chiu, 2013](#), p. 64).

Studies taking into account visitors' perceptions and evaluations of trade fairs are not comparable, in number, to the

ones concerning exhibitors ([Sarmiento and Simões, 2018](#)); still, we verified that they acknowledge the relevance of assessing visitors' needs and satisfaction, leading to the conclusion that understanding what motivates visitors to participate in trade shows and observing their behavior pre- and post-attendance are key factors in the process of defining suitable performance measures. Hence, the strong relation between visitors' motivations and their final satisfaction suggests that visitors' perception of trade show performance might be evaluated, addressing first their motivations to participate in exhibitions. This is why, as mentioned above, for this research, we adopted the definition of performance as argued by [Gottlieb et al. \(2011\)](#), who referred to "consumer's belief about the degree to which he/she is able to achieve his/her attendance objectives" ([Gottlieb et al., 2011](#), p. 91).

As stressed by [Godar and O'connor \(2001, p. 79\)](#), "even given the concentrated nature of trade shows, the control exercised by sellers, and the resulting stress, buyers return in large numbers year after year." Especially when visitors' long-term motives meet their participation goals (e.g. maintaining relationships with exhibitors, which are sellers), they will tend to confirm participation at the next edition of the event, as a result of:

[...] a carry-over effect from one annual exhibition to the next, and for the individual attending the trade show and/or the company for which he or she works, are strategic rather than tactical ([Godar and O'connor, 2001, p. 79](#)).

This may result in visitors' participation at trade show as a "tradition," becoming loyal and confirming their participation year after year. [Smith et al. \(2003\)](#) studied visitors' goals in participating in exhibitions and explained how their accomplishments would affect future attendance intentions. In their research, they compared exhibitions at the local vs offshore level. They demonstrated that for visitors, "the perceptions of success in seeing new product introductions, seeing actual product features, and gathering industry trends" ([Smith et al., 2003, p. 411](#)) significantly affected future show interest at the domestic level. On the other hand, their results show that, at the international level, future interest in the event was generated only when successful supplier interactions were combined with seeing products and trends and gathering information related to buying processes.

[Sarmiento and Farhangmehr \(2016\)](#) stressed the consequence of "determinants of visitors' global satisfaction and intention to participate in the next edition of the fair, taking into account their different motives for trade fair participation" ([Sarmiento and Farhangmehr, 2016, p. 736](#)). Data analysis involved exploratory questionnaires. The main finding stressed that, although the event service is supplied by the organizers of the exhibition, exhibitors are more critical than organizers in shaping visitors' satisfaction and intention for future participations. Furthermore, the authors described that visitors' satisfaction and intentions to future participation are influenced by their intention of buying or nonbuying, namely, exhibitors' quality and product innovativeness and by the experience characterizing the interaction with the staff at the exhibitors' booths. [Hlee et al. \(2017\)](#) explored the characteristics of trade show on-site IT at a Korean trade show and used a survey approach to empirically understand visitors' perception toward on-site IT usage. The authors highlighted relationships among on-site IT usage, effectiveness and visitors'

perception toward different innovation characteristics (e.g. relative advantage, compatibility and complexity). The authors disclosed that relative advantage and compatibility had positive impacts on trade show effectiveness. [Lin et al. \(2018\)](#) proposed a framework called “the visitor–exhibitor–organizer (VEO)” to examine dimensions of overall satisfaction of both trade show exhibitors and visitors. Results indicate that satisfaction of the self-performance, and satisfaction associated with organizers and exhibitors or visitors, contributed to the overall satisfaction of each stakeholder group and positive behavioral intention. Satisfaction associated with the self-performance was marked as the strongest predictor of overall satisfaction in both the exhibitor and visitor models. The authors highlighted that visitors’ satisfaction with both exhibitors and organizers contributed significantly to visitors’ overall satisfaction.

To sum up, visitors’ behavior has been acknowledged as a signal of how a trade show is perceived. Indeed, from the analysis, it emerges that considering trade show performance from visitors’ perspectives entails evaluating the output of their actions, namely, post-exhibition purchases and next visit.

#### 4.3 Emerging technological trends in the trade show domain

Fostered by the COVID-19 pandemic, the trade show sector has been increasingly exploring for new technological solutions to overcome physical distances that have been built up due to required sanitary norms aiming at containing the dissemination of the contagion. Hence, 2020 has proved for trade fairs all around the world as a year of unexpected challenges, urging actors involved in such business to look for answers. In such context, technological trends that, prior to the pandemic, were slowly appearing and been exploited mainly from industry pioneers, are now sought after by many exhibitions. Nevertheless, as determined by literature search by [Lacka et al. \(2020\)](#), previous studies calling attention on the role of the internet have often highlighted its enormous value regarding interaction among parts: “the value of the Internet as a communication channel, which aids information dissemination and enables business partners to maintain information-rich relational exchanges despite physical distance” [Lacka et al. \(2020\)](#), p. 6).

Analyzing the importance of digital technologies, [Baldwin \(2021\)](#) illustrated that, near the end of the 20th century, the economics of exchange platforms (among which, trade fairs) was much changed by new available digital technologies; indeed, the advancement was represented by a low-cost technology given by an instantaneous transmission of coded information that replaced manual and electromechanical technologies. The author continued specifying that, through the larger availability of the internet and with advancements according to Moore’s Law, five digital technologies may be identified as common to all digital exchange platforms; these are: crowdsourcing, peer production, search and ad placement, dynamic pricing, data analysis and prediction. The researcher clarified that crowdsourcing and peer production broadened on a large scale the ecosystems of such platforms; while the last three technologies, that represent a strategic source, are now seen as core processes performed by platform sponsors.

Specifically, in this section, we argue that the most relevant novelties affecting the current state of trade shows are constituted

by the use of social media, the use of in-place profiling tools and, last but not least, the proliferation of virtual trade shows.

