



Finding the future, together

Towards a more sustainable B2B trade show industry in the U.S. and Canada

September 2022

Contents

About the task force	1
How can we continue to create value as an industry?	2
Executive Summary: Why this report and why now?	3
Value and opportunity in the U.S. and Canadian B2B trade show industry	6
The U.S. and Canadian B2B trade show industry: the stakeholder view	8
Material Impacts	
1: Carbon emissions from participant transport	10
2: Carbon emissions from venues	12
3: Carbon emissions from logistics	14
4: Material waste from venues	16
5: Waste from GSC warehouses	20
6: Booth materials	22
Our collective view as a group	26
Creating an action list for change	28
Passing on the baton	30

Assumptions and limitations of this work are outlined on page 2.

References can be accessed in the digital version by moving your cursor over the superscript number.¹

Task force members

Ben Wielgus	Informa
Cathy Griffith	Emerald
Christian Druart	UFI
Courtney Muller	SISO Board Representative
Heather Farley	SISO Board Representative (joined Nov 2020)
Helen Sheppard	RX (joined Nov 2021)
Jyoti Chopra	MGM Resorts (joined 2021)
Katarina Tesarova	Sands
Kevin Bird	Shepard
Mariela McIlwraith	EIC CMP, CMM
Marisa Heller	Freeman (joined July 2020)
Melinda Kendall	Freeman (left June 2020)
Nalan Emre	IMEX (left February 2022)
Nancy Drapeau	CEIR IPC
Rita Ugianskis	SISO Board Representative (left Nov 2020)
Roger Lehner	IMEX (joined February 2022)
Scott Craighead	IAEE (left Aug 2022) CEM
Sheila LeMaster	GES CMP

About the task force

“When it comes to sustainability, what can we achieve together that we can’t achieve alone?”

That was the question that convened our task force of sustainability professionals and other leaders in the global B2B events sector in 2018.

This informal collaboration comprised members from across the industry value chain, particularly event organizers, venues, general service contractors (GSCs), associations and other partners, all committed to solving sustainability challenges that can only be addressed through systemic and coordinated action.

About this report

This report consolidates and simplifies a series of internal research reports into the environmental impacts of the U.S. and Canadian B2B trade show industry. These were commissioned by a cross-industry task force and were conducted by independent impact researchers Little Blue Research with the support of strategic consultants

A Bird’s Eye View (referred to together as LBR). Their insights and evidence were supplemented by industry studies from the Center for Exhibition Industry Research (CEIR) and UFI, the Global Association of the Exhibition Industry. This report is designed to be a transparent overview of the research findings, with a focus on the key material issues.

Principal project founder and funder:



Project co-funders:



Independent researchers:



How can we continue to create value as an industry?

Our global exhibitions industry delivers enormous social and economic benefits. We believe it is an essential engine for connection, knowledge transfer, trade, learning and employment, creating millions of jobs and billions in economic activity. Our activities foster understanding and tolerance while stimulating investment, competition, and innovation. Whole communities rely on our events to help markets function effectively.

As with any industry, we have an environmental impact and there is the need and expectation on us to address it. We have already started but we see an opportunity and a responsibility to do much more.

The pandemic created huge challenges and disruption for the events industry and our customer markets in 2020/21. But, out of this period has also come an increasingly strong conviction that we need to move to a more sustainable, low-carbon economy. As an industry, we must embrace that conviction, whether transitioning to a circular economy, electrifying vehicle fleets, engaging with our audiences' sustainability concerns, or ensuring that we are the responsible employers of the future.

The report was crowdfunded by 14 organizations across the sector. More than 40 stakeholders contributed directly, and it reflects the input of thousands of others who responded to two industry surveys conducted

by CEIR and UFI. Given the COVID-19 headwinds against which we have all had to struggle, we would like to extend our thanks to everyone who made this report possible.

Starting with better understanding

This report allows us to take a better-informed approach to sustainability challenges as we focus on the key issues that can only be addressed through collective industry efforts. It is the output of two years of collaboration between organizations across the exhibitions value chain and the first study to provide a relative estimate of our most material environmental impacts. To do this, we have focused on one of the largest B2B markets in our sector: the U.S. and Canadian trade show industry.

A call to action

Our collective aim is to communicate a clear set of material environmental issues to industry stakeholders, highlight progress, and suggest direction to allow our industry to target future actions more effectively. By providing insight and direction to our whole community, we hope that others will pick up the torch and join us in projects such as the exciting and forward-looking Net Zero Carbon Events Initiative www.netzerocarbonevents.org.

We haven't been able to measure everything, but we believe this captures many of the most important impacts and gives us a sense of relative scale.

Assumptions and limitations

This research project recommends priorities for action based on the ranking and scale of relevant impacts. These, while subjective, have been agreed to by the members of both the task force and the team from Little Blue Research who did much of the work.

This report represents a best practical attempt to gather data and conclusions about the industry, focusing on the 2019 year but with supplementary data from 2020-2021 where it didn't exist in 2019. The impact of the COVID-19 pandemic and the temporary

closure of many venues with a reduction in staff resulted in some unforeseen but inevitable data gaps for all years as staff weren't always available. In some instances, partial estimations were used to fill these.

What is offered here are estimates of environmental impact and there are other relevant factors that could be measured in greater detail and with greater accuracy. The data should not be used to deduce a per-show average as individual shows will differ depending on content, duration, location, and participants.

The task force responses

The responses to the research are the views and recommendations of the individuals in the task force. This panel of industry experts comprises representatives of the 14 organizations from across the B2B trade show sector who have funded and supported this taskforce throughout this project.

Executive Summary: Why this report and why now?

The research set out to evaluate the most material impacts on the environment from the operations of the B2B trade show industry in the U.S. and Canada in order to help guide future efforts and actions as effectively as possible. As one of the largest global trade show markets, its findings provide a basis for considering how to ensure a long-term, sustainable future for the entire global trade show industry.

In part a response to increasing stakeholder expectations around sustainability, the 14 partners who crowdfunded this work intend it to provide expert support for everyone in the industry to build on and accelerate the progress already being made.

By identifying and quantifying the most important environmental impacts, this report creates a foundation of data and knowledge for debate and decision-making, action and monitoring, and knowledge-sharing.

Sustaining a valuable industry

The value of the B2B trade show industry as a dynamic marketplace benefiting visitors, exhibitors, industry stakeholders, and the wider community is undisputed. The U.S. and Canadian industry alone contributed USD 101 billion to the U.S. economy in 2019 and directly supported 400,000 jobs plus many more in ancillary sectors.

As with any activity there are environmental impacts. The task force believes that it is essential to improve these if the industry is to continue to represent a net benefit to society. This will form a vital strand in our industry returning to strength and success after the pandemic, add value to our activities, and ensure our long-term future. Achieving it will demand a collective, industry-wide effort.

What's in the report?

This report presents a summary of the research findings plus responses from the individuals in the task force. It includes examples of good practices and recommendations for the industry's next steps.

Many sector stakeholders are already improving their environmental impact, and some are noted in the report. However, it is clear that stakeholders want to see accelerating change and individual organizations and the sector as a whole can do much more. The report also outlines important considerations for industry leaders including perceived barriers to change and the importance of decision-making early in the show planning process.

The research provides the important insights and data needed to help unify industry efforts behind a shared vision, inspire direct action on a series of identified initiatives, agree to collective commitments and targets, and prioritize efforts and resources to accelerate work being done to create a more sustainable trade show industry in the U.S. and Canada and beyond.

Executive Summary: Why this report and why now?

The key findings

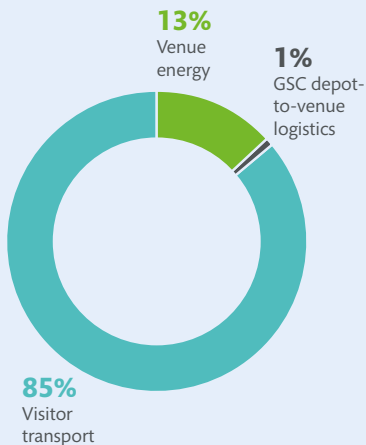
The research identified the three most important environmental impacts of the U.S. and Canadian B2B trade show industry.

Largest impact: Carbon

The largest environmental impact comes from greenhouse gas (GHG) emissions from participant transport, venue energy, and general service contractor (GSC) warehouse-to-venue logistics.

The total measured 2019 emissions for the B2B trade show industry in the U.S. and Canada are estimated at 6.1 million metric tonnes (MT) of GHG, equivalent to the combined annual footprint of 395,000 people in the U.S.¹ or 314,000 people in Canada.²

Figure 1: Breakdown of CO₂e emissions source



Second largest impact: Waste

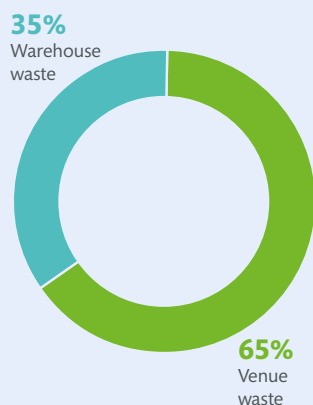
Waste is the second highest environmental impact identified. Primary waste sources were venues (including show floor waste, catering, and other waste generated during shows) and GSC warehouses who supply and build many of the materials and booths at events.

Waste across venues and warehouses in 2019 is estimated at 114,000 MT in total, the majority being municipal solid waste. This is equivalent to the annual footprint of 140,000 people in the U.S.,³ or 161,400 people in Canada,⁴ and equates to a footprint of 5.7lb⁵ per participant.

Venue waste contributed 65% of total waste with 26% of that being recycled. Warehouse waste contributed 35% of the total with a recycling rate here of 42%. Both venues and warehouses achieved a higher recycling rate than the average in the U.S. (24%)⁶ and Canada (21%).⁷

Plastic waste and food waste were also investigated further as these were perceived as significant during stakeholder interviews (see page 17).

Figure 2: Breakdown of source of waste



Third largest impact: Booth construction

Although the most difficult to measure, given the fragmentation of the supply chain and the disruptions of the pandemic, the indications are that booth construction is the third most significant environmental impact, as we recognize that choices here not only contribute to waste (impact 2) but also have impacts on climate change, natural resources, and labor.

The report looks at the differences in booth type and the materials used in walls, ceilings, and floorings as well as their internal fit-out. Although there is significant recycling of many materials, some currently only have limited potential for re-use. That includes carpet which represents the largest proportion of waste material.

