2017 SUSTAINABILITY REPORT

GREENBUILD®
INTERNATIONAL CONFERENCE AND EXPO

ABX2017

TOGETHER IN BOSTON

NOVEMBER 8-10, 2017

Greenbuild is owned and produced by Informa Exhibitions and presented by the U.S. Green Building Council.
ABX is owned and presented by the Boston Society of Architects/AIA.

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View online: www.greenbuildexpo.com/sustainabilityreport and www.abexpo.com/sustainabilityreport

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MESSAGE FROM GREENBUILD/ABX

Dear Greenbuild/ABX Community,

In 2017, Informa Exhibitions, the U.S. Green Building Council (USGBC), and ArchitectureBoston Expo (ABX) welcomed more than 24,000 visitors to Boston, Massachusetts for the Greenbuild International Conference and Expo—the world's largest conference and expo dedicated to green building. Co-located with the ArchitectureBoston Expo (ABX), the event celebrated 'Together in Boston' – a communal spirit of attendees, exhibitors, sponsors, and partners who brought energy, excitement, and momentum.

Greenbuild/ABX 2017 brought together green building experts from around the world for three days of education sessions, renowned speakers, green building tours, networking, and an impressive expo. Greenbuild strives to make our annual event the most sustainable meeting of its kind and to positively impact each city we visit, and each year, the magic that occurs on-site is inspiring.

In 2017, we were proud to continue to raise the bar, and it is with great excitement that we share with you the Greenbuild/ABX 2017 Sustainability Report, summarizing our sustainability initiatives and performance results.

The theme for Greenbuild/ABX 2017 was "All In" - which encompasses the breadth of the sustainability and green building movement - and the depth of our commitment to our community, our mission, and our world. With Greenbuild's platform expanding to India and China in addition to Boston in 2017, we were growing our green building knowledge and sharing expertise across continents—while scaling the breadth and reach of global market transformation for the built environment.

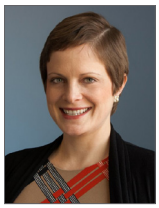
As in years past, we worked with our key venue partners to minimize waste and maximize waste diversion. The Boston Convention and Exhibition Center (BCEC), along with our vendors and partners, stepped up to the plate to implement front of house composting and recycling of carpet for the first time at the BCEC. The culmination of many efforts resulted in a very successful 90.5% waste diversion, the highest in Greenbuild's history. We were also thrilled to have Greenbuild/ABX 2017 participate as the first ever pilot project for the TRUE Zero Waste event certification and achieve a platinum level certification.

We are proud of the hard work and results achieved at Greenbuild/ABX 2017, and extend our heartfelt thanks to all of our event partners who make this unprecedented accomplishment possible. In 2018, we are excited to bring Greenbuild to Chicago, a city that exemplifies leadership in the green building movement. In 2017 alone, more than 43 million gross square feet of space achieved LEED certification in the state of Illinois. ABX is also looking forward to continuing the sustainable event practices begun during the 2017 co-location as they return to the BCEC in November.

We look forward to seeing you in 2018!

Sincerely,

Lindsay Roberts
Greenbuild/ABX Show Director
Informa Exhibitions



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ABOUT GREENBUILD INTERNATIONAL CONFERENCE & EXPO

Greenbuild is the world's largest conference and expo dedicated to green building. The green building community gathers to share ideas and mutual passion at Greenbuild, sparking a contagious buzz throughout the week.

When industry leaders, experts, and frontline professionals dedicated to sustainable building in their everyday work come together, the result is a unique and palpable energy. Participants are invigorated and inspired. They find themselves equipped to return to their jobs with a renewed sense of purpose.

Greenbuild features three groundbreaking days of inspiring speakers, invaluable networking opportunities, industry showcases, LEED workshops, and tours of the host city's green buildings.

ABOUT ARCHITECTUREBOSTON EXPO

ABX is the largest design and construction tradeshow and conference in the Northeast-attracting 8,000 architects, builders/contractors, and design professionals each year. Show features include 400 exhibiting companies and 120 conference workshops. The show founder and presenter is Boston Society of Architects [BSA]. The official publication is *ArchitectureBoston*. The show was founded in 1986 as BuildBoston and rebranded as ArchitectureBoston Expo in 2012.

2017 GREENBUILD/ABX DEMOGRAPHICS

24,731 ATTENDEES

703 EXHIBITORS

96 COUNTRIES REPRESENTED

80 UNIQUE PRODUCT CATEGORIES

169,000 SQUARE FEET

WHO ATTENDS

28% Architect/Engineer/Designer

17% LEED/Research Consulting Firms

15% Government/Utility/

11% Contractors/Builders/Developers

8% Manufacturing/Service

7% Education/Retail/Healthcare

6% Non-Profit/Trade

5% Facility/Property Manager

4% Students

GREENBUILD/ABX SUSTAINABILITY PERFORMANCE AT-A-GLANCE

The Greenbuild/ABX team strives to improve sustainable event performance each year through meaningful stakeholder education and collaboration. To understand the impacts of our efforts, our team and our event partners carefully track hundreds of sustainability-related indicators. Greenbuild/ABX key performance indicators (KPIs) are presented below to give you a snapshot of our efforts and performance.

Greenbuild/ABX Key Performance Indicators	2017
GHG Emissions Per Participant (lb CO2e)	508.92 lb
GHG Emissions Offset	100%
Total Waste Per Participant	5.7 lb
Total Waste Diversion	90.5%
Sustainable Signage Sourced	93%
Materials Donated to Local Organizations	26,265 lb
Food Donated	1,527 lb
Hotels - Walking Distance (1 mile)	39%
LEED Certified Venues	2
TripAdvisor GreenLeaders Certified Hotels	50%
Exhibitor GMEGG Participation	55%
Green Exhibitor Award Participants	149
Total Water Footprint	7,272,158 gal
CONVENTION CENTER	
Waste Diversion at Convention Center	90.5%
Waste Diversion Over Convention Center Baseline	44%
Local Food Sourced at Center (<100 miles, % by weight)	Information not provided by Levy
Regional Food Sourced at Center (<500 miles, % by weight)	Information not provided by Levy
USDA Organic Food Sourced at Center (% by weight)	Information not provided by Levy
CELEBRATION EVENT VENUE	
Waste Diversion at Celebration Venue (%)	96%
Local Food Sourced at Celebration Venue (<100 miles, % by weight)	30%
Regional Food Sourced at Celebration Venue (<500 miles, % by weight)	61%
USDA Organic Food Sourced at Celebration Venue (% by weight)	9%

TOP FIVE SUSTAINABILITY STORIES FROM GREENBUILD/ABX 2017

Among the many exciting victories to emerge from 2017, here are the Top Five Sustainability Stories. Look for detailed info on these highlights throughout the report.

1

90.5% Waste Diversion at Convention Center.
Learn more on page 9.

2

14,500 Attendees at Greenbuild/ABX Pledge to Put Sustainability First. Learn more on page 11.

3

Over 25,000 Pounds of Show Donations Were Made.
Learn more on page 14.

4

Greenbuild/ABX 2017 Was Powered By 100% Renewable Energy. Learn more on page 18.

5

Legacy Project Participants Given Behind the Scenes Look at Greenbuild/ABX. Learn more on page 20.

THE SEVEN SUSTAINABILITY OBJECTIVES OF GREENBUILD

When the Greenbuild International Conference & Expo began in 2002, USGBC established seven long-term objectives for improving the sustainability performance of the show. We believe these objectives address the most relevant event impacts of both Greenbuild and the meetings and events industry.

1. Move Toward a Zero Waste Event
2. Increase Stakeholder Education and Engagement
3. Improve Sustainable Sourcing
4. Improve Performance Tracking
5. Reduce Greenhouse Gas Emissions
6. Positively Impact Communities
7. Catalyze the Advancement of Green Building Initiatives and Sustainable Operations within the Hospitality Industry

1. MOVE TOWARD A ZERO WASTE EVENT

ISSUE

Events can be material intensive affairs. Waste from large events is generated in high volumes, can be complicated and challenging to dispose of, and is often highly visible to attendees and exhibitors. Because the materials used for a show vary immensely, the industry is faced with challenges in the sourcing materials that can easily be reused, recycled, or composted and still meet a standard in look, feel, and function. Additionally, finding waste processing partners to responsibly dispose of common event materials can be a challenge.

ACTIONS

- With Greenbuild/ABX 2017 in Boston, the show was able to leverage a long-standing partnership between the waste hauler Save That Stuff and the Boston Convention and Exhibition Center. Through this local connection, Greenbuild/ABX was able to effectively and efficiently divert a wide-range of compost and organic material, find uses for hard to repurpose items, and create solutions for some of our trickiest construction and waste debris elements.
- This year, the USGBC Massachusetts Chapter and Host Committee focused efforts on waste diversion education. The Host Committee helped to create training materials for volunteers regarding proper waste disposal. In turn, the volunteers helped exhibitors and attendees properly dispose of waste.

These volunteers were well-versed on not only the event itself, but with local and federal waste guidelines and end of life processing and reuse options for many of the materials that are found at Greenbuild/ABX. Through the help of waste volunteers, **Greenbuild/ABX 2017 was able to achieve a diversion rate 90.5% at the convention center. The highest diversion rate of any Greenbuild and most likely one of the best diversion rates of any large expo in the United States!**

TOP FIVE SUSTAINABILITY STORY

90.5%
Waste Diversion at Convention Center

Greenbuild/ABX 2017 achieved a waste diversion rate* at the Boston Convention and Exhibition Center of 90.5% and a diversion rate of 96% for the Greenbuild Celebration held at the Boston Museum of Science. Together the total combined event diversion rate of the event was a staggering 91%. Quite possibly the best diversion rate of any large exhibition held throughout the world.

**Waste diversion is typically defined as the percentage of total waste generated that is collected and processed by means other than landfill disposal or incineration, (e.g. reuse, recycling, composting or donation)*

CASE STUDY

PARTNERSHIP PAYS OFF - Save That Stuff and Boston Convention and Exhibition Center

Since 2008, the Massachusetts Convention Center Authority has been working with the same waste partner, Save That Stuff. It was due in large part to this partnership that enabled us to divert some of the trickiest materials and help Greenbuild achieve its highest diversion rate in the history of the expo.

