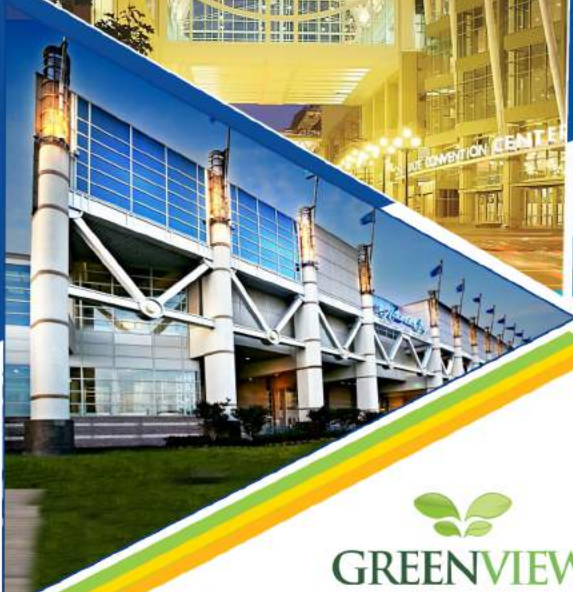
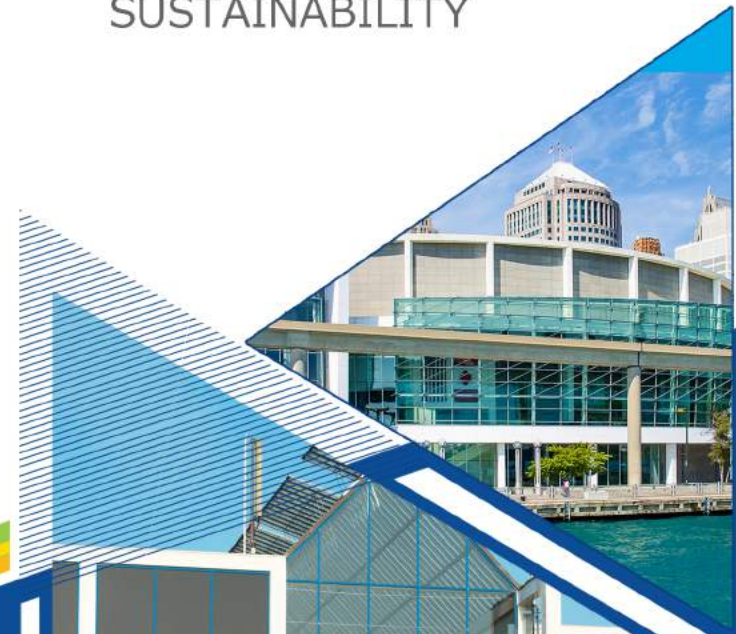


# GREEN VENUE REPORT 2016

STATE OF CONVENTION  
AND EXHIBITION CENTER  
SUSTAINABILITY



SPONSORED BY:

**F R E E M A N**



# GREEN VENUE REPORT 2016

THE STATE OF CONVENTION AND EXHIBITION CENTER SUSTAINABILITY



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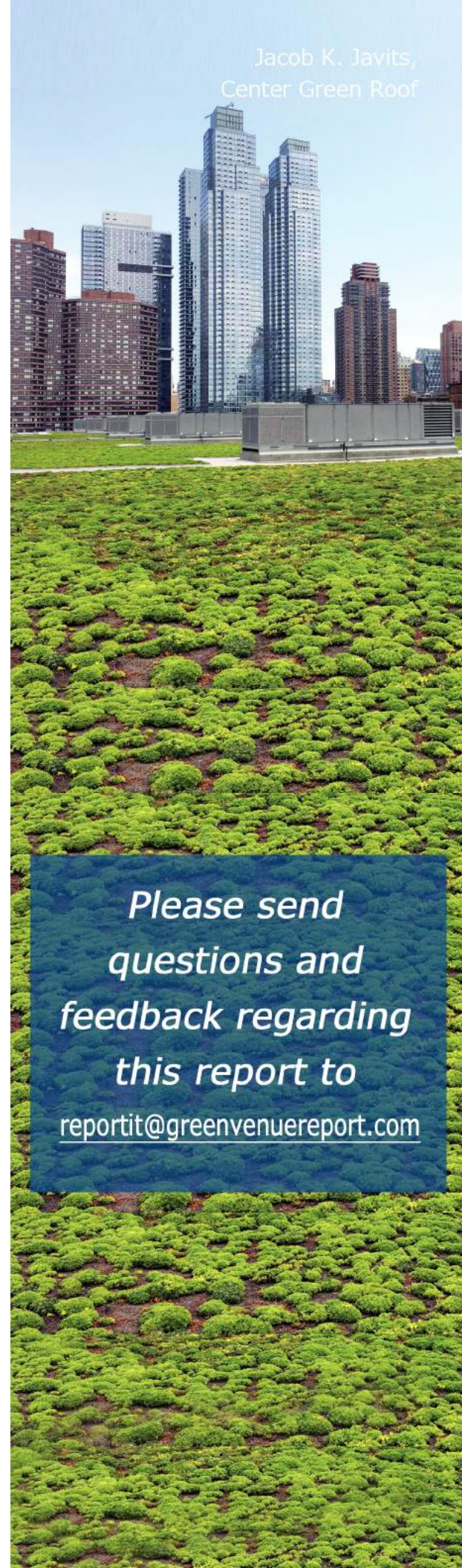
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## Acknowledgements

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feedback regarding  
this report to  
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### F R E E M A N

“ We realize our environment opportunity as the market leader to really make an impact. Not just because it’s a good story to tell but because it is the right thing to do. ”

- Carrie Freeman-Parsons, Vice Chairman of The Freeman Company

As the premiere provider of integrated solutions for live events, including expositions, conventions, corporate events, and exhibits, the Freeman Company provides full-service solutions for nearly every aspect of an event from event design and production to entertainment, and global freight transportation.

Freeman employees actively participate in sustainability initiatives, and take great pride in making them award-winning and successful. As part of the foundation of Operational Excellence, Freeman believes the activities the company participants in should better the environment, and increase the desire to be green. This should apply to both the company’s overall structure, and each individual employee. Freeman is committed to full compliance with the government environmental laws and regulations and proudly engages in sustainable practices at all 40 office locations. Freeman is committed to finding new and innovative ways to produce events that have less impact on the environment.

Freeman promotes innovation at every event. The company provide solutions to reduce the environmental impact of products and services, while actively advocating our sustainability message to clients and industry leaders. Freeman is always mindful of how the company interacts with the local and global environment and strive each day to achieve the mission to Rethink, Reduce, Reuse, and Recycle.

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## SHOWCASE YOUR COMPANY’S SUSTAINABILITY LEADERSHIP AND BRAND!

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# FOREWORD

## *Dear Colleagues,*

*It is often said that sustainability is a journey. We are striving to follow a path toward balancing our relationship with the natural environment and with each other. This idea of a “journey” or “path” implies a continuous trek toward improvement. We are far from solving our challenges, and need to make real change. We also need to accelerate progress on this path as the future scenarios on climate change – and the societal issues its impacts cause – require collaboration and fundamental shifts today.*

*Not to get all doom-and-gloom on you, but we bring this up because it is important when discussing what is a “green venue.” It is no longer a yes-or-no observation about a convention or exhibition center. Even if every single venue on the planet achieved a certification such as ISO 20121, APEX/ASTM, or even LEED, the results would still not be enough to meet the level of progress needed to cut carbon emissions and attain a sustainable model of resource use. That’s the reality, not just for our industry but for all sectors. Some leaders are taking action, committing to bold goals such as setting carbon targets that meet the level of reductions dictated by science, using 100% renewable energy, or halting the purchase of anything related to deforestation. The leaders are raising the bar, pushing the envelope, and taking those next steps along the journey.*

*Through our research and advisory work across the world, we find that every venue has incorporated some aspect of being green, and every venue has opportunity to improve. Some are behind, some are ahead. In perspective however, what was considered best practice of a green venue 20 years ago is relatively common today. Thus, venues should consider that the greenest venues of today will be judged by a different standard, or level of performance in years to come.*

*The vision of the Green Venue Report and Survey is to act as the industry catalyst for improvement. We want to break down the barrier for venues to take the first steps toward going green (and you would be surprised how many just shrug off participating in the survey, saying “oh we’re not green”). We want to give insight and content to the best practices, with real data showing the trends on each, rather than just fun facts. The compare reports participants receive show where they are leading and where they can improve. Anyone can participate as a first step on a sustainability journey, without being externally judged, and without significant cost or commitment. We need to move the whole industry forward, not just keep boasting about a few leaders as if their journey was complete.*

*As a result, we hope that each year our participation grows, but the industry trends decline. Yes, you read that correctly. We know that most venues don’t have a dedicated sustainability professional or even a green team. To fill out the Green Venue Report Survey, there has been a systemic bias as only those venues interested in sustainability tend to participate, and they tend to have more programs in place and track their data. Going forward we encourage all venues to get on board and appreciate all the support of our participants, our sponsors, and supporting entities like UFI and Convene Green, because only together collectively can we move the industry forward.*

*Sincerely,*

*The Green Venue Report Team*

# INTRODUCTION

In this third annual edition, the Green Venue Report continues to gather momentum and participation among convention and exhibition centers around the globe. The 2016 Green Venue Survey is a free, online survey comprised of 142 questions covering the topics of venue space, events, energy, waste, water, accessibility, food and beverage, staff involvement, and communications.

Information is kept confidential, with each participant receiving a compare report of their results against the set of peers. The report highlights the innovative practices found among venues to encourage leadership, while giving everyone a benchmark of where they stand, practice-by-practice. The survey is conducted via the Greenview Portal, an online system for venues to track various types of utility data, community engagement, and best practices. As many of the questions are repeated each year, participants have their information stored within their Greenview Portal profile to make it easier to respond to each year.

In total, 44 venues from 11 countries completed the 2016 Survey, nearly a 50% increase from last year. However, this remains a very controlled sample size. While all the venues participating this year held a sustainability certification or accreditation, overall the actual percentage of green-certified venues is easily less than half of the global supply. More venues should be encouraged to participate regardless of progress in sustainability, in order to understand the trends of all venues and not just those already further along the journey.



The results are presented in each section by topic, where the overall trends are presented alongside some best practices and innovative solutions encountered. Venues can use this report to see what types of policies, programs, and building specifications they should strive for among peers. Event organizers interested in sustainability can use this report to find the type of information they can request when selecting or contracting with a venue.

Through the Green Venue Report, each year new innovations are found and best practice uptake analyzed to report the current state of convention and exhibition center sustainability at that time. It is the project's hope that past reports will soon become dated, as the innovations and best practices of yesterday become the common practices of today.

# 2016 GREEN VENUE REPORT PARTICIPANTS

- › Allstream Centre, Toronto, Ontario, Canada
- › Amsterdam RAI Exhibition and Convention Centre, Amsterdam, The Netherlands
- › Atlantic City Convention Center, Atlantic City, New Jersey, USA
- › Austin Convention Center, Austin, Texas, USA
- › Bangalore International Exhibition Centre, Bangalore, India
- › Bangkok International Trade and Exhibition Centre, Bangkok, Thailand
- › Boston Convention & Exhibition Center, Boston, Massachusetts, USA
- › Broward County Convention Center, Fort Lauderdale, Florida, USA
- › Calvin L. Rampton Salt Palace Convention Center, Salt Lake City, Utah, USA
- › Cobo Center, Detroit, Michigan, USA
- › Colorado Convention Center, Denver, Colorado, USA
- › Columbia Metropolitan Convention Center, Columbia, South Carolina, USA
- › David L. Lawrence Convention Center, Pittsburgh, Pennsylvania, USA
- › DeVos Place Convention Center, Grand Rapids, Michigan, USA
- › Enercare Centre, Toronto, Ontario, Canada
- › Ernest N. Morial Convention Center, New Orleans, Louisiana, USA
- › Exponantes, Nantes, France
- › George R. Brown Convention Center, Houston, Texas, USA
- › Georgia World Congress Center, Atlanta, Georgia, USA
- › Hynes Convention Center, Boston, Massachusetts, USA
- › The International Centre, Mississauga, Ontario, Canada
- › Jacob K. Javits Center, New York, New York, USA
- › Kap Europa Conference Centre, Frankfurt, Germany
- › Los Angeles Convention Center, Los Angeles, California, USA
- › Mandalay Bay, Las Vegas, Nevada, USA
- › Marina Bay Sands, Singapore
- › Melbourne Convention and Exhibition Centre, Melbourne, Australia
- › Metro Toronto Convention Centre, Toronto, Ontario, Canada
- › Moscone Center, San Francisco, California, USA
- › Music City Center, Nashville, Tennessee, USA
- › Orange County Convention Center, Orlando, Florida, USA
- › Oregon Convention Center, Portland, Oregon, USA
- › Palexpo, Geneva, Switzerland
- › Palmer Events Center, Austin, Texas, USA
- › Pennsylvania Convention Center, Philadelphia, Pennsylvania, USA
- › San Diego Convention Center, San Diego, California, USA
- › Sands Expo and Convention Center, Las Vegas, Nevada, USA
- › St. Paul RiverCentre, Saint Paul, Minnesota, USA
- › Vancouver Convention Centre, Vancouver, British Columbia, Canada
- › Venetian Macao Convention & Exhibition Centre, Macau, China
- › Virginia Beach Convention Center, Virginia Beach, Virginia, USA
- › Walter E. Washington Convention Center, Washington, DC, USA
- › Washington State Convention Center, Seattle, Washington, USA
- › Whistler Conference Centre, Whistler, British Columbia, Canada

## JOIN & CONTRIBUTE!

The 2017 Green Venue Survey will open spring of 2017.

Find out more and sign up to participate at [www.greenvenuereport.com](http://www.greenvenuereport.com)





# 2016 GREEN VENUE REPORT PARTICIPANTS

29	USA	1	SWITZERLAND	1	SINGAPORE	1	CHINA
6	CANADA	1	FRANCE	1	AUSTRALIA	1	INDIA
1	GERMANY	1	THE NETHERLANDS	1	THAILAND		



Calvin L. Rampton Salt Palace Convention Center



Washington State Convention Center



Colorado Convention Center



Walter E. Washington Convention Center

# KEY FINDINGS

## CENTERS ARE DEDICATING RESOURCES TO DIVERT WASTE FROM LANDFILLS.

Fifty-seven percent (57%) of centers have active and ongoing back-of-house manual waste sorting programs in place. An additional 5% of venues can offer the service when requested at no additional expense to event organizers. Only 20% of centers reported to not being able to offer manual back-of-house sorting when requested.

## CENTERS VALUE SUSTAINABLE FOOD AND ARE INCREASINGLY PURCHASING FOOD FROM LOCAL PRODUCERS.

Eighty-five percent (85%) of responding venues procure food and beverage products with at least one sustainability-focused certification or accreditation. On average, over 52% of spending on food and beverage items procured in 2015 were considered local (within 250miles/400km).

## SUSTAINABILITY LEADERSHIP POSITIONS PLAY AN IMPORTANT ROLE AT CONVENTION CENTERS.

The total number of centers with a dedicated Sustainability Coordinator or Sustainability Manager on staff nearly doubled this year. Though this is a promising sign for growing commitment by centers to manage sustainability, as a percentage of total responding centers this reflects a decrease from 70% of reporting venues last year to only 61% of venues with a dedicated sustainability point person.

## GREEN TEAMS CONTINUE TO REMAIN CRITICAL FOR GREEN VENUES.

This year saw a growth in the percentage of centers with green teams. Eighty-four percent (84%) of responding centers have a Green Team, up from 77% last year. The average green team size is also up significantly from 11 people to 18 staff members, with team composition representing almost all departments within the facility.



David L. Lawrence Convention Center

## **CENTERS AND EVENT ORGANIZERS CONTINUE TO IMPROVE COMMUNICATION AROUND EVENT SUSTAINABILITY.**

Responding centers indicated that on average 34% of event organizers discussed sustainability or “greening” when engaging with the venue. This growth reflects a positive trend of year over year growth; up roughly from 27% in 2014 and 20% in 2012 (data years). Additionally, 81% of responding centers reported that sales staff are versed in the venue’s sustainability practices and or “green meeting” options and discuss these options during the pre-event planning process. While the majority of venue sales teams remain prepared to address sustainability requests, there is still significant opportunity to increase the quantity and quality of sustainability communications between the venue and organizer.

---

## **EVENT-SPECIFIC WASTE TRACKING IS INCREASING.**

Seventy-nine percent (79%) of responding centers can provide event planners a specific waste diversion report for their event, a slight increase from 72% last year. Sixty-one percent (61%) provide the event reports at no additional expense to planners, up from 57% of venues who provided the service free of charge the previous year.

---

## **CONVENTION CENTERS SUPPORT CITY AND REGIONAL SUSTAINABILITY GOALS AS WELL AS SUSTAINABILITY CERTIFICATIONS.**

One hundred percent (100%) of centers indicated holding some type of sustainability certification or participating in sustainability programs and initiatives lead by their city, regional government, or local grassroots organizations, taking an active role in shaping the sustainable development of their community.

---

## **RENEWABLE ENERGY TECHNOLOGIES ARE FINDING A HOME AT CONVENTION AND EXHIBITION CENTERS.**

Almost half of responding venues utilize onsite renewable energy technologies such as onsite solar photovoltaic (PV) panels or wind turbines.

Forty-five percent (45%) of centers have invested in this green energy technology and are able to produce a formidable amount of energy (up to 25% of their total electricity needs at some centers) and thereby reduce energy needed from fossil fuels.

## WATER MANAGEMENT AT VENUES IS IMPROVING.

Though water consumption varies greatly based on the size of the venue, the number of events and uses of water, convention and exhibition centers are improving water management techniques and completing efficiency upgrades. Twenty-one percent (21%) of venues capture rainwater for storm water management or reuse, up significantly from 6% last year. On average, 89% of all venue faucets are high efficiency (<2.0 GPM / 7.5 LPM) and 66% of all venue toilets are high efficiency at responding venues.

## VENUES ARE RESPONSIBLY MANAGING FOOD WASTE.

Planning the precise volume of food needed for attendees helps to control costs and minimize waste, making food management a critical component of event catering.

Eighty-one (81%) of responding centers practice active food waste management (the tracking and monitoring food production waste, overage, and spoilage). Additionally, almost all of center's catering departments (93%) regularly compost kitchen food waste, helping to divert waste from landfill.

## TRACKING EVENT IMPACTS IS IMPROVING.

Nearly all of the responding centers were again able provide annual impact data related to energy, water, and waste.

Ninety-three percent (93%) of centers provided annual waste data, 84% provided annual energy data, and 89% of centers provided annual water consumption data. When it comes to event-specific reporting, waste is still the most commonly tracked metric (79% of respondents) up from 72%, followed by energy (58%) up from 48% and water (34%) which remained the same as last year.

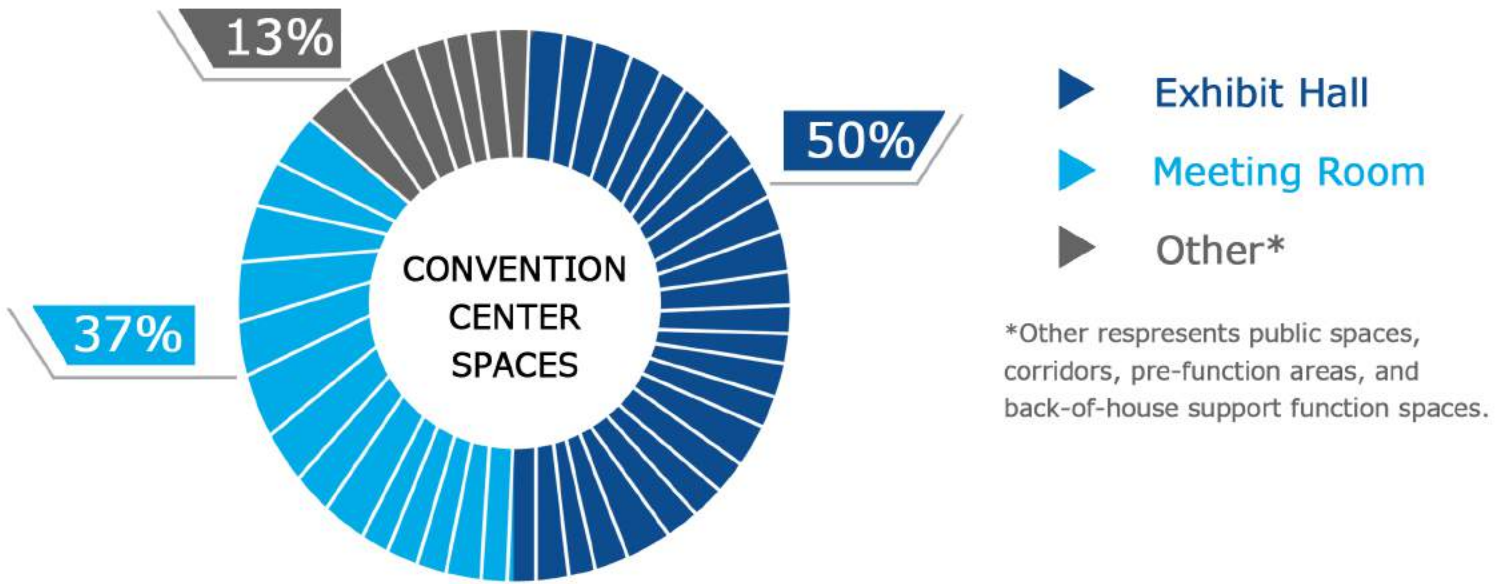


# SPACE & EVENTS

Convention and exhibition centers play an influential role within the MICE industry due to their physical size, the number of people they welcome and host each year from around the world and the economic activity they help generate.