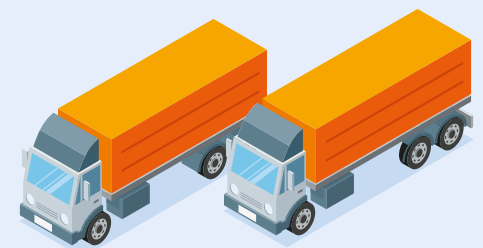
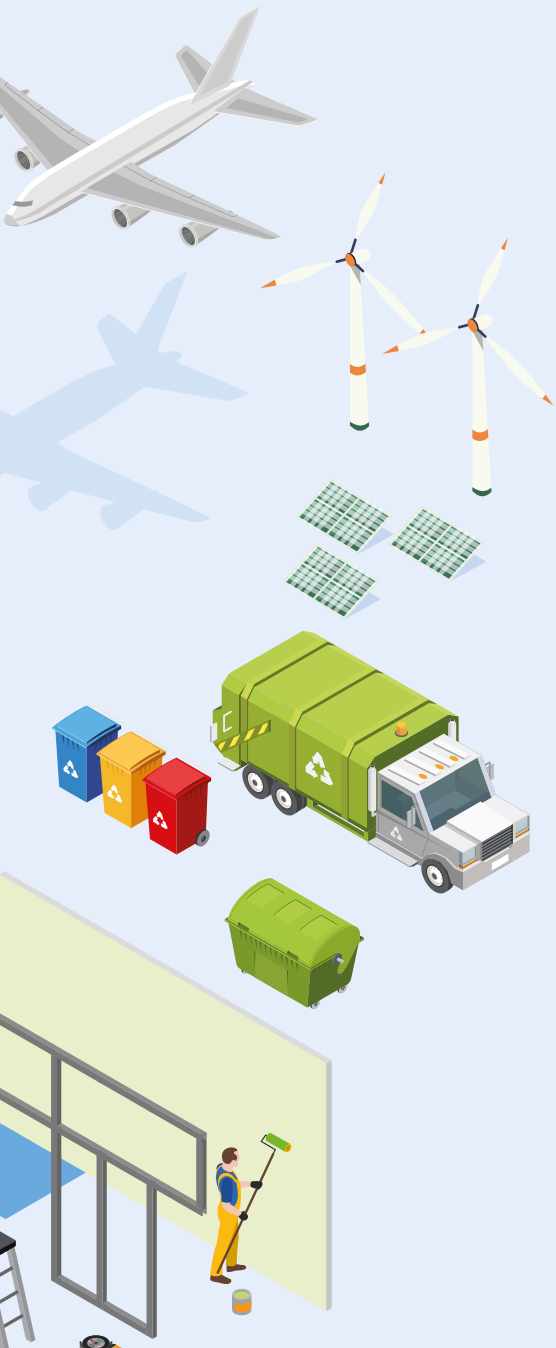
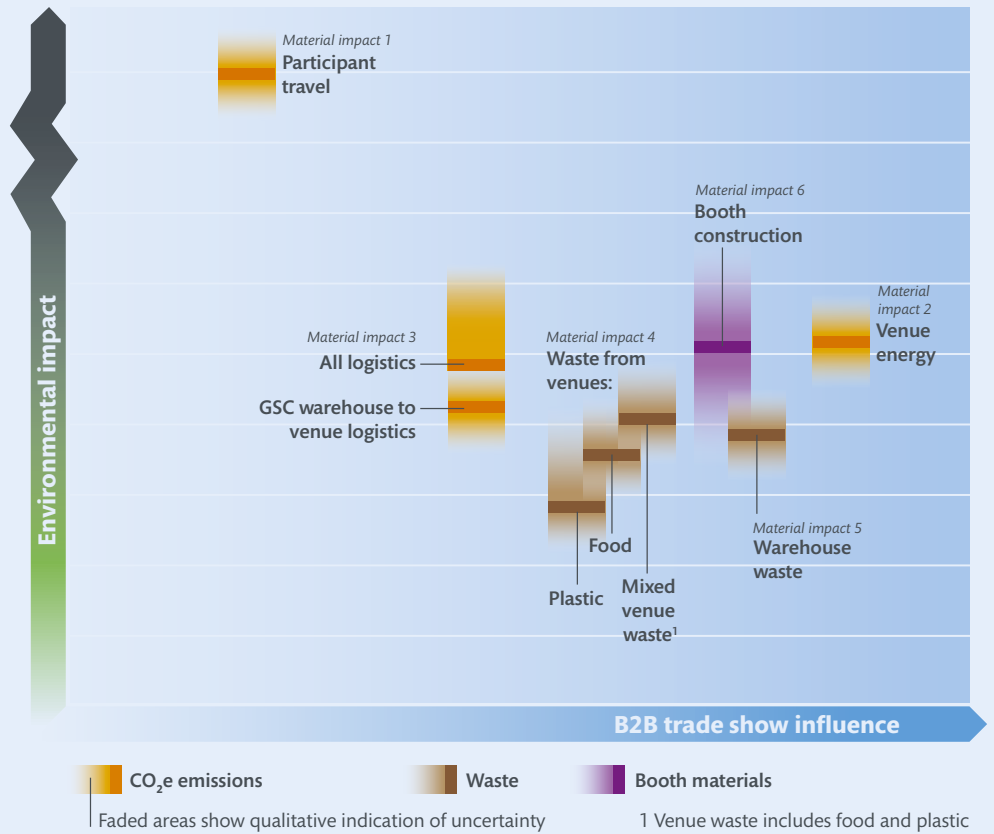


Figure 3: Outputs from assessment of environmental impact

Note: environmental impacts in Figure 3 have been displayed on the same axis, despite having different units. The axes are illustrative and represent the relative magnitude of the environmental impacts measured on the y axis and the industry's influence on the x axis, as ranked by the task force members. The GSC to/from warehouse logistics footprint is limited in scope, as such, an additional arrow showing that a full logistics footprint is expected to be greater than the impact currently measured is included. Venue waste includes food and plastic waste.



What more can we do as an industry?

Now is the time to prepare our industry for the future. To lessen our environmental impact and enhance our value to customers, we are proposing a range of strategic actions for collective, industry-wide discussion, agreement, and implementation.

Our largest impacts emerge throughout the show lifecycle, but many are best managed by considering them before the show even begins. Our recommendations therefore focus on:

- Committing to time-bound targets for net zero carbon and phasing out unsustainable materials
- Investing in infrastructure that supports waste recycling and energy efficiency
- Collaborating to improve the design and material specification of booths and commonly used equipment and materials such as signage, carpeting etc
- Optimizing logistics, saving fuel, time, and money, and reducing air pollution
- Collaborating with host cities and key partner industries, such as airlines and hotels, to transition to a lower-carbon society and reducing waste generated and sent to landfills
- Optimizing industry standards for sustainable design, data, and metrics

You can find more detail on our recommendations on page 29 of this report.

Value and opportunity in the U.S. and Canadian B2B trade show industry

The U.S. and Canadian B2B trade show industry creates many social and economic benefits. This study has helped us understand the corresponding environmental impacts as well as highlighting where the industry is improving those impacts and recommending next steps.

1

Participant transport

- 5.2 million MT CO₂e in 2019 (85% of total measured)
- 120 kg (265 lb) CO₂e per participant
- Equivalent to approximately 4.7 million economy flights from New York City to Los Angeles and back or less than 0.3% of the total U.S. transportation sector emissions

The socio-economic benefits of the industry

- Contributed USD 101 billion to U.S. Gross Domestic Product in 2019
- Supported approximately 400,000 direct jobs (in 2016)⁸
- Connected 45 million people in 2019 in the U.S. and Canada²
- Contributed to host cities' economy and culture
- Facilitates trade, cooperation, innovation, R&D, human interaction
- An efficient way to meet, connect and do business

6

Waste from venues

- 74,500 MT of venue waste was generated by B2B trade shows
- An average of 3.5 lb per participant
- Equivalent to the annual waste produced by 91,800 U.S. citizens
- Combined recycling and composting rate is similar to the U.S. average
- An estimated 51% of waste measured goes to landfill, 10% is combusted and the rest is largely recycled, composted or donated

Food waste

- 14,250 MT – 19% of total venue waste but likely to be mixed in elsewhere too
- Equivalent to an average of 0.67 lb generated per participant
- An estimated 1,000 MT of this excess food was donated, the equivalent of 238,000 meals

- An estimated 67% of waste went to landfill with another 10% going to composting, 11% going to animal feed and 6% being donated

Plastic waste

- Less than 10% of identified venue waste was plastics but likely to be mixed in elsewhere as challenging to measure and segregate out
- An estimated 14% of plastic waste was recycled

- Other research projects¹⁰ conducted by other organizations indicate that B2B trade shows reduce the number of overall flights for participants because the attendee can accomplish multiple goals, and meet many contacts, at one event

Venue energy

- 0.8 million MT CO₂e in 2019 (13% of total measured)
- Equivalent to approximately 358,000 U.S. households' annual energy use
- 75% of the 0.8 million MT CO₂e come from events at hotel/resort venues. Exhibition venues make up the rest

2

Last mile logistics

- Measured from warehouses to venues
- 85,600 MT CO₂e in 2019 (1% of total measured)
- Equivalent to approximately 18,600 passenger vehicles driven for one year
- The measurement of this needs expanding to the whole value chain

3

Waste from GSC warehouses in 2019

- Estimated 39,800 MT of waste
- 42% of that was recycled, compared with a general recycling rate of 24% in the U.S.

4

Booth materials

- 71% of booths in the B2B exhibitions industry in the U.S. and Canada (about 2.2 million) are built from the industry standard, basic pipe and drape
- An estimated 52% of materials by volume used are extensively reused and a further 46% of materials have some limited reuse
- Carpet was estimated to contribute most (17% to 39%) to materials with limited reuse
- Custom booths are the hardest to measure the impacts from due to the enormous variety in construction methods and limited data available during 2020/21. Further data needed to determine impacts here

5

The U.S. and Canadian B2B trade show industry: the stakeholder view

The research project gave us a useful snapshot of how the current trade show industry in the U.S. and Canada is perceived by stakeholders.

An industry with a significant positive economic impact

The U.S. and Canadian B2B trade show industry is a dynamic marketplace creating value for participants, exhibitors, industry stakeholders, and the wider community. In 2019 it contributed USD 101 billion to U.S. Gross Domestic Product (GDP)¹¹ across approximately 10,500¹² shows and, in 2016, supported approximately 400,000 direct jobs.¹³

The need to adapt to changing stakeholder demands

Expectations that the industry will protect and improve the environment are escalating. They come from customers, employees, investors, governments, and the wider public, and industry leaders need to respond by taking more effective action in line with other sectors in the economy.

A valuable role as a travel consolidator

The majority of exhibitors and visitors¹⁴ feel that traveling to a B2B trade show helps save time and money, and effectively reduces their carbon footprint.¹⁵ Successful shows provide a single convening point for accomplishing multiple goals. Industry leaders are already exploring ways to make the convening power of shows in the U.S. and Canada even more efficient, and sustainable.

Concerns about environmental impacts and sustainability

Surveys have shown that, for many stakeholders, the sector's environmental impact is an important issue although it was a reduced priority for some during the recovery from COVID-19 compared with financial or operational issues. The industry certainly needs to display a strong commitment to sustainability and to demonstrate tangible progress.

A challenge for all stakeholders across the value chain

Many stakeholders are convinced that addressing the environmental impact from the industry's activities will help to create a more resilient sector¹⁶. Some feel that organizers and exhibitors have the greater responsibility, but most agree that there is an important role to play for all stakeholders across the value chain.¹⁷

Connecting people in human ways

The pandemic has shown just how vital and effective human connection, in person can be. Tens of millions of attendees want to get back to trade shows and meet vital contacts to replenish relationships and have effective serendipitous meetings.

Opportunities to do better

The sector's current carbon reduction and waste management efforts are perceived as average¹⁸ although many sector stakeholders are doing good work individually. This report shares a few examples including zero waste targets, renewable energy usage, materials efficiency and replacement, food donation programs, carbon offsets and no-foamcore board policies. Exhibitors also believe that the rate of transition could accelerate and efforts to run shows in a more environmentally sustainable way could improve.¹⁹

What the task force set out to do

The independent research by Little Blue Research set out to evaluate the negative and positive effects on the environment from the operations of the B2B trade show industry in the U.S. and Canada. For this purpose, trade shows are defined as business-to-business exhibitions that have an exhibition hall with booths where organizations promote their products to other businesses and professionals rather than consumers. Many also offer education offerings, including conferences, sessions, or workshops and these have been included. The task force group then worked to interpret and add to this.

The methodology

The report findings were developed in three stages over a two-year period from 2020 to 2021.