It is important to notice that, since such technological trends were slowly emerging in the industry, scientific literature on practical explorations concerning such topics is not abundant yet. Hence, we attempt at reviewing previous studies, focusing on the state of the art of such trends as applied in the trade show context according to the available literature.

##### 4.3.1 Social media in the trade show domain

Social media is commonly defined as “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that enables the creation and exchange of User Generated Content” ([Kaplan and Haenlein, 2010](#), p. 61). Digital communication platforms and social media allowed a much cheaper and faster communication, besides broadening the range of potential recipients of messages transmitted; hence, social media may be seen as a “technology that helps individuals achieve their social goals and fulfill their social obligations” ([Baldwin, 2021](#), p. 19).

In our analysis on visitors of trade shows, we noticed that, surprisingly, little scientific research had been dedicated so far to the issues of social media usage in such context. Social media platforms can help gaining direct information about trade show participants’ behavior during the pre-, at and post-trade show ([Tafesse and Skallerud, 2017](#)). [Tafesse and Skallerud \(2017\)](#) argue that, although trade show organizers have been increasingly using such platforms for multiple reasons (e.g. grant information on their events and communicate with current and potential customers), these are still scarcely implemented in the trade show domain to gather information regarding visitors’ perceptions and future intentions. [Kitchen \(2017\)](#) conducted a research to explore how organizers project the networking at trade shows. Their work also focused on visitors’ possible gains from participating to such events. Findings revealed that objectives were different based on the type of attendee; furthermore, they found that attendees typically followed up with 20%–30% of contacts after the exhibition. Accordingly, the authors suggested that the adoption of networking technologies could eventually allow profitable connections.

*4.3.1.1 Social listening.* As social media usage and popularity have risen, brands have increasingly adopted these tools for marketing purposes ([Diba et al., 2019](#)). Social listening emerges in such context as a trend that consists in monitoring a brand’s channels on different social media platforms, listening to the audience conversations as well as its reviews on certain topics or industries, and observing trends and trying to seek for opportunities. [Diba et al. \(2019\)](#) highlighted that brands may advantageously adopt social listening as an alert system and, consequently, rely on sentiment analysis to assess influence on the attitudes toward a brand. Indeed, social listening may be usefully adopted by organizations and brands participating to trade shows. For instance, exhibition organizers may actively investigate specific industry trends as well as needs and desires of the companies that work in it, and that may be targeted for a trade event as exhibitors. Moreover, both organizers and exhibitors may practice it with the aim of analyzing opinions on visitors’ experiences.

To the best of our knowledge, scientific research concerning social listening in the trade show domain is extremely limited, as we observed only one article explicitly exploring such topic. Gopalakrishna *et al.* (2019) developed a conceptual model outlining the process of managing customer engagement at trade shows. What makes this study particularly compelling is the adopted perspective on observing visitors' behavior: the authors depict customer engagement as a "dynamic process that unfolds over time" (Gopalakrishna *et al.*, 2019, p. 100). In describing such process, the authors focused on "social media behaviors," referring to the sharing of experiences lived by buyers on social platforms, as social media can indeed represent a tool for stimulating dialogue about a trade show. According to the authors, the dialogue that may be developed about an exhibition positively influences two behavioral outcomes: intention to purchase and intention to return to the event. The reasons behind it may be disclosed in the fact that by discussing the fair, visitors may further elaborate their experiences, increasing their awareness. Such a relationship is fully mediated by satisfaction with the trade show concerning purchasing, learning and social activities held in such context. Accordingly, to take advantage of the positive relationship between post-fair dialogue and future behavior, Gopalakrishna *et al.* (2019) suggested that managers may push for the increasing usage of social platforms in such context. Fraccastoro *et al.* (2021) studied social media and their integration with traditional sales communication methods. Findings revealed that social media can be very helpful in attracting international prospects. According to the authors, when searching for new business opportunities, "social media is generally preferred in the continuous search for prospects, while participation in fairs and traditional sales prospecting activities are limited to isolated events" (Fraccastoro *et al.*, 2021, p. 9). The authors illustrated that digital communication tools are more frequently adopted in the persuasion phase of the sale process (including, i.e. presentations, negotiations and closing the deal) if compared with the customer relationship management phase.

#### 4.3.2 In-place visitors' profiling

Especially in cases where trade show industry is more mature, the analysis and appraisal of visitors' information become significant, and trade fair companies should take advantage by extracting valuable information for improving visitors' relationship management and enhancing the overall quality of the exhibition (Shen and Huang, 2011).

Developing knowledge on spatial processes during events is useful in gathering visitors' behavior and in promoting companies' marketing strategies (Chongwatpol, 2015). Moreover, it allows to enhance visitors' experience by helping exhibitors understanding visitors' interests and purchasing conduct (Chongwatpol, 2015). Besides that, such practices lay grounds to better manage the trade show itself through the monitoring of the areas and support logistic planning providing information for optimizing critical aspects such as overcrowding (Blanke *et al.*, 2014) and pricing. In fact, literature has consistently studied crowd behavior at large events by means of dedicated mobile applications or sensor tags (Mashhadi *et al.*, 2016). Methods to acquire visitors' location mainly rely on mobile applications that exploit Global Positioning Systems (GPS) or Wi-Fi, Bluetooth or Cellular

signals or a mix of them; on the other hand, sensor tags have been recorded by researchers mainly through Bluetooth devices (Mashhadi *et al.*, 2016). Through our review, we found evidence of explorations entailing observation of the spatiotemporal paths through the definition of *heat-maps* derived from trajectories in the context of the trade shows. For the sake of completeness, we consider to be important to extend our analysis to the entertainment industry, e.g. festivals (Blanke *et al.*, 2014) or sport events (Pettersson and Zillinger, 2011) where computer vision is extensively exploited to gain insights about the usefulness of such techniques and to gather knowledge on the way these could be exploited in the context of trade shows.