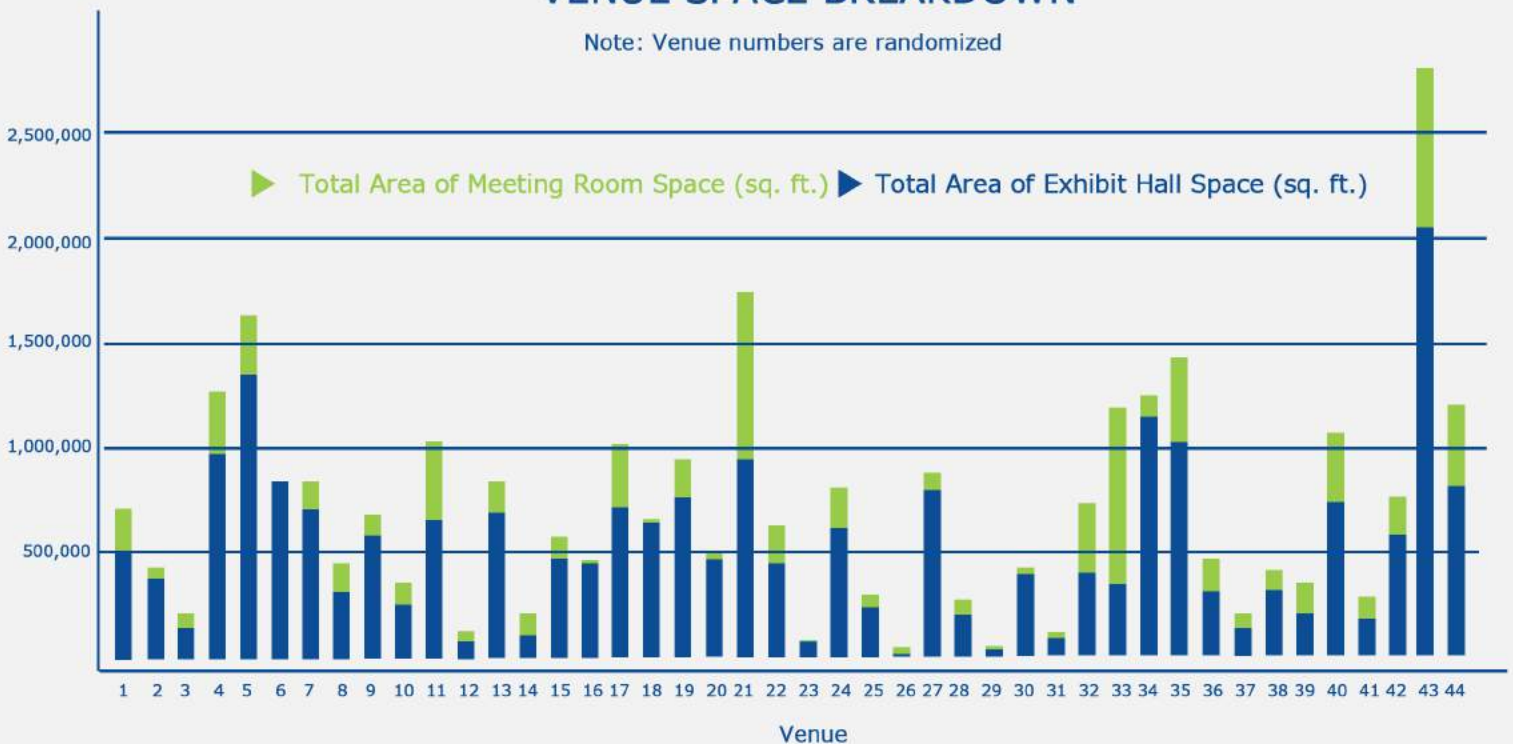
## SPACE

In their entirety, centers ranged in size from about 65,000 sq. ft. (just over 6,000 sq. m.) to 9,800,000 sq. ft. (roughly 910,459 sq. m.) of total conditioned space.



## VENUE SPACE BREAKDOWN

Note: Venue numbers are randomized



## SUSTAINABLE SPACES

Convention and exhibition centers cover a lot of ground, and many have space that may be underutilized. Trends for 2016 show how centers are creatively using some of that space in the form of green roofs, beekeeping, and onsite gardens.

**Twenty-seven (27%)** of centers reported having a green roof in 2016.

Though this is a decline as a percentage of the total, (down from 33%). The total number of centers with a green roof increased from ten to twelve representing over 1.1 million square feet or 102,193 square meters.

**Eleven percent (11%)** of responding centers currently have an apiary on their roof.

**Twenty-three percent (23%)** of centers produce food onsite for catering purposes. Onsite gardening showed a decline as a percentage of total centers (down from 33%). However, the total number of onsite gardens increased from nine centers to ten.



## VENUE HIGHLIGHTS



**The Colorado Convention Center's** (Denver, Colorado) Blue Bear Farm boasts 5,000 square feet of urban garden, yielding fruits, vegetables, herbs, and beehives for use in the center's kitchen.



**Exponantes** (Nantes, France) biodiversity path provides visitors with an opportunity to experience biodiversity within the Centre. The interpretative trail through the grounds of the center consists of a small vegetable garden, apiary, native fauna and flora, and Apailabo; an experimental laboratory to promote the feeding and nesting of wild bees.



The beautiful park that is Yerba Buena Gardens is comprised of a 5-acre esplanade of landscaped lawns, public art, and cafés. An additional, 5-acre space sits atop the **Moscone Center** (San Francisco, California) which is home to a children's creativity museum, learning garden, labyrinth, and outdoor amphitheater.

# EVENTS



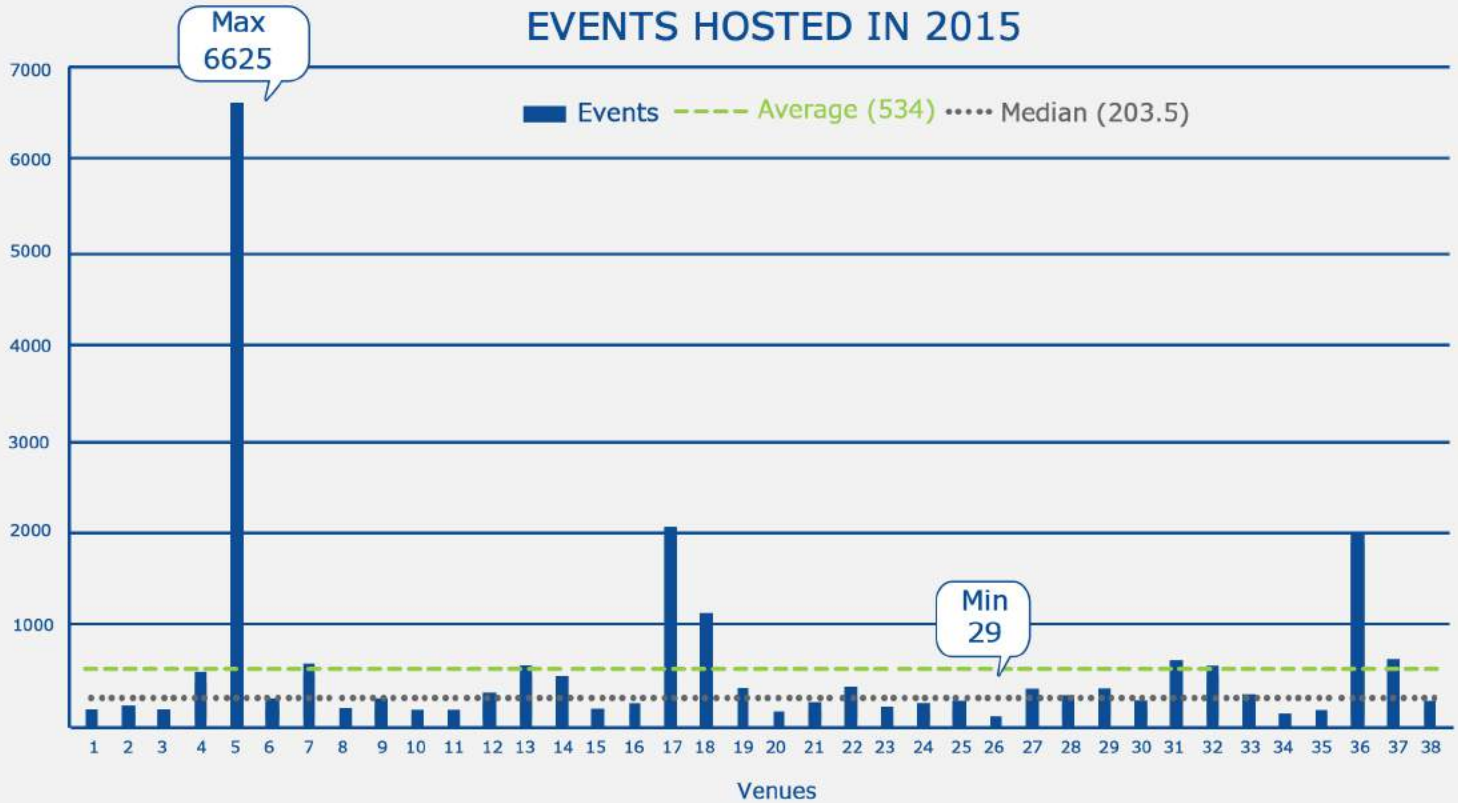
## 86%

of venues were able to provide annual data on events.<sup>1</sup>



## 20,309

total events were held across the 38 responding centers.



In an effort to shed light on how venues calculate event and attendee numbers, in the 2016 survey we asked venues to give us more details on how they typically track this.

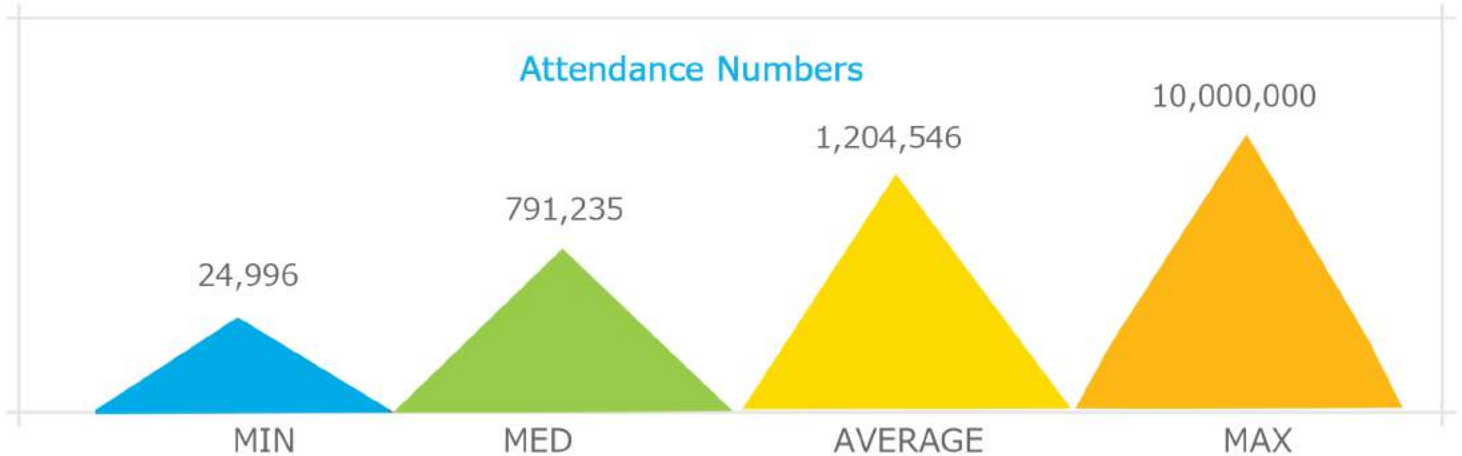
The majority of venues reported to using some sort of electronic event booking and tracking system to track events. However, answers for what constituted an event ranged from “every event is counted regardless the number of days in the building”, to “total licensed revenue generating event” and “total groups visited and how many events each group had during that time.” We will continue to strive for better data and details on a standard definition for an event.

<sup>1</sup> We did not request annual event data according to a specific calculation standard but rather asked how the data were calculated, so responses may not be uniform. The same is true for attendee numbers.



## ATTENDANCE

90% of centers were able to provide annual data on event attendance. 48,181,849 attendees were present for events at 40 responding centers.



### Meeting Face-to-Face



The Meetings, Incentives, Conference, and Events Industry, often referred to as MICE, is a diverse industry comprised of organizers and suppliers working to develop and deliver meetings, conference, and exhibitions world wide. Each event that takes place fosters a key role in helping people, companies, and academic institutions connect, solve problems, innovate and grow. According to a recent study by the World Travel and Tourism Council (WTTC) 89% of survey respondents rated face-to-face meetings as essential for making business deals and 95% agreed that in person meetings are key to both building and maintaining long term relationships.

Reports indicate the MICE industry is expected to grow in the years to come. This potential growth means we can expect to see more meetings and events, attracting more attendees at more convention and exhibition

centers around the world.



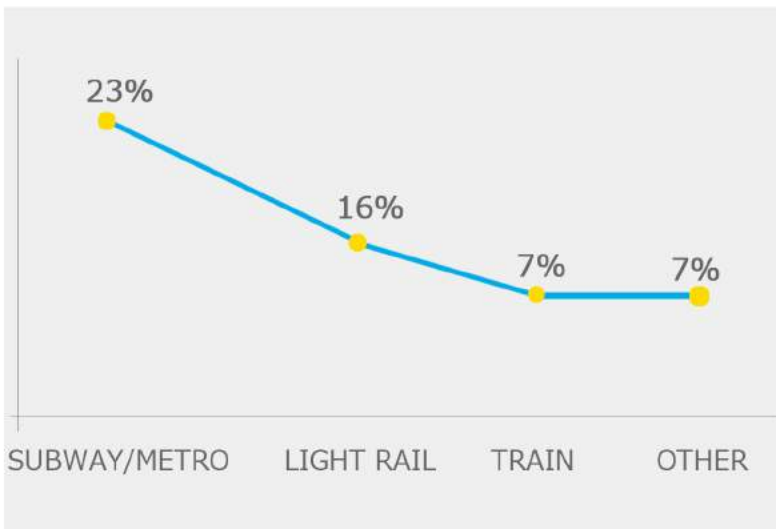
# LOCATION

Convention and exhibition center location and proximity to the city center, airport, public transportation, and hotels directly impact attendee experience and the carbon footprint of an event.

## ATTENDEE ACCESSIBILITY



## PUBLIC TRANSPORTATION OPTIONS FROM AIRPORT (WITHIN .5 MILES)



Ninety-three percent (93%) of venues reported to be accessible by train, light rail, or subway/metro, with the average distance to the nearest train, light rail or subway being 1 mile/1.6 km.



have public bike racks for attendee use.



are within .5 mi/.8 km to a "city bike share" station.



have electric car charging stations.



have programs to offer event organizers that incentivize mass transit travel for attendees.



San Diego Convention Center

## VENUE HIGHLIGHTS

### San Diego Convention Center

(San Diego, California) partners with the local Metropolitan Transit System to offer discounted trolley tickets or specialized packages to convention groups in an effort to help event organizers take advantage of low carbon transportation options for attendees.

**Palexpo** (Geneva, Switzerland) provides all visitors arriving at the Geneva Airport a ticket to use the city buses for 90 minutes free of charge to reach their hotel. When attendees arrive at their hotel they can take advantage of a "Geneva Tourist Card", allowing them to use all the public transportation options (buses, local trains, and boats on the Geneva lake) free of charge for the duration of their stay.

# FACILITY CERTIFICATIONS & PROGRAMS

Certifications offer the opportunity for the destination and the managing organization - may they be private companies or municipalities - to illustrate their commitment to sustainability. As such, many convention and exhibition centers the world over have and continue to invest in resources toward achieving building and sustainability certifications.

Venues are managed differently across the globe which influences center operations in a myriad of ways.



of centers are publicly managed.  
(CVB, local government etc.)



are privately managed.  
(SMG, GLocal Spectrum, AEG etc.)



are managed by other entities  
(authorities of the state, non-profits etc.)

Regardless of management, venues consistently see the value in sustainability certifications and designations.

All participating centers responded to holding some type of sustainability certification or participating government, state, municipality or country wide sustainability designation program that focus on environmental responsibility and community stewardship.



have achieved a sustainability-related certification.<sup>2</sup>



held two sustainability certifications.



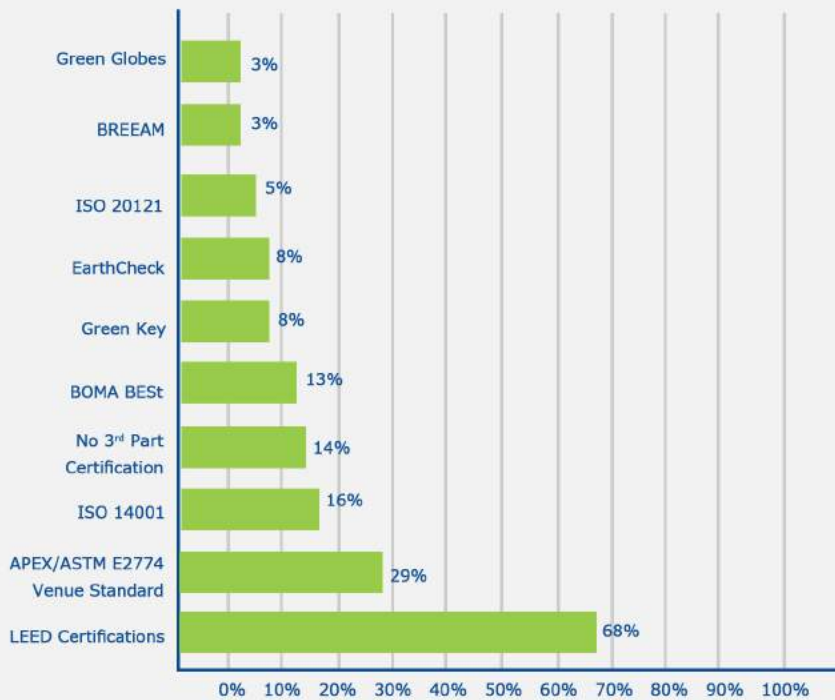
held three sustainability certifications.

Of 31 centers planning to achieve a sustainability-related certification within the next 18 months, 16 centers (52%) are planning on achieving a new future certification, while 15 centers are planning to recertify an existing certification.

<sup>2</sup> This percentage represents third-party certification. Third-party certification involves an independent assessment declaring that specified requirements pertaining to a product, person, process or management system have been met.

