

# **The Evolution of Virtual Trade Shows: A Literature Review from the UK Medical Device Industry**

## **Abstract:**

Conventional medical device trade shows have been held at global geographic locations, serving as a primary marketing mechanism for communicating promotional activities, highlighting industry trends, encouraging collaborations to influence buyer behaviour. The concept and evolution of virtual trade shows as commercial platforms enable the facilitation and collaboration between industry buyers and sellers, virtually anywhere, at any time.

This study firstly offers literary research, discussing and evaluating medical industry perceptions and reactions toward participating in virtual trade shows in contrast to conventional trade shows. Secondly, the study contributes to existing literature through outlining virtual trade show relationships and their value creation.

*Keywords: trade show, technology, medical device*

## 1. Research Gap

Medical device organisations continually face an increasingly dynamic and competitive landscape; requiring flexible, reactive and efficient strategic marketing responses to ensure organisational continuity and survival. Their marketing strategies have needed to carefully consider their decisions pursuant to advancing the objectives of the organisation (Argenti & Barnes, 2009). In this regard, for medical device organisations to achieve their goals and objectives, adjusting their conventional marketing strategies becomes increasingly critical within a dynamic competitive environment (Pearce & Robinson, 1997).

By participating in conventional trade shows offers a significant and powerful marketing tool for medical device organisations to establish and cultivate buyer-seller relationships, (Sharma & Patterson, 1999). Such trade shows offer the opportunity for medical device exhibitors to interact and engage with delegates through direct advertising, promotional activities and direct buyer-seller engagements. Trade shows are, however, considerable marketing investments. They require substantial resource, effort and commitment to compete within an increasingly saturated market.

A progressive annual decline between 2015-20 in United Kingdom (UK) in conventional trade show interest may be attributable to several factors including industry budgetary constraints, workload demands, inaccessible locations or travel limitations (Google, 2020). This decline follows from the 2008-09 decline due to the global economic recession (Gopalakrishna & Lilien, 2012). Compounded with the recently identified COVID-19 viral pandemic, resulting in global event cancellations and postponements for preventative individual infection control through community isolation, travel restrictions, social distancing and practicing of personal aseptic techniques. Both buyers and sellers may be socially isolated or travel restricted, but still likely to have access to both information technology (IT) resources and the internet. This represents an opportunity for medical device organisations to consider substitute marketing strategies for socially isolating buyers. Medical device organisations are constantly looking for alternative cost-effective marketing strategies to promote and champion buyer-seller engagements, which may otherwise be restricted from cancelled or postponed conventional trade shows including expanding online collaborations and virtual trade shows.

This proposed study seeks to establish whether virtual trade shows offer an effective alternative marketing tool to satisfying the strategic marketing and organisational objectives for participating UK medical device organisations.

### *1.1 Research questions*

The research questions for this specific study include:

1. What are the organisational perceptions of participating in conventional trade shows?
2. Would medical device organisations achieve their marketing objectives by participating in virtual trade shows?
3. What factors influence organisations to attend virtual trade shows?

## 2. Introduction

The medical device market is an innovative, heterogeneous and dynamic industrial sector; designing, developing and manufacturing a tremendous variety of healthcare products ranging from single-use surgical masks to cardiac stents and diagnostic imaging devices. The medical device industry is crucial toward developing innovative medical technologies to diagnose, improve and treat illness, (Bayon et al, 2016). Medical devices are classified into general, in-vitro and active/implantable devices and further sub-categorised into four classes (I, IIa, IIb, and III) depending on application, usage and inherent risk (MHRA, 2016).

According to the Office of National Statistics (ONS), the UK public sector expenditure in 2019 on healthcare was £152.9 Billion GBP. This compares with 2000 when UK annual expenditure was an £50 Billion GBP, doubling to £100 Billion in 2008 in real terms. This represented 5.1% of UK Gross Domestic Product (GDP) in 2000, increasing to 7.2% of GDP in 2019, (ONS, 2020). The medical device industry is an alternative, highly regulated enclosed industrial sector, differing from traditional industrial sectors in terms of marketing and promotional activities due to its own specific features. With end users being medical practitioners and healthcare professionals, end products may be large, scientifically complex, proprietary and unavailable to the general public. The regulation of medical device therapeutic claims, proprietary information and restricted license usage (MHRA, 2016) presents significant marketing strategy challenges.

With intense global competition, medical device organisations exploit a multitude of marketing tools and techniques to become successful. Dekimpe et al, (1997), describes organisations' adoption of trade shows as a significant and powerful marketing tool toward brand promotion, directly affecting and influencing commercial purchasing decisions.