Save That Stuff, Inc. was founded in 1990 with one truck (actually, a 1971 vintage VW Double Cab – half bus and half pick-up truck), affectionately called Lil' Stuffy, to provide cost-effective alternatives to traditional waste disposal. Focused on finding responsible waste solutions for all kinds of materials while also engaging the community in sustainable practices has been a core value of Save That Stuff.

In the years since partnering with the Boston Convention and Exhibition Center (BCEC), Save That Stuff has helped completely transform the recycling program at the venue. Founder Erik Levy worked closely with the building services department to set up an organization-wide recycling collection system. They increased the number of commingled recycling containers throughout the facility and helped the catering and kitchen department improve their composting program whereby they now compost roughly 98% of all food waste.

Every year, the Greenbuild waste management team relies on local waste haulers and convention building operations personnel to help us lead the way on award winning waste management programs for the event. This year was no different, and Save That Stuff along with the BCEC Building Services Manager, Evan Harwood, went above and beyond to find responsible recycling, compost, and donation solutions for almost all the material that came from the expo floor. Because Evan and Erik have worked closely together for years, we could leverage relationships throughout the region that helped our waste materials be turned into soil amendments and electricity through anaerobic digesters. They worked with other waste hauler companies and processors in the area to audit waste streams coming out of the BCEC prior to Greenbuild/ ABX to better understand the waste, and identify any challenges we might run into during the show. This extra step enabled the venue to sort and process waste more efficiently and to create clean waste streams for all waste vendors. Ensuring no items were left behind meant everything that could find a new use was captured and repurposed.

2. INCREASE STAKEHOLDER EDUCATION & ENGAGEMENT

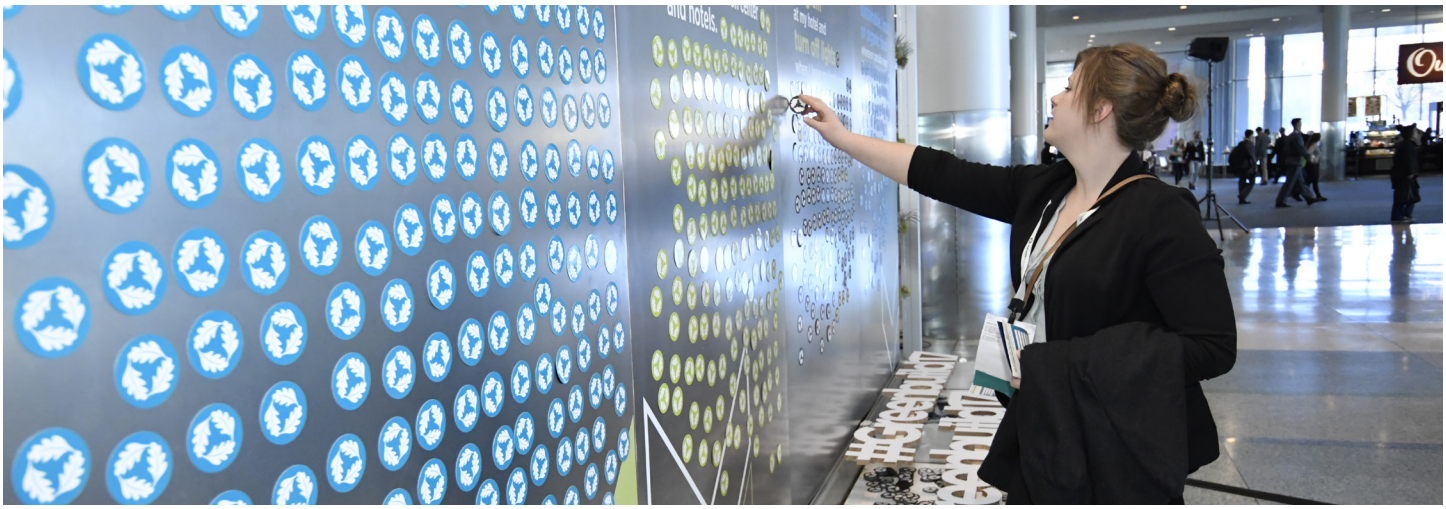
ISSUE

Each year, thousands of green building professionals from across the globe unite to learn, share, and inspire - with the goal of advancing the green building movement. While onsite at Greenbuild/ABX, we want attendees to learn and talk about green building concepts, although there are other important issues that we hope attendees and exhibitors will actively partake in. These discussions include natural resource management and event impacts. While we work diligently to engage our vendors behind the scenes to make the show more sustainable, there is always opportunity to create more meaningful engagement with attendees and exhibitors.

ACTIONS

- The show organizer, Informa, intentionally put sustainability front and center at the event by placing the Sustainability Hub in the main lobby for all Greenbuild/ABX exhibitors and attendees to easily see. The space was designed to be interactive and inviting, with a huge magnet wall where people could place their pledge of sustainable actions while attending the conference.

- To encourage attendees to think about sustainable actions before arriving, they were asked to make a sustainability pledge when registering for the event. Communications about the pledge and the actions tied to the commitment were sent during online registration, and in multiple pre-event communications. Attendees were asked to choose one or all of the following pledge actions at Greenbuild/ABX:
  - Bring my usable water bottle to avoid resource and waste impacts of disposable plastic water bottles.
  - Enjoy the host city and reduce my carbon footprint by walking to and from my hotel, using public transportation or car-sharing services.
  - Responsibly dispose of waste materials by recycling or composting at the convention center and hotels.
  - Use the linen and towel reuse program at my hotel and turn off lights when I leave my hotel room.
  - Choose sustainable, local, or organic food whenever possible when dinning out during the event.



TOP FIVE SUSTAINABILITY STORY

14,500 Attendees at Greenbuild/ABX Pledge to Put Sustainability First

CASE STUDY

CO-LOCATING WITH ABX leads to a sustainability upgrade for another building-focused event

True to the spirit of Greenbuild/ABX 2017's theme "All In," the co-location of ArchitectureBoston Expo (ABX) with Greenbuild provided the perfect opportunity to expand the sustainability focus to a wider audience.

The Greenbuild/ABX education programs cumulatively featured more than 300 sessions, tours, summits, and workshops. Exhibiting companies at both shows were committed to sustainable exhibiting practices. ABX exhibitors were encouraged to follow Greenbuild Mandatory Exhibition Greening Guidelines (GMEGG), a set greening guidelines followed by Greenbuild exhibitors to create a sustainable expo floor.

A special area at every ABX show is the QUAD. The QUAD 2017 was an international call for a social space installation. The competition is hosted by WHAT'S IN, a multi-disciplinary research initiative that advocates for urban density and housing affordability through design and policy. The QUAD looked for proposals that captured the essence of social sustainability by addressing the various factors contributing to the three pillars of sustainability: Environment, Economy, and Social Equity. The QUAD finalists were asked to follow an updated version of GMEGG when creating their installations on-site.

The [re]ACTIVE pavilion was the winning submission in the international design competition. Created by a team of six young architects from Gensler's Boston office, the architectural system catalyzes spontaneous social interaction. The design reinterprets the cedar shingle, a material emblematic of New England coastal architecture. Instead of the static surface pattern seen on homes throughout the region, in [re] ACTIVE the shingle is a moveable element that spurs interaction between people and architecture in a playful, immersive environment. Each row of shingles could be rotated by users to impact and control their physical environment. Moveable displays integrated into select panels layer in additional opportunities for engagement and provide space for poster content display.

An entirely modular system, the full pavilion can be easily installed or dismantled without special tools or equipment. The shingles and plywood used for fabrication were sourced locally, and all components of the pavilion can be reused or recycled when it reaches the end of its useful life. The team enlisted a local mill-working partner, Mark Richey Woodworking (MRW), for design and manufacturing for the machining of the Baltic Birch and solid Poplar components. Both MRW and Gensler are committed to sustainability in their operations and utilize renewable energy systems and carbon offsetting at their facilities.

3. IMPROVE SUSTAINABLE SOURCING

ISSUE

From printed materials to carpet, food and beverage to merchandise, each item that makes up Greenbuild is carefully sourced, and takes health, the environment, and the impact on those who made it into consideration. Finding ways to integrate our sponsors throughout the event is a key part of any successful show. However, that sometimes means we need to find creative solutions for sponsorships.

ACTIONS

- In 2017, Greenbuild/ABX made some big changes to the carpet used at the show. Carpet is a necessary evil in the event world. It offers a sound buffer and walking cushion through the vast expanses of convention exhibition space. Unfortunately, carpet is made of a polypropylene material that is often low value for recycling. Additionally, there are currently few carpet recyclers left in the country. The general service contractor, Freeman, has created an extensive carpet reuse and recycling program in which it can collect and process most of the carpet used for the show. It's a program that has always been utilized by Greenbuild. However, this year, by switching the carpet color on the main floor areas, fewer cuts were required for fitting the carpet to the space, resulting in less scrap overall. Therefore, more carpet can be rolled up at the close of show and reused by Freeman, significantly reducing the amount of scrap that will have to be recycled or sent to waste facilities.
- Hotel key card branding is a great sponsorship opportunity. However, they prove to be tricky, because once they are branded the hotels won't reuse them, and they are nearly impossible to recycle because of the magnetic strip. There were collection points at the venue in an effort to capture hotel cards from attendees at the close of the show. While we weren't able to track the end of life for the key cards, we did do our part to source the most sustainable material for the key cards which were created using reclaimed and renewable materials, 60% Chalk and 40% HDPE non-toxic product, which is a better alternative to the traditionally-used PVC card.

CASE STUDY

The Carpet Conundrum

Convention and exhibition centers across the globe have a few key traits in common. They have large open spaces partitioned by moveable walls and they all have hard surface floors such as concrete. For almost every expo that takes place, this floor is covered in carpet. The reasons for carpeting the floor are simple. For starters, safety. The carpet covers miles of electrical cords zig-zagging the floor; if left exposed, it would provide tripping hazards. It also reduces reverberation and noise, is more comfortable to walk on, and provides a clean aesthetic. Unfortunately, the environmental cost of using carpet for events is high, and sustainable options for end-of-life material have dried up over the years.