## VENUE SUSTAINABILITY CERTIFICATIONS

Note: this graph may depict venues with more than one certification



## THE BREAK DOWN OF CERTIFICATION OR RECERTIFICATION:

- 17 plan to pursue LEED
- 7 plan to pursue APEX/ASTM
- 4 plan to pursue an ISO certification of some type
- 3 plan to pursue either a Green Key Meetings, Green Globes, or BOMA Best rating

## FACILITY CERTIFICATIONS

### LEED NEW CONSTRUCTION (LEED NC):

<http://www.usgbc.org/Docs/Archive/General/Docs5546.pdf>

### LEED FOR EXISTING BUILDINGS OPERATIONS AND MAINTENANCE (LEED EB+OM):

<http://www.usgbc.org/Docs/Archive/General/Docs3617.pdf>

### ASTM E2774 VENUE STANDARD:

<http://www.conventionindustry.org/standardspractices/APEXASTM/APEXASTMlist.aspx>

### ISO - FRAMEWORK FOR ENVIRONMENTAL MANAGEMENT SYSTEMS (ISO 14001):

[http://www.iso.org/iso/theiso14000family\\_2009.pdf](http://www.iso.org/iso/theiso14000family_2009.pdf)

### ISO - EVENT SUSTAINABILITY MANAGEMENT SYSTEMS (ISO 20121):

<http://www.iso.org/iso/home/standards/management-standards/iso20121.htm>

### BOMA BEST (BUILDING OWNERS AND MANAGERS ASSOCIATION OF CANADA BUILDING ENVIRONMENTAL STANDARDS):

<http://www.bomabest.com/>

### BREEAM (BUILDING RESEARCH ESTABLISHMENT ENVIRONMENTAL ASSESSMENT METHODOLOGY):

<http://www.breeam.org/>

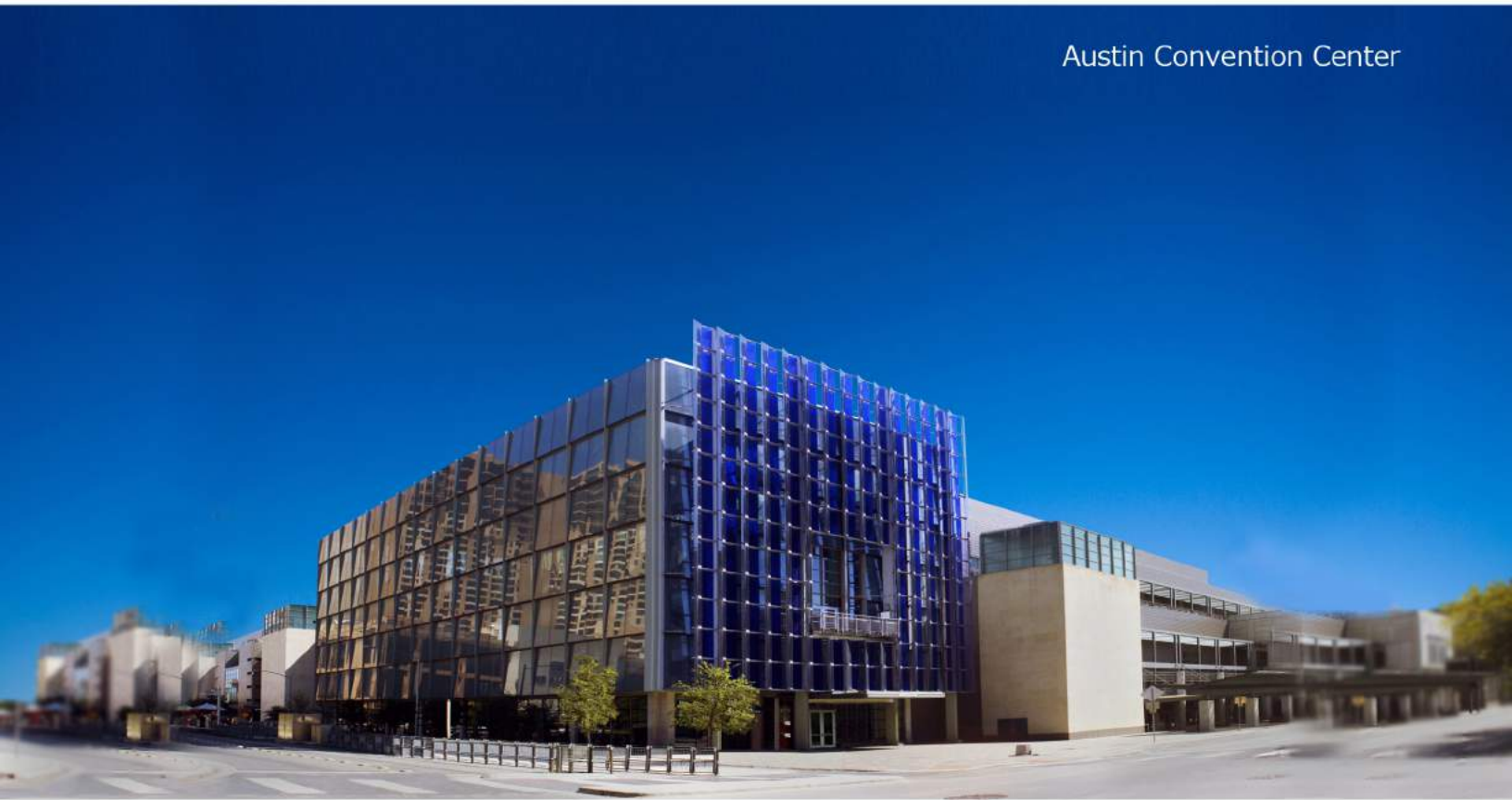
## VENUE HIGHLIGHTS

### THE DAVID L. LAWRENCE CONVENTION CENTER (Pittsburgh, Pennsylvania)

is part of the Pittsburgh 2030 District. The district is a collaborate of public and privately owned high performance buildings in Downtown Pittsburgh. Building members aim to dramatically reduce energy and water consumption, transportation emissions, and improve indoor air quality while increasing competitiveness in the business environment and owner's returns on investment.

The city of Austin, Texas has a number of sustainability goals. Being in the heart of the city and managed through the local government the **AUSTIN CONVENTION CENTER** is committed to supporting many of these initiatives and goals which include: Zero Waste by 2040, Carbon Neutrality by 2020, and Net-Zero community-wide greenhouse gas emissions by 2050. The venue Green Team Committee has worked with the Austin Climate Protection Program to develop a first-of-its-kind Departmental Climate Protection Plan. This plan is intended to help reduce the Convention Center's carbon footprint, and help the City of Austin meet its goal of becoming carbon neutral by 2020.

Austin Convention Center



# STAFF

What is the center's vision of sustainability? Who is responsible for implementing that vision? In some centers, employees create and manage grass roots sustainability programs that align with their personal interests and convictions. In other centers, formal management positions are created to oversee long-term projects like certification and annual reporting. In all cases, the fact remains true that the awareness and buy-in of venue employees is another critical factor to venue sustainability success.

## DEDICATED STAFF



The total number of centers that have a dedicated Sustainability Coordinator or Sustainability Manager on staff rose from just 14 last year, to 27 this year. Even though total numbers rose significantly, as a percentage this reflects a decrease from 70% of reporting venues in 2015 to only 61% of venues with a dedicated sustainability point person. These professionals must use a dynamic skill set to be successful, combining technical knowledge with a holistic, cross-departmental view of the facility and its operations.

Of those centers with a dedicated sustainability position, 56% held professional designations such as LEED AP or LEED Green Associate. An additional 6% of responding centers had a person in a dedicated sustainability position working toward a professional designation.

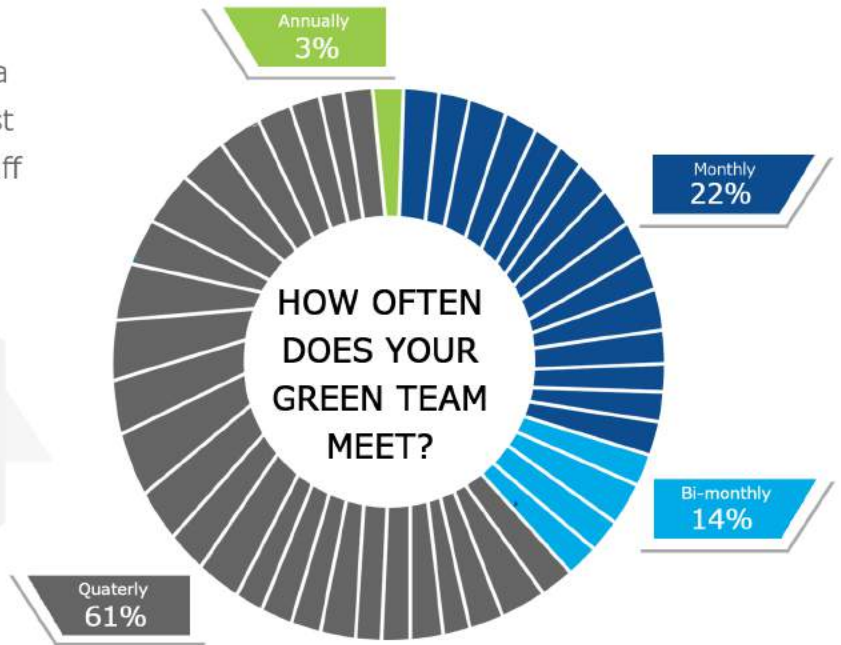
These positions within the center spearhead sustainability projects, communications and certifications discussed above. Thirty-two percent (32%) of centers reported to having someone on staff who is not a dedicated sustainability manager, but holds the responsibilities of the role. Anecdotally, it may be difficult for someone with other core responsibilities to effectively lead facility sustainability efforts.

## GREEN TEAMS

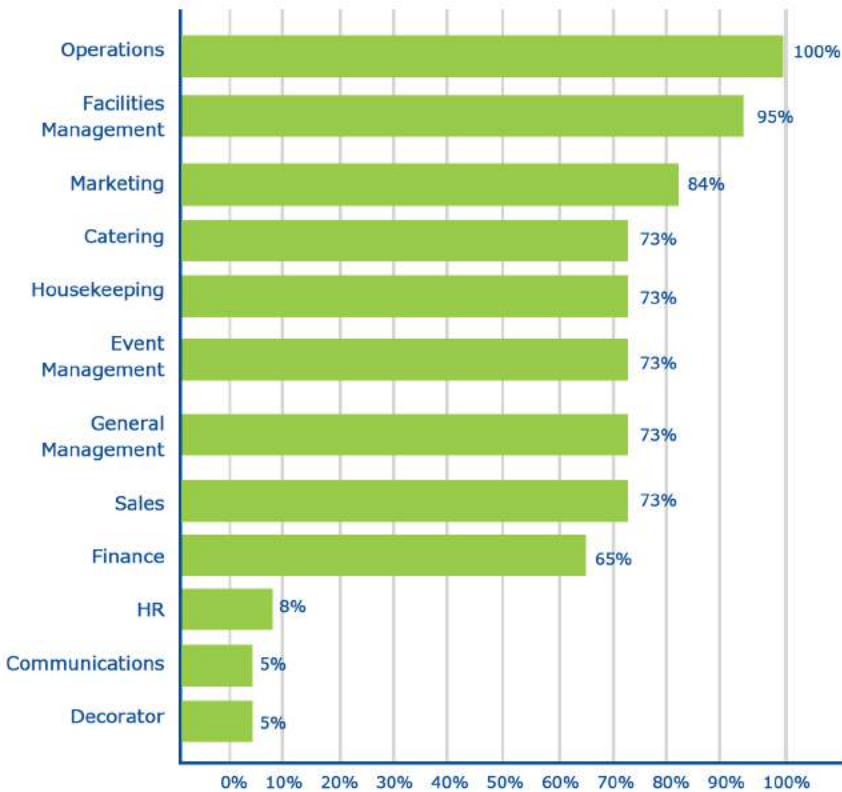
While having a dedicated leadership position within the organization is very important for sustainability performance and success, ensuring that employees from all departments and at all levels are engaged is equally critical.

Eighty-four percent (84%) of centers have a Green Team, a significant rise from 77% last year. The average green team size is 18 staff members, with 97% of teams meeting at least quarterly.<sup>3</sup>

Green team members are representatives across almost all departments within the facility.



## WHO'S ON THE GREEN TEAM



**67%** of responding centers have a budget to implement sustainability initiatives and programs.

**77%** of responding centers hold official staff training on understanding and implementing green practices at least once a year.

**56%** of responding centers recognize and award employees who go above and beyond in their sustainability efforts.

<sup>3</sup> This percentage is based on 36 centers that had a green team and provide data on the frequency of meetings



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*With more women in the workforce today than ever before, buildings are accommodating working mothers. Forty-seven (47%) of responding centers have a dedicated lactation room available for staff and attendees.*

---

Keeping staff engaged and caring about sustainability programs at the work place is a common challenge among respondents. Dedicated sustainability staff and green team members commented that they spend a lot of volunteer time training employees on sustainable operating practices to increase buy-in and help all staff better understand the “why” behind the programs, not just the “how.”



# GREENING HEROES

Sustainability role models come from all departments and inspire in many different ways.



# COMMUNICATIONS

Effective communications are an integral part of any sustainability effort, serving many important purposes: internal buy-in, customer buy-in, education, customer awareness and satisfaction, and increased brand value to name a few. Ideally, sustainable operations become fully integrated into the operations of a center, and likewise, sustainability conversations become fully integrated into the planning process between center staff and event organizer clients.

## POLICIES

One of the foundations of a sustainability program is a sustainability policy, which illustrates a clear commitment and sets center priorities, goals, guiding initiatives, and programs.

Some discrepancy remains among respondents as to what constitutes a “sustainability policy.” Seventy-six percent (76%) of responding centers reported to having a publicly available, written sustainability policy. However, upon examination, only 50% of those centers who claimed to have a public policy were able to provide links to documents that meet the general requirements of such a document.<sup>4</sup>

A **sustainability policy** is public statement outlining an organization’s commitment and strategy towards sustainability. The policy clearly states the organization’s commitments, vision, goals, and objectives for both daily and event operations. The policy defines the organization’s sustainability vision, but also explains how long-term goals will be achieved.

## REPORTING

When it comes to officially reporting on performance, 65% of reporting centers indicated they prepare an annual sustainability report specifically for the venue or as part of the city’s annual sustainability report. However, we discovered an array of documents submitted as sustainability reports. Items ranged from one page infographics to detailed multipage reports with long term goals and metrics clearly defined. For the 2017 survey we will add more detail to these questions to gain a better understanding of information aligned with official reporting standards and what type of content is included.

## WEBSITES & MARKETING COLLATERAL

Almost all centers are proactively marketing their commitment and programs to planners and other stakeholders, with 93% of venue shaving a webpage or website section dedicated to sharing the venues’ sustainability practices, up from 90% last year. The amount, quality, and real-time nature of the content presented varies across center sites.

<sup>4</sup> Requirements for sustainability policies are addressed generally in both the ISO 20121 and APEX/ASTM Standards for Sustainable Meetings and Events

**The Columbia Metropolitan Convention Center** (Columbia, South Carolina) expresses their commitment to integrating sustainability by educating employees and clients through highlighting goals and practices on their website. This includes current green initiatives focusing on recycling, food service, energy efficiency, and future goals to benefit the organization and community.



## PLANNER COMMUNICATIONS & REQUESTS

One-way communications about programs and overall center attributes are a good way for centers to show their sustainability commitment. However, most meetings are unique in size, nature, and impacts. Therefore, it is only through real collaboration and conversation between the venue, event organizer, caterer, and third-party vendor partners (general contractor, AV supplier, transportation supplier) that true sustainable event planning, implementation, and progress can occur.

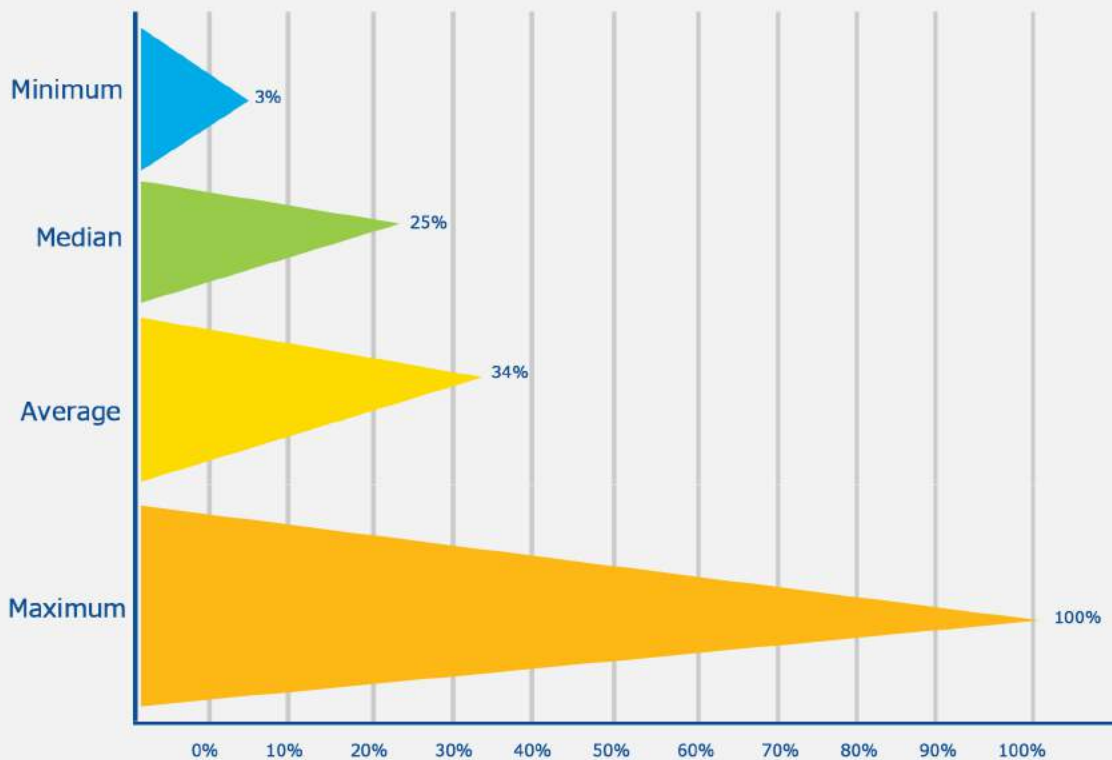
When asked what percent of event organizers discuss “greening” when engaging with the venue, responding centers indicated that, on average, 34% of planners discussed sustainability. This is a rising trend, up from roughly 27% in 2014 and 20% in 2012 (data years).

Eighty-one (81%) of responding centers reported that sales staff are versed in the venue’s sustainability practices and or “green meeting” options and discuss these options during pre-event planning process.

At the **Virginia Beach Convention Center** (Virginia Beach, Virginia) sustainability is embedded in all parts of the meeting planning process. VBCC provides meeting planners and attendees with online resources covering a wide-range of green initiatives from hybrid vehicle and carpool parking areas, to green dining and hotel options, and community outreach programs in the Virginia Beach area. VBCC also offers guidelines for sustainable meetings to help the center achieve their green goals.



### PERCENT OF EVENT ORGANIZERS THAT DISCUSS EVENT "GREENING" WITH VENUE



## VENUE FEEDBACK

When asked,  
“What kind of support would you like to see from event organizers to improve the sustainability at your venue?”

Centers responded that they would like to see planners:

### **Improve attendee engagement around venue sustainability practices.**

Event attendees can significantly help or hinder event sustainability efforts. Educating and encouraging attendees to take part in responsible waste disposal can make a world of difference.

### **Take greater initiative in being responsible for what is brought into the venue.**

Many centers expressed that the success of sustainability programs weighs heavily on the type and volume of material used by event organizers and exhibitors. A greater focus on reducing the use of resources or working to procure materials that are more easily reused or recycled can substantially reduce waste

### **Improve communication between centers, planners, and vendors.**

Planners play a critical role in the success of sustainability programs during events. By sharing sustainability plan details with their planning team, exhibitors, and staff, greater participation and better results can be achieved.

When asked,  
“What kind of support would you like to see from event vendors (hired by the venue or event organizers) to improve the sustainability at your venue?”

Centers responded that they would like to see vendors:

### **Continue to reduce the volume of material brought in for events.**

Use materials and substrates for exhibit build outs that can be reused for more than one show. If that isn't possible, then choose materials that can easily be recycled or donated to local charities.

### **Actively participate in venue best practice guidelines.**

Adopting best practices while onsite that help to reduce energy and encourage greater accountability for responsible disposal of waste materials following an event.



# ORGANIZERS GO GREEN!

As the event organizer, you drive the environmental, social, and economic impacts of your events. By partnering with responsible businesses and procuring sustainable products and services, you also have the power to shape the meeting and event industry supply chain and industry performance as a whole. Your actions are that important!

Progressive event organizers incorporate these best practices into regular show operations. By implementing these actions, you can deliver successful events that tread light, support communities, and boost your bottom line.

## ARE YOU IN ?

### START THE CONVERSATION.

Request (or require) that vendor partners comply with industry best practices.

**WHY:** Just over a third of event organizers discuss sustainability when working with vendors. While this is an improvement, there is a great opportunity being missed. Planners have the potential to be the greatest catalysts for change within the events and hospitality industries by recognizing and rewarding event vendors/partners that offer outstanding products and services in an environmentally and socially responsible way.

### CREATE A GREEN TEAM.

The green team is responsible for discussing, planning, and implementing ways your organization can improve its sustainability performance (e.g., increased efficiency, responsible sourcing, reduced waste).



**WHY:** Effective green teams benefit a company's environmental, social, and financial performance. Green teams empower employees to make positive changes in their work place, which can lead to greater employee satisfaction and potential financial savings. Eighty-four percent (84%) of GVR venues have a green team that your team can work with!

## **REDUCE, REUSE, RECYCLE.**

### **Reduce the amount of printed literature and handouts for your events.**

**WHY:** Around 1 million tons of paper is used every day. Much of the printing needs of an event can be reduced significantly, helping out your bottom line! Clean up mailing lists, reduce the size of marketing materials and programs, move content from print to digital media as much as possible, and utilize event mobile app technology for sharing information and documents.

