

Aluminium booth systems use in Thailand's exhibition industry in context of management ecologization

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Abstract. This research explores the challenges and opportunities of using Standard Aluminum Booth Systems in Thailand's exhibition industry. While these modular systems are valued for their ease of use, cost-effectiveness, and reusability, exhibitors face key challenges such as limited design flexibility and difficulties integrating advanced technologies. Through in-depth interviews with 23 stakeholders, including exhibitors, event organizers, and booth contractors—this study identifies critical factors influencing the adoption of these systems, framed by the Unified Theory of Acceptance and Use of Technology (UTAUT2). The findings highlight exhibitors' appreciation for the modularity and portability of aluminum booths but reveal dissatisfaction with their lack of distinctiveness in competitive environments. Additionally, exhibitors increasingly demand customizable layouts, integrated smart technologies, and sustainable materials to align with evolving industry needs. The growing emphasis on sustainability is also evident, with a focus on eco-friendly solutions to reduce waste in booth construction. The research offers practical recommendations for stakeholders to enhance booth designs by incorporating advanced technologies, expanding customization options, and improving sustainability. These insights contribute to optimizing aluminum booth systems to meet the changing needs of exhibitors and align with global exhibition trends.

1 Introduction

The exhibition industry in Thailand has a long and significant history, playing a pivotal role in promoting trade, commerce, and cultural exchange. Since the first exhibitions in 1882, the country has continued to develop this platform, providing businesses with vital opportunities to showcase their products, engage with customers, and foster international trade relations (Department of International Trade Promotion, 2017). In recent years, Thailand has become a leading hub for regional and global exhibitions, hosting events that attract thousands of exhibitors and visitors alike. A prime example is the 44th Bangkok International Motor Show in 2023, which captured widespread public attention and underscored the critical role exhibitions play in driving sales and brand promotion.

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Within the exhibition industry, Standard Aluminum Booth Systems serve as the primary physical platform where businesses can present their products and engage with potential clients. Among these, the Standard Aluminum Booth System has emerged as a popular choice due to its versatility, ease of installation, and cost-effectiveness. These modular systems, often composed of lightweight yet durable aluminum profiles, are highly customizable, allowing exhibitors to adapt their booths to different exhibition spaces and presentation needs. This has made them particularly attractive to exhibitors participating in multiple trade shows annually.

Most business operators or exhibitors have good technology literacy and resources, but contexts may lead to different technology adoption with different conditions and business conditions.

The global exhibition industry continues to grow, with its market value expected to reach USD 50.01 billion by 2027. Thailand is no exception to this trend, with its exhibition sector expanding rapidly in response to the increasing demand for flexible and cost-effective booth solutions. Both domestic and international manufacturers, such as Adlite Co. and Octanorm Southeast Asia, provide exhibitors with a variety of aluminum booth systems tailored to meet the specific needs of various industries. However, despite its advantages, the Standard Aluminum Booth System faces several challenges, including the potential lack of uniqueness in frequently reused configurations and limitations in outdoor or heavy-duty events.

This research explores the challenges and opportunities of the Standard Aluminum Booth System in Thailand's exhibition industry. While these systems offer flexibility and reusability, exhibitors face obstacles that may impact their effectiveness. The study also examines how technological advancements and customization can enhance booth appeal and functionality. As Thailand's exhibition industry grows, exhibitors and organizers must adapt to evolving demands in sustainability and cost efficiency. This study will provide insights into maximizing the benefits of aluminum booth systems, addressing limitations, and offering practical recommendations for informed decision-making in future exhibitions.

1.1 Research questions

- 1) What are the key challenges exhibitors face when using Standard Aluminum Booth Systems in exhibitions across Thailand, and how do these challenges impact their overall exhibition experience?
- 2) What opportunities exist for enhancing the design and functionality of Standard Aluminum Booth Systems to better meet the evolving needs of exhibitors in Thailand's exhibition industry?
- 3) How can technological advancements and sustainable practices be integrated into Standard Aluminum Booth Systems to improve their effectiveness and appeal to exhibitors?