Purveyors of exhibition carpet typically reuse the aisle and booth carpet a handful of times before it needs to be retired. And while there are some vendors that can recycle the material or repurpose it into something else, the volume of material being produced is quite large. For example, the Boston Convention and Exhibition Center exhibit floor space is just over 500,000 sq.ft. Say the center hosts 40 shows per year with carpet that could be reused five times. This would mean that carpet would be disposed of eight times throughout the year. Take the floor space and the number of disposals throughout the year (500,000 X 8) means that 4 million square feet of carpet would be disposed of every year, and that is just one convention center. Even if 30% of the carpet that is disposed of is recycled, there is still a substantial amount sent to landfill.

For Greenbuild/ABX, this conundrum represents the very real contrast between many organizations with sustainability missions and what is expected at events. There are a few ways event organizers are looking to reduce this impact, from eliminating carpet in certain areas of the expo floor, to utilizing alternative products that can be reused and have better end-of-life recycling markets compared to carpet. Our team will continue to explore these options and as always look for the most sustainable disposal options for the materials we use.

TOP FIVE SUSTAINABILITY STORY

OVER 25K pounds of Show Donations

Each year, our Exhibitor Donation Program collects leftover booth materials from Greenbuild Exhibitors. In 2017, our exhibitors, along with exhibitors from the co-located ABX show, donated more than 25,000 pounds of materials including cement blocks, flooring, carpet, floor tiles, and wood. These items were donated to local non-profits including Habitat for Humanity. Additionally, over 1,500 pounds of food donations were also collected by our catering partner at the BCEC, Levy, and distributed to Boston Rescue Mission.

4. IMPROVE PERFORMANCE TRACKING

ISSUE

The Greenbuild team values the adage "you can't manage what you don't measure." To ensure we are effectively managing our event impacts and improving performance over time, we track hundreds of indicators around waste, energy, emissions, and sourcing. Collecting these metrics in a timely manner from vendor partners often proves difficult when tracking sustainability performance is not a common exercise.

ACTIONS

- In 2017, pre-con meetings with the Celebration venue included detailed discussions on waste management and tracking to improve the quality of data collected and the time frame in which it will be gathered.

- Greenbuild requires vendors to submit Vendor Sustainability Plan documentation during the event planning process. This year all documents were online, making the process faster and easier for stakeholders to review and provide feedback.

CASE STUDY

Greenbuild/ABX Achieves Platinum TRUE Certification in Pilot Program

TRUE ZERO WASTE CERTIFICATION

In 2017, Green Business Certification Inc. (GBCI) incorporated the TRUE Zero Waste certification into its suite of green business programs. Originally designed for facilities, the strategies and concepts laid out by the system relate closely to events. USGBC and Informa Exhibitions decided to pilot test the application of the TRUE Rating System to Greenbuild/ABX 2017. Greenbuild/ABX submitted initial planning documents and underwent an onsite assessment. After submitting additional documentation post-event, Greenbuild/ABX 2017 achieved certification at the platinum level. GBCI is continuing to pilot TRUE certification for the event industry.

TRUE ZERO WASTE AT GREENBUILD

Using the principles of TRUE Zero Waste at the conference allowed USGBC and Informa to shift the thought process surrounding waste within the events industry. With an emphasis on redesign and reduction on the front end, the team identified decisions that were made organically to reduce waste and incorporate narratives as to how these reductions were achieved. The new lens on the overall process encouraged new methods and tracking strategies to meet these sustainability standards.

FEATURED CREDIT CATEGORY: REUSE

The onsite assessment at Greenbuild/ABX confirmed multiple systems that enabled the reuse of materials. In addition to carpet reuse, another example was the extensive efforts by Freeman to communicate and collect donations for Habitat for Humanity and other charities through their exhibitor donation program. Stickers with “Hold for Collection” were placed on items available for donation.

THE TRUE ZERO WASTE RATING SYSTEM

The TRUE (Total Resource Use and Efficiency) Zero Waste Rating System enables facilities to define, pursue, and achieve their zero waste goals – cutting their carbon footprint and supporting public health. It helps facilities to quantify their performance and find additional ways to improve their progress towards zero waste.

WHY EARN TRUE ZERO WASTE CERTIFICATION?

TRUE certified spaces are environmentally responsible, more resource-efficient and help turn waste into savings and additional income streams. TRUE certified projects save on operational costs, reduce greenhouse gas emissions, manage risk, reduce litter and pollution, reinvest resources locally, create jobs, and add more value for their company and community. The number of credit points that a project earns determines the certification level it receives. Levels include: Certified, Silver, Gold, and Platinum.

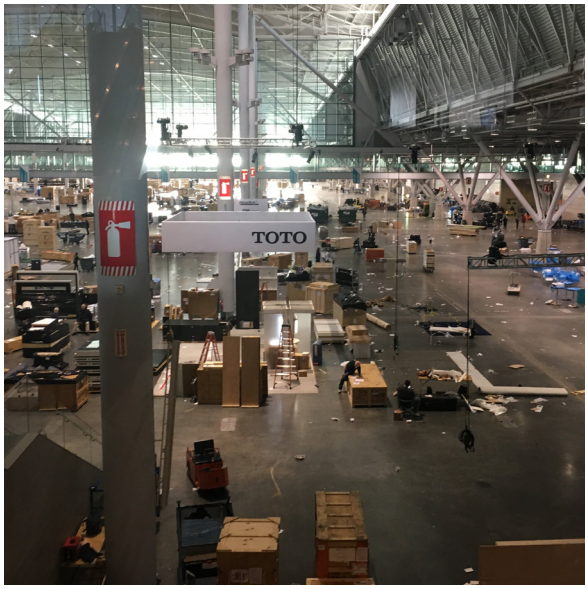
GOALS OF TRUE ZERO WASTE CERTIFICATION:

SAVE MONEY: Waste is a sign of inefficiency and the reduction of waste reduces costs.

FASTER PROGRESS: A zero waste strategy improves upon product processes and environmental prevention strategies, which can lead to larger, more innovative steps.

SUPPORT SUSTAINABILITY: A zero waste strategy improves your triple bottom line and supports the three Ps—people, planet, and profit.

IMPROVE MATERIAL FLOWS: A zero waste strategy uses fewer new raw materials and sends no waste materials to landfills, incineration (waste-to-energy) and the environment.



5. REDUCE GREENHOUSE GAS EMISSIONS

ISSUE

Each year we aim to reduce greenhouse gas (GHG) emissions as a result of show operations. Travel to and from the event will always be one of the biggest contributors. We communicate to attendees how they can offset their travel and do our best to consistently offset our event carbon footprint. One of the largest contributors to GHG emissions worldwide is landfill and food waste. With 18% of the event's total waste footprint being tied to eating and drinking at the show, we do our best to eliminate those items from our landfill stream.

ACTIONS

- This year we worked closely with LEVY catering at the BCEC to ensure that the maximum amount of leftover food was donated. As a result, more than 1,500 pounds of food and beverages were donated to the Boston Rescue Mission. This was a significant improvement from last year.

- Waste hauler Save That Stuff and the personnel working back of house at the BCEC did an incredible job to reduce food waste as well as any other material that could potentially be sent to landfill. All waste from the show was either recycled, composted, or sent to an energy from waste processing facility.

CASE STUDY

Keeping our waste out of landfills

According to research from *National Geographic*, if food waste were a country, it would be the world's third largest emitter of greenhouse gases, behind the U.S. and China. About one third of food waste happens at the consumer level, meaning purchasing or throwing away more food than we need. It is the disposing of food, and where it ends up that ultimately leads to GHG emissions.

The organics from Greenbuild/ABX 2017 were sent to a CORe Waste Management Facility which focuses specifically on processing food waste and compostable material. The organic materials were broken down into smaller pieces using sophisticated machinery, and passed through an initial screen which removes select contaminants and residual material that can be tougher to breakdown. This process is repeated and more contaminants and residual materials are removed. Water or liquid residuals left in the hauling truck are then pumped into the mixture to create a slurry. This slurry was trucked to the Greater Lawrence Sanitary District near Lawrence, Massachusetts. There, the slurry is fed into anaerobic digesters, where bacteria colonies metabolize the organics and effuse methane, which is captured and ignited on-site to generate electricity. The liquids are drained out, treated, and reintroduced into nature, and the residual solids are cured and turned into a soil fertilizer or soil amendments suitable for landscape applications.

When food waste is sent to landfill, it slowly decomposes and produces greenhouse gases including methane, which has as high as 72 times the impact on warming the climate than carbon dioxide*. Because of this, we focused our energy on keeping as much of our food waste out of the landfill as possible. When we exhausted all options to divert event waste, waste material from the event that couldn't be recycled, reused, or donated was sent to an energy-from-waste facility (9.5% of our total waste).

Even with emission controls at waste to energy facilities, some GHG and other air pollutants are still produced from the process. Energy recovery capabilities at these facilities can help to negate climate impact. However, as with landfills, it is still not the most desirable outcome for residuals. This is because the materials are permanently destroyed, which necessitates starting over again by extracting new raw materials. The best approach is to prevent the need for disposal in the first place by reducing, reusing and recreating products.**

Note: Waste to Energy is not considered a diversion method for Greenbuild's waste diversion.
**Source: https://ilsr.org/wp-content/uploads/2008/06/keyfindingsandpolicies.pdf*
***Source: https://true.gbci.org/zero-waste-forgotten-climate-change-mitigation-tactic*

TOP FIVE SUSTAINABILITY STORY

Greenbuild/ABX 2017 Was Powered By

100%

Renewable Energy

Our host for Greenbuild/ABX 2017, the Boston Convention and Exhibition Center, purchased Renewable Energy Credits (RECs) for all electricity used and carbon offsets for all natural gas. In doing so, all the activities that took place at the convention center for Greenbuild/ABX 2017 were sourced by 100% renewable energy, making this year's event our first show to achieve this milestone.