### **Reuse should be a key component of your exhibitor program.**

**WHY:** Encourage exhibitors to take advantage of rentable and reusable booth designs that can be used and repurposed hundreds of times over. In doing so your event will minimize waste and reduce carbon emissions from shipping heavy exhibit building materials around the globe.

### **Recyclable materials means less waste to landfill.**

**WHY:** Using more sustainable products for things like signage means those thousands of square feet of foam core signs - which is a PVC-based substrate and eventually ends up in landfill - can be replaced with 100% recyclable options made from more sustainable materials. Typically called "Falcon board" or "honeycomb" this sustainable sign option can be recycled at any venue with mixed recycling or cardboard recycling, which 100% of GVR venues have. In many destinations, this can be purchased at the same cost as foamcore.





A photograph of the Marina Bay Sands hotel and the ArtScience Museum in Singapore. The hotel's three towers are connected by a skybridge, and the museum's lotus-shaped facade is prominent in the foreground. The text is overlaid on a dark grey semi-transparent box.

# Sustainability Inspiration from Event Organizers and Vendors Partners.

Marina Bay Sands

Participating GVR centers commented that leading planners are creating sustainability initiatives that are not only inspiring their attendees, but their convention center partners across the world.

“One client offered carbon offsets to attendees for their cell phone and other wireless device usage. It was inexpensive and everyone received a sticker to put on their device, enabling attendees to show their support this sustainability effort.”

“One of our expo partners has started formalizing a donation program. The program includes inventory tracking and stickers for tagging donation items after a show so they don't get thrown away. We love the organization and are applying some of these practices to our donation program.”

“One organizer worked to promote the general recycling of more challenging items by advertising to attendees they will receive free admission to the event if they bring an electronic item for recycling to the show.”

“Any time a meeting planner includes a charitable element is inspiring. One example was a group that purchased red tennis shoes, sold them to their attendees and donated the proceeds to charity. It was a win/win as it caused camaraderie among the attendees and it promoted comfort and walk ability during the conference.”

“Any time an organizer promotes a green meeting practices and information to exhibitors, I'm happy.”

“Organizers are eliminating publication bins and using QR code publication walls instead.”

# WASTE

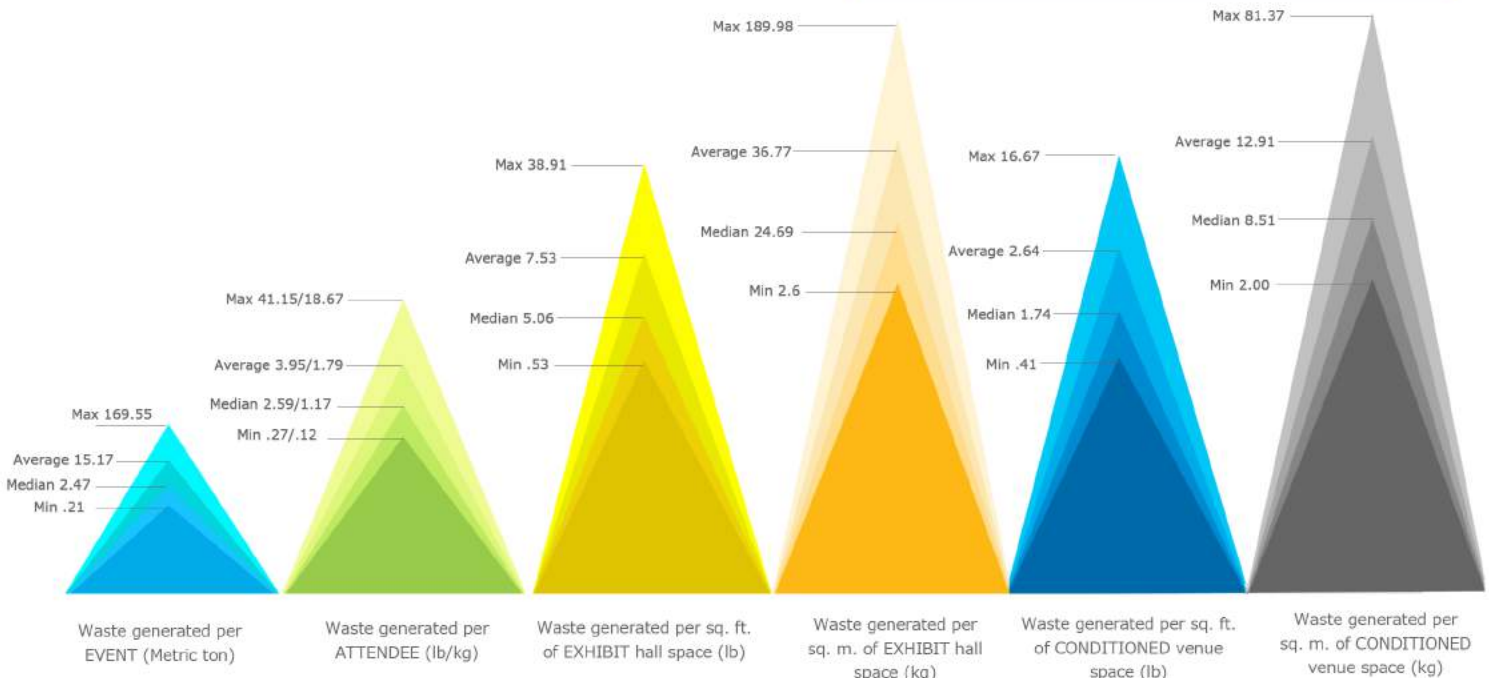
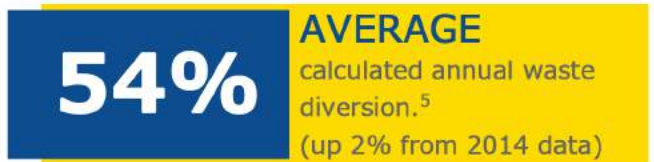
Waste is a significant and highly visible impact associated with meetings and events. General waste, registration materials, marketing collateral, food, abandoned exhibits, carpet, cardboard, broken pallets—these are among the many materials convention centers have to manage during show breakdown, often with limited space on the back docks and only hours to create a “blank slate” for the next event client.

93% of venues were able to provide 2015 waste generation and diversion data.

Total amount of waste generated at the 41 responding centers was 81,338 Metric tons. While this number is 50% higher than in 2014, there were roughly 46% more centers responding.

The highest reported diversion rate reported was 100%,<sup>6</sup> the lowest reported rate was 3%. These reported diversion figures might reflect above average performance for the industry and a lack of standard definition of “waste diversion” among centers across the globe. For example, there currently is no industry consensus if waste-to-energy should count as “diversion”.

Almost 10% of centers send waste to a waste-to-energy plant while another 10% send waste to incineration facilities rather than landfill.



<sup>5</sup> Waste diversion rate was defined in the survey question as “the percentage of total waste generated that is collected and processed by means other than landfill disposal or incineration (e.g., recycling, composting, donation, etc.)”

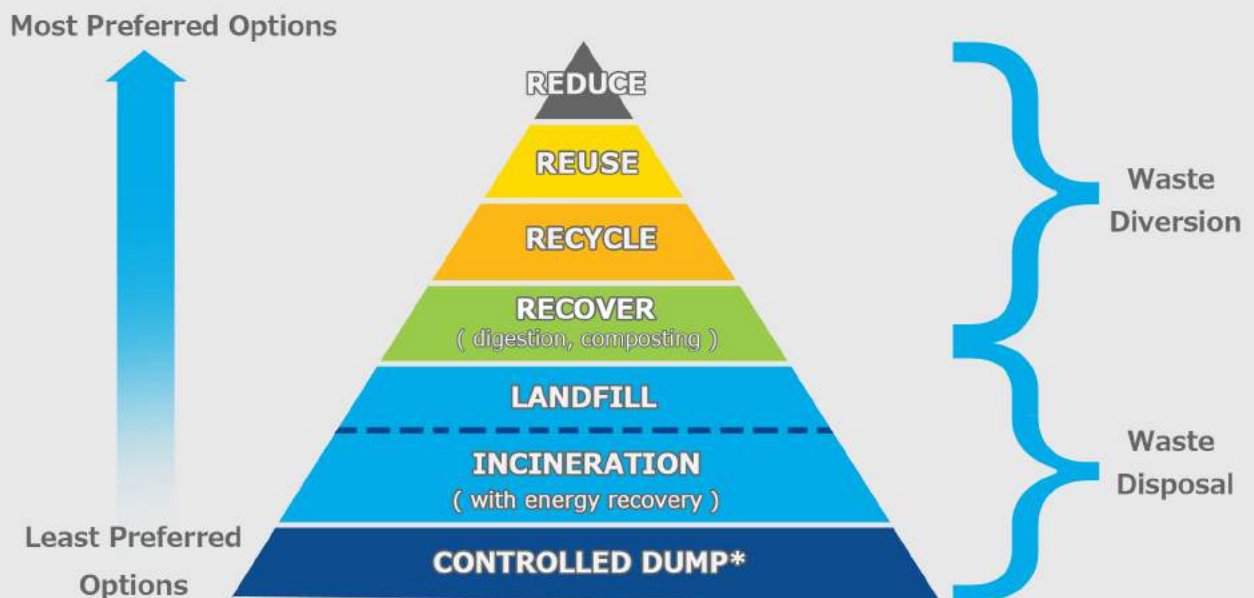
<sup>6</sup> As reported by this center, no waste goes to landfill or incinerator. Residual waste (after recycling and composting) is sent to an industrial waste-to-energy processing plant that produces fuel pellets. Pellets are primarily used to replace fossil fuels such as coal.

## WASTE-TO-ENERGY

Waste is one of the biggest impacts of an event, and at the same time one of the most difficult topics to manage and measure (as any GVR participant knows very well). The characterization of waste disposal is also growing. Historically, the best practice was to measure the amount of waste that was diverted from landfill. The methods of diversion, however, are not equally appealing, especially in the case of incineration. Waste-to-energy is becoming a more common municipal solution to solid waste, especially in Europe. The energy generated from burning waste is utilized for purposes such as district heating loops for buildings, and is at times preferable to burning fossil fuels (though fossil fuels were likely used prevalently in the manufacturing of the waste to begin with). Several forms of waste incineration and energy recovery exist, however, it is not always clear to venues how the final waste streams are disposed.

In addition to metrics, the waste hierarchy can be used for a venue's approach. Reducing the amount of waste generated in the first place undoubtedly is the clear best option. Total waste generation metrics can help venues see how they are performing, and then analyzed together with organizers to understand the waste stream composition of events. When options for waste disposal exist, environmentally preferable solutions should be weighed, and disposal plants evaluated objectively to ensure that claims are valid and vendors are being held accountable.

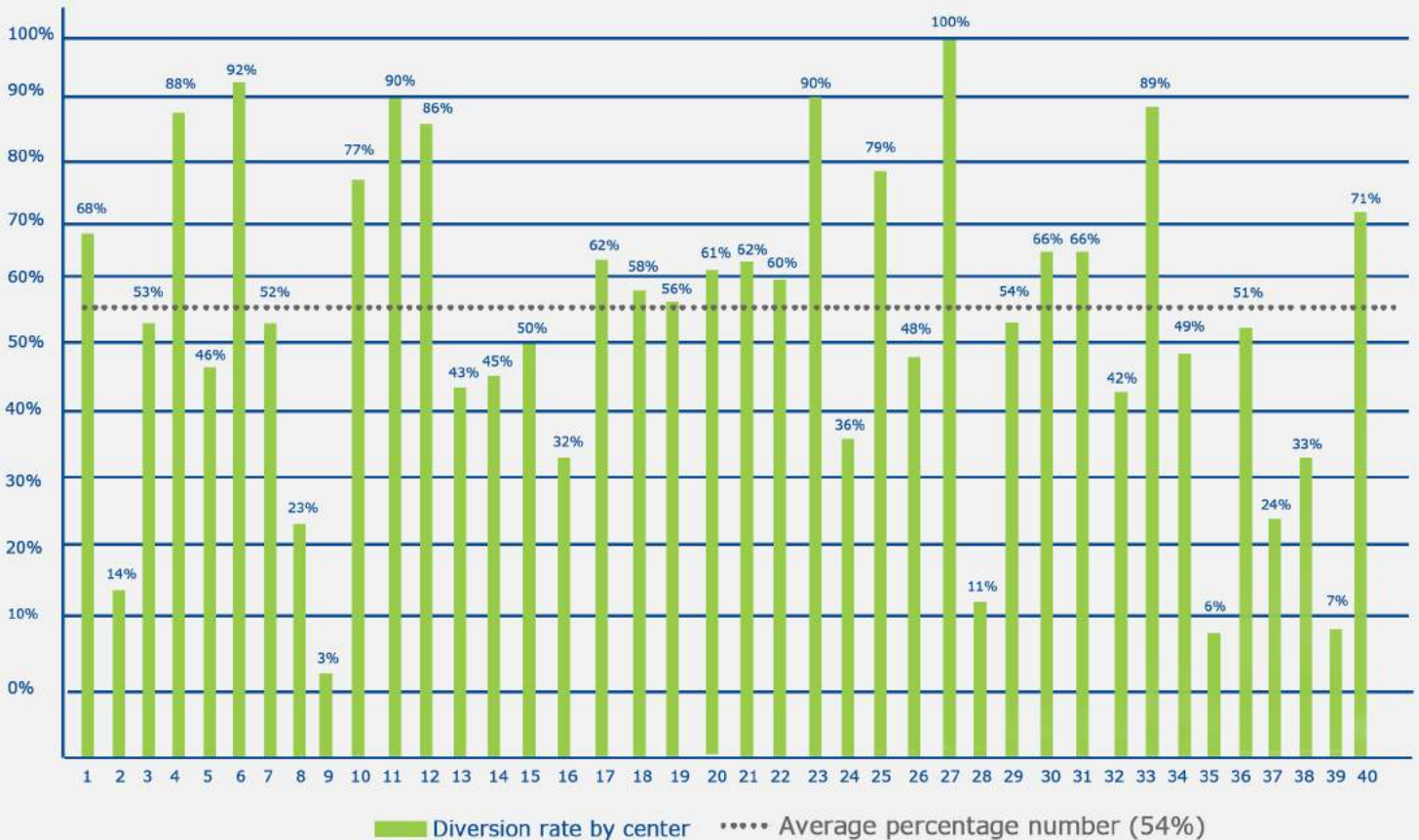
As the Green Venue Report progresses, more detailed breakdowns and clarifications on waste metrics performance will help this decision-making process.



\* As a minimum, waste should be disposed at a "Controlled Dump", which include site selection, controlled access, and where practical compaction of waste, Incineration requires complimentary sanitary landfill, as bottom ash non-combustible and by-passed waste needs to be landfilled.

# CALCULATED WASTE DIVERSION RATE

Note : Venue numbers are randomized



## WASTE BINS

Waste bins—their presence and design—send a message to event organizers about the level of a center’s commitment to responsible waste management. They also present an opportunity for attendees, event organizer staff, vendors, and exhibitors to participate in the waste diversion process. Having effective bins in the right location can also greatly affect the success of a center’s waste management program.

86% of centers have recycling and landfill bins that are **always** paired in public and exhibit hall spaces. (▲ 3% from last year)

48% of centers have **compost** bins available to attendees in public paces and concession areas by default. (▼ 11% from last year)

## BIN BEST PRACTICE

Waste bins can be an expensive line item for centers, making the right decisions for how those bins look can significantly impact your waste diversion rates. Four best practice tips for waste bins include:

- Bins have **WORDING** to describe what can be disposed of in each bin.
- Bins are clearly distinguished by **COLOR**.
- Bins have **IMAGES** of items that can be disposed of on each bin.
- Bins are consistently **PAIRED** together in sets of recycling, landfill, and compost. No stand-alone bins.

Check out the GVR garbage gallery for ideas and inspiration.

<http://www.greenvenuereport.com/garbagegallery/>



### The Compostable Food Service Ware Challenge:

Composting is an important part of improving waste diversion. Sending organics and food scraps from convention and exhibition center kitchens is a straightforward process that can be managed by most cities across the globe. However, when making front-of-house composting an option to attendees and introducing compostable service ware to help facilitate the process, centers face a huge challenge. Commercial composting today is big business that turns over thousands of tons of organic soil, and soil enrichment products within months of receiving food and organics waste. There is a myriad of certified compostable food service ware containers available for food purveyors and conference concession vendors to use to deliver food to attendees. Unfortunately, most of these products do not decompose in the timeframe compost facilities need them to, leaving residual globs of PLA matter. Because of this, more and more compost facilities across the country are refusing to take compostable service ware in their organics stream, making it harder for centers who want to provide this service and offer more sustainably sourced products to event attendees. The industry will need to dissect this challenge together to find solutions.

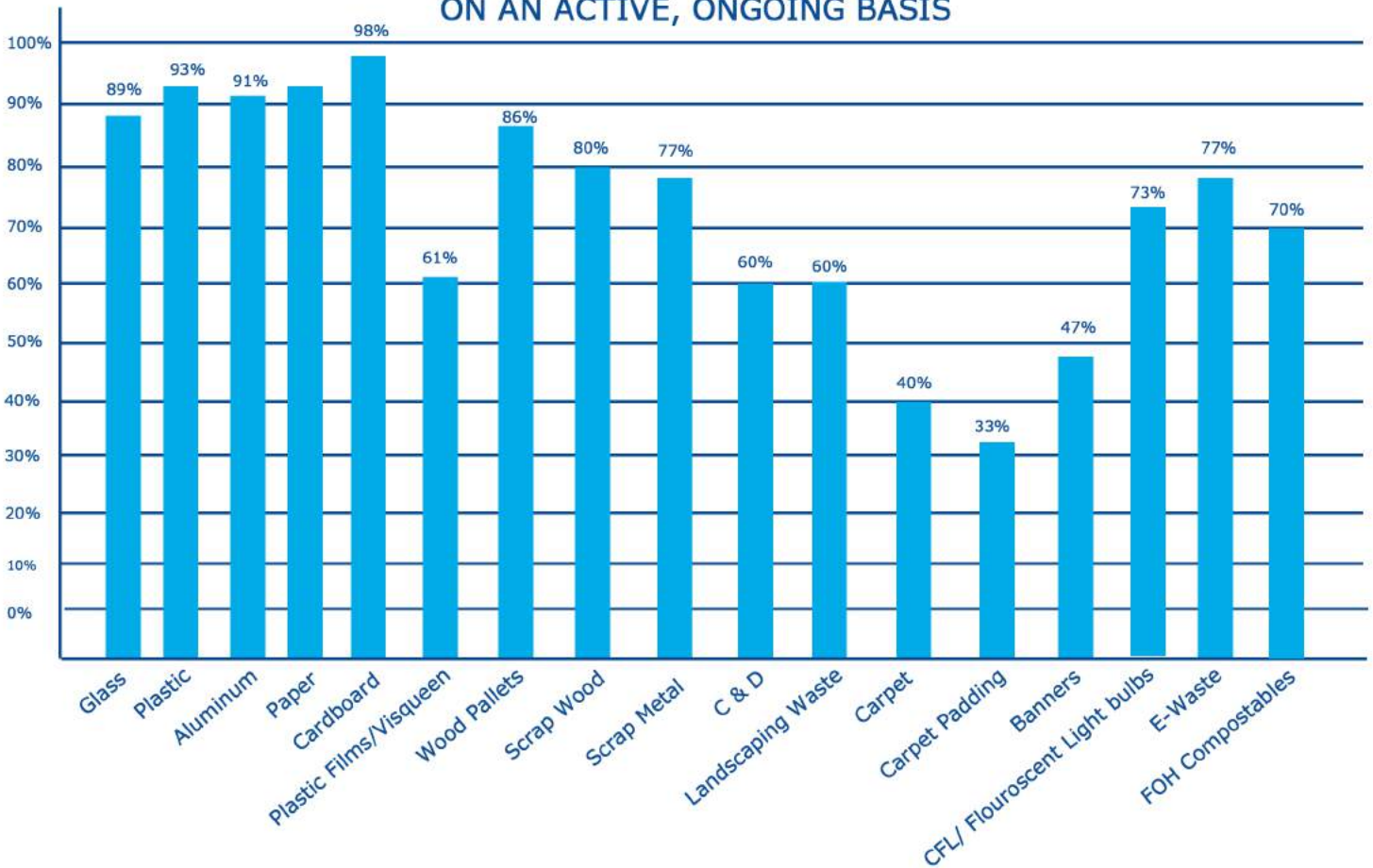
## WASTE DIVERSION PROGRAMS

Regularly operating (i.e. as part of standard operating procedures) waste diversion programs drive positive waste management performance in convention centers, and all facilities alike.