1.2 Research objectives

- 1) To investigate the challenges exhibitors face when using Standard Aluminum Booth Systems in exhibitions in Thailand.
- 2) To identify opportunities for innovation in the design and functionality of Standard Aluminum Booth Systems.

1.3 Significance of the research

This research is significant for several key reasons. First, it addresses a critical aspect of the exhibition industry in Thailand - booth systems - that play a vital role in how exhibitors

present their products and services. The study specifically focuses on the challenges and opportunities of using Standard Aluminum Booth Systems, which are widely used for their flexibility, cost-effectiveness, and ease of setup. By identifying the pain points and limitations that exhibitors face, this research can provide valuable insights for both local and international exhibitors, as well as event organizers, to improve their overall exhibition experience. Furthermore, it offers practical recommendations that can assist manufacturers and service providers in developing more innovative and customized booth systems to meet the evolving needs of industry.

The findings will also be of significance to policymakers and stakeholders within Thailand's growing exhibition sector, which is projected to generate significant economic benefits in the coming years. By exploring how booth systems can become more sustainable and environmentally friendly, the research aligns with global trends toward reducing waste and enhancing the sustainability of business operations. This could influence the adoption of more eco-friendly practices, contributing to Thailand's reputation as a responsible and forward-thinking player in the global exhibition industry.

1.4 Generalization of research

The insights gained from this research can be generalized to similar contexts beyond Thailand, particularly in regions where exhibitions are a key part of business-to-business (B2B) and business-to-consumer (B2C) interactions. The challenges and opportunities of using Standard Aluminum Booth Systems, such as ease of transport, customization options, and environmental impact, are not unique to Thailand but are relevant to exhibitors globally. Moreover, as technological advancements continue to transform how exhibitions are conducted, this research can provide a framework for exhibitors and organizers in other countries to optimize their booth systems, integrate new technologies, and implement sustainable practices.

By examining both the limitations and potential improvements of these systems, this research provides a foundation for future studies in other markets where modular and customizable booth systems are in demand. The principles of flexibility, reusability, and customization identified in this study can apply broadly to various types of exhibitions, making the findings applicable to a wide range of industries and countries. Thus, the research contributes to a broader understanding of how to enhance exhibition infrastructure and performance in an increasingly competitive and sustainability-conscious global market.

2 Literature reviews

Thailand's exhibition industry is categorized into various types, each serving distinct purposes and audiences. General trade shows, for instance, showcase a wide range of products from different countries, acting as a global platform for businesses to explore international trade opportunities and engage with a diverse set of participants, including buyers, suppliers, and industry experts.

These events are key to global commerce. Industry-specific exhibitions, focusing on sectors such as automotive, technology, or healthcare, provide businesses with targeted opportunities to showcase innovations, network with industry leaders, observe competitors, and stay updated on advancements and trends. Additionally, single-country or company-specific exhibitions concentrate on promoting a specific brand, country, or organization, emphasizing national industries or company strengths [1-12].

In Thailand's exhibition industry, the Standard Aluminum Booth System is extensively utilized due to its adaptability and affordability. Suppliers such as Adlite Co. offer customizable solutions tailored to different industries, while imported systems from

Octanorm Southeast Asia provide high-quality, flexible booth options for large international exhibitions. The system's versatility makes it a preferred choice for many exhibitors, particularly in major convention venues in Bangkok. However, frequent reuse of modular designs without significant customization can lead to a lack of uniqueness, reducing the visual impact at successive events. Additionally, while aluminum is durable, its lightweight materials may not be suitable for outdoor or heavy-duty exhibitions that require more robust structures.

Other exhibition formats include consumer fairs, which allow businesses to directly engage with the public and receive immediate feedback. Virtual exhibitions are becoming more popular, as they leverage technology to enable global participation without geographical constraints, increasing accessibility for businesses and attendees. Trade-only exhibitions cater exclusively to industry professionals, promoting B2B relationships and networking opportunities within specialized fields. These flexible platforms offer companies the ability to achieve a wide range of strategic objectives, from product sales and launches to gaining media attention and expanding professional networks [13-18].