6. POSITIVELY IMPACT COMMUNITIES

ISSUE

Greenbuild is carefully planned and designed to provide attendees with an educational and inspiring onsite experience. Likewise, we strive to support local businesses and communities that help make Greenbuild possible. Each year, Greenbuild organizers work with the local Greenbuild Host Committee on incorporating local elements into the show. A significant part of that is weaving the Greenbuild Legacy project into the event and encouraging attendee awareness of the program.

ACTION

As part of our Vendor Sustainability Program (in which we connect with the show's main vendors to discuss show sustainability goals and best practices), we ask vendors to hire local staff and source items locally whenever possible. We think we have the best vendors in the industry, and it shows in their dedication to helping us reach our sustainability goals. Every year our AV partner, PRG, reaches out to the AV community in the host city in search of greening tips or sustainability recommendations.

Additionally, they make it a best practice to locally source scenic materials and decorative elements for our Special Sets Program. This year, temporary staffing partner ProShow went the extra mile to incorporate sustainability education with the local workforce. Rather than including a 'sound byte' about sustainability on the staffer confirmation page, they sent a separate document offering ways to incorporate greening into their daily lives at home to all Greenbuild/ABX temporary staffers. This effort translated into a sustainability contest onsite and helped prepare staff for ways they could be sustainable.

DID YOU KNOW?

A standard Greenbuild best practice is to track the carbon footprint of the event and offset the green house gas emissions associated with the show. Our footprint typically includes carbon sources that can be linked to the following activities:

Electricity use at the venues

Fuel associated with the heating of the venue and fuel used for cooking in the venue kitchens

Estimated mobile fuel combustion of freight, show management deliveries, exhibitor freight sent from advanced warehouse to the center, and marshaling yard trailers used to support this show.

Air travel to the destination by participants (attendees, staff, vendors, exhibitors)

Ground transportation to the destination by participants (car, regional train, local public transportation)

Ground shuttle use for offsite events and event staff

GHG emissions per occupied room for hotels within the contracted room block

CASE STUDY

Greenbuild Legacy Project: Vocational training for a greener industry

The 2017 Greenbuild Legacy Project was The Green Building Tech Program at Madison Park Technical Vocational High School.

The pilot program is designed to create early awareness of green building technologies in the trades of facilities management, electrical, plumbing, and carpentry. The program will expose the next generation of building operators and trade workers to a wide range of "green collar" jobs to fill the industry demand of building operating technicians.

Architects, engineers, and contractors are masters at creating and designing, high-performance buildings. The Commonwealth of Massachusetts is delivering these types of buildings at a record-breaking pace. However, when it comes to operating these high-performance buildings, the middle-skills workforce have difficulty operating and maintaining their performance as intended. Today, some building operators are unplugging building automation systems or abandoning critical infrastructure systems because they are unsure, unaware, or lack training on how high-performance buildings operate.

The Green Tech Program has been folded into regular curriculum at Madison Park in an 8th period program focused on "green facilities career" presentations. Presentations are provided by local professionals, and through a series of tours to the many high-performance buildings in the surrounding area. Additionally, students were brought to the Greenbuild/ABX expo hall for a networking opportunity and a behind-the-scenes tour of the Boston Convention and Exhibition Center.

The Green Building Tech Program is the first of its kind in the Boston Public Schools system and addresses the need to focus education efforts on the next generation of green building operators. At year end, these students will have acquired the knowledge and skill set to help strengthen and maintain Boston's thriving, innovative, and green building economy.

TOP FIVE SUSTAINABILITY STORY

Behind the Scenes Look

Legacy Project Participants Given Behind the Scenes Look at Greenbuild/ABX

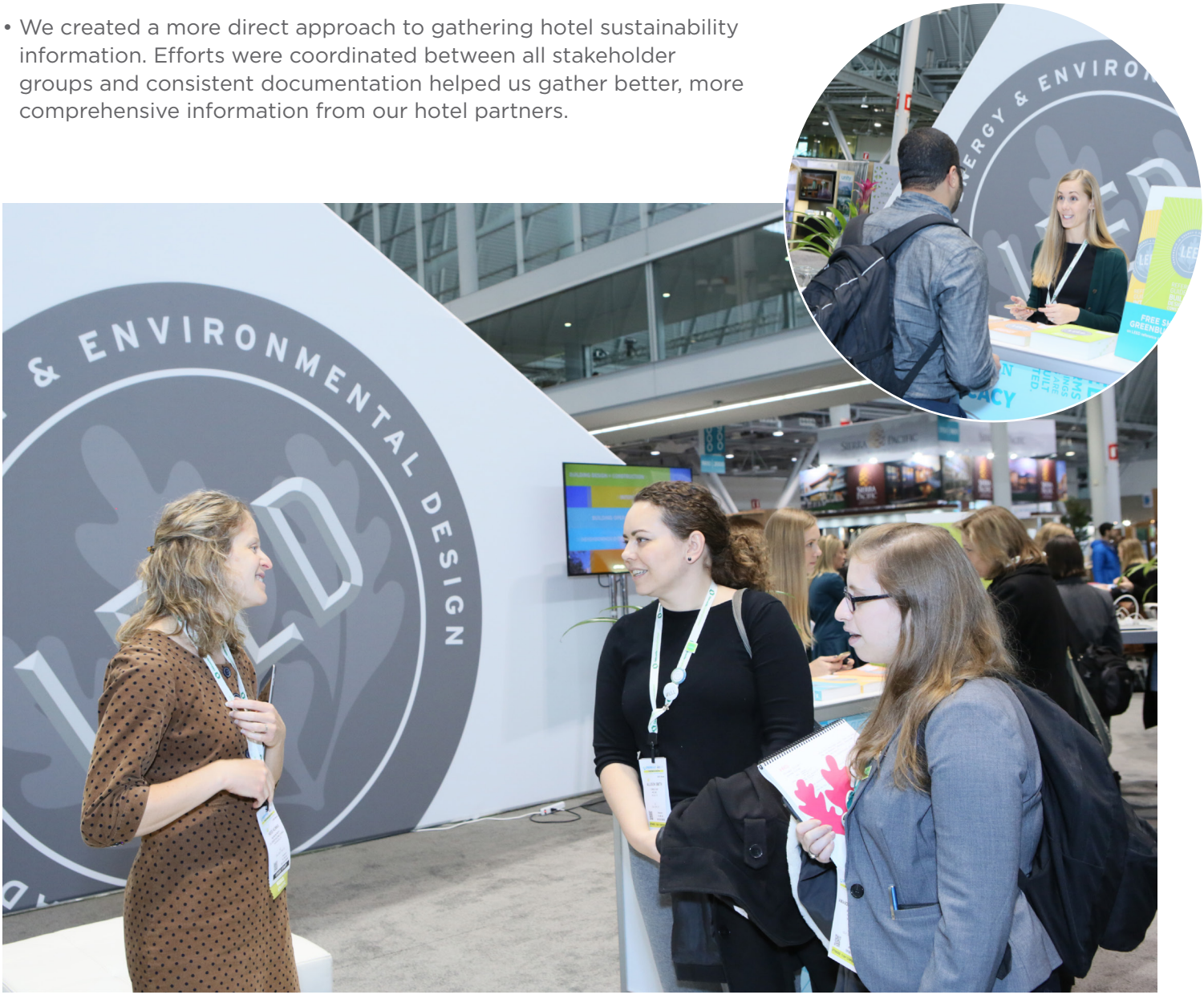
7. CATALYZE THE ADVANCEMENT OF GREEN BUILDING INITIATIVES AND SUSTAINABLE OPERATIONS WITHIN THE HOSPITALITY INDUSTRY

ISSUE

Hosting Greenbuild in a new city each year requires significant work to implement sustainable practices. However, the benefit is that Greenbuild affects a new destination and hospitality community every year. In past events, there have been different stakeholder groups requesting information from hotels in the show's room block. This often led to confusion and missed opportunities for strategic sustainability engagement with our hotel partners.

ACTIONS

- Updated hotel audit program to reflect wording found in hotel sustainability contract clauses. Audit items were placed online for hotel partners to update over the course of the year as they made changes in preparation for the show.
- We created a more direct approach to gathering hotel sustainability information. Efforts were coordinated between all stakeholder groups and consistent documentation helped us gather better, more comprehensive information from our hotel partners.



CASE STUDY

A focused approach to hotel sustainability

The Greenbuild/ABX event team took a more focused approach to engaging the host city hotel partners in our sustainability journey. Six months before the event, we convened our hotel partners for an in-person meeting where we focused on local sustainability resources, had an open discussion about the challenges of implementing sustainable practices in the hospitality and events industry, and shared the sustainability goals for Greenbuild/ABX itself. We invited local speakers to present information to our hotel partners regarding how to reduce environmental impacts and improve social sustainability. Topics included LEED certifications for hotels, TripAdvisor Green Leaders program resources, local composting options and requirements, food and amenity donation programs through local non-profit partners, and resources about BCEC Cares, the convention center donation program. The meeting provided everyone in the room a face-to-face opportunity to share ideas and resources.

To help educate Greenbuild/ABX hotels about the City of Boston's leadership in climate adaptation and preparedness, the host committee created a two-page resiliency assessment customized for each hotel. The resilience project included information on risks of sea level rise, energy demands, and extreme weather. The host committee offered opportunities for each hotel property and cost savings that could be realized through mitigation efforts. The information was used by properties and attendees to learn more about specific risks each hotel faces and resources from the city of Boston to help the properties adapt to climate change. The host committee also created an interactive map which represented all Greenbuild/ABX hotels and nearby restaurants within walking distance that had a strong sustainability focus in their operations and meal offerings.

SEAPORT BOSTON

Seaport Boston was an exceptional sustainability partner in the hotel room block. Named one of the greenest hotels in North America, Seaport Boston is dedicated to sustainability and conservation. The venue boasts an impressive sustainability program that includes energy efficient lighting, low flow faucets, donation programs, sustainably sourced products, materials, and cleaning supplies, and it supports green transportation and uses locally grown food. The hotel is also home to one million bees living on the fifth-floor roof. The bees support the local ecosystem and provide honey for the on-site restaurant as well as being used in other local products like beer and cider.