<i>2 years</i>
<i>14 partners</i>
<i>9 stakeholder groups</i>
<i>30 interviews</i>
<i>6 workshops</i>
<i>100s of survey responses</i>

Phase 1:

Qualitative research involved over 30 interviews with stakeholders from nine different groups to understand their perception of the issues around sustainability, and the results tested in a series of workshops with the task force.

A high-level research assessment then looked at a range of existing studies, standards, sustainability frameworks, and the current approaches adopted by different organizations.

Phase 2:

Data was collected relating to the material environmental impacts identified in phase 1 and an impact measurement evaluation quantified these for the overall industry. Clarifying differences between perceived and actual impacts would help with recommendations for the prioritization and focus of efforts and resources. The methodology for each impact varied.

Phase 3:

Six workshops with the task force members reviewed the evidence and validated the methodology and results at each stage. This iterative process resulted in a set of strategic proposals from individual group members that should enable industry-wide change on the most important environmental impacts. Key gaps in the relevant data essential to decision-making and direct action were identified for further consideration.

Questions were also added to two industry surveys, one conducted by CEIR, one by UFI, to help prioritize potential actions and confirm the importance of environmental sustainability to different stakeholder groups.

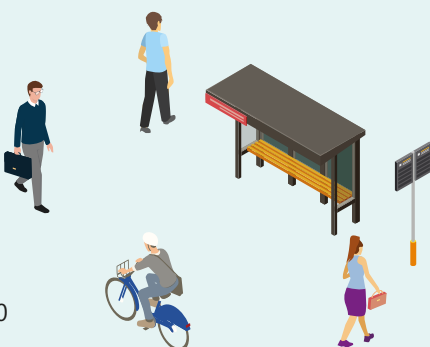
Material Impact 1: Carbon emissions from participant transport



The challenge

The largest identified environmental impact, by a significant margin, was greenhouse gas emissions from travel to events by exhibitors and visitors.

This is estimated as 5.2 million MT CO₂e for 2019, mostly from international and domestic flights. That figure is 85% of the total greenhouse gas (GHG) emissions measured by this study, alongside venue energy usage and 'last mile' logistics from general service contractor (GSC) warehouses to venue. Emissions from flights to B2B trade shows equate to 120 kg (265 lb) CO₂e per participant²⁰ and is equivalent to approximately 4.7 million economy flights from New York City to Los Angeles and back²¹ or under 0.3% of the total U.S. transportation sector emissions in 2019.²²



Estimating travel emissions

The estimated figure is based on return journeys from a central point at the participant's start location to a central point at the event location. The mode of transport assumed is based on distance traveled but is unable to factor in indirect routes and initial and final journeys to and from transport hubs.

The response from the task force

Participant transport is the thing that enables the trade show industry to have the impact it has. The social and economic value of B2B trade shows is premised on the continued provision of transport for exhibitors and visitors. Without them, there are no shows.

Organizers can have some influence on the location of audiences and events, and their method of travel, but ultimately the choice of transport, class, route etc is down to the individual traveler and the transport provider.

From a broader perspective, emerging evidence also supports the long-held belief that, as travel consolidators, B2B trade shows can effectively reduce overall emissions from travel that attendees take across the year. As studies have shown, participants believe that by accomplishing numerous goals in one place rather than traveling to different locations, they save time and money and reduce their annual carbon emissions.²⁴ A pilot 2020 study of 15 events by organizer Informa estimated that they had produced a net saving of around 190,000 flights.²⁵

How is the industry already tackling this?

Encouraging low-carbon travel

Trade show organizer Informa, which has millions of visitors to its events every year, is working on several initiatives that will make it easier for attendees to reduce their own carbon footprint when traveling to events.

This includes offering guidance about sustainable travel options to the event city when registering for events as well as encouraging participants to walking routes from hotels whilst on-site and laying on a shuttle service.





Home



International



Domestic



Local



Venue



Emissions for transport from an individual's home to the city start point location are not included in the estimate.

All travel, international, domestic, and local is included and based on the straight-lined distance between the central location of each city.

Emissions for transport from a city end point location to a specific venue are not included.

Informa is also looking to scale their experience from pilot events that have partnered with European rail companies to provide discounts for attendees to travel by rail to the host cities.

Where travel by air is the only feasible option, they're also testing with dozens of events to find the best ways of selling high-quality carbon offsets, at cost, to attendees as part of the registration process.



What more could we do?



- Many aviation industry operators have committed to the CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation), particularly in North America. Between now and 2050, this will reduce the carbon footprint of travel to events. The events sector could work with attendees and airlines to make it happen much faster and promote use of those airlines where possible.
- Increased collaboration between venues, organizers, hotels, and host cities can drive long-term investment in local and regional public transport, shuttle buses, and active walking and cycling travel routes, to reduce the reliance on private, fossil fuel-based transport.
- High-quality carbon offsetting can compensate for emissions until more sustainable solutions to long distance travel are found.
- There is a role for digital events, alongside or instead of in-person events for those who prefer digital channels. At the same time, the outlook for in-person events remains strong. Many participants will continue to derive real value from their physical presence at a show and host cities appear to gain far more from in-person events which create employment and drive other economic benefits.
- Organizers can work together to increase the role events play in consolidating travel by allowing even more goals to be accomplished at each. This includes better tools for curating and scheduling more meetings on-site and linking together regional and global events.



Future data considerations

- We need to understand how the level of travel consolidation at trade shows compares with the overall footprint.
- By studying and codifying what makes some events better travel consolidators, we can potentially scale and enhance this benefit across the industry.
- A further understanding of the impact of hotel stays on the carbon footprint of event attendance would help round out this data.

Material Impact 2: Carbon emissions from venues



The challenge

At 13% of the total estimated carbon footprint measured in this project, venue energy usage during B2B trade shows is the second largest source of emissions. It is estimated at 0.8 million MT CO₂e in 2019, the approximate equivalent of the annual energy use of 358,000 U.S. households.²⁶

About 75% of the carbon emissions from venue energy use come from events held at hotel/resort venues. Dedicated convention and exhibition venues make up the remaining 25%.²⁷ This is related to the proportion of B2B trade shows held at each of these venue types in the U.S. and Canada.

What was measured?

The estimate covers annual energy emissions across the venue and the venue downtime between shows. It includes the energy used in the facilities used for trade shows within convention centers, hotels, and resorts but seeks to exclude energy associated with the wider facilities such as leisure, retail, casinos, and hotel rooms (see diagram on the top of opposite page).

The response from the task force

The energy use at exhibition venues is arguably one of the most immediately addressable environmental impacts as much of it is under the direct control of events industry participants.

As a short-term solution, some organizers and venues are already agreeing energy management plans during move in/out and throughout events. They include simple measures to optimize the use of lighting, heating, and cooling, such as dialing down usage during low occupancy periods and closing large bay doors when not in use. These plans save money and offer an almost immediate ROI but have to be balanced against safety and wellbeing requirements.

Investment in energy generation, energy-efficient equipment, and renewable energy supplies can help address this part of the carbon footprint very quickly.

How is the industry already tackling this?

On track for 100% renewable electricity

MGM Resorts started its renewable energy journey in 2015 with the opening of a 26-acre, 8.3 MW solar array at Mandalay Bay. The largest contiguous rooftop solar array on any convention center, this provides up to 25% of the venue's electricity needs at peak production.

In 2021, MGM followed it with the MGM Resorts Mega Solar Array in North Las Vegas. With a capacity of 100 MW, it is the hospitality industry's largest, directly sourced renewable electricity project anywhere. It meets up to 90% of the daytime power needs of the company's Las Vegas properties (over 65 million square feet of buildings) or nearly 30% of annual power demand.

To further reduce the carbon footprint for its operations and the thousands of events it hosts, MGM has now committed to cutting its absolute greenhouse gas emissions in half and sourcing 100% renewable electricity in the U.S. (80% globally) by 2030.





Convention centers



Hotels and resorts

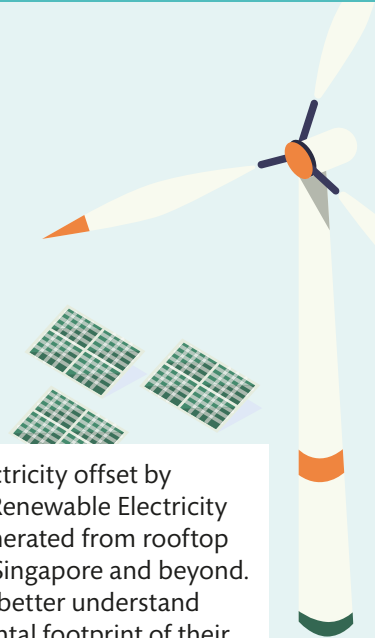


Wider facilities



The scope of the estimate includes annual energy emissions across the venue and the venue downtime between shows. The scope of the estimate includes events held at convention centers, hotels and resorts.

The scope excludes wider facilities and hotel rooms.



Co-investing to save

The Magic Fashion Show, now organized by Informa, and MGM's Mandalay Bay co-funded the replacement of conventional with high-efficiency LED lighting in several exhibition halls. This not only cut MGM's carbon footprint and energy bill but removed the need for Magic to hire in expensive supplementary lighting suitable for displaying clothing ranges.

The application of intelligence

Sustainability challenges are not just a North American issue, they are being tackled by event industry participants around the world. For example, Sands Expo & Convention Centre has adopted resource-efficient, smart building technology to help significantly reduce its energy consumption and carbon footprint.

A USD 36 million intelligent building management system uses thousands of sensors to automatically control utilities such as lighting, heating, and air-conditioning. In addition, a Building Performance & Diagnostics System,

powered by machine learning and artificial intelligence technologies, captures and analyzes building data. Other efficiency measures include 100% energy efficient LED lighting with over 200 motion sensors in meeting rooms. And 98% of its 65 convention center vehicles, including vans, are electric.

Sands Expo is also Singapore's first carbon-neutral MICE venue, with

100% of its electricity offset by investment in Renewable Electricity Certificates generated from rooftop solar arrays in Singapore and beyond. To help clients better understand the environmental footprint of their event, the venue provides Impact Statements on request with detailed information including energy and water consumption.

What more could we do?



- In the mid-term, venues can apply energy-efficiency measures to lighting and air-conditioning and use timers for escalators and other high-energy use equipment.
- Switching to renewable electricity suppliers through initiatives such as Power Purchase Agreements is also far easier for venues than for individual organizers who need to purchase renewable energy certificates or carbon offsets. It can also be far more cost-effective and reduce risk. With suitable energy-efficiency measures, however, and good contracting, that cost should be minimal.
- More substantial investment is required in the long term. This would be in self-generated electricity from renewables and upgrading buildings to higher efficiency ratings with better insulation, solar shading, and energy-efficient mechanical and electrical installations. All these measures should help to control cost and carbon usage while heading towards meeting the industry's net zero commitments.
- Addressing the use of fossil fuels such as natural gas for heating will be more challenging. This may require significant investment in capital at appropriate times, during a venue refit for example.



Future data considerations

This study only considers the energy use at venues. To develop a complete, industry-wide net zero carbon plan, research needs to address energy use elsewhere in the value chain. That would include at GSC warehouses, stand manufacturers, and organizer offices.

I Material Impact 3:

Carbon emissions from logistics

The challenge

Stakeholders identified the logistics of shipping equipment, booths and materials to events as a potentially significant source of carbon emissions. Little Blue Research (LBR) worked with them to estimate the impact.

