SUSTAINABLE
SPORT INDEX



BENCHMARKING REPORT 2023



A LETTER FROM OUR CEO

At APTIM, our culture is based on fundamental tenants, two of which are collaboration and "being for each other." Sports are a perfect embodiment of these tenants: every successful team requires its members to work together effectively and support each other unconditionally.

For the third year running, we are proud to share our annual Sustainable Sport Index (SSI) Benchmarking Report. Our goal is to advance environmental and social sustainability practices in the sports industry by establishing benchmarks, sharing best practices, and fostering peer collaboration. The report is an essential part of APTIM's purpose to enhance environmental quality and sustainability, as we put our environmental, social, and governance (ESG) commitments into play by sharing our research, thought leadership, and subject matter expertise.

Each year, the SSI survey attracts additional participants and provides greater value to the facilities, clubs, franchises, and leagues that have come to depend on it. This year's report includes data from 41 professional and collegiate sports venues, 35 of our responding venues are home to professional sports in the seven major U.S.-based leagues, which is 24% of these venues.* Additionally, 14 of our 2023 participants have participated for three consecutive years to continually assess their improvement and compare themselves to the state of the industry year over year.

The survey's depth of data and insight is growing, too. In 2023, we included a section dedicated to environmental resilience. According to the National Oceanic and Atmospheric Administration's (NOAA) U.S. Billion-Dollar Weather and Climate Disasters report, damages from natural disasters totaled $177.6 billion in 2022. With that information, we decided to assess the current state of resilience in sports venues and their surrounding communities.

This past year, we also expanded our industry collaboration by becoming a Play to Zero partner of the Green Sports Alliance, an organization dedicated to promoting healthy, sustainable communities where we live and play. Teamwork fuels SSI, so we are fortunate to be a part of this network and learn from and work with other members.

We also want to thank our APTIM SSI team, sports venues, and partners who contributed to the development of this report. Your insights and leadership are critically important to our mission. Together, we will continue moving toward a more sustainable future for the sports industry.

Be for each other,



Mark Fallon
He/Him/His
Chairman and Chief Executive Officer

*Professional sports venues are defined as MLB, NFL, NBA, WNBA, NHL, MLS, NWSL.

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INTRODUCTION

Now in our third year, the SSI is growing as an established resource for environmental and social responsibility practices in sports venues. Rather than a certification, ranking, or award, SSI gathers data from sports venues to aggregate and analyze data for trends, best practices, and common challenges. Our benchmarking report is downloaded by representatives from a variety of industries, including sports, sustainability, academia, media, and more.

In addition to the SSI Benchmarking Report, each survey respondent receives a confidential report that compares their responses to the anonymized, aggregated data of similar venues and all participants. This custom report is intended to be a basic gap analysis to provide venues and teams with the information they need to prioritize projects and build the business case for improvements. Based on feedback from previous years' participants, we know that several made sustainability improvements based on their individual report.

In 2023, participation increased by 64%, and we retained 96% of 2022 participants. By increasing participation, our reports will become a better representation of the state of the industry and continue to foster collaboration among our responding venues.

Our Approach and Methodology

Data is based on the 2022 calendar year and was collected during the survey response period, June–August 2023. Most survey questions are optional; therefore, the number of responses varied by question and category depending on applicability and completion by the respondent. The data and information in the report were supplied by participants and are assumed to be accurate and complete. Information was not independently verified.

To provide an accurate and beneficial analysis, instances of specific data inconsistencies or weaknesses are addressed in the report, and extreme outlying data was omitted from analysis. The names of participating venues and teams are shared in the report, but the data set remains confidential.

What Has Changed

To maximize our ability to analyze trends year over year and provide more insights, most of the themes and questions are the same as last year. We made a few adjustments based on feedback from participants and subject matter experts. The most notable changes include a new section about a venue's environmental resilience, additional questions addressing accessibility and social sustainability, as well as an enhanced section to help make the business case for sustainability projects.

Acknowledgments

This effort is only made possible by the participating venues and teams, and we thank them for their time and dedication to improving sustainability in the sports industry. For the first time, we also sought expertise from colleagues beyond APTIM. We thank them for their time in reviewing and improving survey questions.

About APTIM

APTIM is a leading professional solutions firm offering integrated environmental, sustainability, resilience, and critical infrastructure solutions for government agencies, commercial and industrial clients, and energy customers. APTIM commits to accelerating the transition toward a clean and efficient energy economy, building a sustainable future for our communities and natural world, and creating a more inclusive and equitable environment that celebrates the diversity of our people. Learn more at APTIM.com, and connect with us on Facebook, Instagram, LinkedIn, and Twitter.