Evidence on the use of GPS technology for tracking visitors at large-scale events has been provided by Pettersson and Zillinger (2011) and Blanke *et al.* (2014). To observe the time-space movements of visitors during a sport event, Pettersson and Zillinger (2011) used a combination of three methods: GPS devices, questionnaires and overview camera recordings. The researchers were able to synthesize differently colored trajectories depending on the satisfaction expressed by visitors' by associating the GPS devices to a button through which visitors could express positive or negative feelings. Similarly, Blanke *et al.* (2014) associated GPS devices to a survey as they aimed at capturing crowd dynamics through the development of a mobile phone app for a Swiss festival. The authors captured the location of the user continuously so that they could share their position with friends on Facebook who had installed the app. Results highlighted crowd density and produced flow display maps expressing such patterns.

The authors examined further techniques to "track" visitors' behavior. To illustrate, D'Amico *et al.* (2012) presented a prototype of multimodal system for multimedia experiences in artistic exhibitions, comprising an indoor environment where visitors interact with a natural interface system and an outdoor module based on a cross-platform mobile application. The authors developed an interactive installation for visitors where the sessions of interaction were recorded by a Computer Vision system and then associated with visitors' smartphones. When people exited the exhibit, collected data are analyzed to propose personalized paths and multimedia enriched information via the smartphone based on visitors' location. On the other hand, Guo *et al.* (2016) developed a recommendation system to guide visitors of an automobile trade show toward their proper exhibition hall. The authors used spatiotemporal features and clustering techniques to construct profile visitors' interests. The analysis generated three modules: relevance module, quality module and integration module which were finally used to create personalized and recommended exhibition halls for visitors. Chongwatpol (2015) adopted the radio-frequency identification (RFID) technology by distributing badges with RFID tags to build a traceability framework to better manage information at exhibitions. Chongwatpol (2015) aimed at answering exhibitors' questions regarding what exhibitions or booths are most interesting for visitors, how much time the visitors spend at each booth, how many times visitors visit the booth before deciding to purchase and how do visitors explore the exhibition before deciding to purchase a product. Through a five-step approach, the authors laid out guidelines on how to use RFID data for analytics processes. In particular, they claim



that first, an assessment of visitors' movements must be made; second, customer behavior should be studied by observing the obtained data [e.g. by calculating "frequency distributions and descriptive statistics" (Chongwatpol, 2015, p. 668)] and third, RFID data should be integrated within the existing database on the customer profiles for analytical purposes. This would allow shaping predictive models useful for elaborating effective marketing strategies. Mashhadi et al. (2016) studied the impact of the spatial configuration on the formation of network relations, specifically in a large-scale industrial exhibition. Through the design and development of Wi-Fi analytics solution comprising wearable Wi-Fi badges and gateways, the authors underlined that certain areas are functional in favoring sociality among attendees. Moreover, the researchers observed two special groups of visitors: investors and entrepreneurs, concluding that spatial-related reasons may explain different behaviors of the two groups. Bartoli et al. (2016) proposed a method to profile the attention of people moving in a known space. The authors used coarse gaze estimation and a model based on optical flow to improve attention prediction, without using a tracker, so that the method could be applicable also to crowded events. They tested the approach on a Museum Visitors data set and were able to make an accurate estimation of visitors' profiles. Zakia et al. (2016) relied on long-term evolution technology of visitors' personal devices to:

- enable advertisement for traders;
- alert visitors in case of emergency; and
- allow visitors to track each other during the event.

Further studies have been developed by Joppi et al. (2018) and Gentilin et al. (2019). The former one laid out an original perspective for the investigation of exhibition visitors' profiling. The innovative proposal by Joppi et al. (2018) relies in combining the geolocation data collected on visitors with the Web information obtained through a platform constituted by social applications. The authors argued that all three trade shows participating categories, namely, organizers, exhibitors and visitors, could benefit from such analysis by assessing rich multimedia profiles, as well as personalized recommendations, effective innovative behavioral predictions and optimal fair space planning could be implemented. Indeed, by improving visitors' experience, exhibitors' revenues could be increased. The adoption of Bluetooth technology as a valid technique to collect data about the movement of visitors has also been explored by literature (Delafontaine et al., 2012; Gentilin et al., 2019). Gentilin et al. (2019) analyzed pilot trajectories collected during an exhibition via locators communicating via Low Energy Bluetooth to visitors' smartphones. Through a transformation of the raw trajectories into undirected graphs and by applying the dominant set clustering technique, the authors were able to determine overlapping clusters of trajectories. These could be used for setting a visit recommendation system, examining booth assignment effectiveness and laying out a performance indicator, allowing exhibitors to evaluate the participation at the event. On the other hand, Chien et al. (2019) used a face recognition software combined with a server linked to the internet. People flow tally and data collection were carried out in six empirical cases of Asian trade shows. The authors coupled observations with video and scanning systems at exhibition exits and entrances.

They disclosed that the face recognition system could provide a precise and timely distribution data on the number of people at an exhibition site, as well as their age, gender and time of stay. Through such information, exhibitors may be able to adjust their marketing activities according to data acquired on visitors' movements.