Given the disruption to the industry during COVID-19, and the number of parties involved in the end-to-end logistics chain, it was decided to focus on the 'last mile' of exhibition logistics from general service contractor (GSC) warehouses to venues and back (if necessary). While only a proportion of total supply chain emissions, this was still felt to be material to the results.

The research estimates the footprint from the 'last mile' logistics in the U.S. and Canada as 85,600 MT CO₂e in 2019. This is equivalent to approximately 18,600 passenger vehicles driven for one year²⁸ and represents about 1.4% of the footprint measured in this study.

What was measured?

The estimate of logistics emissions focuses on those that are most directly controllable by the exhibition industry itself (tier 1 in the diagram in the top right).

At this time, it has not been possible to fully estimate transportation emissions from exhibitors to GSCs due to gaps in data. Therefore the CO₂e footprint reported here should not be considered as an approximation for the industry's carbon impact.

The response from the task force

The carbon footprint from logistics is clearly material. Potentially, it could be the second most impactful carbon footprint from the industry and there is an opportunity for everyone in the industry to do more.

There is an incentive to develop effective solutions and the industry is already making serious progress in this area because the quantity of freight moved is directly tied to cost. The more volume, weight, and distance the exhibitors, GSCs or organizers need to ship materials, the higher the costs incurred from fuel use, labor, and capital impacts.

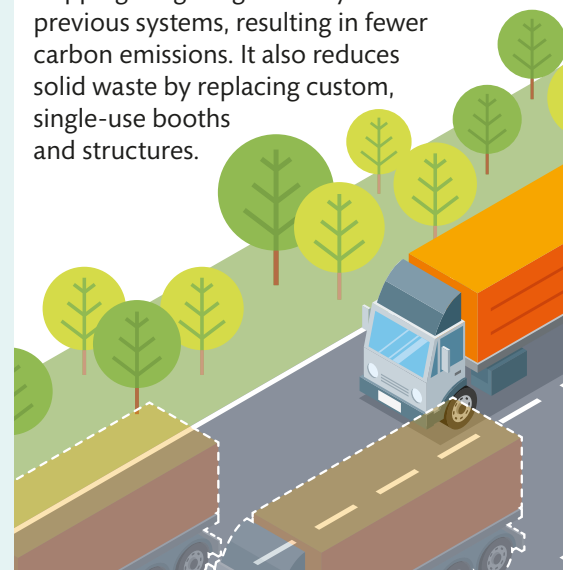
How is the industry already tackling this?

Fewer trucks, lighter loads: How Freeman works to reduce transport emissions

General service contractors like Freeman arrange transportation to and from show sites, primarily in trucks. This produces most of their emissions from fossil fuels.

A thoughtful approach to consolidating and loading trucks can decrease the number on the road, saving fuel, labor, congestion, pollution and associated costs. Even though a heavier vehicle uses more fuel, creating more carbon emissions, we know that it's almost always better for the environment and the bottom line than two lighter ones making the same journey. At the same time, the specifications and weight of products and materials used on-site are a determining factor in shipping decisions and need careful consideration.

Freeman recently launched a modern booth building system, which is flexible, lightweight, and is both reusable and recyclable. The system's high-quality aluminum reduces shipping weight significantly from previous systems, resulting in fewer carbon emissions. It also reduces solid waste by replacing custom, single-use booths and structures.





International logistics transport



Logistics transport to GSC warehouse



GSC warehouse



Venue



Scope excludes tier 3 - all other indirect emissions that occur in a company's value chain further upstream, any international transport.

Scope excludes tier 2 - indirect emissions, transport to GSCs from the supply chain.

Scope includes tier 1 - direct emissions from owned or controlled sources, transport from GSC warehouse to venue.

What more could we do?



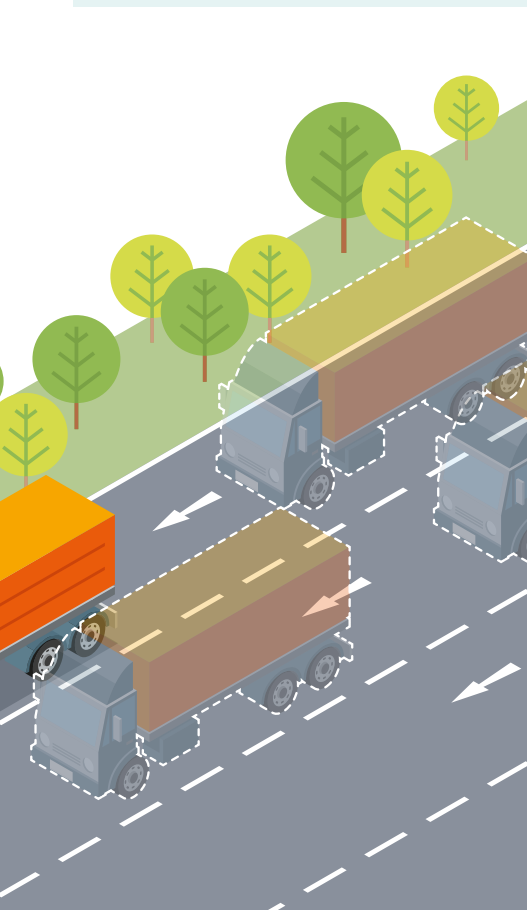
Reducing emissions from the supply chain logistics will involve several key activities on which groups in the industry could feasibly collaborate:

- Investing in low-carbon transport such as electric vehicles when the technology becomes viable. In the meantime, opting for more efficient vehicles and training staff in fuel-efficient driving
- Developing lighter weight, lower volume alternatives to materials such as carpet, chairs, pipe, and drape etc which are regularly shipped to and from GSC warehouses
- Encouraging exhibitors and stand contractors to reduce the materials they bring to site and investing in lightweight reusable stand systems from local suppliers
- Working with venues to seek ways of storing shared resources at venues rather than transporting them back and forth
- Partnering with national programs such as the U.S. EPA's SmartWay as part of an increasingly carbon-efficient logistics chain



Future data considerations

A key priority would be to expand the estimate of logistics emissions to consider those from exhibitors and other elements of the supply chain to the GSC warehouses and/or venues.



Material Impact 4: Material waste from venues



The challenge

Waste is generated before, during and after any trade show. Much of this comes from trash bins on the show floor but a significant volume also comes from packaging materials during set-up and items such as excess promotional materials and samples during breakdown. Disposal is generally the venue's responsibility.

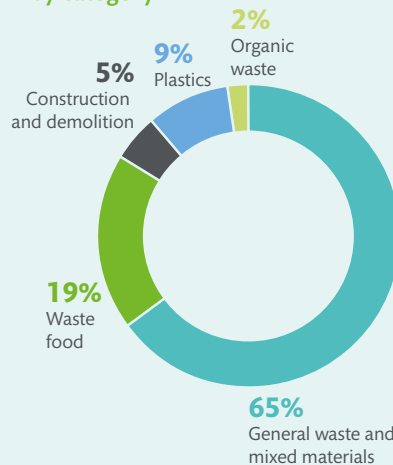
An estimated 74,500 MT of venue waste was generated by B2B trade shows in the U.S. and Canada in 2019. At an average of 3.5 lb per participant,²⁹ this is equivalent to the annual waste produced by 91,800 people in the U.S.,³⁰ or 105,500 people in Canada.³¹ The majority was categorized as general waste and mixed materials (see Figure 5). These findings align with the task force members' assumptions that most waste comes from the show floor.

What was measured?

The estimate includes the waste generated annually in venues during and between shows. It includes convention centers, hotels, and resorts but excludes wider facilities and hotel rooms.

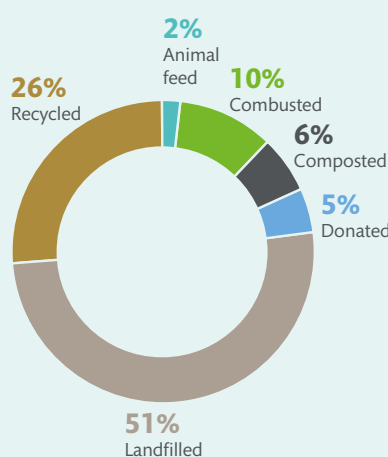


Figure 4: Breakdown of total waste by category



Of the total waste by volume, just over half (51%) went to landfill, followed by recycling (26%) and combustion (10%). Donations accounted for approximately 5% of total waste (see Figure 5).

Figure 5: Breakdown of total waste by end destination



The split of waste being recycled vs landfilled is similar to the U.S. averages³² but with a higher proportion of recycling and less composting.



A closer look: Food waste

Stakeholder interviews named food waste as one of the most important impacts of trade shows. A recent UFI survey of visitors and exhibitors³³ identified it, along with food production, as an area to be given high priority by show organizers. However, the impact of food waste is likely to be significantly less than the other sources of CO₂e emissions outlined in this report although the scale of this difference was not measured in this study. The visibility and emotiveness of food waste, as well as its greater weight per volume, are reasons why it is perceived as making a larger contribution.

Catering waste, such as peelings, leftovers, plate scrapings, spoiled food, and cooking oil made up 19% of the total waste (14,250 MT) generated by U.S. and Canadian B2B trade shows in 2019. That's equivalent to 0.67 lb per participant.³⁴

Nearly 70% of food waste went to landfill with another 10% going to composting, 11% going to animal feed and 6% being donated. Donations represented an estimated 1,000 MT equivalent to 238,000 meals.³⁵



GSC warehouse



Venues



Convention centers



Hotels and resorts



Wider facilities

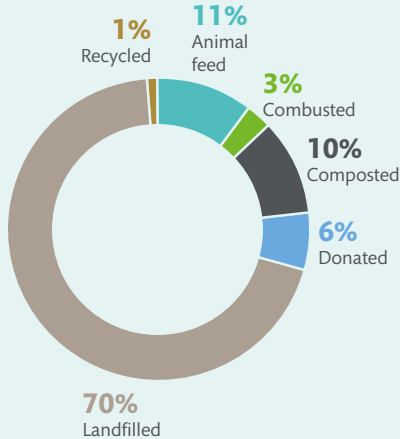


The scope excludes waste generated by GSC depots.

The scope of the estimate includes annual waste generated by venues across trade shows and in the venue downtime between shows. The scope of the estimate includes events held at convention centers, hotels and resorts.

The scope excludes waste generated by wider facilities and hotel rooms.

Figure 6: Breakdown of wasted food by end destination



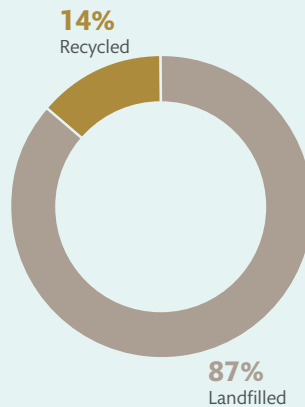
As with the U.S. hospitality sector in general, landfill was the main destination for all food waste but the proportion for the B2B trade show sector was 27% higher. Interviews with venue staff suggested that more food could be diverted from landfill if waste streams were better separated at venues and waste handlers found.

A closer look: Plastic waste

In interviews, stakeholders expressed the belief that plastic waste was one of the most important impacts on event sustainability. In addition, a recent UFI survey³⁶ identified it as the top priority area for show organizers when introducing or enhancing sustainability measures. The Little Blue Research study, while limited in scope, suggests that the estimated weight of plastic waste is less than that of food waste, making it perhaps a lower priority than other measured impacts. However, given plastic's longer life in landfill and the low recycling rates, it is still an important area for consideration and improvement.

Less than 10% of total venue waste generated in 2019 was identified as plastic waste. However, this is likely to be an underestimate given the limited plastic sorting at some venues. It was also not possible to calculate the volume of plastic in dedicated e-waste and demolition streams.