The primary goals for businesses participating in exhibitions include selling products, introducing new offerings, gaining exposure in the media, observing competitors, staying updated on industry developments, and expanding their networks. Exhibitions are critical for businesses to engage directly with potential customers and understand evolving market trends, helping them foster meaningful business relationships.

2.1 Key stakeholders in Thailand's exhibition industry

1. Exhibitors: Companies or organizations showcasing their products or services.
2. Visitors: Individuals or businesses attending to view or purchase products.
3. Organizers: Entities responsible for planning and executing the exhibition.
4. Service Providers: Entities offering essential support in logistics, catering, and marketing to ensure the success of the event.

These stakeholders work together to create a dynamic environment that promotes business growth and market development. Thailand's exhibition industry has seen rapid growth, with 222 exhibitions held in 2018, and the sector is expected to generate revenue of 100 billion baht by 2025.

2.2 The standard Aluminum Booth System

The Standard Aluminum Booth System is a modular and highly customizable booth structure commonly used in exhibitions and trade shows. Its popularity arises from its adaptability, cost-effectiveness, and ease of use, making it a go-to solution for exhibitors around the world, including in Thailand's vibrant exhibition industry.

2.3 Key Features of the Standard Aluminum Booth System

1. Modular Design: The system is built using anodized aluminum profiles that can be assembled into various configurations. These profiles are lightweight yet durable, making the structure easy to set up and take down without specialized tools or advanced training. The modular nature of the system allows exhibitors to easily adapt the booth to different sizes and layouts. For example, Octanorm, a pioneer in this industry, designed their system to be flexible enough to fit any exhibition space, enhancing exhibitors' ability to optimize booth design according to the venue's dimensions.
2. Durability and Reusability: Aluminum is a durable material that resists corrosion, making it ideal for repeated use in different events without significant wear. This

- reusability makes the system cost-effective over the long term, as exhibitors can use the same booth structure for multiple events. The sustainability aspect is also enhanced by the material's ability to be recycled, reducing waste from single-use booths. The durability of the material also supports complex designs that can withstand regular use.
3. **Customization:** Standard aluminum booths offer significant flexibility in customization. While the core structure is standardized, panels made from materials like PVC, acrylic, or fabric can be added to give each booth a unique appearance. Additionally, accessories such as lighting systems, shelves, and branding graphics can be incorporated into the booth, allowing businesses to customize the presentation according to their specific needs and branding. This modular system makes it easier to maintain a cohesive brand image while also adjusting the design as needed for different exhibitions.
 4. **Environmental Friendliness:** As the exhibition industry has faced increasing pressure to adopt more sustainable practices, aluminum booth systems have gained favor due to their environmentally friendly characteristics. Because they are designed for repeated use, these booths help reduce waste typically associated with exhibitions, where temporary booths are often discarded after one event. Furthermore, aluminum itself is highly recyclable, contributing to a more sustainable exhibition industry.
 5. **Cost-Effectiveness:** The reusability of the aluminum booth system, combined with its lightweight design, offers significant cost savings for exhibitors. These booths are easy to transport and store, reducing the logistical costs of moving the structures between events. Furthermore, since they can be quickly assembled and disassembled, labor costs are also minimized. This makes the aluminum booth system particularly attractive to exhibitors who attend multiple trade shows annually.
 6. **Ease of Setup:** These booths are known for their user-friendliness, with quick assembly and dismantling processes. Their lightweight components make them ideal for frequent exhibitions, especially in urban areas with logistical challenges [19-25].

2.4 The Unified Theory of Acceptance and Use of Technology (UTAUT2)

The Unified Theory of Acceptance and Use of Technology (UTAUT2), developed by [22], provide a framework for understanding the factors that influence the acceptance and use of new technologies. Technology plays a crucial role in the success of the exhibition industry, where exhibitors must continuously invest in advanced technologies to improve their systems, maintain a competitive edge, and stay relevant in a rapidly evolving marketplace. Businesses across all sectors face significant challenges in adapting to technological developments, which are expected to continue impacting industries over the next decade.