Medical device organisations recognise trade shows as a significant marketing tool, complementing their existing marketing mix and significantly influencing their ability to position and compete in the global market, (Seringhaus & Rosson, 1998). Trade shows serve as a significant and powerful marketing tool, cumulating and cultivating buyer-seller relationships to promote interest and engagements, (Sharma & Patterson, 1999). Campbell and Keller (2003) suggest each attendee has an objective for participating in trade show events; by registering and attending, each attendee seeks to fulfil and satisfy their requirements, having invested time, effort and resources in order to attend. Recently, the concept of virtual trade shows has emerged following the development of e-commerce and advancing information technology. Virtual trade shows are defined as online business platforms offering sponsoring and exhibiting medical device organisations the opportunity to engage with targeted attendees and present their business, products and services. Such organisations advertise within a virtual trade show platform and engage with participating attendees, registering interest and engagements in addition to offering professional guidance and direction toward their commercial websites.

These virtual trade shows offer sponsoring medical device organisations and attending delegates the opportunity to connect virtually on a single business platform together at any time and from any location. Similar to conventional trade shows, attending delegates can participate in virtual workshops, guest lectures, chatrooms and attend conference halls to interact with sponsoring organisations. Consumer engagements and interactions with medical device sponsors are provisioned virtually without direct physical human connection with interactions comprising text, data, audio and visual exchanges. Previous literature research has suggested the evolution of virtual trade shows offer a supportive commercial marketing

function, extending buyer-seller self-interest and fulfilment of their individual requirements at trade shows. Empirical studies offered from Breiter and Milman (2006) have shown consumer interest, participation and engagement are not confined to conventional trade shows and direct commercial engagements. Likewise, Gottlieb and Bianchi (2017) describe buyer-seller interactions as advancing alongside developing technologies, extending into virtual industrial communities alongside mobile, social networking and virtual forums. This implies buyer-seller relationships are dynamic, with interactions having the potential to evolve with developing technologies.

### *2.1 Research objectives*

The research objectives for this specific study are threefold; firstly, to determine the effectiveness of conventional trade shows as an element of the marketing mix. Secondly, to compare the constraints, limitations and success factors between conventional and virtual trade shows. Finally, determine and discuss factors influencing medical device organisations decisions to participate in virtual trade shows.

## **3. Literature Review**

### *3.1 What are the organisational perceptions of participating in conventional trade shows?*

The UK National Healthcare Service (NHS) is widely regarded as a traditional public healthcare provider and a prized status symbol, with the UK government supporting healthcare manufacturers for the provision of medical, clinical, diagnostic and surgical products and services. Medical device organisations have sought to establish and develop transnational networks, partnerships and relationships on a multitude of levels including formal, informal, integrative, and sub-contracting engagements. These new cooperative relationship building strategies between medical device organisations, consumers and governments have started replacing ad hoc engagements, (Nanay, 2013). Existing literature has recognised the importance, application and effectiveness of organisations' engagement efforts, particularly toward marketing and participating within trade shows as an effective communication medium, (Gottlieb & Bianchi, 2017). Previous literature research toward medical device trade show attendances addresses communications, (Bayon et al, 2016), (Argenti & Barnes, 2009), (Gottlieb & Bianchi, 2017); motivation, (Godar & O'Connor, 2001); delegate behaviour (Money et al, 2011), ( Breiter & Milman 2007); and performance, (Ling-Yee, 2007).

A substantial body of research have explored the determinants and dimensions of the delegate decision making process for attending trade shows and their underlying motivations (Lee, Dewald and Yeung, 2010). Empirical studies ultimately suggest primary motivational factors for delegates attending trade shows are for information research and market investigation, (Lee, Dewald and Yeung, 2010). Contrastingly, earlier observed motivational factors explored by Mair consider personal and professional development, networking, relationship building and keeping up with industry trends as key characteristics of trade show delegates, (Breiter & Milman, 2006). There are numerous key success factors of conventional trade shows compared to alternative promotional activities for both attending exhibitors and delegates. Trade shows target audiences with resultant direct sales opportunities, in addition to offering lead generation potential for medical device exhibitors. Participating in trade

shows offers exhibitors the opportunity for immediate buyer engagement and seller follow up, free of interruption or delay and cumulating specialist input.

Trade shows encourage practical experiences for delegates, inviting participation in demonstrations, social interaction and supported with a high ratio of buyer:seller exposure, (Kellezi, 2014). In addition, the locality of a trade show at a specific geographic location may harmonise with a local exhibitor, having regional offices within the vicinity may further encourage delegate engagement and site visitation, (Han & Verma, 2014).

By distinction, the drawbacks of conventional trade shows consider substantial exhibitor investment, time and resource commitment are required. An estimated £40 Billion GBP is invested annually by exhibitors attending over 1.3 million conferences and events hosted in the UK, (Booker, 2020). Competing medical device exhibitors may experience direct competition for trade show delegate engagements. Delegates perception of quality and offering between competing display stands may seek to differentiate exhibitor superiority.