SUSTAINABLE DESTINATION

In 2017, Massachusetts ranked first among the Top 10 States for LEED for the second consecutive year. With 130 commercial and industrial projects achieving LEED certification, the state added more than 29 million gross square feet of LEED-certified space in the span of a single calendar year, amounting to 4.48 gross square feet of space per resident.

Massachusetts continues to be a welcoming environment for sustainable development and career growth in related sectors, with more than 7,600 LEED professionals calling the state home.

LOOKING AHEAD - GREENBUILD 2018

HUMAN BY NATURE // THE INTERSECTION OF HUMANITY & THE BUILT ENVIRONMENT

The green building movement embraces all of humanity by making sustainable buildings and environments accessible to everyone, and in doing so, benefits the natural environment all around us. We are helping people understand their role in protecting and preserving the natural environment and leveraging the built environment to: enhance human health and wellbeing, ensure resiliency, mitigate climate change, enhance community and social equity, restore and protect our ecosystems, enhance building efficiency and performance, and promote sustainable design.

The future of the human race is interlaced with the future of the planet, and the sustainable practices we celebrate and advance at Greenbuild remind us that our success as sustainability advocates, practitioners and professionals is more than a movement, it is a responsibility.

CHICAGO

- Ranks first in residential energy efficiency compared to other major cities across the U.S.
- The city is home to more than 825 LEED-certified buildings.
- City Hall is home to a rooftop garden with 20,000 plants representing more than 150 species.
- The City of Chicago mandates that all its city facilities achieve LEED Silver in instances of new construction or major renovation.

THE WILLIS TOWER in Chicago is the largest office building to earn the Energy Star certification.

ILLINOIS

The state of Illinois exemplifies leadership in the green building movement and in 2017, ranked third among the Top 10 States for LEED. At the end of 2017, the state of Illinois counted a cumulative 2,082 LEED-registered projects and 1,049 LEED certifications.

LOOKING AHEAD - ABX 2018

ArchitectureBoston Expo
November 28-29, 2018
Boston Convention and Exhibition Center

Statistics via the U.S. Green Building Council (USGBC), Arcadia Power, and the City of Chicago.

GREENBUILD® INTERNATIONAL CONFERENCE AND EXPO

Human × Nature

MCCORMICK PLACE — CHICAGO 2018

EXPO — NOV. 14–15

CONFERENCE — NOV. 14–16

SUSTAINABILITY PARTNERS

We thank our partners for their commitment to helping us make Greenbuild/ABX 2017 one of the most sustainable events in the world.

AMANDA SIMONS. As the sustainable event consulting partner for Greenbuild, Amanda is enjoying her fifth year supporting the sustainability efforts of the Greenbuild team. Amanda works to raise the bar in sustainable event strategy, practices, measurement, analysis and reporting and then applies those practices across other industry-leading events and exhibitions hosted around the world.

BOSTON CONVENTION AND EXHIBITION CENTER. As the primary host of Greenbuild/ABX 2017, the venue went the extra mile to collaboratively develop and implement a rigorous waste management plan and provide complete and accurate impact data for the event.

BOSTON MUSEUM OF SCIENCE. The venue has taken a proactive role in establishing and creating programs and initiatives to operate the museum in the most environmentally conscious way. To accomplish and attain their 'Green Goals,' the museum looks at reducing waste, through recycling programs, purchasing biodegradable and non-toxic cleaning products, making energy efficiency a standard for best practice and investing in innovative sustainable technology like waterless urinals and solar panels.

CADMIUM. CadmiumCD offers digital copies of the recordings for conference attendees and other people who were not able to attend the event. All transactions were done digitally and distribution of content was completed in a sustainable manner.

COMPUSYSTEMS. Through months of testing badge material options, Greenbuild and CompuSystems found a paper-based badge solution that works for Greenbuild and can be used for any other show looking to eliminate the cost and waste associated with plastic name badge holders.

FREEMAN. The entire Freeman team feels very lucky to be supporting this organization and working with all the vendors on the overall sustainability goal for the show. We are very proud of all the efforts that each department at Freeman does to find new and better alternatives to produce this show and give back to the community.

LEVY. Levy strengthened their kitchen waste management practices around organics and recycling, procured 100% compostable serviceware, and expanded recycling to include all metals and plastics. They also expanded composting stations throughout the facility concession areas for Greenbuild/ABX.

PRG. PRG is committed to the sustainability effort at Greenbuild and at our many other events throughout the year. PRG spends over $30 million annually in equipment. At Greenbuild, we have continued to reduce our overall energy usage for the event and have utilized this event to help other customers understand the importance of increasing their sustainability efforts. Our Energy Conservation Task Force worked closely with our production staff to successfully implement our greening efforts.

PROSHOW. ProShow is proud of the sustainability commitment we make to each show we have worked with for eight years. Through our Sustainability contest that we hold on site, we teach each staffer to be aware of their impact locally and globally and reward those who are making the biggest difference.

TMS. TMS has partnered with Carbonfund.org to create an innovative Carbon Offset Shuttle Program that provides a neutral carbon footprint from ground transportation. The TMS Carbon Offset Shuttle Program computes the logistical on-site shuttle information and creates a post-show tally of the number of gallons of diesel each bus burned along with the number of numeric tons each bus emitted. TMS was awarded by Alliance for Workplace Excellence with the EcoLeadership award in 2011 as a company that shows commitment to environmental sustainability.

UNITED SERVICE COMPANIES. United Service Companies janitorial crew was key in keeping the exhibit hall clean and safe throughout all stages of the event. Thanks in part to their back-of-house manual waste sorting operation, they helped Greenbuild 2017 achieve its highest ever waste diversion rate of 90.5%.

APPENDIX A – HISTORICAL PERFORMANCE DATA TRACKING

EVENT SUSTAINABILITY DATA	2013	2014	2015	2016	2017
Destination	Philadelphia	New Orleans	DC	Los Angeles	Boston
Participants (#)	23,600	17,507	19,058	18,079	24,731
Exhibit (sqft)	164,160	142,000	144,300	138,960	169,000
CONVENTION CENTER	**2013**	**2014**	**2015**	**2016**	**2017**
Energy Use (kWh)		253,088	647,887	743,264	912,878
Renewable Energy Use (%)	0%	0%	95%	0%	100%
Water Use (gal)		4,154	205,639	852,491	339,592
Waste Per Sqft Exhibit Space (lb)		2.09	0.80	1.06	0.84
Waste Diversion (%)	67%	78%	84%	90%	90.5%
Local Food (<100 miles) (% by weight)		40%	33%	56%	Unable to report
Regional Food (<500 miles) (% by weight)		73%	70%	87%	Unable to report
Organic Food (% weight)		0.6%	0.7%	7%	1%
Fresh Goods (% by weight)		37%	81%	77%	91%
CELEBRATION VENUE	**2013**	**2014**	**2015**	**2016**	**2017**
Energy Use (kWh)		359,981	42,650	1,828	6,781
Renewable Energy Use (%)		0%	N/A	N/A	53%
Water Use (gal)		776,000	50,039	6,025	4,381
Waste Diversion (%)		68%	N/A	83%	96%
Local Food (<100 miles) (%)		97%	50%	38%	30%
Regional Food (<500 miles) (%)		100%	100%	60%	61%
Organic Food (%)		0%	0%	15%	9%
Fresh Goods (%)		87%	100%	68%	88%
VENUE TOTALS	**2013**	**2014**	**2015**	**2016**	**2017**
Total Energy Use (kWh)	1,167,425	613,070	690,537	745,747	919,659
Total Water Use (gal)	525,000	780,154	255,678	858,516	343,974
Total GHG Emissions (lb)	15,008,515	24,968,955	15,836,895	11,712,477	12,586,193
GHG Emissions Per Participant (lb)	635.95	1,426.23	831	866	508.92
Total Emissions Offset (%)	100%	100%	100%	100%	100%
Local food (<100 miles) (% by weight)	67%	47%	38%	44%	Unable to report
Regional food (<500 miles) (% weight)	77%	77%	79%	69%	Unable to report
Donated Food (lb)	4,592	4,027	-	1,998	1,527
Total Waste (lbs)	115,875	296,274	115,829	146,830	141,663
Total Waste Per Participant (lb)	4.91	16.9	6.1	8.12	5.7
Total Waste Diversion at Venues (%)	67%	72%	84%	90%	91%
Organic Food (% by weight)	17%	0.5%	0.5%	12.3%	2.7%

APPENDIX A – HISTORICAL PERFORMANCE DATA TRACKING (CONT.)

PERFORMANCE	2013	2014	2015	2016	2017
General Contractor Fuel Use (gal)		2,280	2,064	878	769
Shuttle Fuel Use (gal)	3,559	2,812	522	446	585
Signage Produced (sqft)	26,655	28,514	24,994	21,631	33,100
Signage Returned to Inventory (%)	14%	70%	0%	20%	16%
Sustainable Signage Sourced (%)	86%	77%	91%	88%	93%
Paper Used (sheets 8.5 x 11 Equivalent)	1,116,992			1,483,867	1,890,557
Exhibitors - GMEGG Participation (%)	88%	70%	79%	50%	55%
Exhibitors - GMEGG Compliance (%)	68%	55%	72%	67%	52%
Exhibitors - Green Award Participants (#)	26	37	17	238	149
AV - ENERGY STAR (Laptops, Projectors, Monitors)	60%	51%	59%	50%	22%
AV - Energy Efficient (All Equipment)	29%	18%	100%	100%	100%
LEED-Certified Venue Partners (#)	6	0	1	2	2
Hotels - Walking Distance (1 mi) (%)	80%	86%	96%	29%	39%
Hotels - Digital Thermostat (%)*	96%	86%	88%	57%	94%
Hotels - Amenity Donation (%)	72%	43%	68%	29%	83%
Hotels - In-Room Recycling Two-Streams (%)	48%	95%	84%	79%	72%
Hotels - Kitchen Composting (%)	0%	5%	32%	21%	61%
Hotels - No Auto Newspaper Delivery (%)	92%	95%	92%	64%	78%
Hotels - Green Cleaning Products (%)	40%	19%	88%	50%	94%
Hotels - Trip Advisor Green Leaders (%)		19%	68%	36%	50%
Hotels - Housekeeping Incentive Program (%)			12%	0%	39%
Hotel - Survey Response Rate		76%	92%	64%	100%
Hotels - Audit Rate		95%	92%	100%	100%
Donated Materials (lb)	13,630	9,487	7,330	14,515	26,265
WATER FOOTPRINT	**2013**	**2014**	**2015**	**2016**	**2017**
Food-Total water use (gal)				5,620,944	1,792,481
Paper- Total water use (gal)				3,426,444	3,840,148
Fuel - Total water use (GS freight and shuttle fuel) (gal)				17,073	17,467
Hotels- Total water use from occupied hotel room night (gal)				2,024,826	1,278,089
Venue-Total water use from venue (gal)				858,561	343,974
Total Water Footprint (gal)				11,947,848	7,272,158

APPENDIX B – GREENBUILD MANDATORY EXHIBITION GREENING GUIDELINES (GMEGG)

Greenbuild's Mandatory Exhibition Greening Guidelines (GMEGG) is a **mandatory sustainability initiative** that exhibitors must comply with for the construction and operation of a Greenbuild exhibit. All exhibitors are required to sign this agreement with their exhibitor application, design their booth(s) to the requirements outlined in GMEGG, and document their compliance.