UTAUT2 identifies seven key components that influence technology adoption:

1. **Performance Expectancy:** The belief that using technology will enhance efficiency and improve performance. In the case of standard aluminum booths, exhibitors expect that these booths will enhance the professionalism and attractiveness of their displays, helping to draw in more visitors and increase engagement at trade shows.
2. **Expectancy:** The perceived ease of use of technology. Standard aluminum booth systems, such as those from Octanorm, are designed for quick assembly and disassembly, making them easy for exhibitors to set up and use. This reduces the complexity and effort required by the exhibitor. The modular nature of these booths allows for flexible configurations, accommodating various exhibition spaces with minimal effort.
3. **Social Influence:** The degree to which individuals perceive that other, especially peers or industry leaders, expect them to use technology. Exhibitors may adopt standard aluminum booths when they see that their competitors or industry leaders are using them. This social influence can be a driving factor, especially in industries were staying

up to date with the latest trends is critical. Recommendations from well-known industry figures or leading companies using these booths contribute significantly to their adoption.

4. **Facilitating Conditions:** The resources, infrastructure, and support available to help users adopt and use technology. In Thailand, reliable suppliers of standard aluminum booths, such as Adlite Co. and international suppliers like Octanorm Southeast Asia, ensure that exhibitors have access to high-quality materials and support for assembly and logistics. The availability of local distributors and technical support makes these systems highly attractive to exhibitors who need reliable setups in short time frames.
5. **Hedonic Motivation:** The pleasure or enjoyment derived from using technology. Exhibitors often enjoy customization options available with standard aluminum booths, as these booths allow for unique branding and aesthetic configurations. This enhances the overall satisfaction with their use, as the booths can be tailored to fit specific design needs while maintaining professionalism. Customizable features such as LED lighting, panel graphics, and interactive elements help create an engaging booth experience.
6. **Price Value:** The perceived cost-effectiveness of technology. Standard aluminum booths are reusable, durable, and cost-effective for exhibitors, especially for those participating in multiple trade shows annually. The ability to reuse and reconfigure the booths for different events offers significant long-term savings compared to building custom booths for each event. These booths offer high return on investment due to their modularity and ability to fit various trade show layouts, ensuring exhibitors get more value over time.
7. **Habit:** The extent to which using technology becomes part of routine behavior. Exhibitors who frequently use standard aluminum booths may become accustomed to the ease and reliability of these systems, leading to habitual usage over time. This is especially true for businesses that regularly participate in exhibitions, as they often rely on familiar booth systems that they know will meet their needs.

3 Research methodology

This research, titled *Challenges and Opportunities of the Standard Aluminum Booth System in the Exhibition Industry in Thailand*, employs a qualitative research methodology to explore the adoption, challenges, and potential innovations surrounding aluminum booth systems in Thailand's growing exhibition industry. Data will be collected through a combination of in-depth interviews, observations, and document analysis, providing a comprehensive understanding of how aluminum booths are utilized, their advantages, and the challenges faced by industry stakeholders such as exhibitors, event organizers, and booth contractors with over 10 years of experience. A qualitative approach is ideal for investigating complex factors such as customization needs, environmental concerns, and evolving technologies that influence booth system adoption and effectiveness.

This approach allows for in-depth insights into the lived experiences of stakeholders and offers the flexibility needed to explore emergent themes. The study will also generate practical recommendations to improve booth design and functionality, ultimately enhancing exhibitors' strategies.

The study will utilize purposive sampling to select 23 participants directly involved in Bangkok's exhibition industry. This sample size is sufficient for qualitative research, balancing depth of insight with the diversity of perspectives. These participants, who include exhibitors, event organizers, and booth contractors, have significant experience in managing or working with standard aluminum booths, ensuring that the data collected is both relevant and informed. Data will primarily be gathered through semi-structured interviews, with each session lasting 60-90 minutes. The interview guide, based on the Unified Theory of

Acceptance and Use of Technology (UTAUT2), will focus on key themes such as performance expectations, ease of use, customization potential, and facilitating conditions. This guide will be validated by academic experts to ensure it aligns with the research objectives and addresses critical issues relevant to the industry. Observations and document analysis will complement the interviews, offering additional perspectives on booth system usage and industry practices.