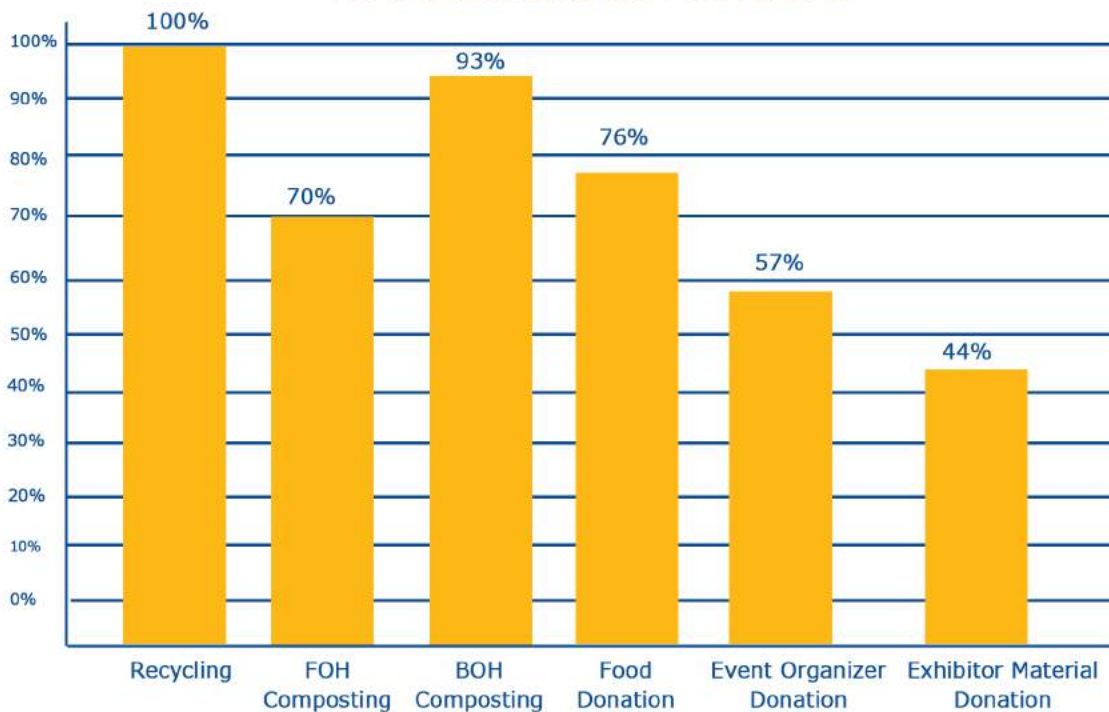
Venue best practice is to create ongoing, regular waste diversion programs that staff can learn, own and improve on. Challenges arise when trying to implement programs on an event-by-event basis, causing confusion and increasing the likelihood of operational “mistakes” and waste stream contamination.

All responding centers have an active and ongoing program in place to recycle at least one of the materials shown in the graph below.

### PERCENT OF CENTERS RECYCLING THESE MATERIALS ON AN ACTIVE, ONGOING BASIS



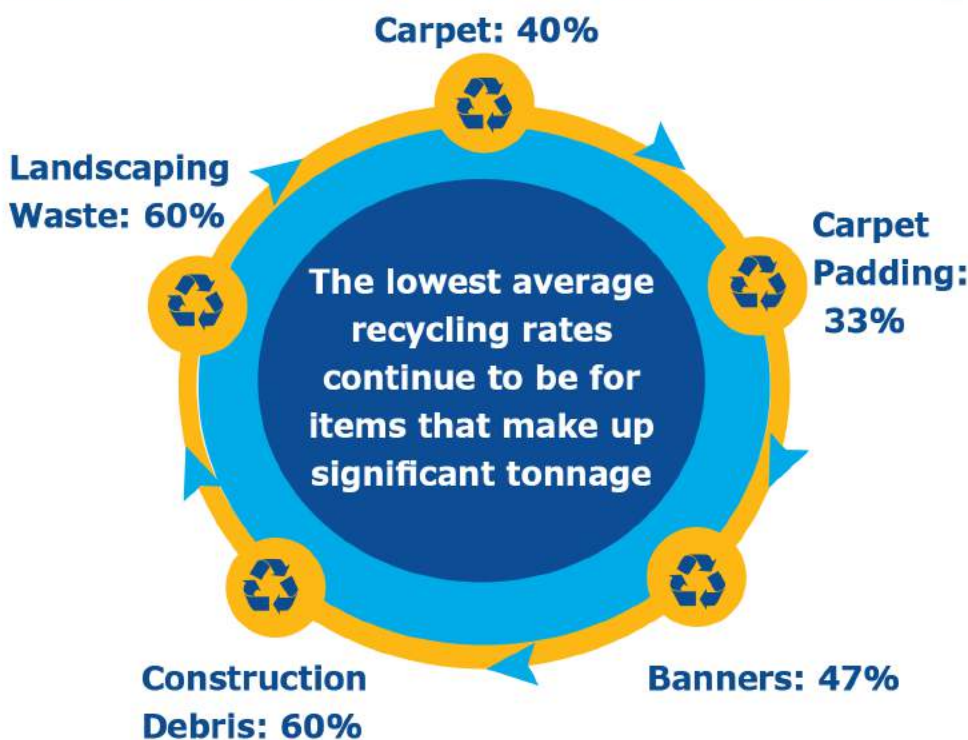
### PERCENT OF CENTERS PARTICIPATING IN ONGOING WASTE DIVERSION PROGRAMS



## VENUE HIGHLIGHT



**Mandalay Bay** (Las Vegas, Nevada) has an extensive waste management and recycling program. Three loading docks back-of-house (BOH) have been converted to a full Material Recovery Facility (MRF) in which MGM staff are responsible for taking commingled trash and recyclables and separating materials for diversion from landfill. Interestingly, any of the BOH docks can be converted to a material recovery station, thereby allowing specific events to have their waste and recyclables sorted, measured, and reported separately from all other waste and recyclables generated at Mandalay Bay at that time. This allows event-specific waste and recycling reporting to be more accurate and valuable to the organizer.



# 57%

Fifty-seven percent of centers have active and ongoing back-of-house waste sorting program in place.

An additional 5% of centers could offer the practice with no additional cost to event organizers. Another 18% could provide manual waste sorting to event organizers, however, planners may incur a fee for this service.

20%

of centers reported to not being able to offer manual back-of-house sorting when requested.

50%

of responding venues charge the event organizer for the actual waste tonnage generated or the number of waste 'pulls'. In doing so, centers can more effectively track and charge for waste generated by event clients.

34%

of centers offered economic incentives for event organizers to reduce waste to landfill. Incentives included reducing or eliminating fees for recycling and composting hauls, charging planners for landfill or incineration hauls only.

## VENUE HIGHLIGHTS

Palexpo



**Palexpo** (Geneva, Switzerland) looks to exhibitors or stand builders to pay for their waste. For larger volumes of materials such as wood, steel, glass etc., the centre has specially designed forklifts with scale to weigh the materials on the show floor. A waste ticket is provided to the exhibit builder to pay separately for the treatment of waste materials. This program encourages reuse and a reduction of waste.

Oregon Convention Center



The **Oregon Convention Center** (Portland, Oregon) has a very specific waste diversion policy in place, in which certain materials are prohibited at the center. Two very common conference items have been placed on the banned substances list. Foam core signage (paper signs backed by a foam-like material made of PVC) is not allowed at the center as it is not recyclable. Single use conference bags provided by show management or by vendors to collect show materials or items are also prohibited. More sustainable options for these materials have been created by general service contractors and vendors, and are encouraged, as costs to procure the items are comparable.



## WASTE TRACKING

*You can't manage what you don't measure* is a saying venues are taking seriously when it comes to waste tracking and management.

**93%**

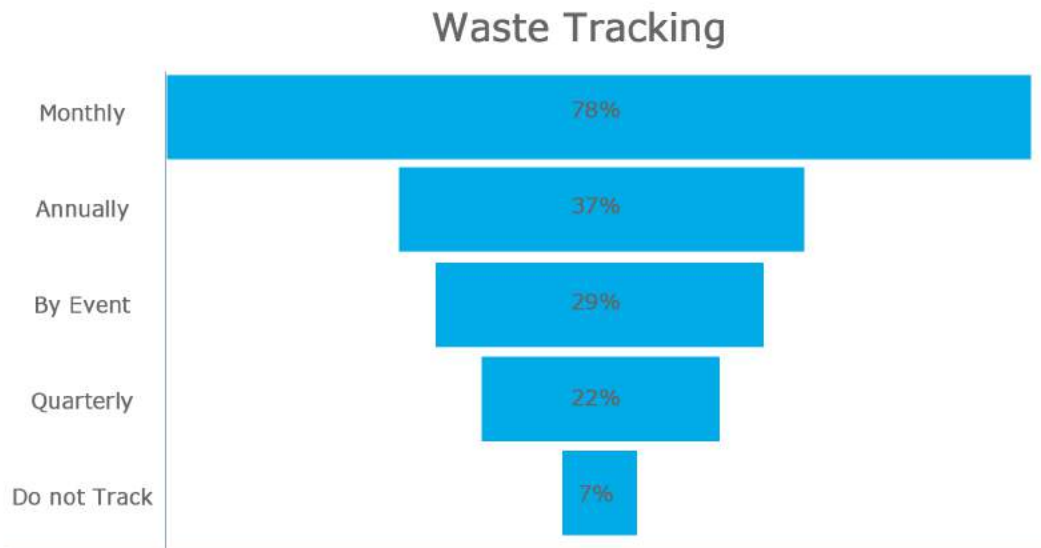
of centers track their waste on a regular basis.

**79%**

of centers can provide event planners a specific waste diversion report for their event, up from 72% last year. However, only 45% provide the event reports at no additional expense to planners, down from 57% the previous year.

**82%**

of centers verify, many through site visits, how the waste haulers are processing waste after it leaves the venue.



## WASTE CHALLENGES

- ▶ Certain materials, common to events, are not easily recycled by commercial and municipal haulers. (e.g., foamcore signage, carpet scraps etc.)
- ▶ Facilities available for accepting front-of-house compost and compostable service ware are scarce.
- ▶ Limited space to offer waste sorting programs back-of-house.
- ▶ Modest cooperation of event attendees, contracted cleaners and vendors to effectively separate waste streams.
- ▶ Poor market incentives to recycle materials vs landfill or incineration options.

# COMMUNITY INVOLVEMENT

Volunteer time and donation programs by convention and exhibition centers play an important role in supporting the needs of the local community and enabling event organizers and attendees the opportunity to leave a positive legacy for the host destination. Additionally, donation programs have the added benefit of improving wastediversion rates.



of responding centers regularly help event organizers donate conference materials. Additionally, 21% can help, at no additional cost to the planner, when requested. (↑ from 17%)

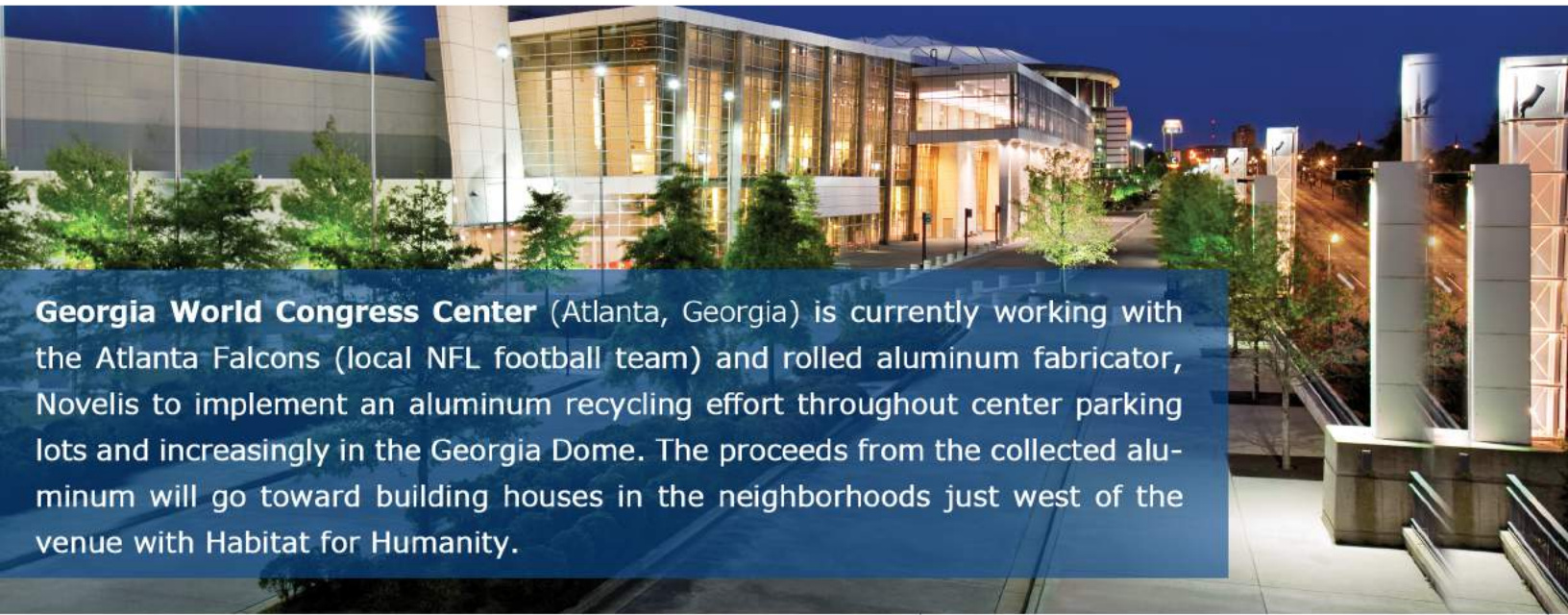


of responding centers regularly facilitate exhibitor materials donation programs, (↓4% from 2014) and an additionally 33% will coordinate with exhibitors for donations when asked by event organizers at no additional cost.

In 2015, 1,607 Metric tons of material were donated to local non-profits, schools, or community organizations throughout the world.



## VENUE HIGHLIGHT



**Georgia World Congress Center** (Atlanta, Georgia) is currently working with the Atlanta Falcons (local NFL football team) and rolled aluminum fabricator, Novelis to implement an aluminum recycling effort throughout center parking lots and increasingly in the Georgia Dome. The proceeds from the collected aluminum will go toward building houses in the neighborhoods just west of the venue with Habitat for Humanity.

**Cobo Center** (Detroit, Michigan) employees do a lot to give back to the Motor City. Green Committee members and other employees regularly volunteer with Forgotten Harvest, a center that collect and distributes unused food for those in need through the city. Employees are also given volunteer opportunities with the Detroit Downtown Beautification Project, an initiative that cleans parks and public spaces in the Detroit neighborhoods. Tools and building materials need for these service projects are provided by Cobo Center.



Every year the **Walter E. Washington Convention Center** (Washington, D.C.) hosts the Safeway Feast of Sharing. The event works with various organizations to provide a Thanksgiving meal, donated clothing and medical check ups for thousands of people in need. Cooked food from this event is shared with several humanitarian organizations around the city.



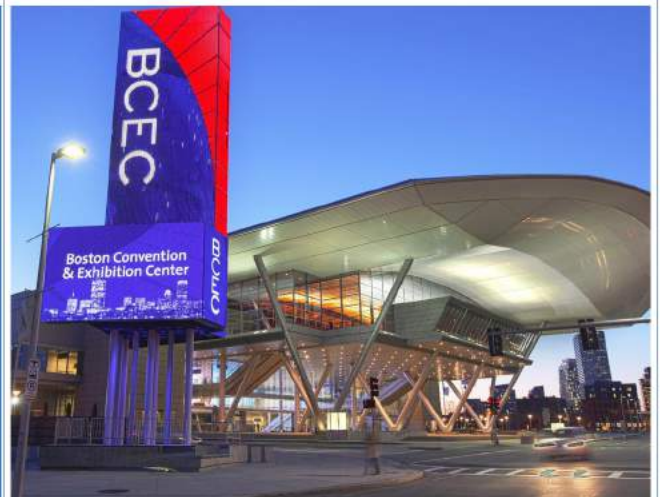
**Metro Toronto Convention Center** (Toronto, Canada) has annual build days for Habitat for Humanity, which employees can choose to attend without using vacation/lieu days. The social committee selects a local charity for the year where funds raised at events (raffles, draws etc.) will be donated.

**The International Centre** (Edmonton, Canada) has a long standing partnership with the MPI Foundation where each year it supports four different charitable organizations including Events for Communities of Sustainability, Sick Kids Foundation, Breakfast for Kids, The Stop and Industry Scholarships. Staff play a large role in fundraising for these causes and helping the organization give back. To date over \$20,000 has been raised for these organizations.



The Sands properties across the world worked round the clock to assemble over 200,000 hygiene kits for the non-profit Clean the World. More than 1,500 **Venetian Macao** (Macau, China) volunteers worked to help assemble 75,000 kits to be donated to regional countries where underprivileged people are in need of basic hygiene in their day-to-day life.

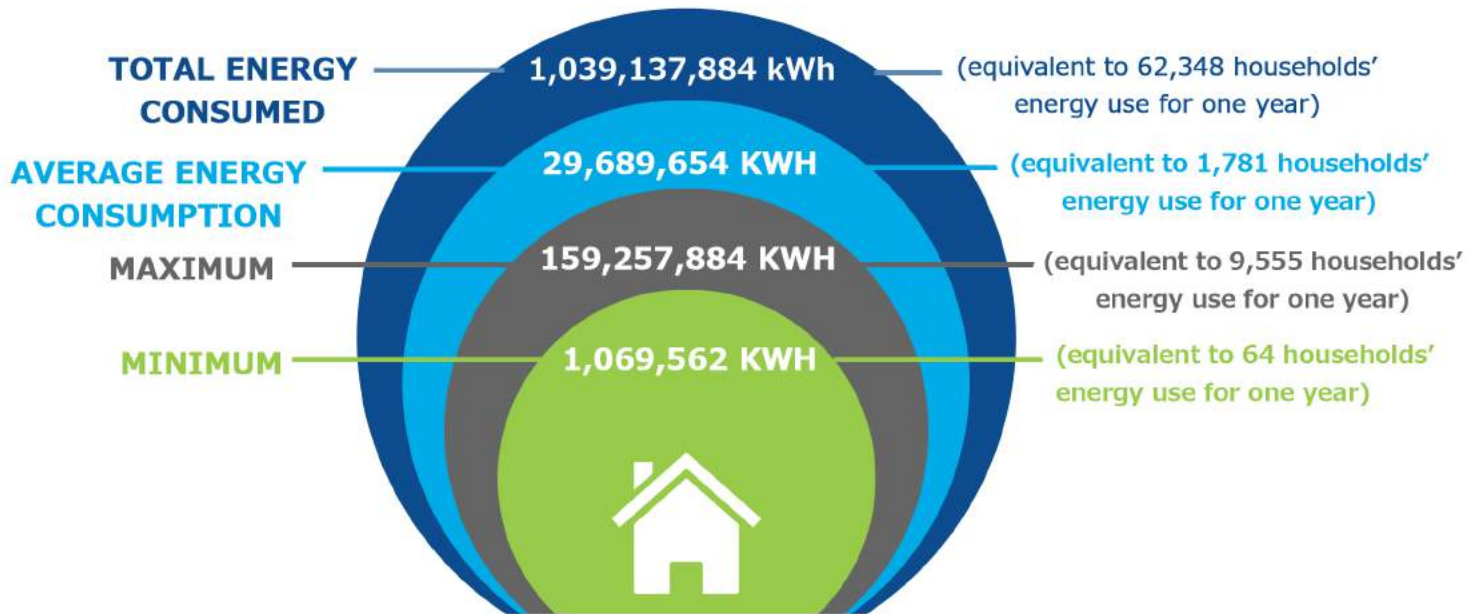
Revenues for a grant and scholarship program for local non-profits are generated from consumer shows at the **Boston Convention and Exhibition Center** (Boston, Massachusetts). The program helps to fund the South Boston Community Development Foundation which receives 10 cents for each square foot of rented exhibit space and one dollar per admission ticket sold at each gate at the BCEC.