ABX exhibitors were provided the same agreement along with their booth contract. While GMEGG was not a mandatory initiative for ABX 2017 exhibitors, it was strongly recommended and will be mandatory moving forward.

ENERGY CONSERVATION

Booth Lighting

The exhibitor will meet the following mandatory requirement:

- Incandescent bulbs are prohibited for use in any medium screw-based lighting applications. LEDs or compact fluorescent light bulbs (CFLs) must be used instead.

Booth lighting will meet one or more of the following additional requirements:

- Exhibitor will not purchase new bulbs; bulbs will be reused from prior exhibitions. The organization will create a policy that would only replace bulbs upon burnout.
- LED, CFL, T-5 or T-8 tubular fluorescent lighting will be used exclusively in at least one of the following:
  - Accent lighting
  - Backlighting
  - Overhead signage
  - General lighting
  - Booth Lighting is not used.

Electronic Display

The exhibitor will meet the following mandatory requirement:

- All displays, monitors and booth lighting must be completely powered down each night after show/set-up hours. Any equipment that cannot be shut down must be put into sleep mode during non-expo hours.

Electronic display equipment (i.e. flat screen displays) will meet one of the following requirements:

- Display is reused from previous shows.
- Display meets criteria for ENERGY STAR qualification or equivalent energy efficiency program.

SHIPPING PRACTICES

Energy Conservation Shipping Methods

Exhibitor will meet one or more of the following requirements:

- No exhibit materials will be shipped
- If the exhibitor ships booth materials using a third-party logistics partner, the exhibitor will choose a logistics partner that participates in the U.S. EPA's SmartWay Partnership Program or an equivalent program.
- Shipments will be consolidated into only one shipment
- The exhibitor will purchase carbon offsets to cover all emissions resulting from shipping booth materials to and from Greenbuild.

Shipping Materials

Exhibitor will meet one or more of the following requirements:

- All padding materials and exhibit crate(s) will be reused for all exhibition shipping.
- Exhibit crate(s) will meet one of the following options:
  - Made from rapidly renewable materials (defined above)
  - 50% recycled content
  - Be comprised of FSC-certified wood
- Polystyrene (i.e. packing peanuts, #6 or foam plastic) will be eliminated from booth shipping and operations.

WATER RECLAMATION

If using water for display purposes, the exhibitor must use water reclamation/recycling (i.e. holding tanks).

APPENDIX B – GREENBUILD MANDATORY EXHIBITION GREENING GUIDELINES (GMEGG) (CONT.)

BOOTH MATERIALS

Flooring

Flooring will meet one or more of the following requirements. Flooring that is utilized to demonstrate products that the booth is marketing are exempt from these requirements.

- Flooring will not be used.
- All flooring is reused and has been in use for at least one year.
- New flooring must be comprised of one or more of the following:
  - Carpet and Rug Institute (CRI) Green Label Plus Certified Carpet
  - 25% post-consumer recycled material
  - 100% recyclable material
  - 100% rapidly renewable material(s). Rapidly renewable building materials and products are made from agricultural products that are typically harvested within a 10-year or shorter cycle.
  - Forest Stewardship Council certified wood flooring.
  - Reclaimed or repurposed from a source other than trade show use.
  - Sustainable flooring option provided by the Greenbuild general service contractor will be used. (GSC-provided carpet marked with a "green footprint" icon contains a minimum of 25% post-consumer recycled material.)

Booth Graphics and Signage

Graphics and signage will meet one or more of the following requirements:

- No graphics or signage will be used within the booth.
- Exhibitor will reuse graphics and signage that have been in use for at least one year.
- New graphics and signage will be 100% recyclable and will not be foam core.
- New graphics and signage will contain a minimum of 25% recycled material

Booth Structure

Pop-up displays and booth structural support materials will meet one or more of the following requirements.

- Display elements are reused from past exhibitions or the company has created a plan for reuse through future exhibitions for at least one year.
- New display elements will be 100% recyclable.
- New display elements will contain a minimum 25% recycled content.
- Booth structure is rented from the Greenbuild general service contractor, using standard inventory materials used throughout the year.

Communications & Collateral

Prerequisite: All printed collateral, if used, will be on 100% recyclable paper. Paper must be recyclable in a standard municipal recycling stream. Many laminated and coated papers are not recyclable and are prohibited.

In addition, exhibitor will meet one of the following requirements:

- Exhibitor will eliminate print and promotional giveaways used for attendee distribution.
- Exhibitor will limit the quantity to less than 1,000 handouts and giveaways combined.
- Exhibitor will distribute handouts and giveaways that match the sustainability criteria below. Quantity is not limited if criteria for both handouts and giveaways are met.
  - Paper Handouts: all paper handouts will contain 100% post-consumer recycled content or FSC-Certified content.
  - Promotional giveaways must match one of the following options:
    - Giveaway material contains 30% post-consumer recycled content.
    - Giveaways are made from rapidly renewable materials (defined above).
    - Promotional giveaways are 100% compostable.

Indoor Air Quality

The booth construction and maintenance will meet one or more of the following requirements:

- No paints, sealants, coatings or adhesives will be used to maintain the booth.
- Only low- or zero VOC paints, sealants, coatings or adhesives will be used within the show.
- Any new flooring, counters and paneling will be certified low- or zero VOC by their manufacturer.
- All booth flooring, counters, and paneling will be reused from previous shows
- All signage will be printed using non-toxic vegetable- or water-based inks.

APPENDIX B – GREENBUILD MANDATORY EXHIBITION GREENING GUIDELINES (GMEGG) (CONT.)

ON-SITE OPERATIONS

Exhibitor Responsibility

Each booth is responsible for all materials brought into their booth at Greenbuild. It is the responsibility of the exhibitor to convey all GMEGG requirements and the exhibitor's sustainable practices to all third-party vendors hired by the exhibitor for show set-up, tear-down and staffing. Greenbuild staff will randomly select 10% of exhibitors for an on-site booth sustainability audit. Those selected will be notified in advance and must participate in the audit.

Staff Training

The exhibitor will discuss and make all on-site booth staff aware of the following, prior to the show opening:

- How the booth complied with each GMEGG category (including a printed or electronic copy of the booth's unique responses).
- Baseline knowledge of any other sustainable practices to be conducted within the exhibit booth, including plans for responsible waste management, food & beverage service, nightly shutdown and transportation.

On-Site Transportation

The exhibitor will ask booth staff to do at least one of the following:

- Take the provided conference shuttles or public transit to/from the convention center
- Walk or bicycle to/from the convention center
- If cabs are absolutely necessary, use of shared cabs: no individual cab trips should be taken
- If public transit and/or walking are not an option, the exhibitor should offset travel to and from the convention center by purchasing carbon offsets.

Waste Management

The Exhibitor will participate in Greenbuild's Waste Management program, by properly disposing of all waste and utilizing all available recycling opportunities throughout the show, including set-up and move-out. Additional waste streams will be provided for special exhibition-related materials.

The exhibitor will not use individual waste containers in exhibit booths. The venue and show management will provide recycling stations throughout the exhibit area for attendee and exhibitor use during show hours. Each exhibitor is responsible for disposing of waste and recyclables at these stations.

Waste Management, cont.

The exhibitor will meet one of the following requirements:

- If the exhibitor plans on leaving any items after the show, the exhibitor will donate material through the Exhibitor Donation Program using the appropriate forms and labels.
- The exhibitor will have in place a "pack in/pack out" policy to minimize any waste left behind at the end of the show. All materials brought to Greenbuild, including booth components, giveaways and reusable packing materials will be shipped back to the exhibiting company after the event.
- The exhibitor will return materials back to local offices or partners after the show.

Food and Beverage Service

Any food and beverage service conducted within the booth will be ordered to minimize disposable material use and properly handle waste in accordance of the requirements of the Greenbuild Waste Management Program.

The exhibitor will meet the following mandatory requirement:

- The only food service ware used in the booth will be China service, compostable service ware, or recyclable service ware. The exhibitor will inform attendees of the compostability/recyclability of the products (if applicable), directing them to the proper disposal stream onsite.

APPENDIX C – DATA BOUNDARY AND QUANTIFICATION METHODS

This section provides additional details pertaining to boundaries and calculation methods used to arrive at our reported performance results.

ENERGY USE

- The energy boundary consists of energy consumed during Greenbuild/ABX events and corresponding move-in/move-out periods from main venues (Boston Convention and Exhibition Center and the Boston Museum of Science) and contracted transportation only.
- For the convention center, total energy consumption (purchased electricity, fuel burning for heating and cooling) during Greenbuild/ABX move in, event and move-in/out days was reported through manual meter readings.
- For the celebration venue, energy usage was reported through manual meter readings at the start of the event and the end of the event.
- Fuel data from the contracted shuttles were provided by TMS.
- The total energy consumption for the entire period was assumed to be all attributed to the Greenbuild/ABX event.
- Energy use from hotel accommodations, fuel burning from participant travel to/from the destination, and mobile fuels from other vehicles operated by the venues or third parties were not included in the energy footprint (but were included in the GHG emissions calculations).