The analysis follows Miles and Huberman's (1994) three-step framework. First, data reduction organizes and refines the raw data, focusing on key findings by summarizing and coding the most relevant information. Next, the data display presents the reduced data in thematic categories for clearer interpretation. Finally, conclusion drawing summarizes and verifies key findings to ensure the conclusions are robust and supported by the data. Triangulation will be employed by cross-referencing data from interviews, observations, and secondary sources, confirming the consistency of findings.

4 Results of the study

4.1 The challenges exhibitors face when using Standard Aluminum Booth systems in exhibitions in Thailand

4.1.1 Design and structural limitations

Exhibitors in Thailand face significant challenges with standard aluminum booth systems due to limited design flexibility and structural constraints.

The pre-set structures restrict creativity, making it difficult for exhibitors to incorporate unique or artistic elements that help their booths stand out. This is particularly problematic for industries like luxury goods or high-tech sectors that aim to project a high-end image. Furthermore, the inability of these systems to support heavy or large exhibits is a major drawback for companies showcasing industrial equipment, limiting their presentation options. Additionally, while standard booths are cost-effective at first, customization expenses for elements like lighting and displays can quickly increase, rivaling the costs of more flexible alternatives.

4.1.2 Repetitiveness and maintenance Issues

Another issue with standard aluminum booths is their repetitive design, leading to uniformity across exhibitors and making it difficult to differentiate in a crowded exhibition space. This sameness reduces visitor interest and impacts the booth's ability to attract attention. Maintenance is also a concern, as wear and tear on connectors and panels over time can cause delays or disruptions during setup. Despite the promise of easy setup, damaged parts can lead to last-minute replacements, throwing off an exhibitor's schedule.

4.1.3 Technological and sustainability challenges

Standard aluminum booth systems also struggle with integrating modern technologies and meeting sustainability standards. While aluminum is recyclable, the lack of eco-friendly modifications can be a drawback for companies prioritizing sustainability, as the materials may not fully align with their environmental goals. In terms of technology, the booths often lack the infrastructure to support advanced digital tools like augmented reality (AR), virtual reality (VR), and smart displays. Exhibitors looking to integrate these technologies may face

additional costs and logistical challenges, as the booth systems are not equipped to accommodate the necessary wiring and spatial arrangements.

4.2 The opportunities for innovation in the design and functionality of standard Aluminum Booth Systems

4.2.1 Innovative advancements in standard Aluminum Booth Systems

The design and functionality of Standard Aluminum Booth Systems offer several opportunities for innovation that can significantly enhance booth performance, improve visitor engagement, and address current limitations. Recent advancements in manufacturing technologies and materials have made these enhancements more accessible and affordable. Modular and customizable components, once regarded as premium features, are now produced on a scale, which has drastically reduced costs. This enables exhibitors of all sizes to take advantage of flexible booth designs without incurring excessive expenses. Likewise, the increasing use of eco-friendly materials such as recycled aluminum and sustainable composites has become more cost-effective, making them appeal to companies focused on minimizing their environmental impact.

Additionally, innovations in lightweight alloys and hybrid materials have reduced transportation and labor costs associated with booth setup. Many modern booth systems now incorporate snap-fit and tool-free connection technologies, simplifying assembly and lowering labor expenses. The lighter weight of newer materials also leads to reduced shipping costs, making advanced systems more accessible to smaller businesses or those with budget constraints. On the technology front, the integration of smart features such as built-in lighting, interactive digital displays, and even augmented and virtual reality (AR/VR) experiences is becoming more affordable, thanks to declining costs of digital components. These innovations are no longer exclusive to large corporations; they are now available to a broader range of exhibitors, further driving the evolution of booth systems in the exhibition industry.