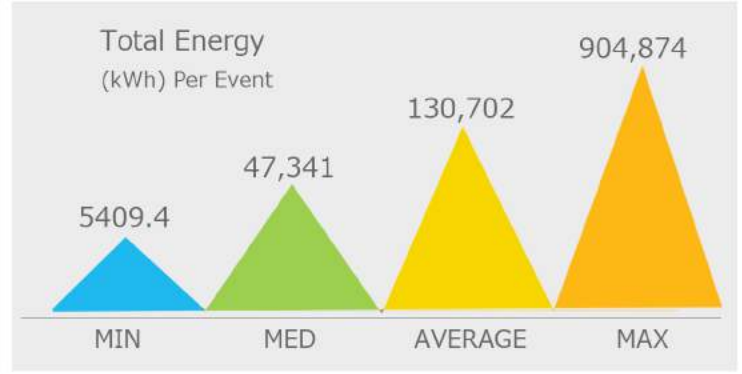
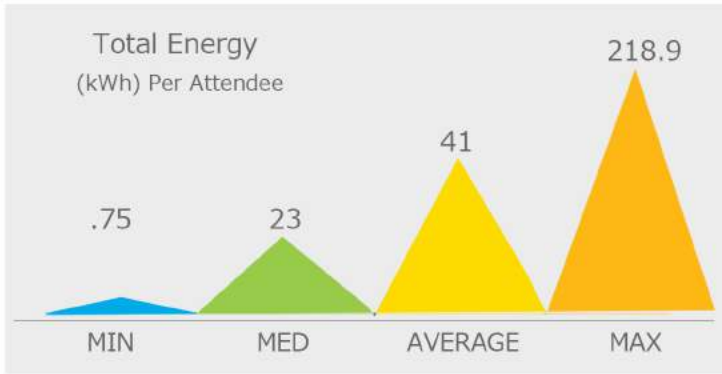
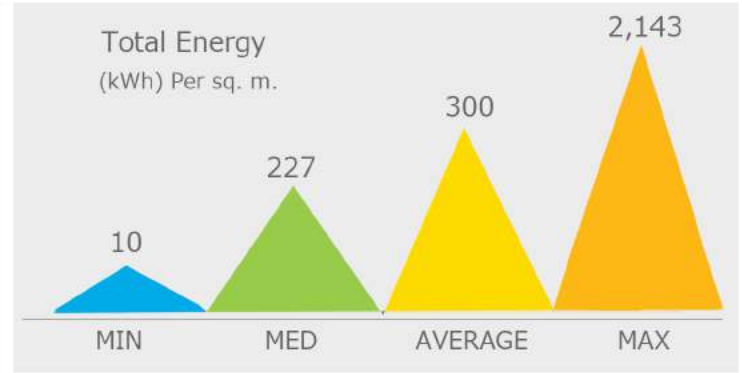
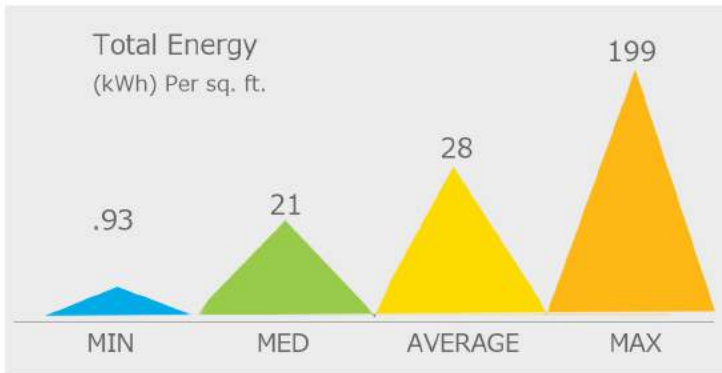
# ENERGY

A clean energy portfolio and energy-efficient practices are prominent components of a venue's sustainability program.

Eighty-four percent (84%) of centers were able to provide energy data for 2015.

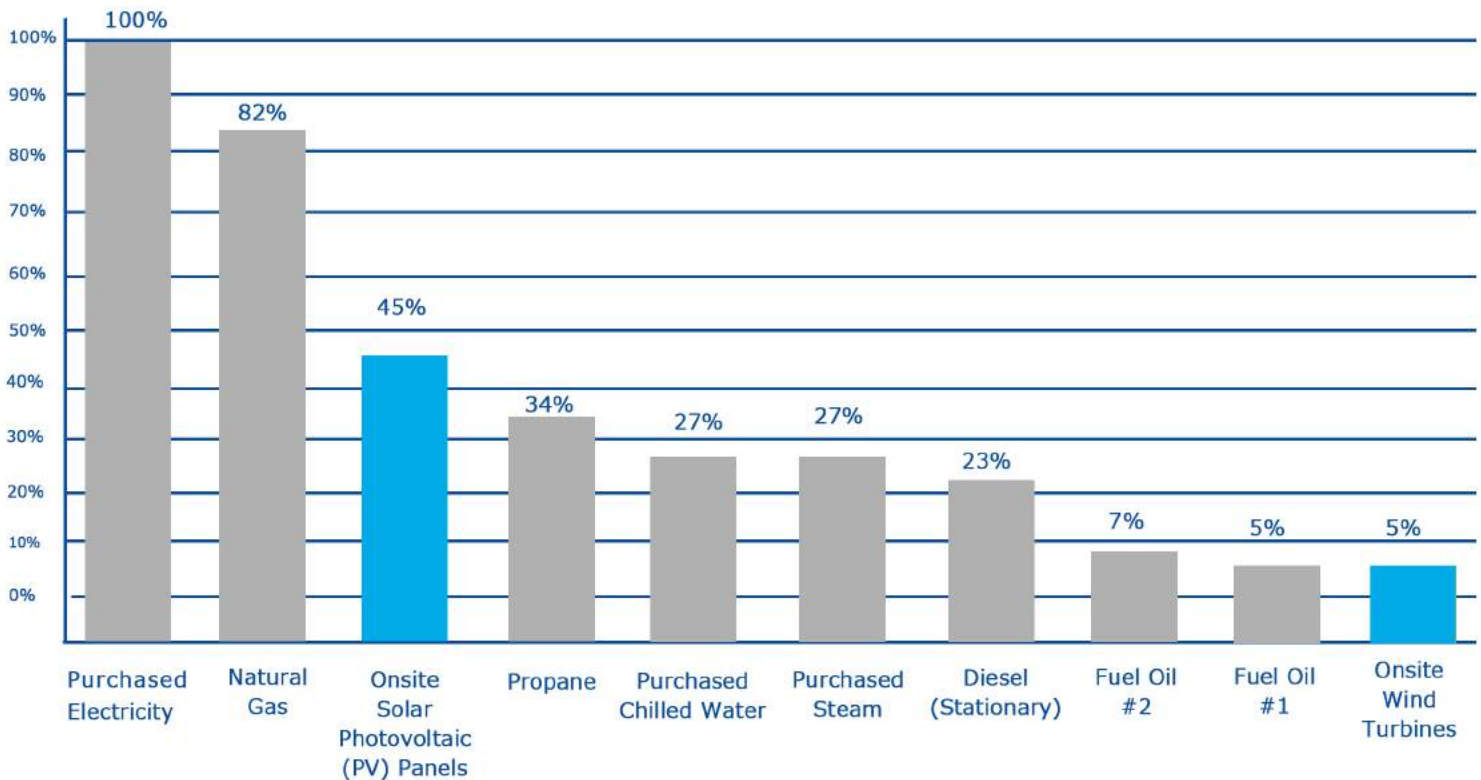


Orange County Convention Center



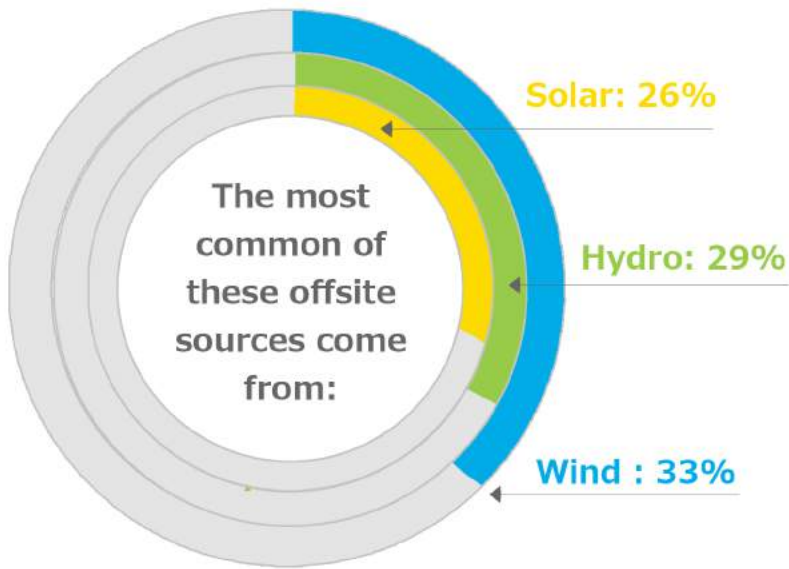
## ENERGY SOURCES

Note: Venues may use more than one of the below energy sources



## RENEWABLE ENERGY

Convention and exhibition centers are procuring more renewable energy and incorporating more renewable energy technologies into onsite operations.

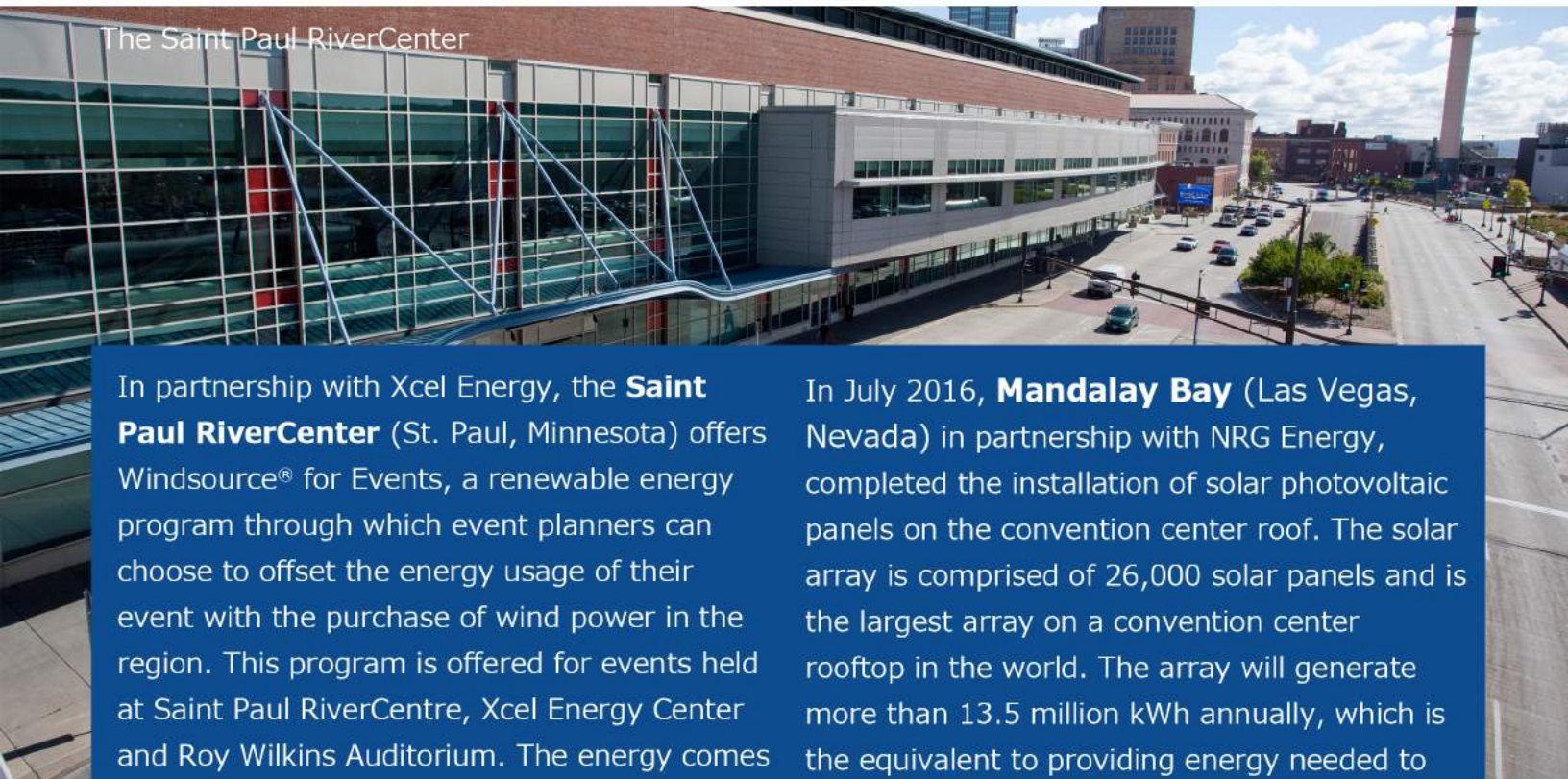


**45%** of venues utilize onsite renewable energy.

**28%** of venues purchase Renewable Energy Certificates (RECs).

**52%** of venues purchase energy from municipalities or other parties using renewable sources.

## VENUE HIGHLIGHTS



The Saint Paul RiverCenter

In partnership with Xcel Energy, the **Saint Paul RiverCenter** (St. Paul, Minnesota) offers Windsource® for Events, a renewable energy program through which event planners can choose to offset the energy usage of their event with the purchase of wind power in the region. This program is offered for events held at Saint Paul RiverCentre, Xcel Energy Center and Roy Wilkins Auditorium. The energy comes from 20 Minnesota wind farms whose output is dedicated to this voluntary program for homes and businesses. On average, one day of Windsource® at the Center offsets the energy use equivalent of 2-3 American homes over an entire year.

In July 2016, **Mandalay Bay** (Las Vegas, Nevada) in partnership with NRG Energy, completed the installation of solar photovoltaic panels on the convention center roof. The solar array is comprised of 26,000 solar panels and is the largest array on a convention center rooftop in the world. The array will generate more than 13.5 million kWh annually, which is the equivalent to providing energy needed to power 1,340 homes for a year. When completed, at peak production the panels will provide almost 25% of Mandalay Bay's total power demand.

## ENERGY REDUCTION

Reducing energy use can lead to significant cost savings and reduced environmental footprint for venues.

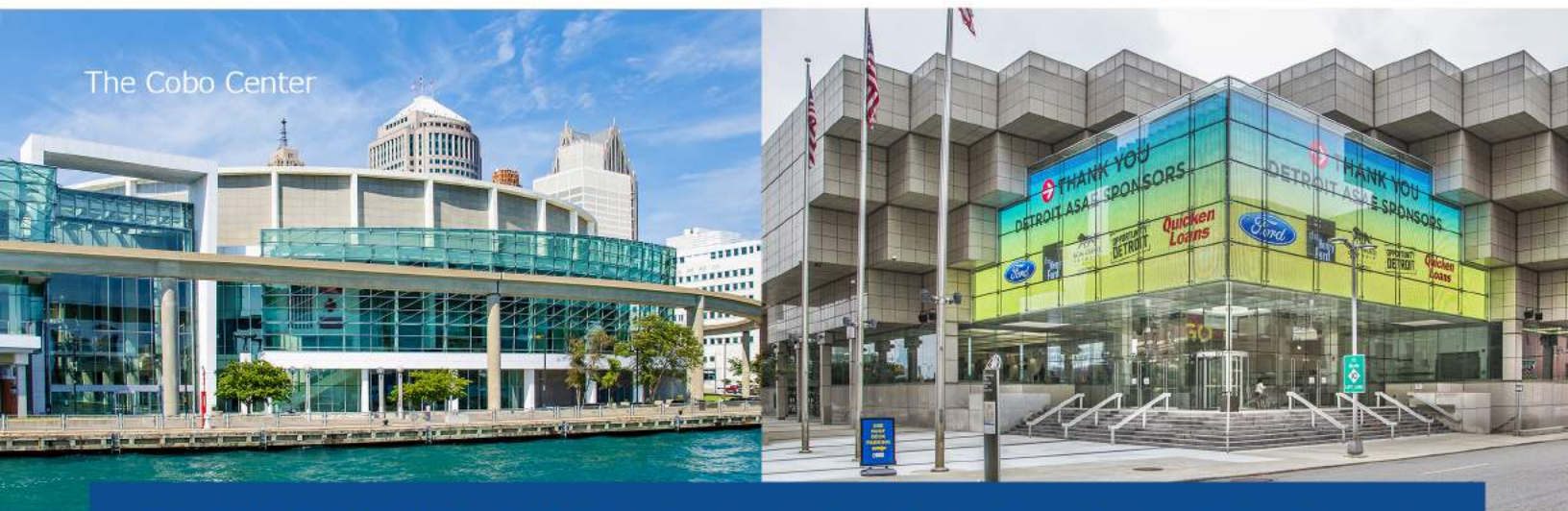
Of responding centers:

- ▶ 76% have indoor cooling setpoint (during events) at 72°F/22°C or higher.
- ▶ 90% have the indoor heating set point during events at 72°F/22°C or lower.

On average:

- ▶ 56% of venue's restrooms that have occupancy sensors for reducing lighting, which represents 39% of GVR reported total conditioned space.
- ▶ 37% of venue's meeting rooms have occupancy sensors for reducing lighting use when unoccupied, which represents 49% of GVR reported total conditioned space.

## VENUE HIGHLIGHT



The Cobo Center

The **Cobo Center** (Detroit, Michigan) uses a condensate reclaim system, which reduces the potable water intake used to cool the condensate through a heat exchange and river water. In 2015 the system reclaimed 1,166,900 Btu/hr and saved the center \$125,133 USD in energy costs.

## ENERGY EFFICIENCY

Installing energy efficient lighting is a common best practice at convention centers. For centers that can make the investment for upgrades to energy-efficient lighting and equipment, there are significant cost savings and environmental benefits to be had.

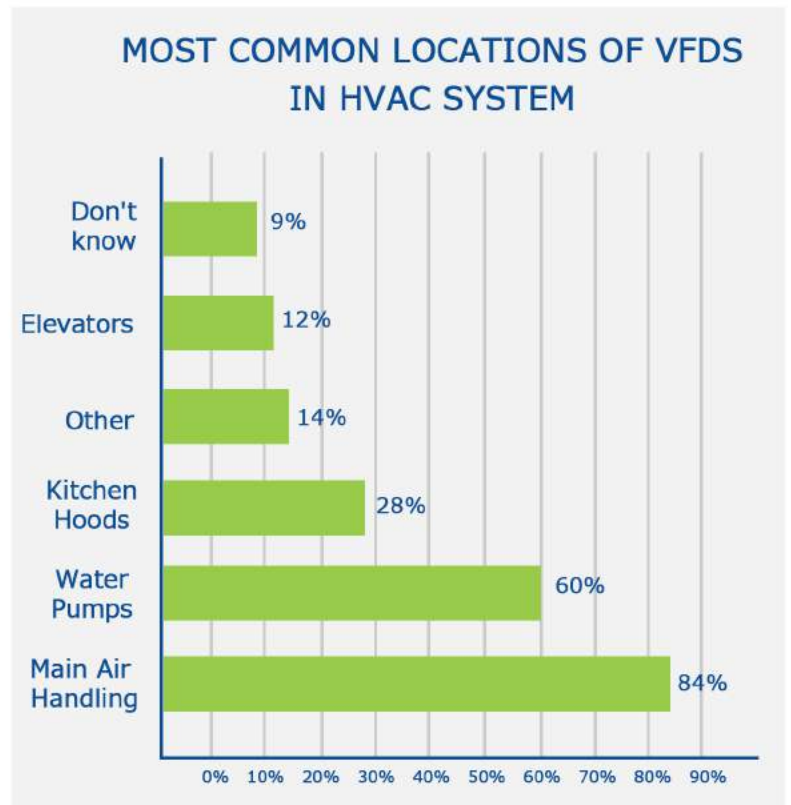


## Lighting

- ▶ 62% have energy-efficient lighting in exhibit halls (▲ from 54%)
- ▶ 65% have energy-efficient lighting in the non-exhibit areas (corridors, meeting rooms etc.)
- ▶ 73% have windows outfitted with energy-efficient attributes, which represents 58% of GVR reported total conditioned space

## Equipment

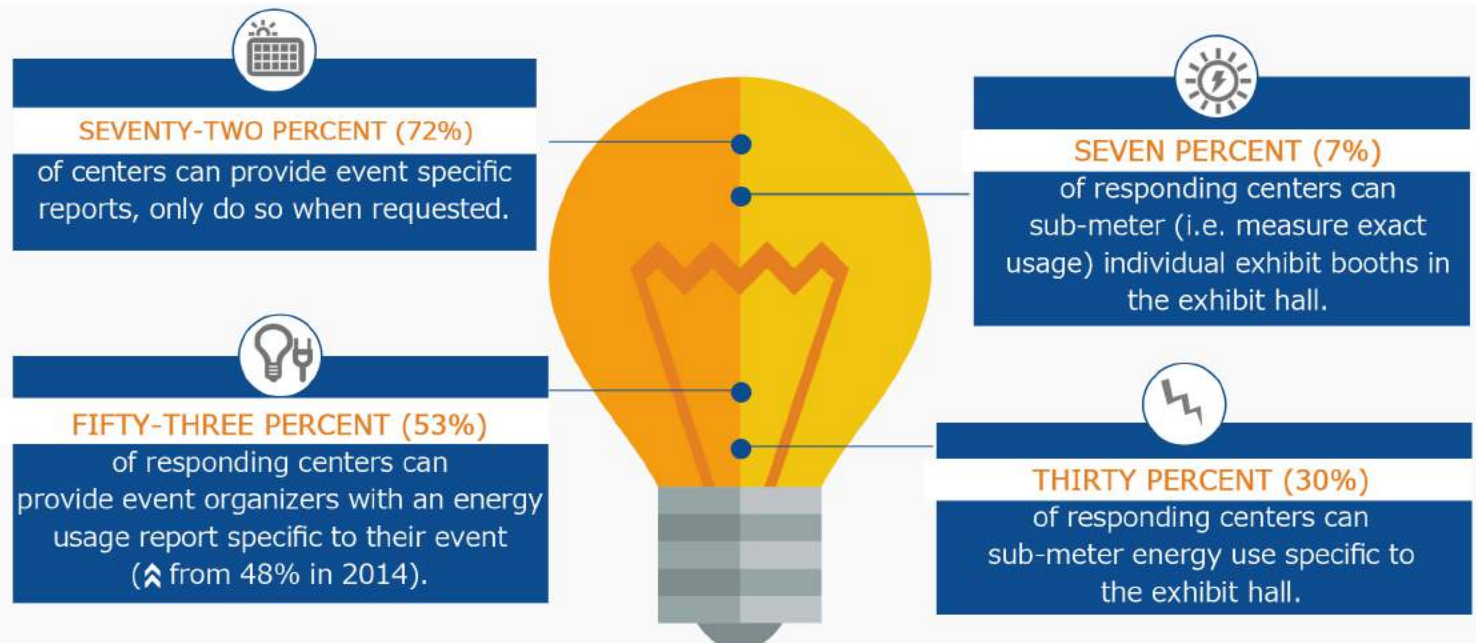
- ▶ 59% have all energy-efficient boilers (>85% efficiency) (▲ from 46%)
- ▶ 73% have all high efficiency chillers (▲ from 57%)
- ▶ 98% have variable speed frequency drives in their HVAC systems (▲ from 93%)



## ENERGY TRACKING & EMISSIONS

All centers reported to tracking energy on an on-going basis, with 86% of centers tracking energy monthly (▲ from 77%). Consequently, energy tracking on a quarterly and annual basis declined as venues are increasing the frequency of tracking.