Delegates perceiving an exhibitors' display stand as inferior may tarnish that organisation's reputation and brand, (Bello, 1992). Conventional trade shows attract a wide variety of delegates, potentially attracting an audience unsuitable for exhibitors. Local events may compete and attract target audiences away from trade shows, outside of exhibitor influence. Medical device exhibitors may be unsuccessful in attracting qualified delegates to display stands, irrespective of quality, size and offering if the target audience is limited. This may negatively impact buyer:seller trade show engagements, attracting higher financial costs, offer limited return on investment (ROI) and challenge future exhibitor resource commitment.

This supports the previous research by Cop and Kara (2014) concluding that high trade show participation fees and an unfavourable location are the largest contributors to low delegate attendance within the medical device industry.

### *3.2 Would medical device organisations achieve their marketing objectives by participating in virtual trade shows?*

Contrary to popular perception, online communication and virtual meetings are widely prevalent, powerful and vital for organisational survival, (Han & Verma, 2014), and extend to nearly all elements of an organisation's marketing tools. Conventional trade shows, by contrast, typically retain a traditional format but take advantage of developments in technologies by offering additional channels of communication to support strategic marketing and promotional activities. This was further explored by Lee and Carter (2012, page 377), stating "trade shows are one of the most effective ways of understanding international competition and keeping abreast of technologies and new trends".

Developing technologies continue to influence current marketing activities (Yesawich, 2000), supporting conventional trade shows with the application of email, online registration, and live virtual customer service support. Technology continues to support trade show and exhibitors' marketing capabilities by capturing registrant's data, professional specialism, commercial interest and social media profiles, thereby enabling exhibitors to offer bespoke advertising to further engage with prospects and consumers. Developing technologies have become more accessible, affordable, and interactive; offering greater features and functionalities to further connect and enhance user experiences, (Klaus & Maklan, 2013).

Virtual trade shows are built on an online platform as an extension of virtual marketing activities, employed by organisations to compete in the current marketplace, (Talukder & Yeow, 2006). These existing technologies offer a foundation and framework to support virtual collaborations. Current technologies deployed at conventional trade shows

including wireless internet capability (“wifi”), virtual reality simulations, touch screen audio-visual displays and near field communications (“NFC”). This supports the evaluations of Chiou, Hsieh and Shen (2007) examining the application of developing technologies toward trade show strategy and demonstrating there is no measurable impact on trade show performance.

A virtual medical device trade show may include a live online exhibition hall, workshops, and chatrooms, permitting users access to select areas with specific permissions, (Remolar et al, 2015). A conventional medical device trade show format by contrast would not be practicable to replicate in a virtual trade show framework as highlighted by Chaffey (2010), with conventional medical device trade shows showcasing physical medical products or sensitive scientific technology, inapplicable to offer in a virtual environment.

### *3.3 What factors influence organisations to attend virtual trade shows?*

As medical device organisations are acutely aware- participating in trade shows is one step in the long decision-making process of procurement (Bello, 1992). They remain optimistic of virtual trade show potential as a sales-generating tool. Medical device organisations offering capabilities to participate in virtual engagements following direct investment and implementation of new marketing activities would thereby create a defined competitive advantage, (Martínez-López, 2013). Many medical device organisations have experienced a cross-over between information and marketing technologies, already possessing existing telecommunications, information technology and near-field communications enabling medical device suppliers to almost seamlessly deploy and enhance their presence in virtual marketing engagements. Medical device organisations who previously resisted technology adoption, are under resourced, or have misaligned marketing and organisational strategies may be disadvantaged and challenged to respond effectively to consumer interest and requirements. Ultimately, this could influence and potentially detract consumer engagement, create dissatisfaction and remove brand loyalty, (Kaufmann, 2014).

By improving communication, promotional engagement activities and marketing strategies, medical device organisations could build stronger and more resilient interdepartmental relationships between both strategic management and marketing teams to develop competitive advantages from a combination of developing technological and marketing capabilities, (Yadav & Pavlou, 2014). This offers a distinct advantage for medical device organisations to participate in virtual trade shows over conventional trade shows, empowering both international exhibitors and delegates the opportunity to overcome language barriers and enable convenient conversations with the assistance of translation technology services.

Virtual trade shows offer the provision of education services and prompt access to Subject Matter Experts (SMEs), which may not be available at conventional trade shows or in immediate follow up buyer discussions. Similarly, the provision of delegate Key Performance Indicators (KPIs) and engagement reporting metrics by medical device organisations have presented as challenges at trade shows. Typically, limited delegate registration data is captured at conventional trade shows, however with virtual trade shows, considerable delegate information is captured and stored online including workshop attendances, chatroom conversations, promotional material tracking and sharing. Gottlieb and Bianchi (2017) support establishing KPIs for brand development is critical in virtual engagements for brand generation, promoting awareness toward developing organisational creditability and trust.