4.3 Recommendations for Investing in three types of technology for trade shows to enhance aluminium booth system

4.3.1 Low-Cost, basic technology – purchase for long-term use

For businesses that frequently participate in trade shows, investing in low-cost, basic technology is a cost-effective, long-term strategy. Technologies such as iPads, Tablets, Digital Signage, Sound Systems, and Projectors can enhance booth appeal and functionality while remaining within a reasonable budget. For example, purchasing an iPad at approximately \$600 can yield significant returns after being used in just 3-4 trade show events, eliminating the need for repeated rental fees.

Owning these basic technologies enables businesses to save costs over time, while simultaneously boosting the efficiency and attractiveness of their booth without incurring additional expenses for every event.

The versatility and durability of these devices make them ideal for repeated use across multiple exhibitions.

4.3.2 Mid-Range, advanced technology – invest selectively based on necessity

Mid-range technology, such as Interactive Touch Screens, 3D Printers, and Video Conferencing Solutions, can offer more interactive and immersive experiences. However,

businesses should invest in these technologies only if they are essential for their trade show presence. For instance, if a company frequently demonstrates products that benefit from hands-on interaction, purchasing an Interactive Touch Screen, which typically costs between \$1,000 and \$3,000, may be justified. Conversely, if the need for these technologies is infrequent, renting—typically priced between \$500 and \$2,000 per day—would be more cost-effective. Although this category of technology can significantly differentiate a booth and increase visitor engagement, businesses must evaluate the frequency of use and strategic importance before committing to a purchase.

4.3.3 High-Cost, cutting-edge technology – rent rather than purchase

High-cost, cutting-edge technologies such as LED Video Walls, AR/VR setups, Holographic Displays, and Projection Mapping, often come with substantial upfront and maintenance costs. For instance, renting a high-resolution LED Video Wall can cost between \$2,000 and \$5,000 per day, while AR/VR systems or Holographic Displays can range from \$5,000 to \$10,000 per day. Due to the rapid pace of technological advancements, renting these high-end technologies is generally a more practical solution.

Renting allows exhibitors to use the latest innovations without the financial burden of ownership, ongoing maintenance, or upgrades. Moreover, renting eliminates the complexities associated with transportation, setup, and operation, ensuring that businesses can make a strong impact at their trade shows without long-term financial commitments.

4.4 Sustainability and smart technologies as key innovation drivers

Sustainability is becoming an increasingly important focus in the design of exhibition systems. Booths made from recycled aluminum or other sustainable materials have the potential to meet the growing demand for environmentally responsible solutions. These booth systems can be designed for easy disassembly and reuse, thereby reducing the environmental footprint of exhibitions. Manufacturers can further address sustainability by creating lighter, more durable booth systems that can be reconfigured for various events, catering to businesses aiming to minimize their ecological impact.

Incorporating smart technologies also presents exciting opportunities for innovation in booth functionality. Features such as built-in lighting, digital displays, and interactive touchscreens can elevate the overall effectiveness of booths. Pre-wired setups could simplify the installation of audiovisual equipment, while interactive displays enhance visitor engagement. Furthermore, AR and VR technologies can be integrated into booth designs, offering exhibitors the ability to create immersive experiences without the need for large physical spaces. These innovations not only improve the functionality of exhibition booths but also contribute to a more dynamic and engaging visitor experience.

5 Discussion of research findings

The findings from this research on the challenges and opportunities associated with the use of Standard Aluminum Booth Systems in Thailand's exhibition industry provide valuable insights into how exhibitors and event organizers interact with these systems. Several key themes emerged from the analysis, highlighting the pivotal role booth systems play in enhancing exhibition experiences, as well as the factors that influence their adoption, optimization, and potential for innovation.