PARTICIPANTS



Forty-one total venues completed the SSI survey this year, marking a 64% increase from 2022 and a participant retention rate of 96%. Thirty-five of our responding venues are home to professional sports in the seven major U.S.-based leagues, which is 24% of these venues.*

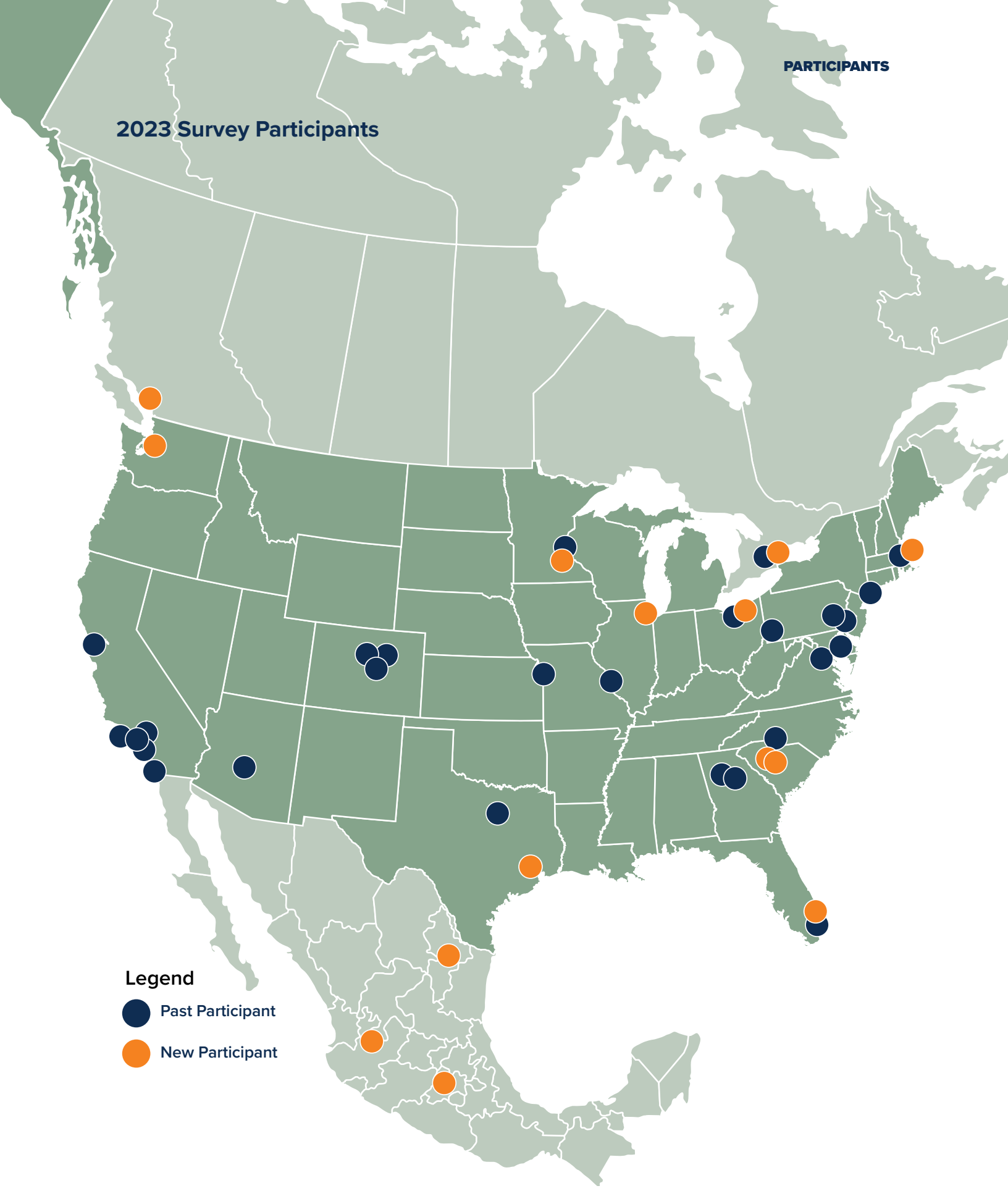
Participating venues are home to teams from 15 sports leagues, including:

◆ Major League Baseball (MLB) ◆ National Football League (NFL) ◆ National Basketball Association (NBA) ◆ Women's National Basketball Association (WNBA) ◆ National Hockey League (NHL) ◆ Major League Soccer (MLS) ◆ National Women's Soccer League (NWSL) ◆ Canadian Football League (CFL) ◆ Liga MX ◆ Liga MX Femenil ◆ National Lacrosse League (NLL) ◆ National Collegiate Athletics Association (NCAA) ◆ Indoor Football League (IFL) ◆ Major League Rugby (MLR) ◆ American Hockey League (AHL).

While the survey is open to professional and collegiate stadiums, arenas, and ballparks, collegiate venues are less represented due to the complexity of facilities and operations management in the collegiate environment, which has hindered participant recruitment.

*This percentage is based on facilities for seven major U.S.-based leagues: MLB, NFL, NBA, WNBA, NHL, NWSL, and MLS.