#### 4.3.3 Virtual trade shows

Digitalization has made its way into multiple fields (Flavián et al., 2019) and exhibition industry is just one of those involved in the challenges posed by such trend. In their pioneering work, Su et al. (1998) illustrated that virtual exhibitions have often been considered as an extension of physical trade fairs. Lee-Kelley et al. (2004) portrayed virtual exhibitions as exhibitions held in cyberspace; later, Geigenmüller (2010) proposed a definition by stating that: "virtual trade fairs are Web-based platforms where customers, suppliers and distributors can get together virtually at any time and from any place" (Geigenmüller, 2010 p. 286). Moreover, Foo (2008) argued that virtual exhibitions offer the opportunity to overcome restrictions of space, time and location. They suggest that virtual exhibitions can represent a valid alternative to the "real thing" and constitute improvements for visitors' experiences encompassing learning, interacting with more contents beyond physical exhibits, active participation through forums and uploads, online shopping, etc. In fact, "users can be captivated, engaged and even contribute toward the continual update of the exhibition" (Foo, 2008, p. 33). Indeed, exhibitions may take place under physical or through computer-mediated platforms (Sarmiento and Simões, 2019). Besides, virtual trade fairs may be accounted by visitors as engagement platforms, useful for becoming part of bigger business networks (Sarmiento and Simões, 2019). The internet and the world wide web constitute the grounds for electronic trading in which exchanges takes place (Lee-Kelley et al., 2004) and online trade fairs represent an innovative service that both exhibitors and visitors can exploit (Geigenmüller, 2010) as it entails a good number of advantages, allowing to overcome the limitations of the physical exhibition (Lee-Kelley et al., 2004).

Geigenmüller (2010) stressed the main elements of difference of physical versus virtual trade fairs. According to her view, virtual trade fairs offer IT-mediated interaction that "may expand visitors' privacy and reduce the perceived pressure to communicate personally" (Geigenmüller, 2010, p. 286). In addition, virtual trade shows foster interaction through multiple channels (such as e-mail and chats) and avoid geographical or time limit to the fruition of the event. Thus, virtual events pose an interesting potential. In fact, among the key features that make virtual exhibition appealing venues for buyers and sellers, the possibility to relax spatiotemporal constraints by following the 24/7 principle and by displaying in multiple languages (Su et al., 1998; Lee-Kelley et al., 2004; Geigenmüller, 2010), can reduce expenses, especially for smaller firms that would otherwise struggle to participate due to cost barriers (Lee-Kelley et al., 2004; Geigenmüller, 2010; Gabisch, 2015; Baldwin, 2021) and made available reliable tools (e.g. passwords and authentication codes) that would allow exhibitors to discriminate less qualified visitors from high-end ones (Geigenmüller, 2010). According to Getz (2004), what virtual trade shows miss "is the sense of place, the



dynamics of crowds, and the emotions associated with being physically a part of something special” (Getz, 2004, p. 414). Researchers have rather underlined the complementary nature of the two types of trade shows (Lee-Kelley et al., 2004; Sarmiento and Simões, 2019). Exploratory research by Lee-Kelley et al. (2004), carried through a questionnaire to European and Middle Eastern senior managers participating to trade fairs as exhibitors, observed the potential of the virtual exhibitions and demonstrated that such events are likely to be a useful medium for the following items of the marketing mix: “product,” “promotion” and “price,” whereas it did not as strongly for “place.” They explained the weaker response to place may be due to preference in the use of virtual exhibitions to transfer information in place of distributing goods. Wolf et al. (2018) investigated pros and cons encountered by visitors when attending virtual museum exhibitions compared to their original. The authors studied ways to improve visitors’ attendance at virtual museum by conducting two experiments. To start with, they compared virtual reality (VR) versus real museum and, second, they realized interviews with museum professionals. According to their results, pure VR presents the following pros in comparison to real museums: space, time, location and possibility to save money. Differently, elements such authenticity and sensation of space are not favored by VR. The study revealed “content accessibility from everybody, everywhere, and at any time” as the major advantage of VR (Wolf et al., 2018, p. 85). However, there are some contents that cannot fully be virtualized as original products. Sarmiento and Simões (2019) stressed the dual nature of exhibitions as, in their view, trade fairs represent “engagement and learning platforms consisting of physical and virtual touch points between actors in a service ecosystem” (Sarmiento and Simões, 2019, p. 1787). They defined virtual trade shows as a tool “to foster interactivity and connectivity before and after the physical trade fair” (Sarmiento and Simões, 2019, p. 1782). The fundamentals of such debate seem to lie in solutions that may allow virtual trade fairs to overcome two critical aspects: first, alternatives to the sensory experience lived at the trade show should be provided, as physical exhibition is a “single, intense, and frequently memorable human experience absorbed by emotions and human senses” (Sarmiento and Simões, 2019, p. 1795). The second key aspect under discussion is the way virtual trade fairs may be used in developing and maintaining valuable interpersonal relationships (Geigenmüller, 2010; Gopalakrishna and Lilien, 2012).

Due to the COVID-19 pandemics, even if temporarily, the virtual has replaced the in-person exhibitions (Hoffman, 2020); consequently, many sectors, comprising the trade shows and the museums’ had to quickly adapt themselves to a new online-reality. However, according to Hoffman (2020), the way we perceive physical space is still nowadays directing the creation of online spaces. To illustrate, Itani and Hollebeek (2021) developed a model to examine drivers of visitors’ COVID-19-induced social distancing behavior and its effect on their intent to use virtual reality-based (vs in-person) attraction site tours during and post-COVID-19. The research revealed visitor:

- perceived threat severity (COVID-19’s perceived seriousness);

- response efficacy (beliefs related to the effectiveness of the coping response); and
- self-efficacy (beliefs about whether individuals can perform recommended coping response) raise social distancing behavior.

Besides, social distancing has been found to increase visitors’ intentions to participate in virtual reality tours during pandemics. In the case of the postpandemics, results by the research illustrated that social distancing has no consequent impact on potential visitors’ intent to use virtual reality vs in-person tours.