The primary challenges exhibitors face when utilizing Standard Aluminum Booth Systems is the perceived lack of uniqueness in booth design, particularly when the same

configurations are reused across multiple exhibitions. This repetitive use can reduce the booth's visual impact, which is crucial in exhibition environments where differentiation is key to attracting attention. As [19] notes, while modular systems offer flexibility, exhibitors report that achieving visually distinctive booths with aluminum systems often requires substantial customization. This additional customization not only increases costs but also adds complexity, making it challenging for exhibitors who need to balance innovation with budget constraints. These findings align with [22], who suggest that exhibitors prefer booths that stand out in competitive environments, yet often find themselves constrained by the modular nature of aluminum systems. Furthermore, exhibitors encounter technical limitations with aluminum booths, especially for outdoor exhibitions or events requiring heavy-duty structures. Although aluminum is valued for being lightweight and durable, it is not always suitable for exhibitions that demand more robust materials to support heavier displays or withstand adverse environmental conditions. This issue is particularly prevalent in industries such as construction or machinery, where product weight and structural demands exceed the capacities of standard aluminum booth systems. As a result, exhibitors in these sectors may find aluminum booths inadequate, prompting them to seek alternative materials or solutions that better meet their needs.

Despite these challenges, the research identifies significant opportunities for innovation in the design and functionality of Standard Aluminum Booth Systems. One major area of growth is the integration of technology. Exhibitors are increasingly seeking ways to incorporate interactive features like augmented reality (AR) and virtual reality (VR) to create immersive experiences for visitors.

This aligns with [5], who emphasize the growing importance of technology in modern exhibitions.

By integrating advanced display technologies and interactive tools, aluminum booth systems can offer exhibitors greater flexibility in how they present their products and engage with attendees. Such technological enhancements not only elevate visitor experiences but also help exhibitors differentiate their booths in increasingly competitive environments. Customization also represents a critical avenue for innovation.

While the modular nature of aluminum systems provides some flexibility, exhibitors expressed a desire for more creative control over booth layouts and designs without significantly increasing setup time or costs. This need for adaptable booth solutions is especially relevant for companies that participate in multiple exhibitions throughout the year, as they require the ability to tailor their booth setups to different venues and audiences while maintaining a consistent brand identity. Offering more modular options, such as customizable walls, integrated lighting systems, and tool-free assembly, could significantly enhance exhibitors' ability to create distinct and impactful displays with minimal effort.

Sustainability is an increasingly important consideration for exhibitors and event organizers, particularly considering global efforts to reduce waste and promote environmentally friendly practices in business operations. Standard Aluminum Booth Systems offer considerable advantages in terms of sustainability due to the reusability and recyclability of aluminum.

Exhibitors are becoming more aware of the need to adopt sustainable booth designs that not only reduce waste but also align with broader corporate social responsibility (CSR) goals. This trend reflects the growing emphasis on eco-friendly practices within the exhibition industry, where exhibitors and organizers are actively seeking solutions that minimize environmental impact.

By promoting the sustainability benefits of aluminum systems, manufacturers can cater to the increasing demand for eco-conscious booth designs that resonate with both exhibitors and visitors. Additionally, technological advancements within booth systems are critical to future developments.

[22] suggest that exhibitors are more likely to adopt new technologies if they believe these innovations will enhance their performance. For Standard Aluminum Booth Systems, potential advancements include pre-installed wiring for electrical components, tool-free setup options, and smart booth technologies that allow exhibitors to monitor visitor engagement in real time. These innovations not only streamline booth setup but also provide valuable data that can be used to improve exhibition strategies. Furthermore, the integration of smart technologies reduces labor costs and increases the overall efficiency of booth systems, making them more attractive to exhibitors seeking to optimize both cost and performance.

6 Practical implications for the industry

Booth manufacturers and suppliers can derive significant benefits from the insights provided in this research by addressing the key pain points identified by exhibitors, particularly regarding the need for greater customization and technological integration.

Developing booth systems that are flexible, cost-effective, and easy to assemble will empower exhibitors to create more engaging and distinctive presentations at trade shows while maintaining operational efficiency and reducing costs. Manufacturers can focus on offering modular components that allow exhibitors to easily adapt booth designs without excessive effort or expense, enhancing both the aesthetic appeal and functionality of their setups.