2023 Survey Participants



2023 Survey Participants

- **BC Place Stadium** | Vancouver, BC, Canada | Vancouver Whitecaps FC (MLS) & BC Lions (CFL)
- **Lumen Field** | Seattle, WA | Seattle Seahawks (NFL), Seattle Sounders FC (MLS), OL Reign (NWSL) & Seattle Sea Dragons (XFL)
- **Chase Center** | San Francisco, CA | Golden State Warriors (NBA)
- **SoFi Stadium** | Inglewood, CA | Los Angeles Rams (NFL) & Los Angeles Chargers (NFL)
- **Dodger Stadium** | Los Angeles, CA | Los Angeles Dodgers (MLB)
- **Los Angeles Memorial Coliseum** | Los Angeles, CA | University of Southern California Trojans (NCAA) & Los Angeles Giltinis (MLR)
- **Angel Stadium** | Anaheim, CA | Los Angeles Angels (MLB)
- **Petco Park** | San Diego, CA | San Diego Padres (MLB)
- **Footprint Center** | Phoenix, AZ | Phoenix Suns (NBA), Phoenix Mercury (WNBA) & Arizona Rattlers (IFL)
- **Ball Arena** | Denver, CO | Colorado Avalanche (NHL), Denver Nuggets (NBA) & Colorado Mammoth (NLL)
- **Coors Field** | Denver, CO | Colorado Rockies (MLB)
- **Empower Field at Mile High** | Denver, CO | Denver Broncos (NFL)
- **Globe Life Field** | Arlington, TX | Texas Rangers (MLB)
- **NRG Stadium** | Houston, TX | Houston Texans (NFL) & University of Houston Cougars (NCAA)
- **Estadio BBVA** | Guadalupe, NL, Mexico | Club de Futbol Monterrey (Liga MX) & Club de Futbol Monterrey Femenil (Liga MX Femenil)
- **Estadio Akron** | Zapopan, JA, Mexico | Club Deportivo Guadalajara (Liga MX)
- **Estadio Azteca** | Tlalpan, CDMX, Mexico | Club America (Liga MX) & Cruz Azul (Liga MX)
- **Allianz Field** | St. Paul, MN | Minnesota United FC (MLS)
- **Target Field** | Minneapolis, MN | Minnesota Twins (MLB)
- **GEHA Field at Arrowhead Stadium** | Kansas City, MO | Kansas City Chiefs (NFL)
- **Busch Stadium** | St. Louis, MO | St. Louis Cardinals (MLB)
- **Wrigley Field** | Chicago, IL | Chicago Cubs (MLB)
- **BMO Field** | Toronto, ON, Canada | Toronto FC (MLS) & Toronto Argonauts (CFL)
- **Rogers Centre** | Toronto, ON, Canada | Toronto Blue Jays (MLB)
- **Progressive Field** | Cleveland, OH | Cleveland Guardians (MLB)
- **Rocket Mortgage FieldHouse** | Cleveland, OH | Cleveland Cavaliers (NBA) & Cleveland Monsters (AHL)
- **Fenway Park** | Boston, MA | Boston Red Sox (MLB)
- **Gillette Stadium** | Foxborough, MA | New England Patriots (NFL) & New England Revolution (MLS)
- **PNC Park** | Pittsburgh, PA | Pittsburgh Pirates (MLB)
- **Citizens Bank Park** | Philadelphia, PA | Philadelphia Phillies (MLB)
- **Lincoln Financial Field** | Philadelphia, PA | Philadelphia Eagles (NFL) & Temple Owls (NCAA)
- **Citi Field** | Queens, NY | New York Mets (MLB)
- **Oriole Park at Camden Yards** | Baltimore, MD | Baltimore Orioles (MLB)
- **Nationals Park** | Washington DC, | Washington Nationals (MLB)
- **Spectrum Center** | Charlotte, NC | Charlotte Hornets (NBA)
- **Winthrop Ballpark** | Rock Hill, SC | Winthrop University Eagles (NCAA)
- **Winthrop Coliseum** | Rock Hill, SC | Winthrop University Eagles (NCAA)
- **Mercedes-Benz Stadium** | Atlanta, GA | Atlanta Falcons (NFL) & Atlanta United (MLS)
- **Truist Park** | Atlanta, GA | Atlanta Braves (MLB)
- **Hard Rock Stadium** | Miami Gardens, FL | Miami Dolphins (NFL) & University of Miami Hurricanes (NCAA)
- **loanDepot park** | Miami, FL | Miami Marlins (MLB)

KEY FINDINGS



- **DEDICATED SUSTAINABILITY POSITIONS ARE ON THE RISE.** The number of venues with a dedicated environmental sustainability position on staff has increased to 56% from 24% last year. Among repeat participants from 2022, twice as many now have dedicated positions.

56%
OF VENUES HAVE A DEDICATED ENVIRONMENTAL SUSTAINABILITY POSITION ON STAFF

- **INCREASED SPONSORSHIP REVENUE IS A RECOGNIZED BENEFIT OF SUSTAINABILITY PRACTICES.** Sixty-four percent of venues reported that sponsorship revenue has increased 'somewhat' or 'a lot' because of sustainability programs, compared to 47% last year.

64%
OF VENUES REPORTED THAT SPONSORSHIP REVENUE HAS INCREASED BECAUSE OF SUSTAINABILITY PROGRAMS

- **VENUES ARE IMPLEMENTING SUPPLIER DIVERSITY INITIATIVES AS PART OF THEIR DIVERSITY, EQUITY, AND INCLUSION (DEI) EFFORTS.** Seventy-three percent of venues engage in vendor diversity initiatives, such as working with women- or minority-owned businesses.

73%
OF VENUES ENGAGE IN VENDOR DIVERSITY INITIATIVES

- **LED SPORT LIGHTING IS NOW COMMON PRACTICE.** Eighty percent of venues now have energy efficient LED sport lighting, demonstrating the market transformation that has occurred since the early 2010s.