WATER USE

The water boundary consists of water consumed at the main venues (convention center and celebration venue) during the event and corresponding move-in/move-out periods.

- For the convention center, total water consumption during Greenbuild/ABX move in, event and move-in/out days was reported through manual meter readings.
- For the celebration venue, water consumption was reported by manual meter readings at the start of the event and the end of the event.

Boundary Considerations

- Water data include district potable water consumption only.
- Water data only includes the operational water footprint and does not include virtual water content of processes involved in the materials and supplies used or consumed during the event.

Water Footprint Considerations

The water footprint boundary consists of water consumed, both direct and indirect from the following source and/or products: Boston Convention and Exhibition Center water consumption for the duration of Greenbuild/ABX 2017, Boston Museum of Science Celebration Event Venue water consumption for duration of Celebration Event 2017, LEVY food and beverage procured for Greenbuild/ABX 2017, Wolfgang Puck Celebration Event food and beverage procured for Celebration Event 2017, Freeman Freight Fuel and TMS shuttle fuel, Paper procured for Greenbuild/ABX 2017, and average water consumption for occupied hotel room nights. All figures are reported in gallons.

- Direct water consumption is defined by the actual water consumed by individuals through various avenues including water infrastructure systems. Indirect water consumption is defined as the summation of all water footprints consumed to produce a final product.

Water Footprint Calculations

The following details the measurements in the water footprint.

1. Boston Convention and Exhibition Center– total water consumption during Greenbuild/ABX move in, event and move-in/out days was reported through manual meter readings.
2. Boston Museum of Science – water consumption was reported by manual meter readings at the start of the event and the end of the event.
3. LEVY / Wolfgang Puck Food and Beverage – based on the global average water footprint liter/kg for provided whole food items (Water Footprint Network). If water footprint of item was not provided, an item in the same plant family.
4. Freeman Freight and TMS Shuttle Fuel – based on total gallons of water consumed to produce total gallons of gasoline consumed (Water Intensity of Transportation).

APPENDIX C –
DATA BOUNDARY AND QUANTIFICATION METHODS (CONT.)

5. Paper – based on total gallons of water used to produce total pounds of coated groundwood paper consumed for Greenbuild/ABX 2017 (Environmental Paper Network).
6. Hotels – based on average hotel water usage per occupied room (L) in Boston, Massachusetts (Cornell Hotel Sustainability Benchmarking Index 2016: Energy, Water, Carbon).

WASTE CALCULATIONS

The waste boundary consists of waste generated at the main venues (convention center and celebration venue) during the event and corresponding move-in/move-out periods.

Convention center back-of-house waste streams measured and tracked included:

1. Composted material – scale weight of compactor as reported by hauler
2. Comingle Recycling (Plastic/Aluminum/Glass) – scale weight of compactor as reported by hauler
3. Cardboard – scale weight of compactor as reported by hauler
4. Visqueen/Plastic Film – scale weight of trailer as reported by hauler
5. Large Debris (C&D) – scale weight of recyclable items from trailer as reported by hauler. Items that could not be recovered or recycled were weighed separately and attributed to waste to energy total
6. Wood – Weight estimated based on # of pallets donated
7. Carpet/Padding – scale weight of compactor as reported by hauler
8. Donated Food – individual food items were weighed, then multiplied by the amount of that item left over to determine total weight
9. Donated Items – weight captured on forklift during loading process for individual donation recipient groups
10. Waste-to-Energy – items that are typically landfilled went to a waste-to-energy facility. Scale weight of compactor as reported by hauler

Celebration back-of-house waste streams measured and tracked included:

1. Composted material – data provided by BootStrap Composting (hauler)
2. Comingle Recycling – scale weight of collection containers as reported by hauler
3. Landfilled materials – data provided by manual weights of containers as reported by the venue, Boston Museum of Science.

Boundary Considerations

- Upstream waste not disposed of onsite is not included.
- Waste generated from hotels, or other vendors offsite, is not included.

GHG EMISSIONS

Included in the total GHG emissions value:

- Electricity use at the venues
- Stationary combustion of fuels at venues
- Mobile fuel combustion of fuels at venues
- Estimated mobile fuel combustion of freight:
    - o General contractor/show management deliveries
    - o Exhibitor freight sent from advanced warehouse to the center
    - o Marshaling yard trailers used to support this show
- Air travel to the destination by participants (attendees, staff, vendors, exhibitors)
- Local and regional travel to the destination by participants. Participants were assigned a round trip distance based on the characteristics and layout of departure city. Mode of travel includes car, regional train and local bus/metro.

APPENDIX C –
DATA BOUNDARY AND QUANTIFICATION METHODS (CONT.)

- Ground transportation by participants from airport to convention center
- Ground shuttle use for offsite events and event staff
- GHG emissions per occupied room for hotels within the contracted room block (per the Hotel Carbon Measurement Initiative), using either data provided by the hotels directly, or default metrics per the Cornell Hotel Sustainability Benchmarking research report published May 2015.

Not included in the value:

- Emissions from waste disposal and wastewater treatment
- Fugitive emissions from refrigerant leakages
- Emissions from ground transportation other than Informa-contracted shuttles
- Emissions from hotel accommodation used outside the contracted room block

Quantification

- Emission factors for mobile fuel burning obtained from the US EPA Climate Leaders Program
- Emission factors for electricity consumption at venues were obtained from EPA eGRID V1.0 (2010 Data)
- Carbon dioxide emission factors for air travel obtained from the International Civil Aviation Organization (ICAO), assuming a direct flight from major US hubs, with 1 connection for other cities, and a connection through 1-2 major hubs internationally.
- Emission factors for stationary fuel burning obtained from the World Resources Institute stationary combustion tool 4.0
- Other attendee carbon offsets were calculated separately from the total GHG emissions value
- Actual count of air travel offsets used to figure out total MTCO2e of attendee offsets
- Actual count of attendee offsets for hotel accommodations, with an assumption of 3-day length of stay to calculate total room nights

APPENDIX D –
2017 GOALS & BEST PRACTICES

AUDIO VISUAL - BEST PRACTICES

✓ Eliminate vinyl in scenic design elements.

✓ Incorporate biophilia (natural elements) into all stage set design whenever possible.

✓ Minimize electricity consumption through the use of LED lighting fixtures and other energy efficient technologies.

✓ Properly dispose on-site electronic waste (e.g., bulbs and batteries).

✓ Select energy-efficient AV equipment when ENERGY STAR rated equipment is not available. (Computers, some projectors, flat screens).

✓ Track energy usage of LED screens and other special AV equipment.

✓ Use 100% ENERGY STAR computers, monitors, printers, laptops.

✓ Utilize 90% local AV equipment from local/regional (100/500 miles) facilities and vendors.

✓ Collect and dispose 99% of gaffing tape to avoid recycling stream contamination.

AUDIO VISUAL - GOALS

✓ **Seek to have 75% of materials and decorative elements in special set rooms that are sourced locally (within 500 miles) and made of sustainable materials.**
100% of materials and decorative elements in special set rooms were sourced regionally (within 500 miles) and made of sustainable materials.

✓ **Source sub-rental items 95% locally (100 miles).**
100% of sub-rental items were sourced locally (100 miles).

✓ **Utilize 25% USBs or other low consumption devices rather than laptops for public spaces and booths (as source data for LCD screens).**
PRG was able to eliminate laptops for all content related applications. We only used laptops in scenarios that required interaction from a user.

Develop a time line to ensure that PRG can work utilize the most environmentally friendly shipping methods and to ensure we minimize resources wasted due to shipping items that are not required for the event.
As the show approached we fell behind on some portions of the time line, however we were able to overcome most of these obstacles through our previous knowledge of the show.

Legend: ✓ Achieved Progress Improvement Needed X Not Achieved

Learn best practices from the local community.
Pursued a number of leads in the Boston area including some new sustainable partners. However, we were not successful in adding these to the 2017 show.

Utilize 100% eco-friendly projectors (have energy-saving mode).
We utilized 90% eco-friendly projectors. All of the projectors we utilized eco-mode control of lamps, however in some instances the eco-mode was not enabled due to the ambient lighting in the room.

X **Track usage of cyber café computers to determine baseline in which to create future orders.**
Unable to track energy usage in cyber cafés.

✓ **Use décor that is biodegradable, reusable or recyclable.**

CONFERENCE PROCEEDINGS: BEST PRACTICES

✓ **Use 100% recycled paper and vegetable-based inks for all printed material.**

✓ **Choose most sustainable materials where appropriate.**

✓ **Eliminate paper receipts; only distribute digital receipts on-site.**

✓ **Cadmium to choose sustainable options when traveling and planning for on-site staff.**

✓ **Cadmium to choose energy efficient options for all equipment.**

CONFERENCE PROCEEDINGS: GOALS

✓ **Use ONLY Energy Star rated computers for all Cadmium on-site transactions.**
100% of computers used on-site were ENERGY STAR rated.

EVENT DÉCOR AND MATERIALS: BEST PRACTICES

✓ **Catalog all signs and build-outs used at Greenbuild to create a Materials Summary.**

✓ **Collect sustainability and sourcing information for all show materials.**

✓ **Highlight material and disposal considerations during design phase of show décor.**

✓ **Track disposal/reuse plan and quantities for all small signage.**

✓ **Use vinyl-alternative tabletops.**

✓ **If any, use LED lighting at registration counters.**

✓ **No new PVC used for show management build-outs.**

Legend: ✓ Achieved Progress Improvement Needed X Not Achieved

- ✓ 99% of carpet scrap is recycled. Small scraps to be recycled by local vendors.
- ✓ Use standard products available at convention centers to decrease the carbon footprint of the Special Sets.
- ✓ Reuse four existing Special Set stages.
- ✓ Source furniture and stage rentals locally or reuse existing Freeman inventory.
- ✓ Utilize human directionals in lieu of directional signage when possible.