Centers vary in their ability to track energy use and use different tools to do so, including utility management programs, energy dashboards, billing services, and publicly available tools.

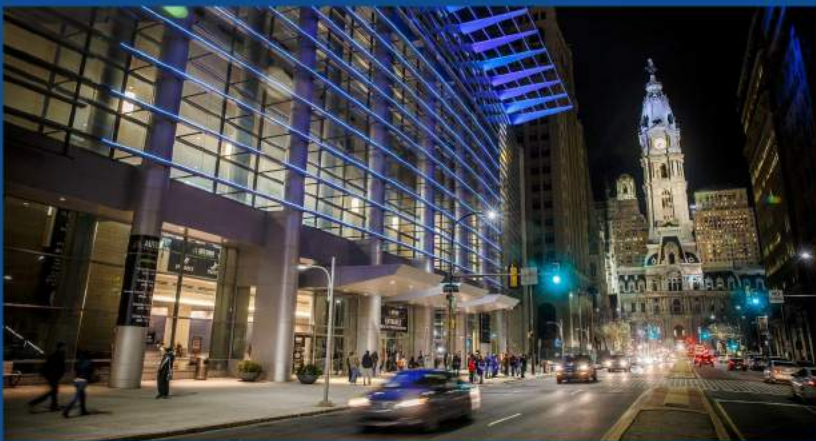


Centers that can provide event-specific energy reports are able to calculate the energy use of concurrent events by using the following technologies or calculations:

- ▶ Sub-metering throughout the center and exhibit hall space to determine exact energy values used by exhibitors and specific contracted spaces.
- ▶ Calculation based on service space being used by the event (sq.feet or sq.meter contracted space) for the duration of each event.

Moving toward more granular sub-metering provides venue facility managers with more information about and control over their facilities. It also supports the venues' ability to invoice based on actual energy use and helps provide event organizers accurate show-specific impacts. The same is true for more granular measurement of other venue impacts.

## VENUE HIGHLIGHT



### The Pennsylvania Convention Center

(Philadelphia, Pennsylvania) uses an innovative web-based service called EnerNOC, which tracks real time electricity as well as other metered data. The data is used for energy profiling, monthly utility and budget projections, daily usage, temperature, off peak use, and demand. Director of Facilities, Janet Mitrocsak recently gave the technology and program praise:

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*"We have rolled out this product to clients that want to track their event energy and water data. We recently hosted the American Chemical Society and were able to provide a beautiful energy report that was produced with electricity, gas, and water usage costs as well as CO<sup>2</sup> emissions metrics. This is an excellent tool to offer clients that are green minded."*

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## ENERGY CHALLENGES

- ▶ Tracking requires advanced notice due to requests to utility providers or manual meter readings.
- ▶ Allocating energy to a specific event if it is not a full-facility event (sub-metering that exists is typically limited).
- ▶ Tracking all energy sources (e.g., electricity, natural gas, district steam, chilled water) can require coordination with various providers.
- ▶ Price distortions from government subsidies and taxes between renewable and other energy sources can make using and utilizing renewable energy technology cost-prohibitive.
- ▶ Environmental forces (e.g., extreme heat or cold) are beyond a center's control that increase an event's footprint from one year to the next.
- ▶ In some developing nations, centers are subject to prolonged power outages, black outs and rationing.

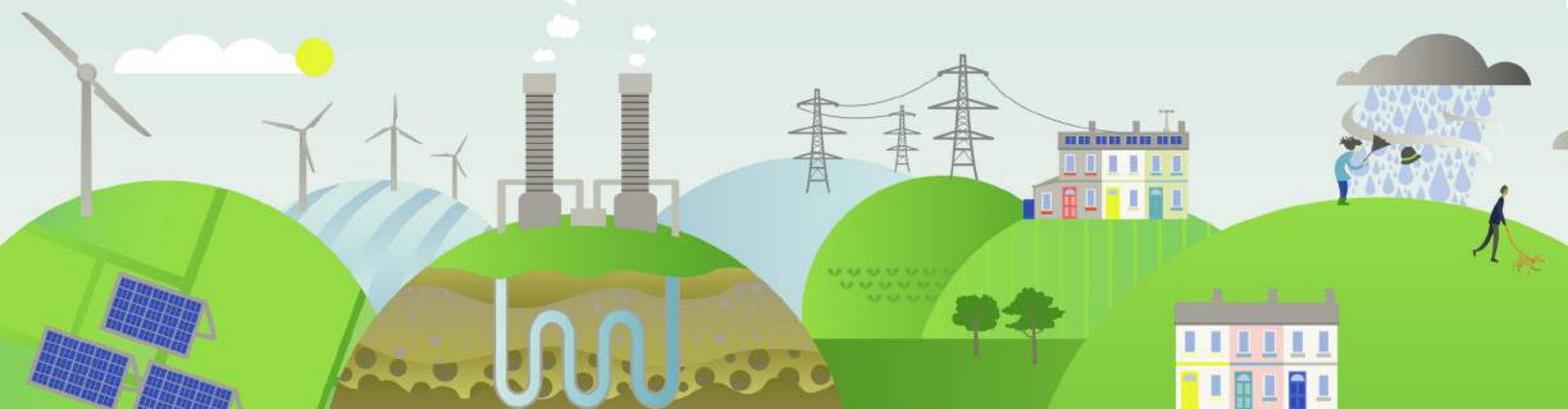
- ▶ Environmental forces (e.g., extreme heat or cold) are beyond a center’s control that increase an event’s footprint from one year to the next.
- ▶ In some developing nations, centers are subject to prolonged power outages, black outs, and rationing.

**Fifty percent (50%)**  
of responding centers track carbon emissions as a venue.  
(▲ from 34%)

**Thirty-seven percent (37%)**  
of responding venues can track and report the carbon footprint for a specific event.  
(▲ from 31%)

**Nine percent (9%)**  
of responding centers track carbon footprints of events on a regular basis.

**Twenty-one percent (21%)**  
will track the carbon footprint of events event if requested by an event organizer with no additional cost.



# WATER

Water scarcity is one of the major challenges facing our world today. Over the last century, world water use has grown at a rate more than double the rate of population growth and increasingly a number of regions are chronically short of water.<sup>8</sup> In convention centers, kitchens, restrooms, and landscaping can be significant areas of water consumption.

## Total water consumption at reporting centers in 2015

711,687,266 US Gal/  
2,694,028 M3<sup>9</sup>

## Average water consumption

19,234,791 US Gal/  
72,812 M3

## Maximum water consumption

91,627,200 US Gal/  
346,847 M3

## Minimum water consumption

422,675 US Gal/  
1,600 M3



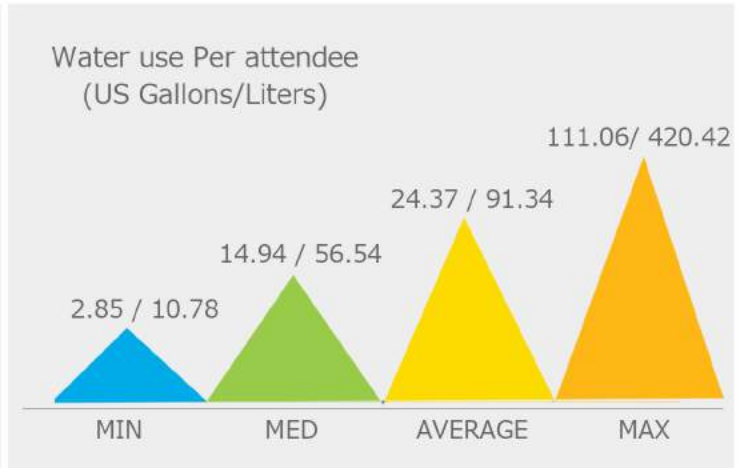
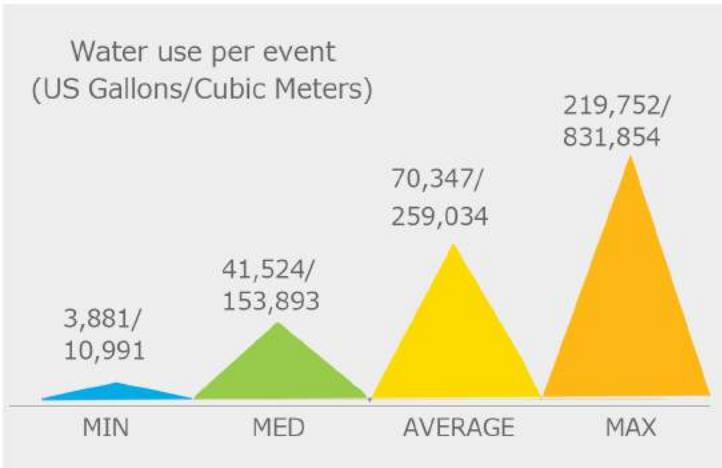
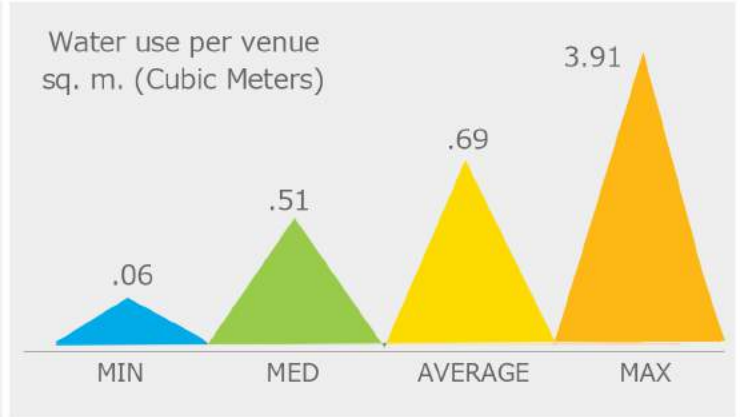
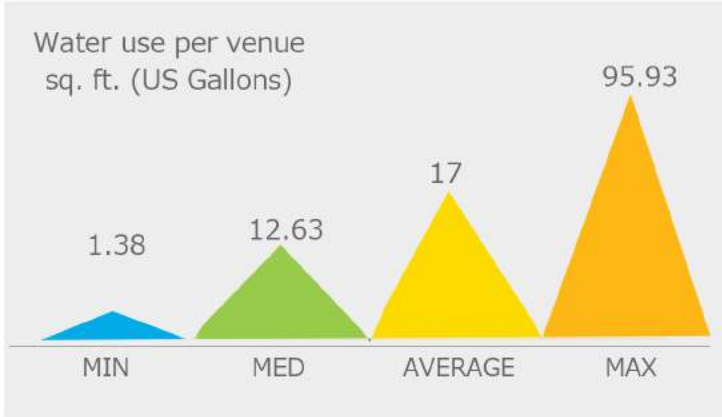
<sup>8</sup> <http://www.un.org/waterforlifedecade/scarcity.shtml>

<sup>9</sup> Outlier was removed for reporting purposes  
Green Venue Report 2016

All centers regularly track water consumption, up from 93% of centers last year.

Forty-four percent (44%) can provide an event-specific water use report to event organizers. (⬆️ from 34%). Only two percent (2%) of centers track event water use on an ongoing basis, however 27% can provide event organizers an event specific water use report when requested at no extra cost. Twenty-three percent (23%) of venues regularly track their water footprint. <sup>10</sup>

2015 annual reported water consumption is equivalent to the amount of water used to fill more than 1,078 Olympic-sized swimming pools.<sup>11</sup>



## WATER EFFICIENCY

Water management and efficiency practices adopted by responding centers include:

- ▶ 21% capture rain water for storm water management or reuse. (⬆️ from 6%)
- ▶ 15% reuse grey water.

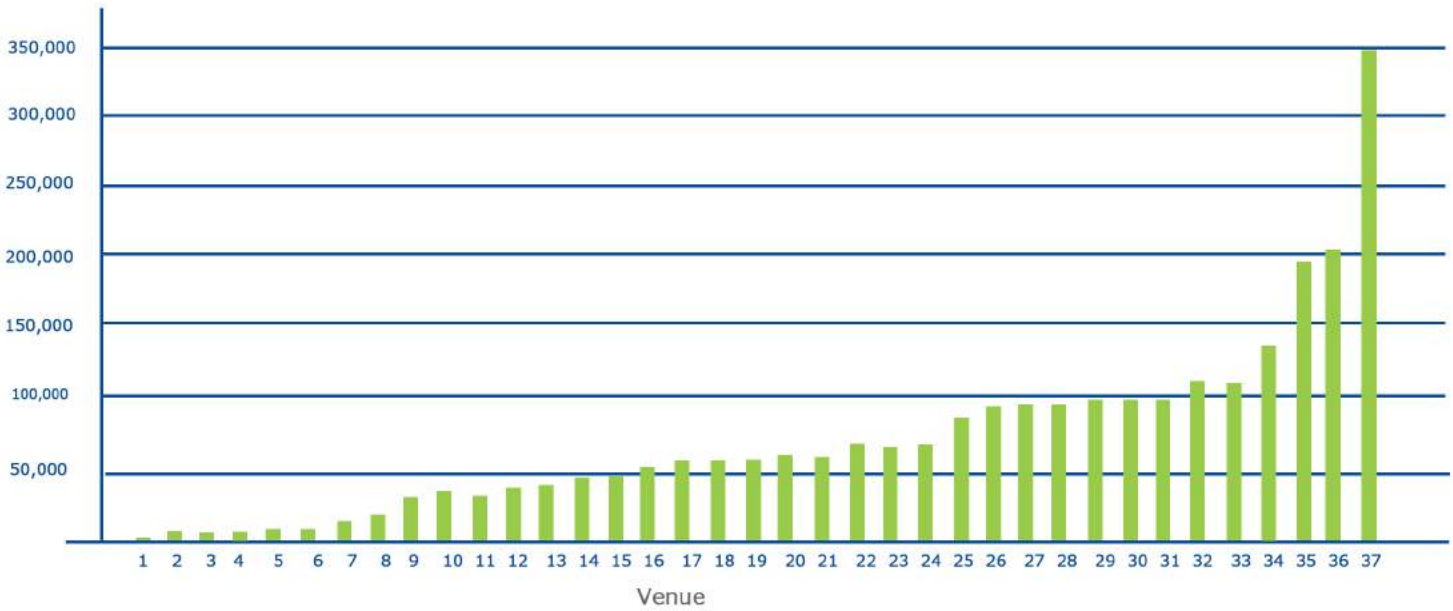
<sup>10</sup> Water footprint is generally defined as an indicator of freshwater appropriation, measured in terms of water volumes consumed and polluted over a specific period of time. Boundary for venues would be all parties, persons or groups operating within the venue

<sup>11</sup> [https://en.wikipedia.org/wiki/Olympic-size\\_swimming\\_pool](https://en.wikipedia.org/wiki/Olympic-size_swimming_pool)

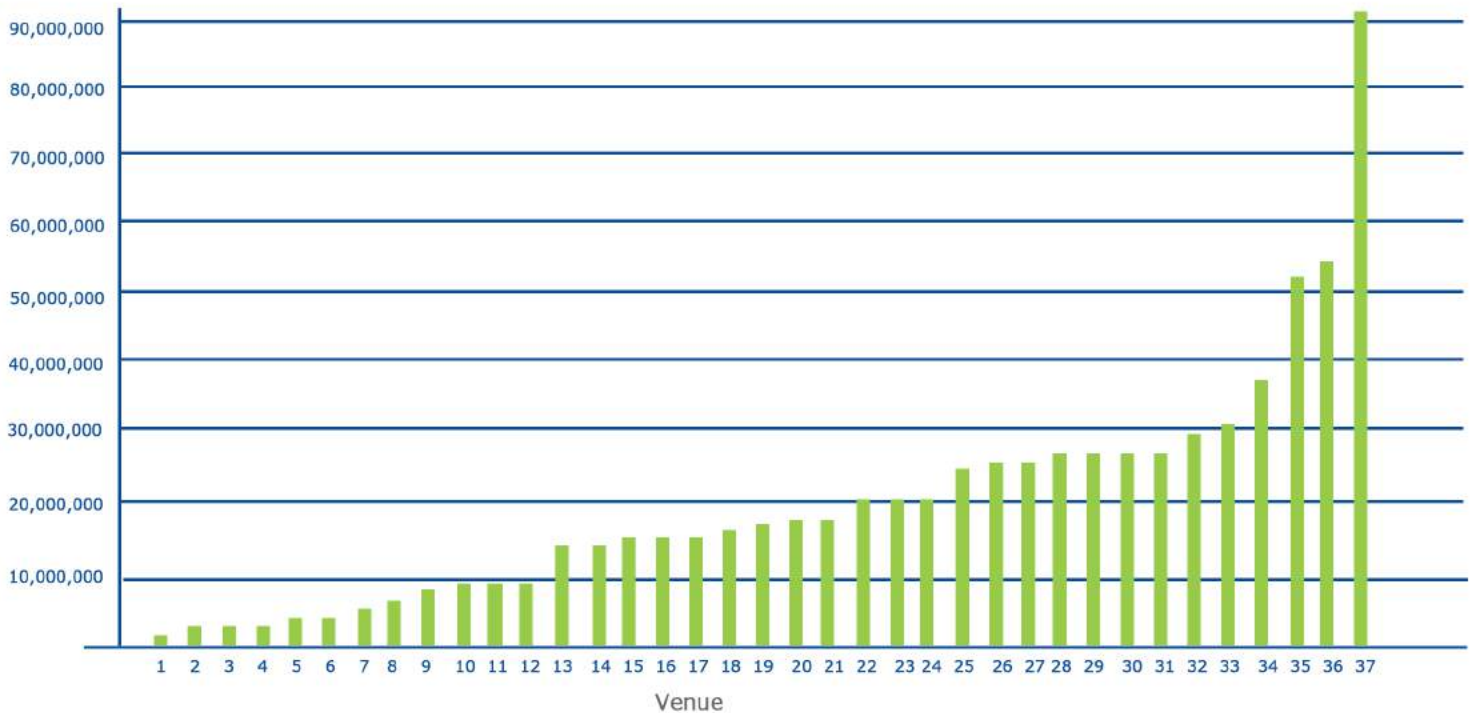
On average:

- 89% of all venue faucets are high efficiency (<2.0 GPM / 7.5 LPM).
- 66% of all venue toilets are high efficiency (<1.28 GPF / 4.8LPF).
- 49% of centers have water bottle refill stations located in the facility.