80%
OF VENUES NOW HAVE ENERGY EFFICIENT LED SPORT LIGHTING

- **VENUES AND TEAMS ARE LAGGING IN PUBLIC ESG OR SUSTAINABILITY REPORTING.** Only 8% of venues produce a public report. By comparison, 96% of S&P 500 companies voluntarily publish ESG reports.

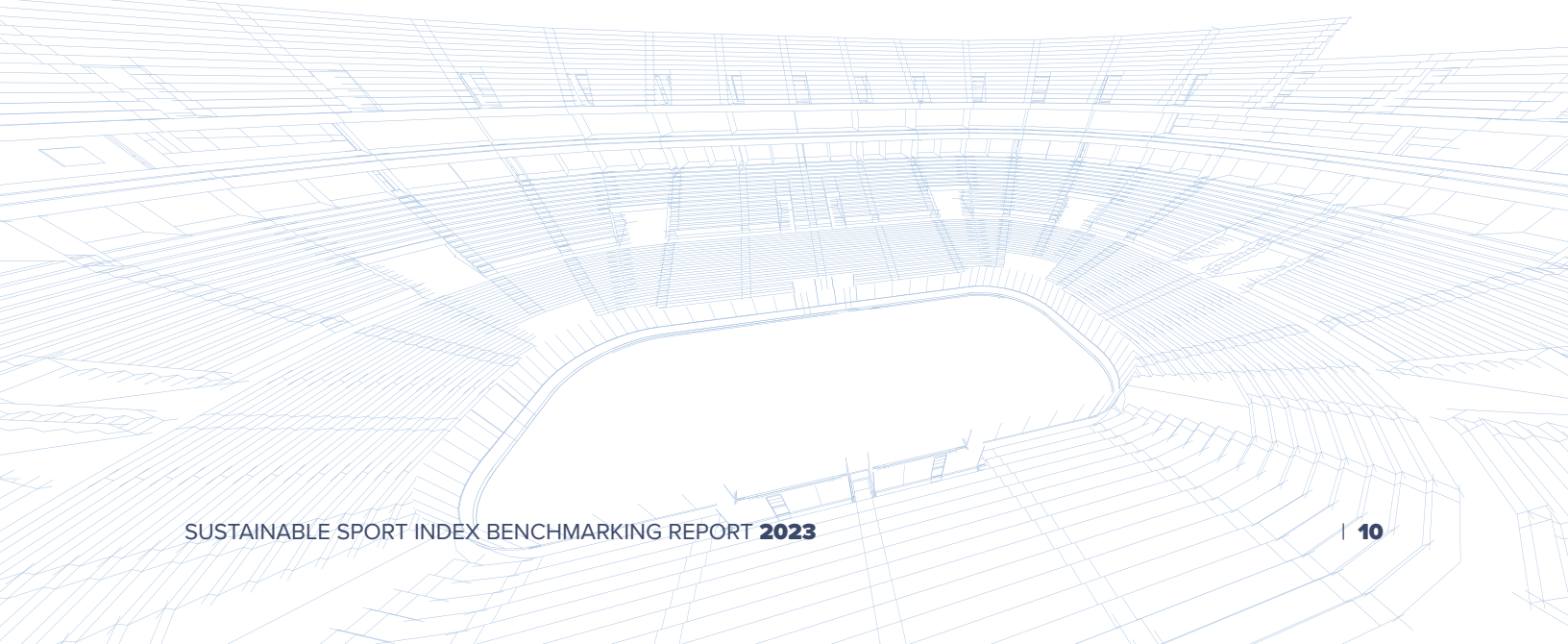
8%
OF VENUES PRODUCE A PUBLIC REPORT

- **VENUES ARE CONSIDERING CLIMATE-RELATED EXTREME WEATHER AND DISASTERS BUT ARE NOT YET PREPARING FOR THEM.** Only 7% of venues have developed climate adaption plans. Meanwhile, 98% note that at least one climate-related risk could affect their venue.

7%
OF VENUES HAVE DEVELOPED CLIMATE ADAPTION PLANS

- **WASTE MANAGEMENT AND DIVERSION REGULATIONS ARE GROWING.** Forty-four percent of facilities are required by law to recycle, while 24% are required to compost organic material.

44%
OF VENUES ARE REQUIRED BY LAW TO RECYCLE



FACILITIES OVERVIEW & CERTIFICATIONS



Sports venues are iconic landmarks, backdrops for childhood memories, and sources of pride for the cities and teams they represent. With cultural significance and high event attendance, upwards of 80,000 fans, the impact of sports facilities on the environment extends far beyond their walls. However, so can their positive influence on fans and the community by implementing and showcasing best practices in sustainability.

In our 2023 cohort, participating venues vary in age, region, and size. For instance, opening day for participating venues ranges between the years of 1912 and 2020, and venues are welcoming between 344,000 and 3.8 million fans annually.