Finally, Gani et al. (2021) conducted a literature review on the topic of virtual exhibitions. By arguing that conceptual studies on virtual trade shows are lacking, the researchers focused on those aspects of virtual trade shows presenting open questions and potential fields where theoretical development is needed. According to their findings, several areas have remained under-explored by literature; hence, they claim that the trade show domain presents a relevant potential for theoretical improvements. The study suggested managers of virtual trade shows to pay attention to the role of IT and new technologies in their field of business; especially by analyzing and defining specific paths to reach a sustainable relationship with clients. Relevant technologies should be considered by trade fair organizers and exhibitors, as these could greatly impact virtual exhibitions at each stage.

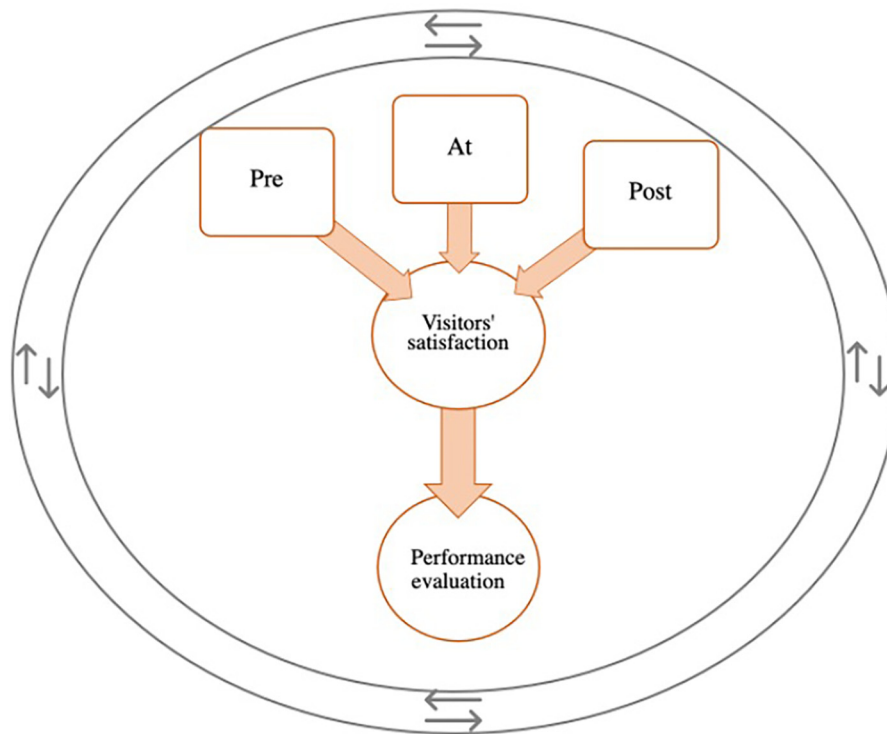
#### 4.4 Conceptual framework of the research

As a premise for our conceptual frameworks, we argue that, since trade show visitors are diverse, for instance, in terms of inclinations, needs, perceptions and evaluations (Godar and O’connor, 2001; Gopalakrishna et al., 2010; Gopalakrishna et al., 2019), it is paramount for exhibitors and organizers to closely observe such variability to be able to carefully plan strategies for improving performance indices such as audience numbers and loyalty.

From visitors’ perspective, defining unanimously the concept of trade show performance is not an easy task. For the present analysis, we rely on the definition of performance through its effectiveness following Gottlieb et al. (2011), who referred to “consumer’s belief about the degree to which he/she is able to achieve his/her attendance objectives” (Gottlieb et al., 2011, p. 91) by applying it to the industrial context.

On the basis of the existing literature (Rosson and Seringhaus, 1995; Herbig et al., 1997; Chu and Chiu, 2013; Çobanoğlu and Turaeva, 2014; Tafesse and Skallerud, 2017; Sarmiento and Simões, 2018; Gopalakrishna et al., 2019), we believe that a three-step scheme allows the most suitable representation framework of how trade shows evolve over time; hence, in the following analysis, we apply it to the study of visitors’ role and behavior.

In such scheme illustrated in Figure 2, the pre-show phase consists in the analysis of the criteria adopted by visitors to select an exhibition event, such as visitors’ motivations and elements evaluated when picking an exhibition. As a second item, for describing the at-show phase, we focus on the variables that influence the enjoyment and involvement of visitors’ experience at exhibitions. Third, we stress visitors’ post-trade show involvement, followed by their perception of

**Figure 2** Research framework

performance and post-trade show behavior, namely, post-show purchases and participation to future events. We posit that these two latter elements are the last sequential components of visitors' trade show journey, constituting visitors' behavioral facets as shaped by their participation to an exhibition that, as such, may reflect the outputs of trade show performance. At the same time, the variables pertaining to each of the three steps contribute to the creation of different degrees of visitors' satisfaction. Consequently, when elaborating satisfaction as a result of trade show participation, visitors make a judgment on trade fair performance.