Figure 7: Breakdown of plastic waste by end destination



Less than 15% of the estimated plastic waste was sent to recycling (see Figure 7). Interviews with venue staff revealed that recycling of this and other waste streams is driven by the presence or absence of appropriate bins, manual sorting, and other infrastructure.



The response from the task force

Waste continues to be a big challenge for the industry and, despite the serious steps already taken, is perhaps one of the most immediate priorities.

The public perception of plastic waste has made it a highly emotive topic with attendees and exhibitors and, as a result, will accelerate change. A plastic bottle, straw or lanyard might not contribute significantly to an event's environmental impact but, to participants, it can signal a lack of commitment on the part of the venue, its concessions, or the event organizer.

During the height of the COVID-19 pandemic, we saw a surge in single-use plastics from safety wear. However, we are encouraging attendees and suppliers to go plastic-free where possible and expect a return to 2019 levels soon. More work is needed to eliminate single-use plastics and ensure that any remaining are recycled by upgrading waste handling infrastructure and running engagement campaigns.

The task force also believes that a significant proportion, if not the majority, of plastic waste from events, is made up of 'hidden' plastic from packaging, carpeting, and signage. Further work is needed to understand how this compares with the waste from consumer items but many organizers and GSCs are already seeking to reduce it.

Food waste is another emotive topic. If not as publicized as consumer plastic waste, its environmental impact is likely to be significant, especially when the energy involved in food production is factored in. Food hygiene and safety regulations may limit the opportunities for action, but there are leading practices in the industry that could be enhanced and adopted more widely.

Material Impact 4: Material waste from venues



How is the industry already tackling this?

Eliminating single-use plastics

In 2019, Emerald decided that single-use plastics would not be available during Outdoor Retailer Summer Market at the Colorado Convention Center in Denver, CO. Show management, the center, and the in-house food and beverage vendor collaborated to offer alternative containers and utensils at food and beverage functions and retail outlets. Several companies sponsored the effort.

- One sponsor provided 20,000+ reusable vessels.
- 3,985 gallons (15,000 liters) of water, in 5-gallon jugs throughout the center, replaced the equivalent of 42,506 12 oz (350 ml) bottles.
- Three large water refill vats, created with another exhibitor, provided 1,320 gallons (5,000 liters) of water.
- Industry advocates formed an alliance against single-use and difficult-to-recycle plastics such as poly bags. Members hosted 170 in-booth water refill stations.
- Working with exhibitors, a supplier offered reusable stainless cups, collected each day, cleaned, and reused. This diverted 6,000 single-use cups.
- Boxed and canned water was available at retail outlets.
- 96% of disposable service ware was compostable.

Donating waste material

In 2019, IMEX and Sands Expo collaborated in donating excess materials at the end of the show to the Animal Foundation of Las Vegas, Hero School, New Day Adult Day Care, Las Vegas Rescue Mission, Teacher Exchange, and Veterans Village. This included furniture and electronics, as well as other usable materials.

Partnering to reduce waste

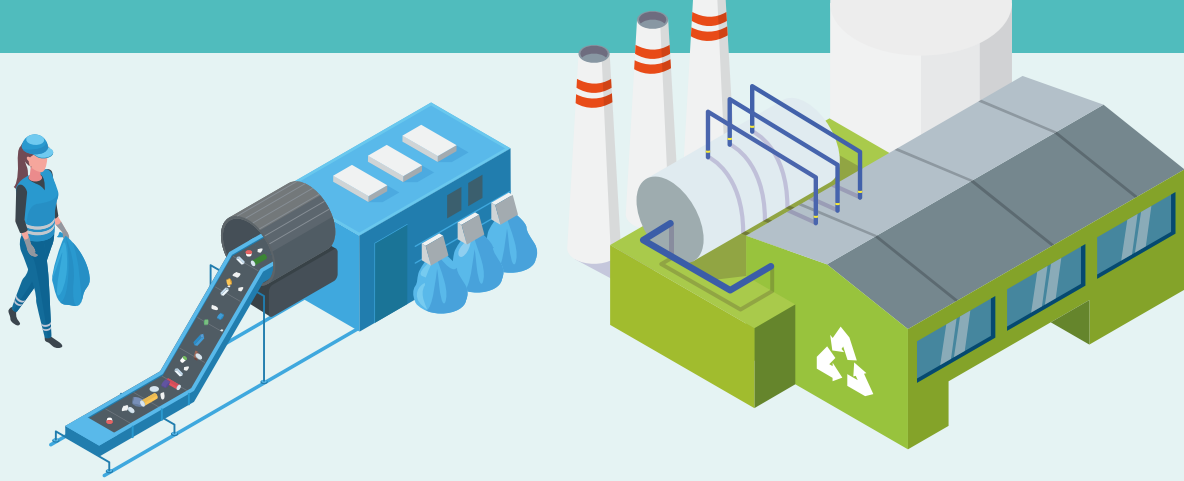
In 2018, Sands Expo in Singapore hosted Schneider Electric's Global Innovation Summit which brought together over 3,200 world-leading entrepreneurs, executives, and industry leaders to create opportunities for powering and digitizing the economy.

Sands helped Schneider Electric reduce its environmental footprint, intercept waste, and measure its impact. The venue's Event Impact Statement tracked nine waste streams.

392 kg of unserved food, preserved in the venue's blast chillers, were donated to The Food Bank (Singapore) to benefit children at risk, low-income families, seniors, and those with special needs.

46 kg of coffee grounds were donated to a local farm and thousands of kilograms of food waste were aerobically digested into nutrient-rich grey water, helping to address Singapore's water scarcity challenge.





What more could we do?



The events industry could learn from other sectors that have successfully incorporated circular economy principles into their decision making and engaged with stakeholders across the value chain to encourage behavioral change and new approaches to be explored.

For all waste streams, the established actions (the 7 R's) continue to be the priority.

- **Rethink.** How are materials specified and consumed? Could we switch PVC signage to paper or use digital screens? Event organizers such as Informa and Emerald are going further, rethinking established practices, such as edge-to-edge aisle carpeting, which can lead to significant waste.
- **Refuse.** Specifiers within all stakeholders are increasingly refusing single-use or hard-to-recycle materials such as foamcore board and PVC for signage or plastic cups, stirrers, and straws in catering. This is easily expanded to more materials as better replacements are found and scaled to become cost-effective.
- **Reduce.** The opportunities to save money by reducing waste and therefore material and waste handling costs are huge and have been embraced by the industry since it first began. However, a renewed focus on waste has encouraged even bolder challenges to established norms. These range from a shift to digital apps from printed guides and

daily newspapers to new catering contracts that move away from minimum orders towards planning for actual numbers.

- **Rechoose.** This can relate to all parties, but there could be opportunities to help exhibitors choose materials and stand construction techniques that minimize waste and, perhaps, shipping emissions as well. And participants can be encouraged to take only what they need, whether that's food from the buffet or materials and samples from exhibitors.
- **Repair.** Commonly used items like chairs, tables, screens etc are selected to be robust as they get moved around a lot. When damage and wear does occur, such as to seating or fabric, items can be modular so that components can be swapped out or repaired without having to replace the whole thing.

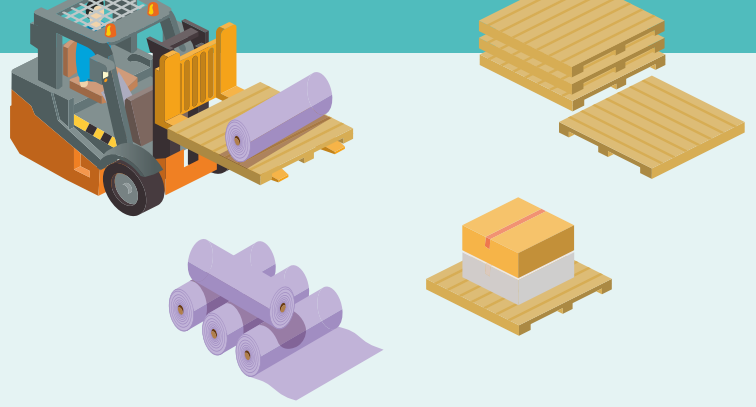
- **Reuse.** The U.S. and Canadian B2B events industry already leads the world in choosing reusable systems for exhibition booths rather than the disposable systems still used in other parts of the world. Established donation systems for leftover materials and show furniture could be expanded to capture even more of the waste stream
- **Recycle.** There will always be waste to deal with whether that's a booth system that's been reused many times but has an easily recyclable metal frame or trimming from carpets. The Little Blue Research interviews clearly identified opportunities for improving the waste handling infrastructure, engaging with new supply chain partners to handle waste, and educating stakeholders about what to do with it.



Future data considerations

- Little Blue Research work identified several opportunities for generating more precise data insights into the makeup of the general waste streams. (See page 30)
- Further studies and more granular analysis are needed to reach a more accurate estimate of food waste and the associated carbon footprint, particularly focusing on the amount of edible food wasted vs cooking oils and peelings.

Material Impact 5: Waste from GSC warehouses



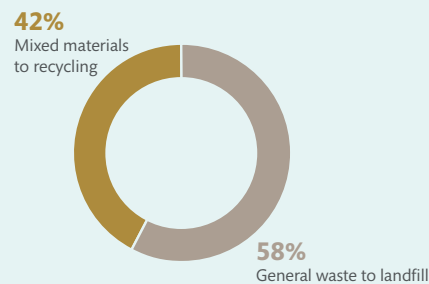
The challenge

General service contractors (GSCs) such as Freeman, GES, and Shepard play an essential role in the B2B events ecosystem. They are not only responsible for much of the last-mile logistics but also for constructing common and feature areas such as stages and registration, supplying audio visual (AV) equipment, laying carpet etc. Many exhibitors also hire them to construct their booths. All of this is managed from warehouses around the country and can represent a significant part of the industry's value chain, as well as a source of carbon emissions.

According to stakeholder interviews, warehouses are also a significant source of potential

waste. This can include waste generated during normal operation, as well as preparing for and returning from venues after the event.

Figure 8: Breakdown of warehouse waste to end destination



An estimated 39,800 MT of B2B exhibitions industry waste was generated from GSC warehouses in the U.S. and Canada in 2019. 42% of that was recycled, compared with a general recycling rate of 24% in the U.S.³⁷ or 21% in Canada.³⁸

How is the industry already tackling this?

Making print green

B2B trade shows generate a massive amount of printed material. Arguably, it accounts for one of the largest volumes of warehouse waste. The mainstream response has been to explore options for recycling after a show has finished. This can involve, amongst other things, collaborating with show managers to encourage the use of eco-friendly and recyclable substrates such as Falconboard and conVerd etc.

Shepard realized that there was an opportunity to go further by working with The Sustainable Green Printing Partnership. This requires printers to consider the end-to-end production process from green inks and recyclable materials to minimizing waste and resource consumptions.

What was measured?

The estimate includes the annual waste generated across GSC warehouses that can be apportioned to B2B trade shows. It does not include waste generated at third-party manufacturers, stand construction companies/design houses that are not GSCs, or at material handlers such as carpet suppliers.

The response from the task force

The management of waste at GSC warehouses is simpler than at venues. GSCs are largely in full control of their warehouses and only their staff handle and generate the waste. In comparison, the waste at venues is handled by staff, contractors, exhibitors, and attendees.

Warehouse waste comes from the repair, maintenance, construction, and disposal of materials used by the

GSC, as well as waste backhauled from the venue most of which has been brought to the venue by the GSC in the first place. This can include carpets, signage, used stand materials, and electronics, unusual waste which can be challenging to handle, especially as it is often made up of different materials and components.