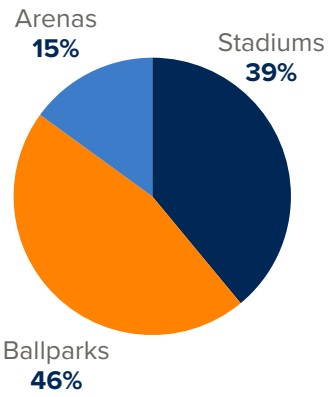
Venues are also at different stages of implementing sustainability practices. Certifications are among the tools used to evaluate and recognize a venue's impact from its built environment and operations. Certifications are often used as a common barometer for sustainable practices and may be used by sport- or event-governing bodies to standardize requirements. This section outlines common certifications and trends.

The diversity of venues can make it more challenging to analyze the data and make apples-to-apples comparisons. Characteristics such as age, size, attendance, event days, use, and region are all factors that contribute to a venue's energy, waste, and water use. However, the practices and approaches to improving environmental and social sustainability are typically similar.

Below is a snapshot of venues by type and region. This year, we are excited to have more overall participation, including an increase in NFL/American football stadiums, as well as our first participants from MLS and Liga MX soccer-specific stadiums.

Below is a snapshot of the venues by type and region.

Venue Type



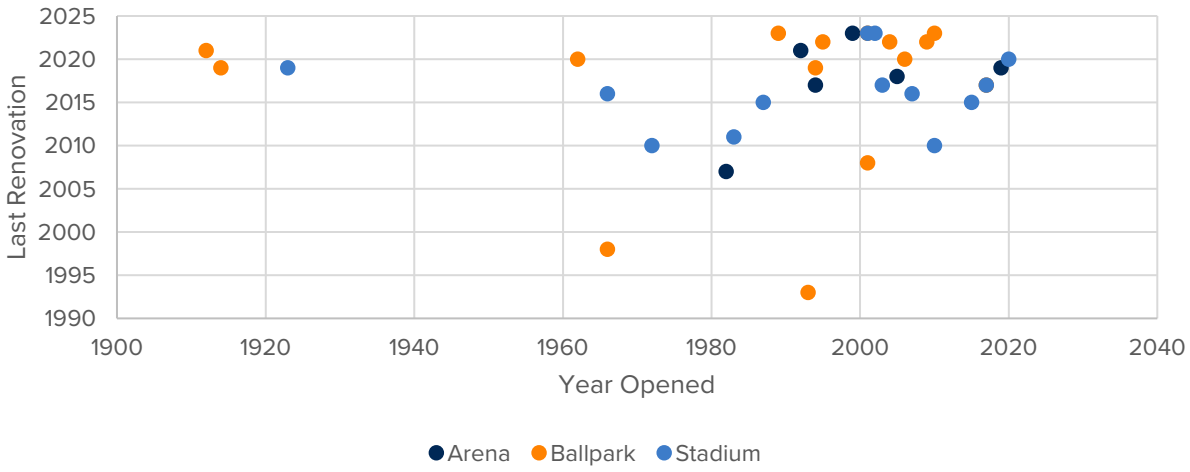
	AVG. SEATING CAPACITY	AVG. SQUARE FEET OF CONDITIONED SPACE	AVG. SQUARE METERS OF CONDITIONED SPACE	AVG. WASTE DIVERSION RATE	AVG. RENEWABLE ENERGY GENERATED ON SITE
BY VENUE TYPE:					
Arena (15% of participants)	16,011	612,037	56,860	36%	7%
Stadium (37% of participants)	62,637	658,348	61,163	51%	36%
Ballpark (49% of participants)	40,405	426,299	39,604	40%	34%
BY REGION:					
West (27% of participants)	52,422	530,282	49,265	41%	Not enough data provided
Southwest (15% of participants)	52,488	684,493	63,591	19%	Not enough data provided
Midwest (17% of participants)	39,328	480,226	44,614	43%	<1%
Southeast (22% of participants)	36,820	623,492	57,924	51%	3%
Northeast (19% of participants)	45,962	511,085	47,481	54%	25%