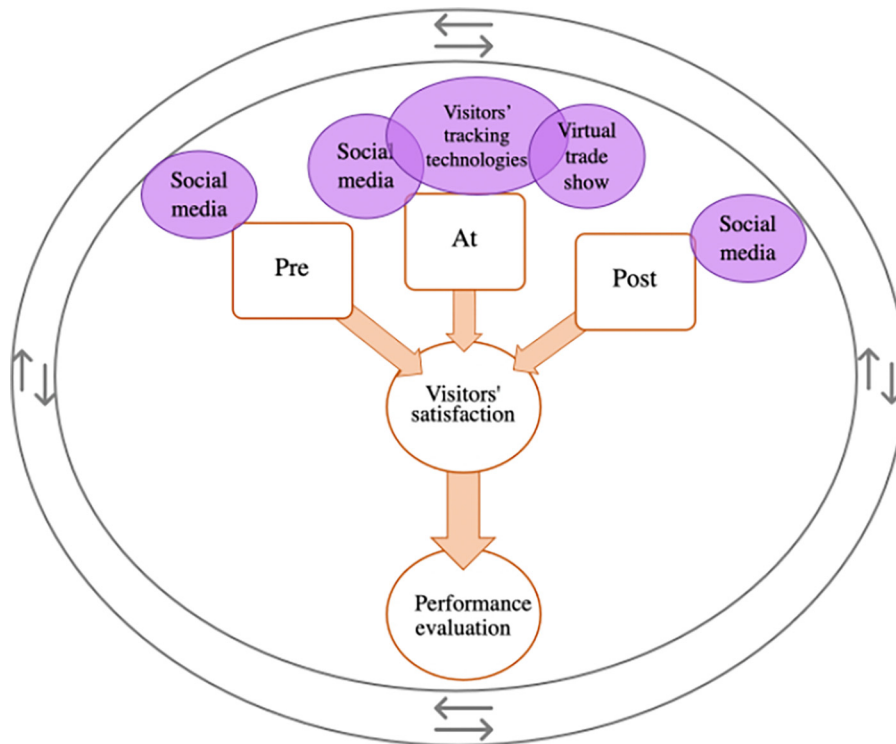
In further detail, we argue that pre-, at- and post- are three sequential steps of visitors' path in a trade show experience. Specifically, we assume a cycle-form path: pre-, at- and post-show stages may take place regularly, event after event, as due to loyalty or tradition visitors are often carried to the same event regularly. The cycle is represented in [Figure 2](#) through arrows that go in opposite directions: we posit that each stage is influenced by components of the stage before, besides, it is also affected by the stages occurring afterward, in an interconnected dimension.

To explain how variables act in this model, an example is provided. For instance, seeing new products and comparing suppliers' solutions may be a major variable for visitors to choose a trade show (pre-stage). At the exhibition, they will search for such type of product/service (at-stage) among different exhibitors. Then, they may receive information about the solutions compared through follow-up activities (post-stage). At the same time, past experiences (post-stage) may influence visitors' expectations (pre-stage) and, therefore, their behavior during the expositions (at-stage). Then, the exhibition

performance may be evaluated by visitors taking into consideration the degree to which they were able to pursue their attendance objectives. Successful attendance will include having met participation objectives, such as seeking new products, comparing alternative solutions, collecting information, meeting regular or new suppliers, updating professional skills and taking part in an important event in the industry. Variables pertaining to a specific exhibition visit will make the difference in the experience accomplished by visitors, as, e.g. prepared personnel, quality of services or products offered, aspects related to the organization and layout of the trade show itself and of the booths are all aspects that influence the perceived quality of a trade show. Consequently, a successful participation to a trade show edition will leave a positive influence on visitors' consideration of the next editions; hence, when deciding whether to participate, the previous participation will be taken into account, in a cyclic way.

This paper brings to light every step mentioned in the research framework by critically considering the role that variables pertaining to each of the three considered phases entail on the formulation of visitors' satisfaction and perception of exhibition performance. The above-illustrated framework constitutes the grounds to propose the foremost role played by emerging technological trends, as their importance is surging. Hence, the framework in [Figure 2](#) constitutes the basis for developing further examinations and evaluations on what the most modern technological trends can be in trade fair sector. Accordingly, we expand the framework represented by [Figure 2](#) in [Figure 3](#).

The grounds for such expansion lie in the fact that each of the three technological trends can be examined by bearing in mind

**Figure 3** Research framework enriched by trade show technological trends

the three-step process of exhibitions. In fact, we claim that social media is pertinent to all of the three phases as a communication and promotion tool but also as a data source concerning visitors. On the other hand, visitors' profiling, such as through video tracking and machine learning technologies, and virtual trade shows are consistent in the time span that involves the phase at the trade show as well as in the virtual exhibition context.

Furthermore, it can be noticed that many of these aspects are interconnected, i.e. through social media, one can receive information in the pre-exhibition phase regarding many aspects of the event, during the show itself, social media represent a real-time source of information/communication between participants. During the post phase, social media can convey word-of-mouth opinions on the event, the experience lived, the products encountered, etc. We want to highlight the interconnection that occurs between these aspects and the three phases as a cycle: after a span of time post-show stage, visitors will be considered again if participating to next edition; hence, opinions expressed and encountered on these media has a role in the next decision phase.

## 5. Discussion

The main goal of the present research is to illustrate visitors' behavior and satisfaction in relation to trade fair participation and how the emerging technological trends can impact on visitor behavior and, therefore, on trade show performance. In doing so, we did not limit ourselves in providing literature-based illustrations; instead, we also presented our conceptual model integrating visitor behavior and new technologies. This topic is nowadays of crucial importance given the outbreak of

the COVID-19 global pandemics. This study is particularly useful for trade show exhibitors and organizers in reaching a solid basis on the multitude of variables that influence visitors' participation to B2B trade shows, namely, pre-, at and post-event itself. Organizing and exhibitor managers carefully plan their participation well ahead of the exhibition, and they make investments to reach profit. Deepening their knowledge on visitors' behavior and on the variables impacting their behavior will benefit the phase of strategy planning to achieve a successful and profiting participation to trade shows, year after year.

We specifically focus, throughout the literature review and in representing it through our research framework, on the participating mode of visitors. The originality of our contribution is given by the development of a theoretical model including the emerging technological. Top notch and innovative technologies, which represent a foremost topic of current interest for the events' sector.