The source of much of this waste arguably lies in decisions made by exhibition organizers and exhibitors. There is, therefore, an opportunity for better communication about how different choices could affect what materials are used.

As well as working with suppliers and participants to ensure that everyone is aligned, there are also plenty of opportunities to educate customers on making more sustainable choices.





Sitting comfortably with repairs

GES sets out millions of items of furniture every year for its customers, particularly chairs and tables. These items are sturdy but they get used a lot, and are often moved around frequently. Eventually things wear out. Rather than replace the whole item, GES has committed to maintaining and repairing these items where possible.

For example, thousands of chairs are maintained each year with the rubber feet being repaired or replaced. Padding on seats can be replaced if it is ripped or torn, and fabric is either cleaned or removed and sent to the laundry before being replaced. This all significantly extends the service life of this furniture and reduces waste.

Reducing warehouse waste

Carrie Freeman Parsons challenged all Freeman employees to find sustainable solutions in any area of the business to help reach the company's Zero Waste Goal. Employees in Dallas, where most custom booths are built, sourced a new waste hauler with an extensive variety of recycling capabilities, installed new recycling stations throughout the offices and warehouses, and created training on proper waste handling procedures. These efforts translated to a record-setting 90%+ waste diversion rate.

What more could we do?



- **Investing in additional staff training and infrastructure in warehouses.** To ensure better consideration of materials and waste sorting, as well as to improve the ability to separate waste into higher value, less commingled waste streams.
- **Improving partnerships,** both with cities and other organizations to seek better ways to minimize, collect, and repurpose waste.
- **Reducing the amount of waste generated in the first place.** This can be done by improving the longevity of materials with, for example, longer lasting carpet and furniture and covers that can be reused more often. For those that do construction, more reusable registration booths and theaters, and less wasteful shipping and installation methods could help. Working with organizers, it is also possible to specify carpeting that's not 'edge to edge' and therefore reduces trimming to fit, or signage without dates that can be stored and reused.
- **Specifying simpler materials that can be recycled or reused more easily.** This can include moving from PVC and foamcore signage to card-based stocks or 'wipe clean' signage that can be reused for other customers. It is also possible to work with suppliers to choose more sustainable fabrics, recyclable table coverings etc.



Future data considerations

- Further work could be done on categorizing warehouse waste, as well as giving a more complete picture by expanding measurements to include the carbon and water footprints. Freeman, GES, and Shepard have already made serious steps in this direction.
- The collection of waste data could also be expanded to include carpet suppliers and the companies who manufacture and construct booths (see next section for more).

I Material Impact 6: Booth materials



The challenge

The materials used in exhibitor booths had the third most important environmental impact identified by industry stakeholders and associated frameworks. These materials include the walls, ceilings, and floorings as well as the furniture and internal fit-out.³⁹ These impacts include both the embodied carbon in material production as well as the waste from their disposal.

This was the most challenging impact to measure given the much greater fragmentation in the booth construction supply chain, as well as the significant disruptions caused by the COVID-19 pandemic. Results should be seen as a first-step indication of the relative scale and make-up of the waste streams. They are not directly comparable to the other impacts in this report.

An estimated 71% of booths in the U.S. and Canada B2B exhibitions industry are built from the industry-standard, basic pipe and drape (P&D) system. In 2019, these amounted to about 2.2 million booths⁴⁰ representing the majority of exhibitors and show floor area. The main structure of these systems is quick to assemble and highly reusable. Their contents, including banners and promotion materials brought by exhibitors, were not included in the study.

Of the rest, many booths are made from highly reusable modular systems and a small remainder are custom made for exhibitors by booth construction companies or general service contractors (GSCs). They are more varied, generally much larger, and have a more complex material footprint.

This compares well with many other countries where the proportion of booths built for single use is considerably higher.

Based on the indicative estimates, the area with the highest potential contribution to B2B trade show waste from booth materials is carpet which makes up the largest estimated volume of materials across all types of booth. Much of this is supplied by GSCs and is reused/repurposed aisle carpet which is commonly cleaned after each show and reused when practically possible.

What was measured?

To understand the split of booth types, Little Blue Research made use of data from 30 different shows. They then analyzed materials and waste by booth type from up to eight shows. Average values were extrapolated to provide estimates for the B2B trade show industry in the U.S. and Canada during 2019 and should be taken as indicative only.

The scope of materials measured across both P&D and custom booths is displayed in the following diagram, along with the materials excluded from the analysis.

A closer look: Reuse of P&D booth materials

Pipe and drape booths are estimated to account for the largest use of materials, although this is to be expected given their prevalence. Over 52% by volume of these materials are extensively reused (up to 29 times) and a further 46% has some limited reuse potential (up to 4 times).

It was found that carpet made up the largest proportion of the limited reuse category, representing an estimated 17% to 39% of all P&D booth material in 2019.

Nearly half by volume of the analyzed materials disposed of after reuse are not easily recyclable. This includes some varieties of plastic carpet (the largest estimated contributor) as well as other plastic materials (see diagrams on opposite page). Recycling rates vary by GSC and booth designer.

It should be noted that this analysis is an example of where Little Blue Research had to work with incomplete data and make assumptions. In particular, it wasn't possible to obtain data on the lifespan of the metal pipes





Materials analyzed

Pipe and Drape booths

Classified as extensive reuse – up to 29 times

Build and packaging	Plastic*	Paper/card*	Textiles*	Plastic carpet*	Other metal†	Wood	E-waste†	Mix wood & plastics†	Other†	Crates
----------------------------	----------	-------------	-----------	-----------------	--------------	------	----------	----------------------	--------	--------

Custom booths

Bespoke booths built to exhibitor specifications

Build (94.5%)	Plastic	Paper/card	Plastic carpet*	Metal	Wood	E-waste†	Mix wood & plastics	Other†	Textiles	Metal frames
Packaging (5.5%)	Plastic				Wood					

† Missing values

* Missing units estimations used based on GSC interviews

Tinted boxes represent **Exclusions**

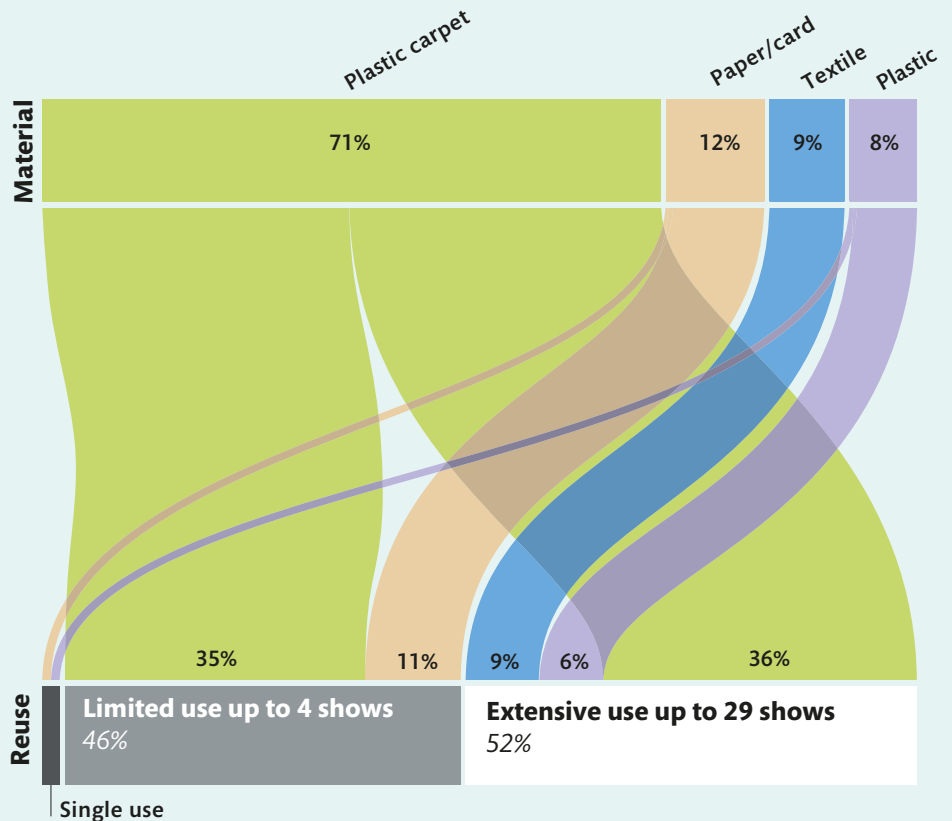
nor the volume used. Given that these are metal, the task force’s assumption is that they are used many times and infinitely recyclable.

A closer look: Custom booths

Custom booths are estimated to make up a smaller part of the overall footprint of shows (3%) and have a more complex material footprint than P&D booths.

Most of the materials used are potentially reusable. More than half are, in fact, extensively reused and a further 19% have a number of uses dependent on exhibitor decisions.⁴¹

It should be noted that more data about material types were available for the custom booth samples than for P&D booths, so comparisons of booth types should not be based on this data.



Material Impact 6:

Booth materials

The response from the task force

All trade show markets use modular, reusable systems for smaller booths (e.g. 10 ft x 10 ft). Europe leans towards a modular 'shell scheme' system whereas the U.S. uses the lighter-weight pipe and drape systems. We believe that modular systems will continue to be used by most exhibitors and to take up the majority of show floor space.

When it comes to the sustainability of materials, the U.S. and Canadian B2B trade show industry has a distinct advantage over many parts of the world where mid- to large-sized booths are often custom built and single use.

Where we see a big difference is in the larger booths. Custom booths in the U.S. and Canada tend to be of multi-use, modular construction whether they are exhibitor-owned or rentable, reusable systems. Many factors probably drive this, from relatively high labor costs and low storage costs in the U.S. and Canada (compared to Europe and some other countries), to a tendency, perhaps, for many companies to exhibit more frequently. Studies by Informa and others suggest that reusable booths are more cost-effective over the long run as well as being faster, safer, and more cost-effective to build and take down.



How is the industry already tackling this?

Better Stands for zero waste

Informa launched its Better Stands program globally in 2020. Part of its commitment to reaching zero waste by 2030, the aim is to work with exhibitors to phase out single-use exhibition stands (called booths in the U.S./Canada) over the next decade by introducing a series of commitments, communications and standards that are aimed to phase out disposable, single-use booths in favor of higher quality, safer, faster, and cheaper reusable construction techniques.

The U.S. market should be much faster as single-use booths are less common in this market.

Following requests by suppliers and peers, the team is working with others to open source Better Stands to help accelerate their wider adoption across the industry.

Planning ahead to cut waste

IMEX and GES worked together to increase the reuse and recycling of materials during the 2019 U.S. show.

By carefully selecting materials and lining up the right partner organizations, waste was significantly reduced:





- 94% of all carpet, padding and Visqueen was saved for reuse or recycled.
- 100% of the 42,089 square meters of carpet was made from recycled material.
- 6,705 meters of 100% recyclable, paper-based Falconboard signage was either donated or recycled on-site.
- Highlighting savings
- Emerald is helping its partner brands understand the savings available by moving from printed sales materials in the booths to digital alternatives and have partnered with the Environmental Paper Network to create a savings calculator.



What more could we do?



- A great stand design can draw in attendees and help improve the ROI for any exhibitor. Some of the best are reusable and this helps spread the cost over multiple shows. The industry should take any opportunity to save time, money, materials, and the embodied carbon by ensuring that the booths making up the backbone of exhibitions are as sustainable and high quality as possible.
- The choice of booth materials and construction techniques is, primarily, the exhibitor's. Event organizers, GSCs, and stand construction companies, can provide guidance, education, and, ultimately, regulations to encourage more sustainable choices.
- There are opportunities for innovation and collaboration, creating consistent standards, raising awareness, and providing resources to help exhibitors make sustainable choices.