The cost savings of participating in virtual trade shows in comparison to conventional trade shows is significant and measurable. In addition to conventional trade show sponsorship and registration costs, including booth rental, event staffing and promotional material

generation, consideration for additional cost savings toward staff/visitor travel, accommodation and sustenance expenses should also be included. As conventional international trade show locations attract global medical device organisations to participate and exhibit, the high associated travel and accommodation costs may prohibit organisations from extending trade show attendance to prospective visitors and SMEs, (Santos and Mendonça, 2014). This may result in removed specialist staff resources from the trade show and their absence to participate, engage and support buyer-seller discussions. Virtual trade shows offer the capability to support prospective visitors and SME engagements from any time zone or location without associated travel/accommodation costs. Attending SMEs may strategically align and support both marketing and organisational objectives to enhance buyer:seller discussions, gather market intelligence and offer professional education services.

The attendance of a third-party specialist or SME to a trade show can introduce a degree of independence for buyers, creating a perceived segway between buyers and sellers, (Santos & Mendonça, 2014). This helps build trust between buyer and seller, with mediating SMEs perceived as independent, trustworthy and creditable, offering professional guidance and direction to potential buyers as opposed to sales focussed organisational representatives.

Conversely, the main challenges and constraints of medical device organisations participating in virtual trade shows may include difficulty in determining the effectiveness of interactions between delegates and exhibitors. Communication misinterpretation, technological challenges, and lack of social interaction may confound the effectiveness of virtual trade show interactions in addition to the potential threat of online intruders. Poor social etiquette, miscommunication, vulgarity and unprofessionalism may also occur in an online social environment. Virtual moderators may be required to regulate content and discussions, thereby modifying discussions and limit the full capacity of developing open virtual relationships.

Another constraint of international virtual trade show participation, as suggested by Kaushik and Rahman, (2015), is the technological capability, adequate IT resources, internet access, and sufficient bandwidth required to support online attendance, particularly in developing international regions. This is further compounded with virtual trade show required minimum IT standards for data transmission and system stability. System administrators may be required to offer online assistance, direction and user coaching. These constraints could challenge and limit delegate-exhibitor contact time, challenge participation and disrupt discussions.

The creation of a positive virtual trade show buyer experience, supported with effective marketing, encourages buyer participation and opens dialect between buyer and seller, adding value to the virtual experience, (Sheng & Zolfagharian, 2014). Ultimately, the creation of a positive experience along the sales cycle that exceeds buyer expectations creates consumer satisfaction, promotes brand loyalty, and drives profitability.

#### **4. Conclusion**

Conventional trade shows offer a significant and powerful marketing tool for organisations to establish and cultivate buyer-seller relationships, interacting with attendees through direct advertising, promotional activities and buyer-seller engagements. Conventional trade shows are expensive and require substantial resource, effort and commitment for a potentially uncertain return on investment. Medical device organisations are constantly

looking for alternative cost-effective marketing strategies to promote and champion buyer:seller engagements beyond conventional trade show attendances.

By contrast, virtual trade shows are built as an extension of online marketing activities, constructed from a framework of conventional trade show offering, (Argenti & Barnes, 2009). Equivalent existing technologies deployed at conventional trade shows parallel technologies offered in virtual trade shows and online business platforms, (Martínez-López, 2013). Medical device organisations adopting existing technologies and resources could seamlessly transition and participate in virtual trade shows, extending their online consumer collaborations. By participating in virtual trade shows, medical device organisations could demonstrate enhanced consumer engagements, promote consumer satisfaction and drive brand loyalty, (Kaufmann, 2014).

The main drivers for medical device organisations participating in virtual trade shows following literary research suggest expanding market access, increasing sales revenue, higher return on investment, and promotion of brand loyalty are leading contributors. By improving communication, promotional engagement activities and marketing strategies, medical device organisations could build stronger and more resilient interdepartmental relationships between both strategic management and marketing teams to develop competitive advantages from a combination of developing technological and marketing capabilities. Significant cost-savings, immediate access to SMEs and technological effectiveness are identified as the main advantages of virtual trade shows in comparison to conventional trade shows. Detailed literature research findings suggest international technological access, reliable ROI measures, and difficulty in assessing virtual trade show key performance indicators challenges present the main constraints of virtual trade shows.

Strategically, the advantages and sustainability of virtual trade shows may not be fully utilised and challenged by medical device organisations if cost advantages, capabilities and industry direction are not recognised. The healthcare industry is invited to further explore virtual trade show capabilities, features and functionalities as an innovative concept toward future trade show direction.

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