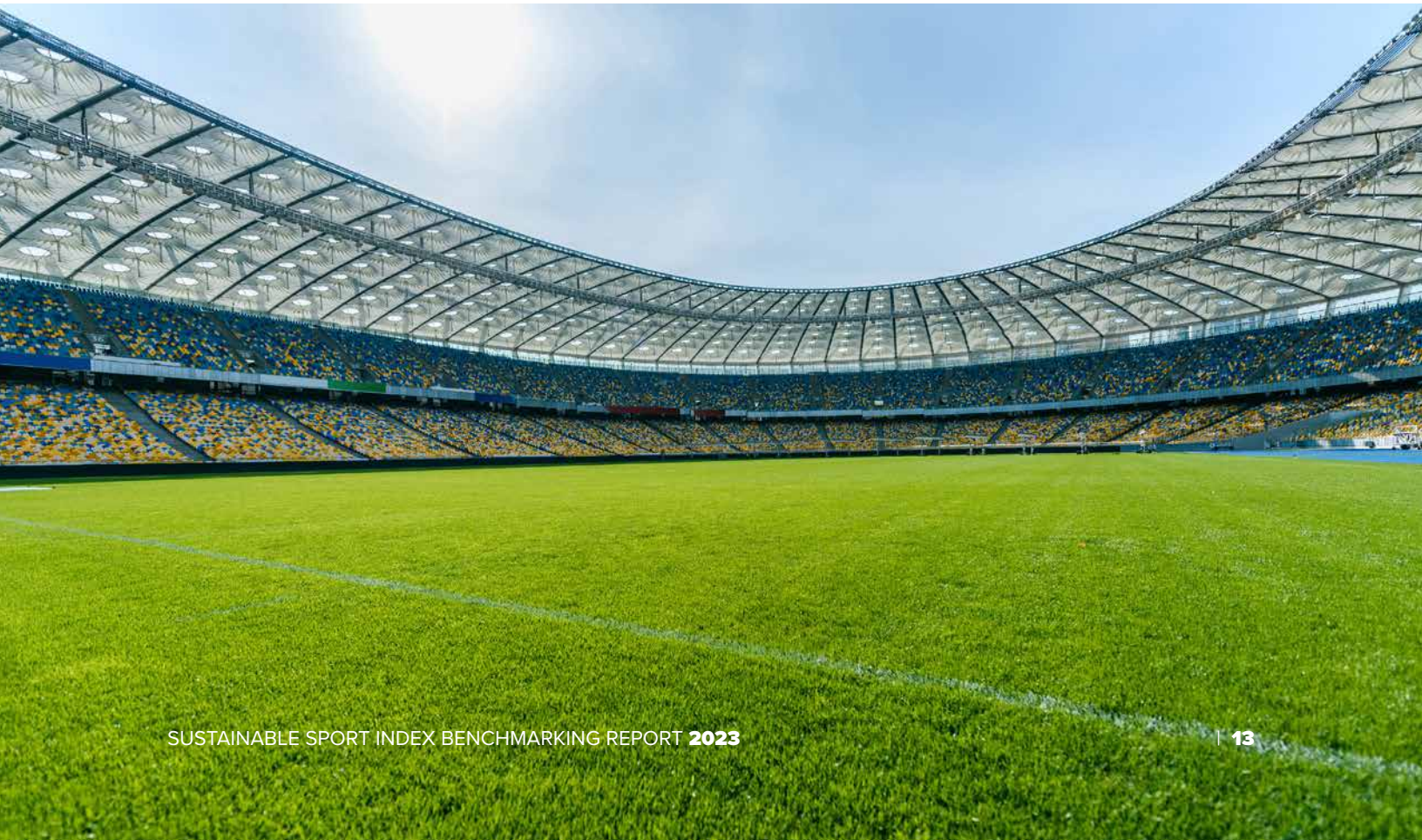
Facility Characteristics

The age and latest renovations of a venue, roof style, playing surface, capacity, and number of event days are among the characteristics that affect energy, waste, and water usage. For example, closed roofs require lighting and heating, ventilation, and air conditioning (HVAC) throughout the facility, while open air stadiums and ballparks can rely on daylight for some events and will not have climate control in most seating areas.

60%
OF VENUES HAVE BEEN RENOVATED SINCE 2015

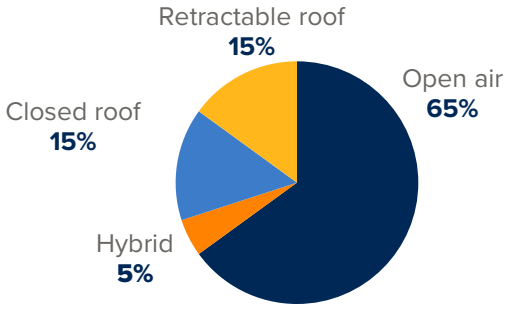
Venue Opening Year and Latest Renovation



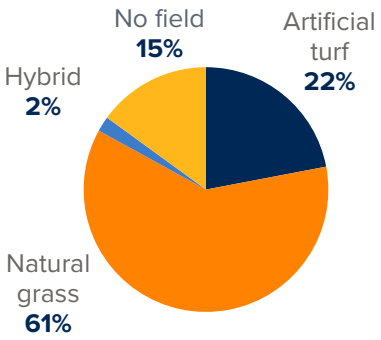


Some newer venues, such as SoFi Stadium and Allianz Stadium, are being designed and built with hybrid or canopy roofs. At SoFi Stadium, the roof is free standing, hovering above the venue and open on three sides, allowing the ocean breeze to flow into the stadium. The 360-degree roof canopy at Allianz Stadium shades fans and captures rainwater to channel into a central stormwater system, irrigating the surrounding landscape.