For visitors, trade shows represent opportunities to meet suppliers, to acquire information, to receive technical advice and to interact as a part of a community. Prior to the show (pre-show phase), visitors decide in advance whether to participate or not in trade shows, considering their motivations and finding a possible match between their needs and the offer given by a specific event. At the trade show, there are multiple factors affecting the visitors' experience, i.e. booth-related, services-related and personnel's competencies-related elements. After the exhibition, visitors may be engaged by exhibitors or organizers in follow-up activities. Trade show performance has mainly been considered by exhibition literature from the exhibitors' side (i.e. distinguishing outcome-based dimension

and behavior-based dimensions). Indeed, visitors' behavior has been recognized as a signal of how a trade show is perceived. Post-exhibition purchases and next visit emerge as signals of an exhibition performance in relation to visitors' perception. Besides, especially when visitors' long-term motives meet their participation goals, they will tend to confirm participation at the next edition of the event.

Social networks represent a functional tool for trade shows organizers and exhibitors as they can be used to accomplish many tasks, for instance, communicating with target audience and facilitating interaction by creating social communities where individuals can find information on products and/or services. Still, in the exhibition industry, social media as a source of data does not seem to be exploited enough.

Multiple methods to examine visitors' movements have been explored by the literature (Pettersson and Zillinger, 2011; Delafontaine et al., 2012; Blanke et al., 2014; Gentilin et al., 2019). For instance, data on visitors' paths at the exhibitions and/or overcrowded areas can be acquired. Furthermore, researchers have developed ways of addressing visitors' multimedia profiles (Bartoli et al., 2016; Guo et al., 2016; Joppi et al., 2018) and behavioral predictions. Such information may be extremely relevant in developing improved marketing strategies targeting visitors and in managing optimal fair space planning.

Exhibitions may take place under physical or through Web-based platforms. Due to the COVID-19 pandemic, virtual trade shows, which have been exploited by industry pioneers, in 2020 and the first half of 2021 have been strongly intensified. The debate whether virtual trade shows can be an effective substitute to physical events is still under discussion; however, the pandemic has given a great boost to such modality of events. It is important to point out that most of the accessed literature refers to the time prior to the 2020 pandemic, as we did not find significant contributions on the theme yet and authors are hesitant in claiming that virtual exhibitions might replace physical ones (Sarmiento and Simões, 2019). In light of recent happenings due to the COVID-19 pandemic, a wide number of trade shows, globally, has indeed postponed or cancelled events that were programmed in 2020 and 2021. Consequently, the sector is facing a troublesome time, pressing for solutions that are being explored by trade show organizers, whose business is staggering due to force majeure (Exhibitoronline, 2020)

## 6. Managerial implications

In their literature review, Tafesse and Skallerud (2017, p. 18) point out that "trade show research is heavily dependent on a combination of cross-sectional designs and surveys, with limited application of other designs and data collection approaches." They stated that depth and rigor of the trade show marketing literature could be improved by applying different methods. Our analysis confirms the authors' conclusions, and accordingly, we call trade shows' organizers and exhibitions' managers to explore and, consequently, try to adopt alternative sources to investigate visitors' profiling, such as social media or geolocation, which have been identified as efficient management and marketing strategies in the entertainment fields such as festivals, amusement parks and

museums. Gopalakrishna et al. (2019, p. 110) also suggested that future research will likely comprise recording behavioral activities using these types of technologies tracing visitors, as "knowing a customer's entire behavior during the show could enable real-time interventions involving contact and promotional strategies to enhance engagement, and thereby increase loyalty and future purchase behaviors."

Moreover, in the framework of digital transformation, a new hybrid form of fruition combining in-person and online participation is emerging. This is currently exacerbated by COVID-19 sanitary emergency that has triggered a transition from real to virtual that will shape a new era of communication and interaction affecting all kinds of human activities. Trade shows are not an exception, determining an essential rethinking of the business model (Exhibitoronline, 2020). In this transition from real to digital and back, enabling technologies like AI, big-data management and distributed smart systems become essential for the effective exploitation of the huge amount of information that is made available by the internet and related information technologies. Geolocalization, virtual reality and social listening, are only few of the many keywords that are shaping the reality of trade shows allowing to face the challenges risen by the happening of the COVID-19 pandemic. Hence, confirming Itani and Hollebeek (2021), we suggest trade shows' organizers and exhibitors to expanding their service portfolio to include virtual reality-based offerings, as these are predicted to acquire greater importance in many experience-related sectors.

We believe that trade show organizers should boost the interplay between exhibitors and visitors relying on an interplay of social media and social communities, in a way that buyer-supplier interaction can be consolidated and so that visitors are eased in accessing information on future purchases. Moreover, if properly managed, they may help in enhancing brand engagement. In fact, social media trigger the word-of-mouth mechanism, benefiting links among individuals and companies through the expression of reviews and conversations. Also, we encourage exhibition managers to further stimulate social media dialogue and follow-up activities to reach higher audience evaluating the experience online so that behavioral outcomes will result as a consequence of such elaboration (Gopalakrishna et al., 2019). Furthermore, social media constitute a powerful tool to observe and acquire intelligence on visitors, though still under-used in such context. Hence, in our opinion, trade show organizers and exhibitors should gain awareness of the potential of these platforms, as data on target audience as well as on new potential visitors can be extrapolated, advantaging exhibition marketing strategies.

Finally, in our opinion, it would be paramount for trade shows organizers to acquire deeper visitors' profile information by creditably using tracking technologies; in such a way, the intelligence on crowds' movements should be gathered so that trade show areas logistics could be optimized, and *ad hoc* tools can be developed guiding visitors in the flow to strategical nodes. Trade show organizers should take advantage from such technologies as they may exploit crucial exhibition areas, for instance, adapting the prices to the potential profitability of exhibition booths.



## 7. Conclusions

Examining visitors' behavior and preferences is fundamental for trade show organizers and exhibitions managers to acquire an exhaustive perspective on their participation. Due to the COVID-19 pandemic, technological trends are acquiring a broader role in the exhibition industry. Further research is expected to understand the evolvement of the trade show business due to the changes imposed by the pandemics.