EVENT DÉCOR AND MATERIALS: GOALS

- ✓ **Keep the carpet loss to under 20% of total use.**
- ✓ **Eliminate new vinyl from being created for 2017 show. Existing vinyl used in Education Labs, Sales Office, and Net Zero storage.**
  Only existing vinyl banners were used for the 2017 show.
- ✓ **Use material for 7” x 44” booth ID signs - that include recycled/recyclable content.**
- ✓ **Keep a 3-year consistent look for Registration, from 2017-2019.**
  Kept 95% of registration signs for reuse over next two years.
- ✓ **Complete signage evaluation walk-through during 2017 show to make recommendations for reuse in 2018.**

EXHIBITOR ENGAGEMENT: BEST PRACTICES

- ✓ Communicate sustainability goals to exhibitors prior to arriving on-site.
- ✓ Provide simple GMEGG Forms - year two of two for current GMEGG language and completing the survey in registration.
- ✓ Implement exhibitor sustainability requirements.
- ✓ Provide a marketing-based incentive program for exhibitor sustainability practices to include blog posts, signage,
  and social media. Best in Show receives 10x10 next year.
- ✓ Removing individual trash cans from booths.
- ✓ Educate local Freeman staff on show sustainability goals, to in turn, educate labor.

Legend: ✓ Achieved Progress Improvement Needed X Not Achieved

EXHIBITOR ENGAGEMENT: GOALS

✓ **Increase awareness of Exhibitor Donation program pre-show via exhibitor newsletters and through on-site signage.**
Pre-show newsletters to exhibitors and emails to EACs mentioned the donation program.

✓ **Communicate GMEGG program and details to exhibitors through at least five mechanisms and directly to exhibitors through sales calls.**
All details were communicated with the exception of the PA announcements for audit reminders.

✓ **Provide quality on-site GMEGG auditor training, including Sales Team. This to be accomplished 100% by Informa staff.**

 **70% audit participation for Informa year one. Informa staff to confirm on-site plans, and add calendar invites to booth staff to participate.**
45% participated in the audit. Sales team emailed participants directly, however calendar invites were
not sent as planned.

 **85% GMEGG participation.**
54.9% initiated the survey, and only 52.2% completed it.

 **Achieve 95% GEA completion out of those who complete GMEGG (88% in 2016).**
GEA participation dropped to only 31.1 %, our goal was to reach 95% GEA completion out of those who completed GMEGG (88% in 2016).

X **Improve exhibitor on-site communication relating to sustainability through on-site signage and PA announcements.**
Missed making PA announcements this year.

✓ **Do not serve individually wrapped food items at catered special events. All convention center food events need to be in bulk. (This does not include concessions which can be individually wrapped).**

X **Track food miles and organic status for 100% of convention center food and beverage.**

HOTEL: BEST PRACTICES

X Incorporate LEED Certified hotels into official Greenbuild 2017 housing block.

✓ Ensure as many official Greenbuild 2017 hotels as possible are within walking distance of the convention center.

✓ Use sustainability clauses in all hotel contracts.

✓ Execute on-site audits for all hotels to confirm that sustainability practices are in place.

Legend: ✓ Achieved  Progress  Improvement Needed X Not Achieved

HOTEL: GOALS

✓ **Work with local contacts to provide information about a donation program and connect hotels to shelters.**
We included a local shelter/donation program at the initial housing meeting to provide information to all hotels on how and where to start donating.

✓ **Capture data digitally during June site visits and pass along for follow up.**

✓ **Have 50% of hotels implement amenity donation programs.**
66% of hotels in room block had an amenity donation program in place.

✓ **Increase attendee communication on hotel greening through TripAdvisor ratings and feedback mechanisms, signage, social media, eblasts, and articles.**
Continued walking direction and TripAdvisor GreenLeaders email. Completed a hotel sustainability spotlight article.

✓ **Provide sustainable hospitality resources to hotel properties.**
In on-site meeting months prior to the show we provided resources to hotels and followed up with information via email.

✓ **Make phone calls to ensure that the right people are attending the pre-con meeting and audits (engineers, facilities managers).**
Informa staff called each hotel to confirm attendance by the right people for each meeting. We had much more success this year than prior years.

Have 100% of hotels implement recycling programs.
89% of hotels had a recycling program in place.

Have 100% of hotels compliant with contracted sustainability practices.
Only a handful of hotel achieved every sustainability practice outlined in the hotel contract language. A majority missed 1-3 items.

Establish a baseline percentage of 50% GreenLeader certified hotels in the Greenbuild block.
28% of hotels in the room block carried the Trip Advisor GreenLeader certification status.

LEGACY PROJECT: BEST PRACTICE

✓ **Conference to sponsor one or more legacy projects to leave a social and environmental impact in the local community.**

LEGACY PROJECT: GOALS

✓ **We featured a video from the Legacy Project on-site in the screens that ran inside the convention center throughout the week. It was produced by the school connected to the Legacy Project.**

X **Where are they now - past projects. Write one Greenbuild blog post before Greenbuild 2017 with updates on as many past projects as possible.**

Legend: ✓ Achieved Progress Improvement Needed X Not Achieved

MARKETING: BEST PRACTICES

✓ **Print all marketing materials on 100% post-consumer recycled content.**

✓ **Print using vegetable-based inks.**

✓ **Expo guide printed in Dallas.**
Printer used 100% PCW recycled paper and soy based inks. Printing the expo guide in Dallas allows us to combine with our show shipment and helps to minimize the carbon footprint.

✓ **Ensure that over-mailing doesn't take place to potential attendees.**

MARKETING: GOALS

✓ **Maintain same size for registration mailer as 2016.**
The 2017 registration brochure format was consistent with 2016 and uses less paper than the brochure
format for 2013-2015.

✓ **Maintain quantities distributed of registration mailer.**
We printed 60,000 of the brochure and mailed to two per address, consistent with 2015.

✓ **Maintain same post card distribution as 2016.**
We printed 80,000 postcards, consistent with 2016.

✓ **Source local sustainable printer in Q2 of 2017. Print last-minute show materials in show local area. Ensure workbooks are printed using sustainable printing practices.**

✓ **Maintain or reduce paper content for Passport to Prizes piece this year.**
100% PCW Paper was used for the Passport to Prizes. This year, attendees had the option to participate through event's mobile app. Next year's printing of the Passport to Prizes may be able to be reduced by encouraging more participation through the app.

✓ **Incorporate product opt-out back into registration. Strive for 15% of opt out option from conference materials/conference guide.**
We had 33% of attendees PLEDGE to utilize the mobile app over the printed show guide when they registered for the show.

Explore ways to decrease the size of the show program and drive attendees to use the event mobile app.

X **Reduce amount of leftover show programs post-show by 20%.**
Will review ways to improve this for 2018.

MERCHANDISE: BEST PRACTICES

✓ **No products shall be packed in Styrofoam/polystyrene**

✓ **Document Sustainability criteria (domestic, organic, fair-trade, water or soy-based ink, biodegradable, compostable, or recyclable).**

Legend: ✓ Achieved Progress Improvement Needed X Not Achieved

MERCHANDISE: GOAL

✓ **Source 100% of T-shirts sold in Greenbuild merchandise store (as well as volunteer t-shirts) will be made from 100% recycled material, sourced domestically OR 100% organic cotton, grown domestically.**
Shirts were made from a combination of third party certified, 100% recycled post-industrial cotton and post consumer plastic bottles. These were knit, sewn, and printed in the USA with Eco-Friendly Ink.

REGISTRATION: BEST PRACTICES

✓ **Eliminate use of plastic name badge holders.**

✓ **Source recyclable, non-vinyl badge stock material.**

✓ **Minimize amount of ink waste.**

✓ **Paperless pre-show registration process, and no on-site paper registration forms.**

✓ **Source ink made out of bio-renewable materials in smaller packaging. Provides for more proficient use on-site - re: energy use of printers.**

✓ **Use 100% ENERGY STAR rated (or equivalent) for all computers at registration.**

REGISTRATION: GOALS

X **Eliminate Happy Hour drink tickets (approximately 10,000 pieces of badge stock).**
Unable to eliminate Happy Hour drink tickets.

Use 100% ENERGY STAR rated (or equivalent) for all printers at registration.
Color printers used require less energy than the previous color printers.

SPONSORSHIP: BEST PRACTICES

✓ **Include greening requirements in the sponsorship contract.**

✓ **Do not create signage for the sake of a logo.**

SPONSORSHIP: GOAL

✓ **If a tote bag is to be commissioned for the show, it will made from 100% Recycled content + made and sourced in US.**
No bag was used in 2017.

✓ **Lanyards made from 100% Recycled content, made and sourced in US and packaged in bulk.**

Legend: ✓ Achieved Progress Improvement Needed X Not Achieved

TEMP STAFFING: BEST PRACTICES

✓ **All temporary staff are trained on-site about basic sustainability practices.**

✓ **Motivate temps to go above and beyond with sustainability in an effort to increase participation and engagement in the program through a contest on-site.**

✓ **Recycle all training materials pre-show.**

TEMP STAFFING: GOALS

✓ **Launch a Sustainability contest during training in which at least 75% of temp staff participate.**
Achieved 80% participation.

✓ **Reduce printing 50% on-site by approving reports online.**
Reduced printing on-site by 50%.

✓ **Reduce printing 60% pre-show emailing documents instead of printing.**
Reduced printing by 60%.

✓ **Set a daily sustainable goal on-site for all staff.**
Goals were set in daily meetings with staff.

✓ **Have staffing partner include sustainability initiative on project confirmation, with links to contest and ideas. Confirm with staffing partner that this is done in advance of the show.**
80% was done in advance of the show.

VOLUNTEER: BEST PRACTICES

✓ **Provide incentives and reminders to volunteers to take sustainable transportation, etc. Provide this information in orientation packet.**
An incentive was not provided but information was made available in volunteer materials.

✓ **Reducing amount of paper for volunteer check-in registration.**

VOLUNTEER: GOALS

✓ **Ensure cheat sheet is clear and accurate and also highlights USGBC's mission.**
Cheat sheet updated with additional information about end of life waste processing.

✓ **Increase volunteer knowledge on mission and Greenbuild sustainability and its importance.**
Host committee focused on education around waste management for the show and the city of Boston.

Legend: ✓ Achieved  Progress  Improvement Needed X Not Achieved