Future data considerations

- This was one of the most challenging areas of the study, especially because of the limited ability to collect data from live, active shows during the pandemic. Further work is needed to capture a wider sample of data and understand how many times booths are reused, and what happens to the materials at the end of life. We hope that a coalition of booth construction companies can form a project team to address these questions.



Our collective view as a group

We can do better together...

The cross-industry task force was founded on the simple premise that we can achieve more together and perhaps only together. That premise has been confirmed by this independent research and the resulting collaborations between some of the most influential organizations in the events industry. Working groups on sustainability, particularly in EIC and UFI, are also increasingly demonstrating just what can be accomplished collectively.

Drawing on extensive company data from the task force's member organizations and industry stakeholders, this project has evaluated the environmental impact of our industry, focusing on one major market in the U.S. and Canada, and shows how we are already rising to some of the challenges. It also suggests useful next steps (see page 29).

...but we need to do it now

It is now time for the whole industry to pick up the baton and meet stakeholders' increasing expectations. We have an opportunity to help our customers exhibit and attend events more sustainably, even perhaps providing places where they can come together to tackle their own sustainability challenges in an efficient, travel-smart way. In the process, we can enhance the value the industry delivers to its stakeholders and ensure our long-term future.

The task force members hope that our findings will inform the work of others including the ambitious and incredibly important Net Zero Carbon Events Initiative.

The barriers to overcome

When asked about the barriers to change, interviewees identified a number of factors:

- **Financial** – the cost to value equation of particular actions
- **Structural** – the lack of the required infrastructure at venues/cities/partners
- **Cultural** – the challenge of educating people and changing their behavior
- **Strategic** – the need for leaders to see sustainability as integral to their strategy
- **Operational** – the complexity of the challenge and the investment needed in time, technology, and support
- **Policy** – the lack of industry guidelines and sector-wide guidance
- **External** – the dependence of some actions on other sectors such as aviation

As recent industry studies show, our stakeholders believe a number of actions could make the B2B trade show industry more environmentally sustainable. These include financial incentives, the development of new technologies, sharing best practice and improvements, and the increased use of sustainability standards.⁴²



Figure 9: Barriers to sustainable change identified by interviewees

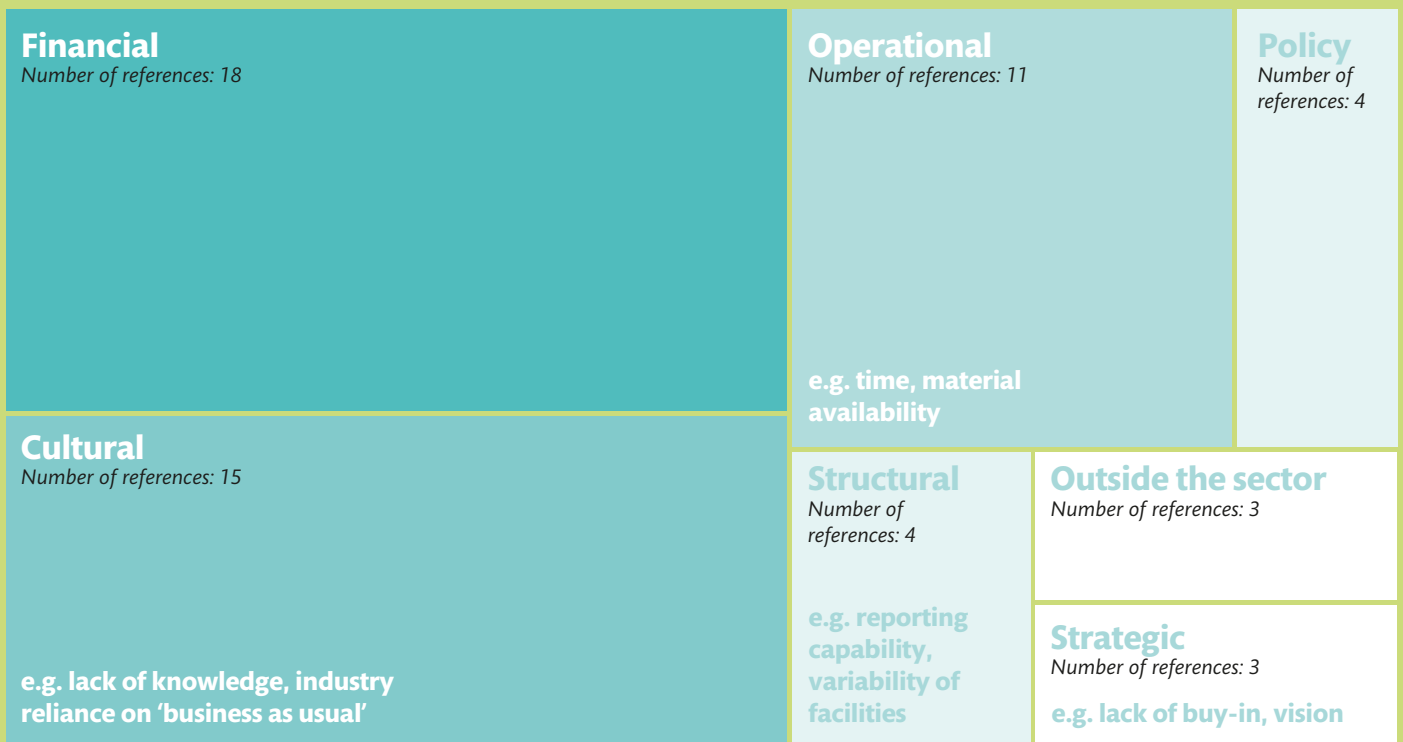
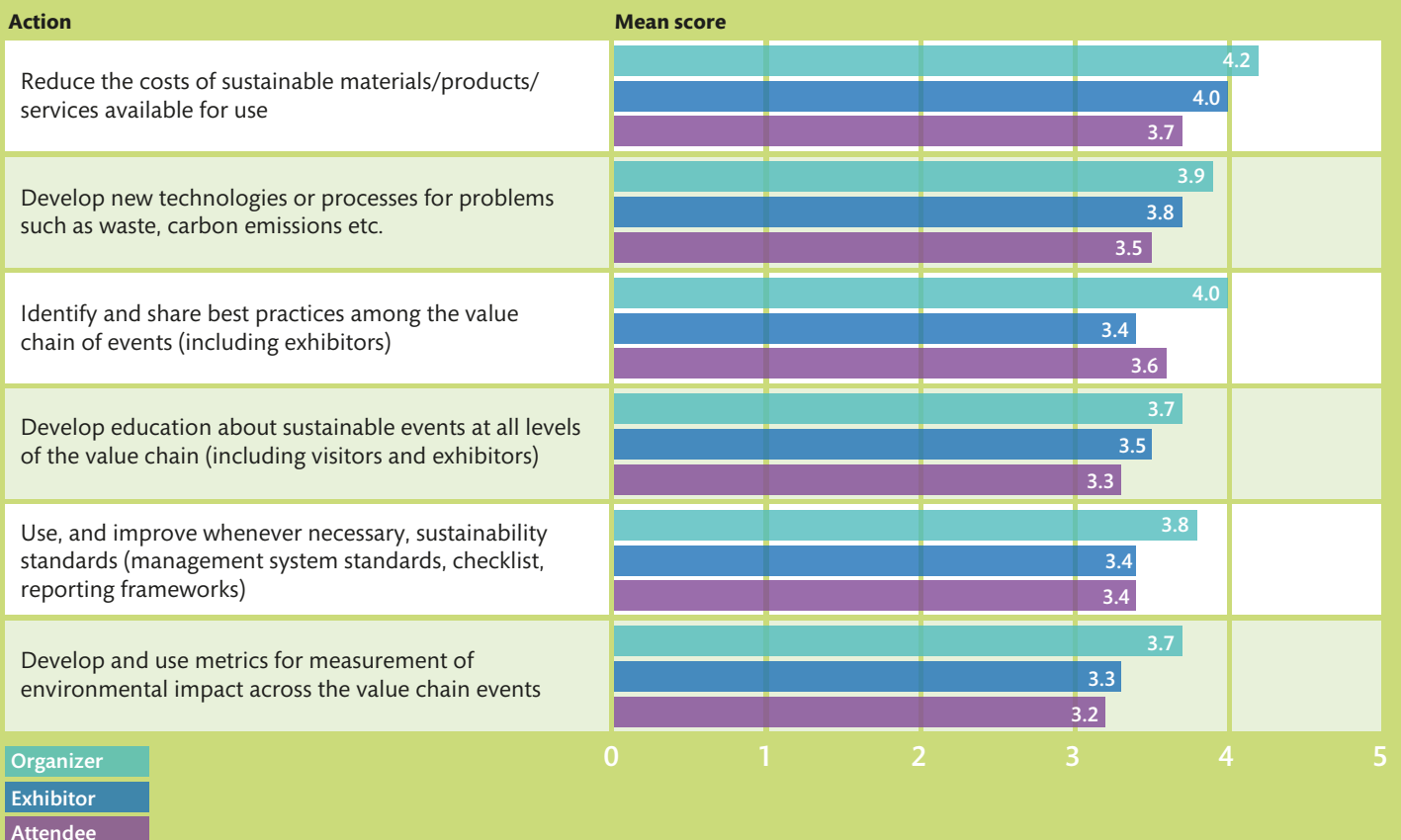


Figure 10: Survey data from UFI⁴³ and CEIR (2021), 'How effective do you feel each of the following are/would be in helping the environmental sustainability of the trade show industry?'

(1 is 'Not effective at all, 5 is 'Very effective')



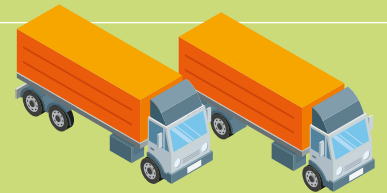
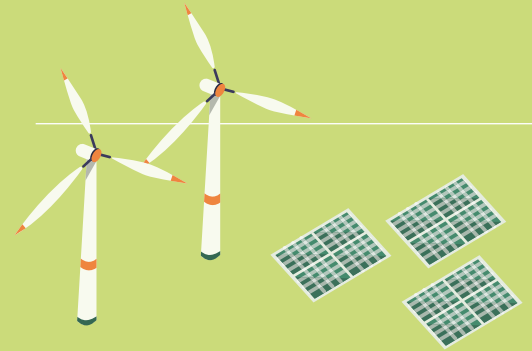
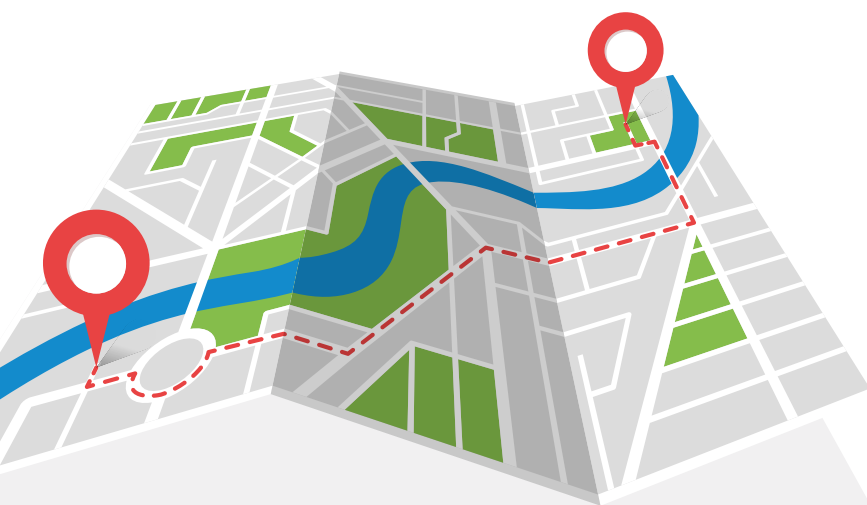
Note: The mean score has been weighted to account for respondents that answered 'don't know' or didn't answer.