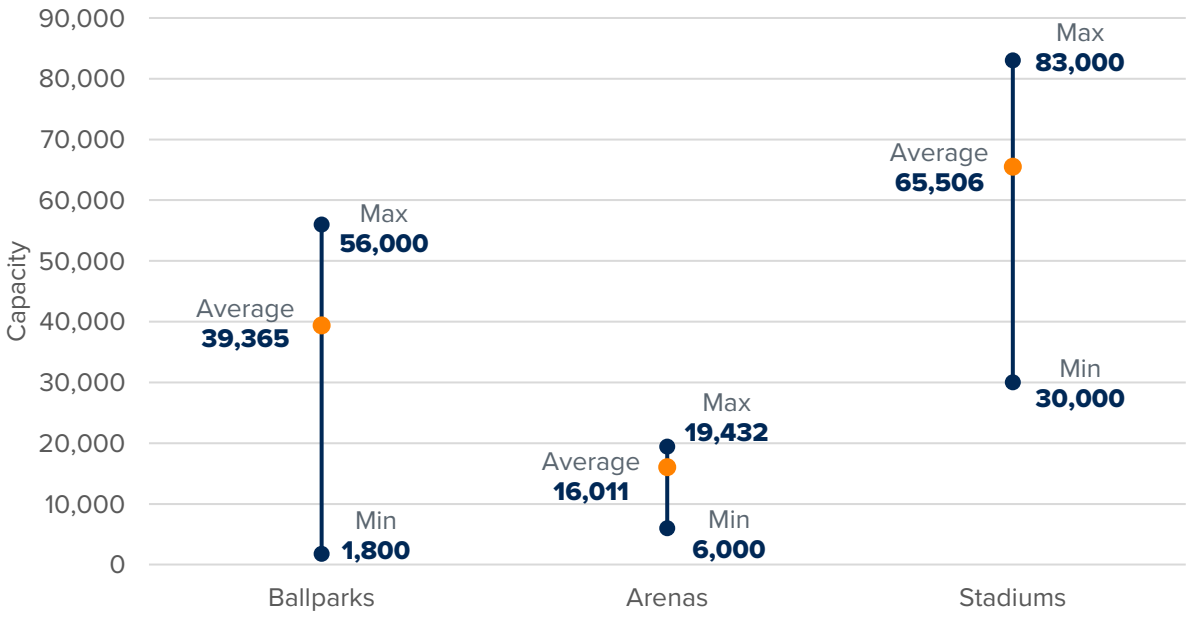
Venue Roof



Field Type



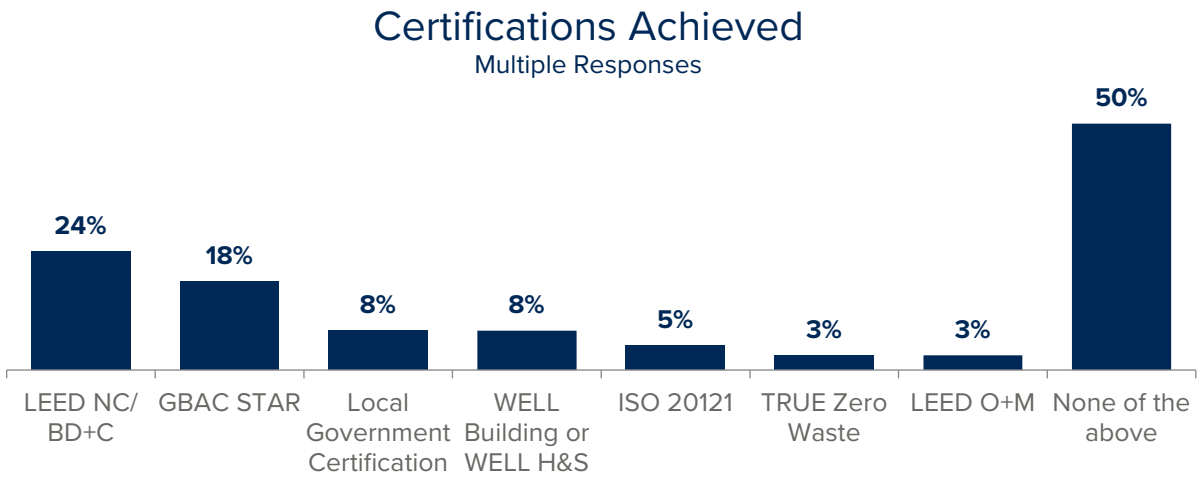
Venue Capacity



Certifications

Certifications verify that a venue or an event was constructed or is operated to a particular standard. Certifications may address resource efficiency, health and wellbeing of the occupants, cleaning and sanitation, the management systems, or other elements of the built environment or operations. A venue may choose to pursue a certification as a third-party source of credibility, prevent greenwashing, gain recognition for investments, or align with local or global efforts and standards.

The below chart outlines the various certifications achieved by this year's SSI participants. Overall, 50% of participants have at least one sustainability-related certification, which is consistent with last year's results. Venues may have more than one certification. Leadership in Energy and Environmental Design (LEED New Construction (NC) and Existing Building Design and Construction (BD+C) certifications are the most common; however, only one venue has been certified as LEED Operations and Management (LEED O+M).



In addition to certifications, venues and teams make commitments to sustainability through organizations or associations. For example, 85% are members of Green Sports Alliance, 5% are United Nations (UN) Sports for Climate Action signatories, and 3% are UN Global Compact signatories.

Types of Certifications

These are the most common certifications in sports venues; however, this is not an exhaustive list of reputable sustainability certifications. In addition to these nationally or internationallyrecognized certifications, participating venues also earned sustainability or green business certifications administered by local governments.

LEED standards are established by the U.S. Green Building Council (USGBC). To achieve LEED certification, a project earns points by adhering to prerequisites and credits that address carbon, energy, water, waste, transportation, materials, health, and indoor environmental quality. Certifications exist for NC, BD+C, and O+M.

LEED Zero is a complementary program to LEED that recognizes net zero achievements.