Specifically, we agree with Haon *et al.* (2020), who call for exhibitors to consider trade shows strategically, rather than merely as venues for soliciting short-term sales orders. Hence, we suggest further research focusing on the distinct motives that diversify trade show visitors as well as on the differences between exhibitors' and visitors' needs and motivations. In fact, we believe such a deepening would benefit both organizers and exhibitors in devising increasingly customized marketing and business strategies.

As we aimed at providing a picture on the current technological trends that shape visitors' participation at exhibitions, we have noticed that literature on such progression is still quite scant. Hence, we would encourage some elements to develop by future research. While some of these factors would subserve the end-to-end pipeline from pre- to post-show, others would be peculiar to specific phase.

Precisely, in our opinion, social media have a great potential for acquiring data concerning visitors; hence, such information should be explored by further research more in depth, in relation to all the three stages of trade shows. Prior to the show, social media could help gain knowledge on visitors' profiles, considering their motivations and criteria to select an exhibition. At the event itself, social media could reveal in real-time feedback of the experience lived. Finally, after the show, social media could reveal interesting information on visitors' evaluation of the overall experience or of the single exchange held at booths. We then agree with Lacka *et al.* (2020), who suggest further research on social media and, in general, on the Web 2.0 as tools allowing to achieve an active two-way communication. Specifically, we call for research on these themes inherently the exhibitions industry as an important component of trading between business-related firms.

As we pointed out above, the application of visitors' tracking techniques in the industrial trade show context is very limited; thus, as argued by Joppi *et al.* (2018), we suggest future research to conduct exploratory investigations to further exploit this possibility since these techniques also reveal data on exhibition visitors' profiling.

Virtual trade shows have emerged as a technological trend in the industry and have encountered a fast rise in 2020, especially due to the social distancing constraints. Digital exhibitions, for companies that cannot physically participate in trade shows or for the trade shows organizers itself in cases of government bans, offer a solution to keep the business lucrative and to keep developing valuable connections. In fact, virtual trade shows may be exploited due to the potential fosterage of interactivity and connectivity of the actors involved before and after the physical trade fair. So, we consider the analysis of the experience of all the actors involved (beyond visitors) in virtual or dual (in-person and virtual) events to be among the hottest topics of future investigation.

In conclusion, we believe that the pandemic has triggered a breakout toward the shift to digital events that will substantially reshape the trade-show scenario. Hence, we strongly recommend imminent future research to investigate the impact of such outbreak on the trade show industry. Such evolution that has digital and digitalization as protagonists is occurring in all types of events peculiarized by social exchange, from work to conferences and education. It seems, in fact, that prior to the time of COVID-19, digitalization was being slowly introduced in this context. Disposing of digital tools to interact and acquire information in times of lockdown has become essential; as Coeckelbergh claimed "our lives literally depend on them" (Coeckelbergh, 2020, p. 1). This is of extreme relevance in sectors as the trade show industry, pronouncedly characterized by large crowds and interpersonal interaction that, in our opinion, will boost a transition toward a hybrid nature of the events.

## Notes

- 1 The complete research strings are available as Supplementary Material.
- 2 CVPA is described as "the level of significance that visual aesthetics hold for a particular consumer in his/her relationship with products" (Bloch *et al.*, 2017, p. 242).

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### Further reading

- UFI The Global Association of the Exhibition Industry, Beier, J. (2022), *The Role of Exhibitions in the Marketing Mix*, University of Cooperative Education, Ravensburg.



## Appendix

### Research conducted on 20-04-2022

#### 1,196 results from Scopus for:

(TITLE-ABS-KEY (“trade show\*” AND visitor\*) OR TITLE-ABS-KEY (“trade fair\*” AND visitor\*) OR TITLE-ABS-KEY (“trade show\*” AND effectiveness) OR TITLE-ABS-KEY (“trade fair\*” AND effectiveness) OR TITLE-ABS-KEY (“trade fair\*” AND performance) OR TITLE-ABS-KEY (“trade show\*” AND performance) OR TITLE-ABS-KEY (“trade show\*” AND “social media”) OR TITLE-ABS-KEY (“trade fair\*” AND “social media”) OR TITLE-ABS-KEY (“trade show\*” AND “covid-19”) OR TITLE-ABS-KEY (“trade fair\*” AND “covid-19”) OR TITLE-ABS-KEY (“trade fair\*” AND “digital”) OR TITLE-ABS-KEY (“trade show\*” AND “digital”) OR TITLE-ABS-KEY (events AND “gps-localization”) OR TITLE-ABS-KEY (visitors\* AND profiling) OR TITLE-ABS-KEY (“virtual trade show\*”) OR TITLE-ABS-KEY (“virtual trade fair\*”))

### Research conducted on 02-05-22

#### 2,910 results from Web of Science Core Collection for:

(((((ALL=(“trade show\*” AND visitor\*)) AND ALL=(“trade show\*” AND visitor\*)) OR ALL=(“trade fair\*” AND visitor\*)) OR ALL=(“trade show\*” AND effectiveness)) OR ALL=(“trade fair\*” AND effectiveness)) OR ALL=(“trade show\*” AND performance)) OR ALL=(“trade show\*” AND “social media”)) OR ALL=(“trade fair\*” AND “social media”)) OR ALL=(“trade show\*” AND “covid-19”)) OR ALL=(“trade fair\*” AND “covid-19”)) OR ALL=(“trade fair\*” AND “digital”)) OR ALL=(“trade show\*” AND “digital”)) OR ALL=(events AND “gps-localization”)) OR ALL=(visitors\* AND profiling)) OR ALL=(“virtual trade show\*”) OR ALL=(“virtual trade fair\*”))

#### Corresponding author

**Claudia Bazzani** can be contacted at: [claudia.bazzani@univr.it](mailto:claudia.bazzani@univr.it)