Additionally, event organizers and policymakers can play a crucial role in fostering sustainable practices within the exhibition industry. By promoting the use of eco-friendly booth systems, such as aluminum setups, and providing incentives for exhibitors to adopt sustainable technologies, organizers can actively contribute to the greening of the exhibition sector.

For instance, implementing policies that encourage recycling, energy-efficient lighting, and the use of renewable materials would not only benefit the environment but also align with global sustainability trends. Such initiatives will position the exhibition industry as a leader in corporate social responsibility and attract exhibitors who prioritize sustainability in their business practices.

7 Theoretical implications

The application of the Unified Theory of Acceptance and Use of Technology (UTAUT2) provides valuable insights into the factors influencing exhibitors' adoption and usage behaviors regarding Standard Aluminum Booth Systems in Thailand's exhibition industry. This framework identifies several key determinants that shape decision-making processes, particularly in relation to technological advancements and customization opportunities.

Performance Expectancy: Exhibitors are more likely to adopt advanced aluminum booth systems when they believe these systems will enhance their exhibition experience. This research emphasizes the importance of highlighting performance benefits, such as customizable booth layouts, branding integration, and support for interactive technologies like AR and VR. When exhibitors perceive that these features will improve key outcomes—such as increased brand visibility and visitor engagement—their likelihood of adopting the technology increases. Therefore, manufacturers and suppliers should focus on showcasing the tangible improvements that their booth systems can offer.

Effort Expectancy: Exhibitors are more inclined to use booth systems in future events if they find them easy to use. This has significant implications for manufacturers, who should prioritize simplifying booth assembly through innovations like tool-free installation, pre-

wired systems for technology integration, and lightweight materials for easy transport. Reducing both the physical and cognitive effort required will make the systems more attractive to exhibitors, thus increasing the likelihood of long-term adoption.

Social Influence: The adoption of advanced booth systems is often influenced by industry trends and the practices of leading companies. If prominent exhibitors are using advanced booth systems, others are likely to follow suit. Manufacturers can leverage this trend by targeting influential exhibitors and demonstrating the success of their products in high-profile exhibitions. This creates a ripple effect, encouraging broader adoption across industry.

Facilitating Conditions: Access to local suppliers, such as Adlite Co., and international providers like Octanorm Southeast Asia, ensures that exhibitors in Thailand have the necessary support to adopt and utilize Standard Aluminum Booth Systems. Manufacturers should continue enhancing customer service, offering customization options, and providing robust after-sales support to strengthen facilitating conditions and encourage continued use of these systems.

Hedonic Motivation: Exhibitors derive satisfaction from customizing their booths to reflect their brand identity. Manufacturers can increase this motivation by offering flexible design options and tools, such as user-friendly software for booth design. By making the customization process enjoyable and engaging, exhibitors are more likely to adopt these systems and continue using them in future events.

Price Value: Standard Aluminum Booth Systems are seen as cost-effective due to their durability, reusability, and eco-friendly characteristics. Manufacturers should emphasize these long-term cost savings and use case studies to demonstrate the return on investment that exhibitors can expect. Highlighting the success of other businesses that have adopted aluminum systems will reinforce the value proposition for new and existing customers.

Habit: For exhibitors who frequently participate in trade shows, the repeated use of Standard Aluminum Booth Systems may become habitual. Suppliers can capitalize on this by offering loyalty programs or discounts for repeat customers, encouraging long-term usage. Ensuring a consistently positive experience and maintaining high-quality standards will further reinforce exhibitors' reliance on these systems.

8 Future recommendations

Future research could explore how technological advancements and sustainability initiatives in other countries influence the adoption and optimization of Standard Aluminum Booth Systems. Additionally, there is a need to investigate how these systems can be further adapted for outdoor exhibitions or events requiring more robust, heavy-duty structures. Another promising area of research lies in examining the role of emerging technologies, such as 3D printing or automated booth assembly, and how they can revolutionize booth system design and functionality. This would provide deeper insights into the future direction of booth innovation and offer practical solutions for exhibitors seeking to stay ahead in a rapidly evolving industry.

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