Creating an action list for change

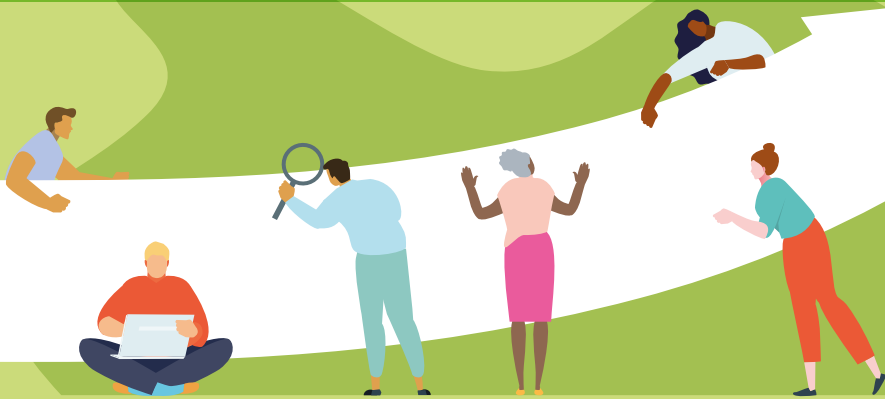
The task force members believe that collective strategic action is the key to a more sustainable sector. We have developed a series of 30 recommended quick wins and longer-term actions for industry-wide adoption that will help us all improve our collective sustainability.

These were developed in a series of workshops which considered the findings from this study, the outputs from a series of interviews by Little Blue Research, the 2021 CEIR and UFI industry surveys on sustainability, and our own professional experiences. They deliberately focus on quick wins and opportunities in the mid-term rather than long-term targets to encourage the whole industry to get started.

Members of the task force are working with key industry initiatives such as the Net Zero Carbon Events Initiative facilitated by the Joint Meetings Industry Council, the Events Industry Council Centre for Sustainability and Social Impact, and the UFI Sustainable Development Committee. Our hope and expectation is that our findings can help accelerate existing and permanent program towards a more sustainable events industry.



	Quick wins in the next 1-2 years	Proposals for action in the next 2-5 years
Participant transportation	<ol style="list-style-type: none"> 1. Work with local communities to promote and incentivize the use of public and other low-carbon transport in host cities 2. Campaigns to encourage event participants to adopt environmentally friendly travel practices to/from host cities, including offering carbon offsetting to attendees at registration or elsewhere when flights are the best choice 3. Campaigns and collaboration to help customers understand how best to consolidate travel through attending events 4. Weaving digital events into the product offering, where appropriate and where it maintains the quality of the customer experience 	<ol style="list-style-type: none"> 19. Support policies that enable the transition to low-carbon travel 20. Partner with transport providers to support and influence the development of low-carbon travel 21. Develop and expand best practice that helps events be more effective as travel consolidators, including exploring the co-location of related events
Venue energy	<ol style="list-style-type: none"> 5. Collaborate on the consistent measurement of venue and hotel carbon emissions 6. Venues to explore collaborative ways to reduce emissions, such as industry buying programs 	<ol style="list-style-type: none"> 22. Set a goal to halve carbon footprints by 2030 in line with the Science Based Targets initiative 23. Commit as an industry to a net zero carbon goal such as the Net Zero Carbon Events Initiative and set a time bound goal for shifting to renewable energy
Logistics transport	<ol style="list-style-type: none"> 7. GSCs, organizers and venues to work together to find ways to use common or shared materials, such as carpet, AV, staging, pipe, and drape, across shows 8. Encourage local sourcing by all parties 	<ol style="list-style-type: none"> 24. Organizers to work with exhibitors to reduce the volume and weight of materials freighted to and from events
Venue waste	<ol style="list-style-type: none"> 9. Educate exhibitors about shifting to low-impact materials for booths and materials 10. Invest in consistent and expanded waste handling infrastructure and training for venues and contractors 11. Expand efforts to phase out plastic from venues, caterers, exhibitors etc., including concessions 12. Invest in water refill stations and support a culture of reusable water bottles 13. Partner with others to find new ways to repurpose waste 	<ol style="list-style-type: none"> 25. An industry-wide agreement to simplify materials at shows to increase recycling 26. Work together on timelines to phase out hard-to-recycle materials 27. Invest in more reusable serviceware or ban disposable food service materials 28. Work with cities and waste handlers to improve waste handling infrastructure, particularly around composting and off-site materials recovery
Food waste	<ol style="list-style-type: none"> 14. Work with caterers and specifiers to improve food sourcing, specify appropriate quantities, recipes and serving styles, and reduce waste 15. Work with local communities, government, and NGOs to maximize the donation of edible food, and find uses for the rest 	<ol style="list-style-type: none"> 29. Commit as an industry to reduce food waste, with phased targets 30. Consider investing in shared community infrastructure to handle food waste better
Warehouse waste	<ol style="list-style-type: none"> 16. Work together to reduce the amount of carpet specified and improve reuse and recycling rates 	<ol style="list-style-type: none"> 31. Explore alternatives to carpet such as permanent or bare flooring
Booth materials	<ol style="list-style-type: none"> 17. Promote the value of reusable, sustainable booth systems 18. Support R&D into new sustainable materials and booth systems 	<ol style="list-style-type: none"> 32. Invest in a greater supply of reusable booth systems 33. Invest in new reprintable materials such as booth signage and fabrics



Passing on the baton

As discussed elsewhere in this report, the task force have been working on this project for nearly three years and hope that our work contributes significantly to the understanding, perceptions and priorities of the B2B events industry in the U.S. and Canada, as well as elsewhere. Many of us are members of industry associations, working groups of organizations that are each trying to tackle sustainability challenges on their own or with others. We would be delighted if this study can feed into those existing program and help focus and accelerate work by the sector on its transition to a net zero carbon, circular economy led, more equitable and responsible events industry. Here are just some of the existing initiatives that the task force members are already contributing to. Now that this research is finished, we hope these groups can pick up the baton and run with it.

Making even better-informed decisions in the future

In evaluating the most material environmental impacts, Little Blue Research’s work, and that of the task force, has drawn on extensive data provided by industry stakeholders. As with any research project, there are opportunities to gather more data to help aid accuracy and breadth of findings. This would enhance our understanding and help the industry to set a better baseline for program such as the Net Zero Carbon Events Initiative.

These data gaps could be plugged by further research or, potentially, integrated into existing industry standards and frameworks. We’ve highlighted some of these throughout this report but have consolidated the key findings here.

	Recommended next steps in expanding data sets
Participant transport	<ul style="list-style-type: none"> - Measure the carbon footprint from hotel room accommodation for participants. While not identified as a material issue by stakeholder interviews, we believe it may be larger than many expect
Logistics	<ul style="list-style-type: none"> - Measure the end-to-end logistics footprint from the exhibitors to the GSC warehouses and/or venues
Venue waste	<ul style="list-style-type: none"> - Measure the breakdown of materials in waste streams more accurately, including the source and destination of food waste - Introduce more consistent categorization of waste at venues, GSCs and elsewhere to enable better tracking and measurement at industry level - Understand and measure the waste handled by other supply chain partners, including carpet companies and stand builders
Booth materials	<ul style="list-style-type: none"> - Measure more accurately the amount of carpet used in booths and aisles, plus the wastage and recycling rates - Better understand the materials used in booths, especially how much is reused and how often

The Net Zero Carbon Events Initiative

The Net Zero Carbon Events (www.netzerocarbonevents.org – NZCE) was set up mid-2021 to work collectively to help the events industry deliver the goals of the Paris Agreement. Initiated by a group of around 20 organizations from across the events sector, the initiative, hosted and facilitated by the Joint Meetings Industry Council (JMIC) and supported by the UNFCCC, has now grown to around 360 supporters around the world as of May 2022. The task force members welcome this as an important and industry-leading initiative and many of the founding companies have signed up.

The NZCE group's first deliverable was the Net Zero Carbon Events Pledge, officially released at the COP26 event in Glasgow, Scotland, at the end of 2021, and which sets out the commitments to addressing climate change.

This global initiative will facilitate:

- the development of common methodologies for measuring the industry's direct, indirect, and supply chain greenhouse gas emissions
- best practice sharing and the support and guidance on key issues

- the fostering of collaboration with suppliers and customers to ensure alignment and common approaches
- the establishment of common mechanisms for reporting progress
- the communication about the event industry's commitment to tackling climate change and driving towards net zero by 2050.

The group aims to release a roadmap at COP27 in November 2022. It is designed to support events industry stakeholders on their journey to net zero by providing key definitions, a framework for prioritizations and setting out a pathway to net zero by 2050 for the most significant impacts.

EIC's Centre for Sustainability and Social Impact

Bringing together members of the sustainable events community, the Centre is one of several global groups who are working on tackling sustainability challenges. In particular, the group has been updating its Sustainable Event Standards (EIC SES). More than 300 event professionals, with representation from 20 industry associations and 20 countries, provided feedback in the preparation of the 2022 standards.

Eight specific standards assess events and industry suppliers on a wide range of sustainability criteria in support of environmental and social responsibility.

Their goal is to provide a common framework and transparent process to set and implement targets. The standards have been written through a global collaborative process with participation from subject matter experts in many areas of the industry. Third-party verification of compliance ensures transparency and accountability.

The eight standards apply to organizational management, marketing, communication and engagement, climate action, water management, materials and circularity, supply chain management and social impact.

UFI's Sustainable Development Group

This working group brings together industry professionals committed to the field of sustainability in the events industry. It is composed of more than 30 members representing all regions and industry segments.

Its activities can be grouped under four main areas:

- Raising awareness along with analysis and general guidance including communications and guidance for events professionals
- Identifying and sharing best practices through initiatives such as an annual award scheme running for the last decade
- Education, primarily thanks to face-to-face events
- Facilitating implementation through collaboration and convening the right groups

For more information

sustainability@eventscouncil.org

sustainability@ufi.org

sustainability@informa.com

www.netzerocarbonevents.org

www.eventscouncil.org/sustainability

www.ufi.org/susdev

Principal project funder:



Project co-funders:



Independent researchers:



Disclaimer

This is a first of its kind study for the events industry at large and all best endeavors have been made to gather and extrapolate data and trends that indicate the relative material impacts of the industry. The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation. Where calculations, insight or documents are provided from the internal research reports completed by Little Blue Research, this information is shared to third parties without warranty and no liability is accepted for decisions taken based on this report.

All opinions are those of the individuals comprising the task force steering committee and should not be construed as official positions for the respective organizations. All information contained herein, including calculations and extrapolations made by Little Blue Research Limited, is from sources believed to be as accurate as the data and methodologies will allow but, due to the nature of this type of study and data collection, it is provided without warranty of any kind. The citing of trade names, reports, websites does not constitute an endorsement and we accept no liability for damage arising from the use of this report.

All calculations are based on data released prior to August 2021. A full list of limitations and assumptions is set out in the original research report.

Copyright

This report is the property of the respective members of the task force and should not be reproduced in full or in part without permission and accompanying disclaimers.