## WATER USE BY VENUE (CUBIC METERS)



## TOTAL WATER USE BY VENUE (US GALLONS)





## WATER CHALLENGES

The majority of centers indicated that extreme weather patterns (persistent drought, heavy rains, flooding etc.) significantly affect water use, processing and costs. With weather becoming more severe on a more regular basis we may see a significant increase in the trend of centers being challenged with water management.

Additionally, a few centers responded to water costs being relatively inexpensive, which has translated into water conservation efforts that have to be simple and inexpensive in order for facilities to make the “business case” for their implementation.

## VENUE HIGHLIGHT

MELBOURNE CONVENTION AND EXHIBITION CENTRE



### The Melbourne Convention and Exhibition Centre

(Melbourne, Australia) has an onsite black water treatment facility. Rain and storm water, as well as waste water are collected and treated onsite to Grade A quality for reuse in the building. The sophisticated operations enable water to be used for things like cooling, toilet flush reuse, landscaping, and irrigation. Consequently, the system also reduces water flows to sewers.

### The Broward County Convention Center

(Ft. Lauderdale, Florida) uses a high-efficiency irrigation system that is monitored 24/7 with soil moisture sensors and high/low flow sensors in all zones. The system senses when too much water is flowing into the soil and shuts down automatically. If the soil moisture sensors read that the ground has enough moisture to satisfy the all-native plant material, then the irrigation will cease until ground sensors indicate the soil is dry and needs water.

### The Vancouver Convention Centre's

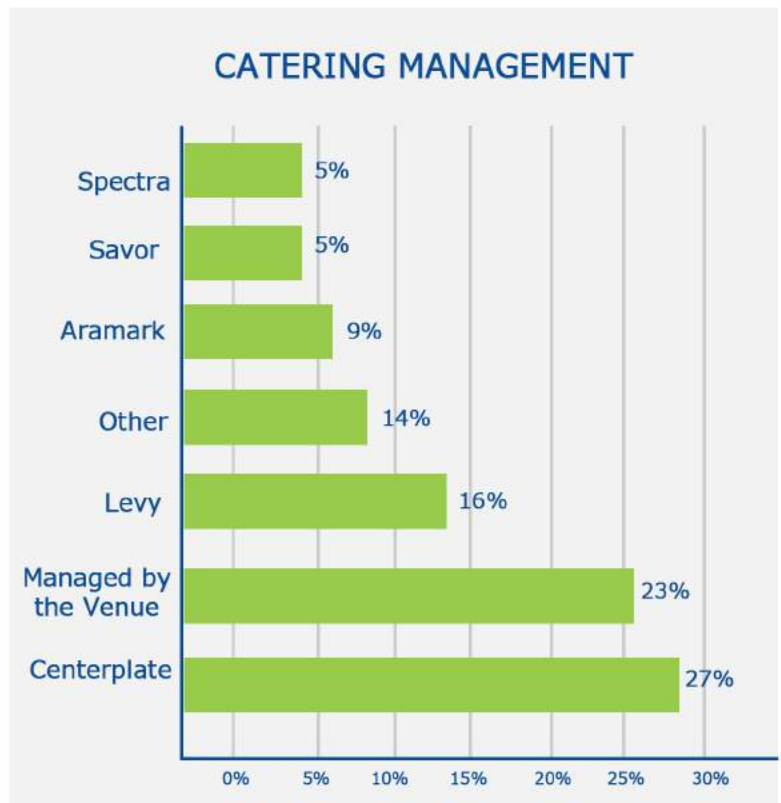
(Vancouver, British Columbia) onsite wastewater treatment, storage, and reuse system recycles 100% of wastewater that is produced in the building. The effluent is used for flush fixtures and irrigation of the living roof.

# FOOD & BEVERAGE

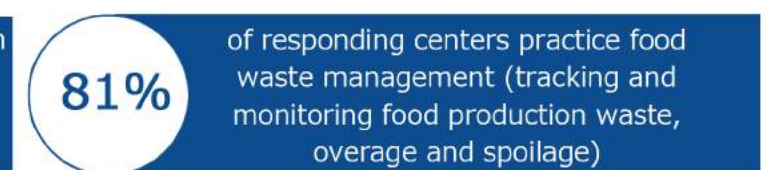
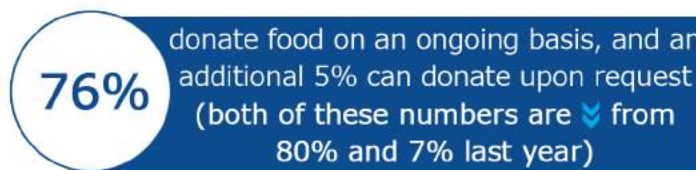
Food and beverage is a fun, creative, and delicious part of many events. It can be a great way to connect attendees to regional cuisine and to provide venues with an opportunity to be creative and minimize impacts when hosting events.

## ORGANICS & FOOD WASTE

**Roughly one third of all the food produced in the world for human consumption is lost or wasted – that’s approximately 1.3 billion tons of food.**



Catering practices being implemented to divert kitchen organics and excess food from landfill include:



While use of traditional composting facilities is still the most common processing method for organics, (80% of venues), onsite liquefiers and food waste digesters now make up 11% of organics processing at venues. Seven percent (7%) of venues that process back-of-house organics disposed of it through alternative methods such as feed for local pig farms.

**In 2015, over 644 Metric tons of food were donated by Green Venue Survey participants. Eighty-seven percent (87%) of catering departments can provide event organizers with the weight of food donated for their specific event.**

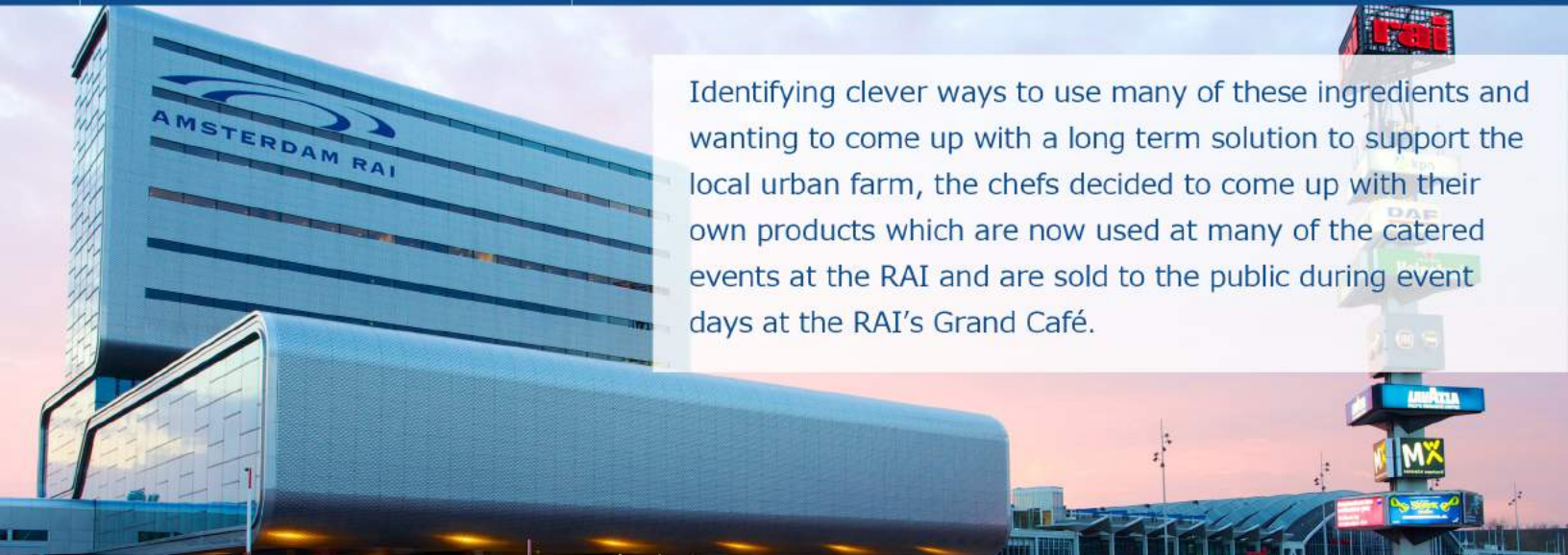




## VENUE HIGHLIGHT



Basement Chefs, the name given to the culinary team at the **RAI Amsterdam** (Amsterdam, Netherlands), has launched their own food product line featuring ketchup, basil olive oil, and red apple vinegar. When a local department store chain went bankrupt, large quantities of fresh ingredients were suddenly without a home, including a large batch of tomatoes from a city farm in Amsterdam.



Identifying clever ways to use many of these ingredients and wanting to come up with a long term solution to support the local urban farm, the chefs decided to come up with their own products which are now used at many of the catered events at the RAI and are sold to the public during event days at the RAI's Grand Café.

## MENUS AND PURCHASING

68% of venues provided data on purchasing habits for food and beverage. On average, 42% (by spend) of food and beverage items procured in 2015 were considered "local".<sup>12</sup>

<sup>12</sup> Local was defined as "within 250 mi/400km of the venue"

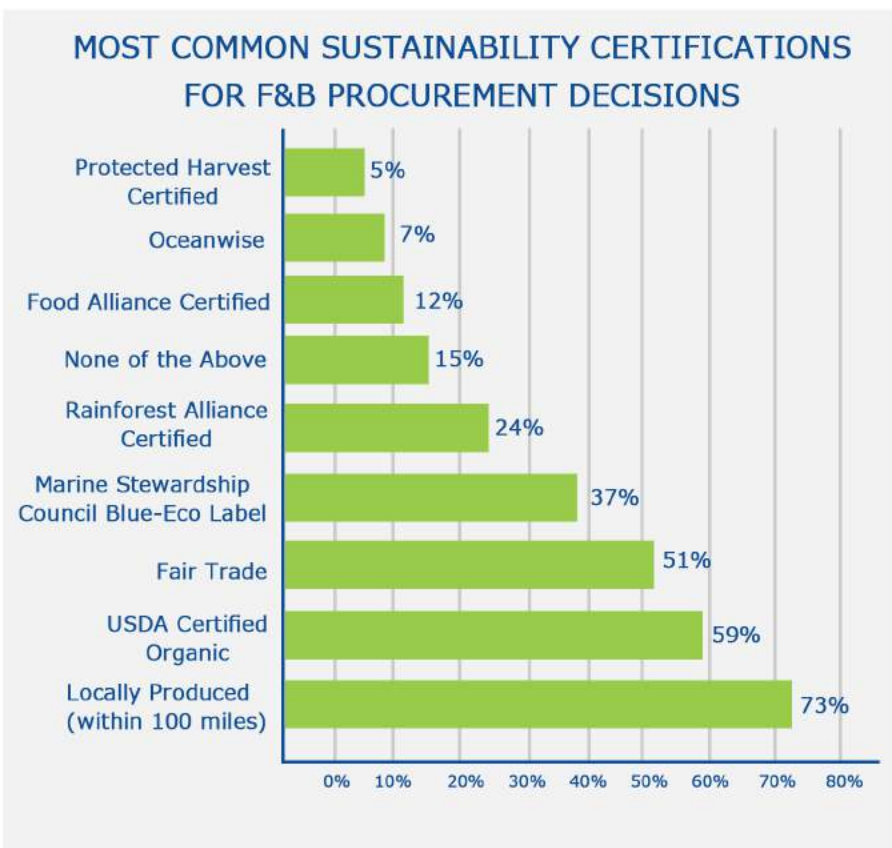
When planning menus for events, 30% of centers have an active ongoing program in place to provide event organizers a report detailing the percentage of local/organic/sustainable F&B purchased for their event.

([↑ 6% from previous year](#))

An additional 35% will provide that information if requested, at no additional fee to the planner.

(also [↑ roughly 6% from previous year](#))

On average just 23% of event organizers request organic/local/seasonal menus.



On average 67% of responding centers offer food service ware (cups, utensils, coffee cup lids etc.) through the venue caterer which is ASTM D6400 or BPI certified compostable.

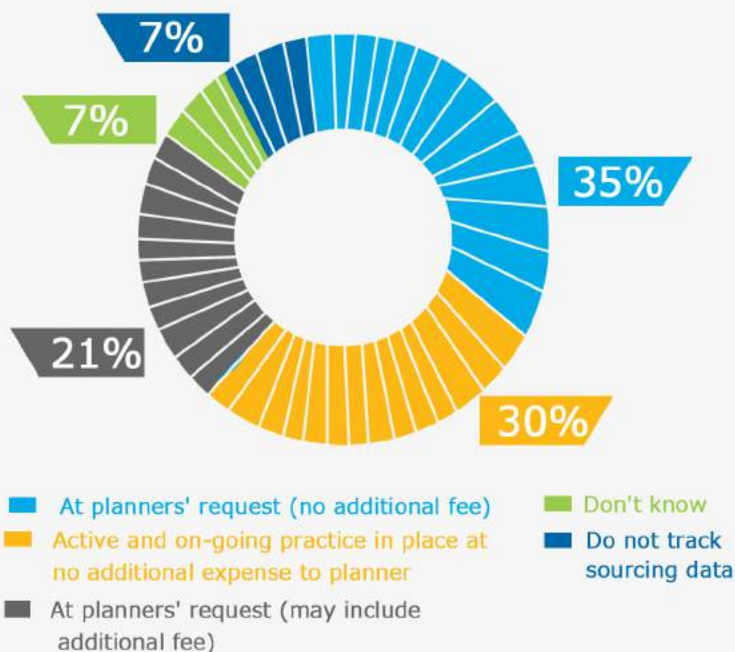
75% of responding centers offer ASTM D6400/BPI certified compostable service ware by default or without additional charge event organizers.



## FOOD AND BEVERAGE CHALLENGES

- ▶ Lack of municipal composting partners to take food waste and compostable service ware.
- ▶ Local food producers are often unable to provide the large volume of products needed by convention center catering departments.
- ▶ Sourcing local food year-round in locations affected by desert climates or long winter months.
- ▶ Costs associated with sustainable food products.

## CATERING DEPARTMENTS THAT PROVIDE PLANNERS WITH THE PERCENT OF LOCAL/ ORGANIC/ SUSTAINABLE F&B PURCHASED FOR EVENTS



# AIR QUALITY

You could live days without food or water, but only minutes without air. Polluted air can have detrimental effects on your health and wellbeing. Taking steps to improve air quality both indoors and out helps us all breathe a little easier.

80%

of all participating centers have an Indoor Air Quality (IAQ) program in place.

86%

On average, 86% of permanent carpet found in responding venues is low-VOC or VOC-free,<sup>13</sup> making up 75% of all GVR reported conditioned space.

79%

have a no idling policy for shuttle buses, however, only 48% reported that the policy was strictly enforced.

91%

On average, 91% of responding centers' painted facades are low-VOC or VOC-free,<sup>13</sup> making up 82% of all GVR reported conditioned space.

## CENTER HIGHLIGHT



Technology and innovation continue to improve the interior conditions within venue. Paying close attention to building materials, **Kap Europa** (Frankfurt, Germany) chose all low-emission and environmentally responsible materials for the interior of the building. Using a state-of-the-art climate management system, building operation managers can obtain detailed information for every room in the building in regards to temperature, air flow and humidity and make adjustments as needed.

<sup>13</sup> According to the EPA, volatile organic compounds, or VOCs, refer to the toxic compounds often found in paint and carpet that change from solid or liquid form to gas; in other words, they vaporize or off-gas into the air you breathe over time. <http://www.epa.gov/iaq/voc.html>

# GREEN CLEANING

Green cleaning is an increasingly relevant topic in sustainability due to the effects on cleaning staff handling cleaning chemicals on a daily basis, as well as on building occupants, who are concerned with exposure to chemicals that are harmful or can cause allergies. Additionally, concerns are expanding to consider detrimental downstream effects certain chemical ingredients can have when discharged into water and soil. Green cleaning can refer to both the composition of supplies procured for cleaning and actual cleaning operations/practices to reduce usage or waste.



On average, Seventy-six percent of cleaning products used by responding centers are third-party certified as sustainable (e.g., EcoLogo, Green Seal, etc.)

Interestingly, there are a variety of factors that make green cleaning more or less of a challenge. In some parts of the world city agencies are required to modify their purchasing practices limiting the strength of chemicals and toxicity of products entering the city sanitation systems. Others cited that some green cleaning products aren't as effective as traditional products and there is a need to use higher volumes to get the job done. In areas like the kitchen there are strict and highly regulated hygiene standards that must be adhered to many sustainable cleaning agents aren't approved for these activities.



Los Angeles Convention Center

# OUTLOOK

With comparable data from the prior year, this year's results show clear progress. Some areas had great improvements and others incremental but all points to a trend movement in the right direction.

The Green Venue Report will also enter its next phase of maturity. The project was started by Greenview and Twirl Management as a pet project to help get the discussion going. Looking at the participation and support after the first three years, it is clear that the discussion is happening, not just through the Green Venue Report but the entire venue and event organizer community. We hope the annual report's findings will continue to be a driving force in this important industry conversation.

External trends are also converging with global initiatives such as the UN Sustainable Development Goals and the We Mean Business Coalition Commit to Action. The report will look to integrate more of these to help connect venues and event organizers to the global sustainable development dialogue.



Allstream Centre

As more venues participate, the survey questions, results, and comparison can be segmented further by region and type of venue so that the data is more meaningful to participants and industry bodies. To improve the survey and output, an industry advisory board will be formed. And we will welcome new partnerships, support forms, and sponsorship to take the Green Venue Report to the next level.

Next year is promising with the possibility of increased participation and improvement on industry uptake of best practices. While trends may change each year, it is our hope that the clear best practice for any venue will be to participate in the Green Venue Report and help accelerate the spread of sustainability in our industry.

### **Sign up to take the 2017 Green Venue Survey!**

- ▶ Completion of the survey provides you with aggregated sustainability data for your venue that you can choose to share with event organizer clients, your marketing team and other stakeholders.
- ▶ Participate in an industry-leading study, continuing your association with leading sustainability initiatives. Participating venues will receive recognition in the published report, PR Materials and external communications.
- ▶ Access to a comprehensive list of convention center best practices.
- ▶ Be part of a growing community of industry leaders working together to advance best sustainability practices in the meetings and events industry.

### **Sponsor the 2017 Green Venue Report and Survey!**

The 2017 Green Venue Survey and Report allows venues to better understand their individual and collective impact, catalyze the adoption of best practices, stimulate competition and recognize leadership around sustainability.

Would you like your company and brand to be part of the industry-advancing project? To find out how you can sponsor the next report

**Visit**

**[www.greenvenuereport.com](http://www.greenvenuereport.com)**

**or contact**

**[Amanda@gviewadvisors.com](mailto:Amanda@gviewadvisors.com)**

# TECHNICAL NOTES

- ▶ All questions related to performance data are for the 2015 calendar year.
- ▶ All questions related to practice information pertained to currently implemented practices as of the date of surveying (July 2016).
- ▶ Questions related to reporting number of events, attendees, or floor area do not follow any specific standardization on calculation methodology.
- ▶ The data and information for call-outs in the report were supplied by participants and are assumed to be accurate and complete. Data were not verified however.
- ▶ Instances of particular data inconsistencies or weakness are addressed in the report and extreme outlying data was omitted for analysis.
- ▶ Data points are asymmetric in terms of the coverage of floor area vs. utility data. Some venues do not have complete coverage of their floor area, while others have to proportion out utility usage from shared facilities. In showing the energy, water, and waste metrics, the intent is to provide the range of performance across the industry. Data are not normalized however and apples-to-apples comparison is still lacking.
- ▶ The data set remains confidential and is not provided to any party other than Greenview.
- ▶ Sponsors are not involved in the preparation of the report or its content.

# ABOUT GREENVIEW

Greenview is a sustainability consulting and research firm that helps organizations with their strategy, programs, measurement, and reporting. In addition, Greenview provides technology solutions to make calculation and monitoring of data and best practices easy through its Greenview Portal. Greenview's clients include many of the hotel industry's leading chains, as well as cruise lines, event organizers, venues, destinations, trade associations, and research institutions to catalyze sustainability as the industry's thought leader.

With offices in Singapore and the United States, Greenview works with event organizers to develop and implement award-winning, engaging programs that tie the key themes of sustainability to the events. Greenview's clients have received notable awards including the IMEX Green Meeting Award, the Trade Show Executive Gold 100 Award for Best Sustainability Initiatives, the PCMA Green Leader Award, and the UFI Sustainable Development Award.

In addition to advising leading global organizations, Greenview has launched several innovative industry initiatives including the Convene Green Pledge, the Green Lodging Survey, the Cornell Hotel Sustainability Benchmarking Index, the Hotel Footprinting Tool, Hotel Owners for Tomorrow, and the UNWTO's sustainable cruise development benchmarking framework for South-East Asia.



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**GREENVIEW**





# GREEN VENUE REPORT 2016



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