- **LEED Zero Carbon** recognizes net zero carbon emissions from energy consumption through carbon emissions avoided or offset over a period of 12 months.
- **LEED Zero Energy** recognizes a source energy use balance (i.e., total energy use, including generation and transmission) of zero over a period of 12 months.
- **LEED Zero Waste** recognizes buildings that achieve Green Business Certification Inc.'s (GBCI) Total Resource Use and Efficiency (TRUE) certification (i.e., ≥90% diversion of solid wastes from landfills and incineration) at the TRUE's highest certification, Platinum level.
- **LEED Zero Water** recognizes a potable water use balance of zero over a period of 12 months.

WELL

- WELL Building Standard® is a performance-based system for measuring, certifying, and monitoring features of the built environment that impact human health and wellbeing through air, water, nourishment, light, fitness, comfort, and mind.
- WELL Health-Safety Rating for Facility Operations and Management is an outline to build resilient business policies and operational plans. It helps organizations address the health, safety, and wellbeing of their occupants.

International Organization for Standardization (ISO)

- ISO 20121 is a standard for sustainable event management, providing guidance and best practices to help manage the social, economic, and environmental impacts of an event.
- ISO 14001 is a standard to help organizations improve their environmental performance through more efficient use of resources and waste reduction.

International Living Future Institute Zero Carbon Certification is the first worldwide, third-party certification standard for zero carbon. During a 12-month active period, projects must demonstrate actual net zero carbon operations.

Global Biorisk Advisory Council STAR Facility Accreditation Program is based on a 20-element quality management system designed to help facilities establish a program for healthy spaces for building occupants, visitors, and the surrounding community. The program is performance-based and includes strategies for infection prevention and cleaning.

Sustainability Tracking, Assessment, and Ratings System (STARS) is a program by the Association for the Advancement of Sustainability in Higher Education and is a self-reported framework for colleges and universities to measure sustainability performance. STARS includes an optional section about green athletics. While none of our respondents reported this certification, it is important to highlight this collegiate-specific certification.

PARKSMART is the world's only rating certification system designed to advance sustainable mobility through smarter parking structure design and operations. It focuses on reducing operational costs, increasing energy efficiency, and incorporating better lighting and ventilation.

TRUE is a zero-waste certification program from GBCI that aims to improve and measure zero waste performance. TRUE evaluates the full life cycle of products and how they are reused. The TRUE certification process is an assessor-based program that rates solid waste minimization at requesting facilities.

In addition to these certifications, there are additional frameworks, such as the UN Sports for Climate Action Framework and the Net Zero Carbon Events Framework, that can help guide sustainability best practices.

HIGHLIGHT: ESTADIO BBVA LEED SILVER CERTIFICATION



Estadio BBVA—located in Monterrey, Mexico, and nicknamed “The Steel Giant” for its enormous size and steel construction—is the home of C.F. Monterrey of Liga MX and C.F. Monterrey Femenil of Liga MX Femenil and is a FIFA World Cup 26™ venue. The stadium earned LEED Silver BD+C: New Construction, the first soccer (football) stadium in North America to do so. The venue is currently in the process of obtaining LEED O+M.

Estadio BBVA’s practices include:

- Irrigating the pitch and green areas with non-potable water sources
- Designating over a third of the entire land area as lush green spaces, beyond local regulation, to offer a natural ambiance, filter rainwater, and replenish aquifers
- Separating recyclables and organics on site

Promotion of the use, care, maintenance, and conservation of the Ecological Park “Río La Silla”.

Cleaning brigades in the city of Guadalupe, Nuevo León.

Sustainability of the BBVA Stadium and CFM.

Waste separation generated at BBVA Stadium into PET, organic, processed organics, and inorganics.

Ecological restoration and reforestation of Sierra del Fraile (Monk’s Mountain) at Parque Estatal de las Grutas de García (Regional Grottoes Park of Garcia).

Recycling and reuse campaings with AlEn Group.

Environmental hallmarks and certifications.

Reuse of organic waste for composting of Gran Parque Río La Silla.



SUSTAINABILITY GOALS, POLICIES & REPORTING

Establishing goals and developing policies are key steps to meeting organizational commitments. Accountability is the name of the game, so industry best practices indicate that written policies should be transparent to the entire organization and clearly lay out expectations for employees and vendors. In addition to policy-related questions, our 2023 survey added questions about goal setting, implementation, tracking, and reporting on sustainability.

Public reporting is becoming more common with the rise of ESG and corporate social responsibility reports. While the sports industry has started reporting on social and community initiatives, it lags in communicating environmental goals, plans, and performance. The Securities and Exchange Commission (SEC) proposed a rule, anticipated to take effect this year, that will require publicly traded companies to publish elements of ESG reporting, specifically climate-related disclosures. Since most venues and teams are not publicly traded, this requirement would not necessarily apply, but it may create pressure for venues and teams to be more forthcoming with sustainability reporting.

Sustainability Policies

Sustainability policies outline a venue or team's commitment to practices and standards designed to promote environmentally and socially responsible operations to support organizational goals. This can include energy management, water conservation, procurement, DEI, and more.

This year, there is a slight decrease in overall participants who have formal sustainability policies: from 33% in 2022 to 28%. However, with many new participants, an additional 15% are currently developing policies.

Additionally, 18% are performing a materiality assessment. This is often considered among the first steps in gathering information to determine which ESG considerations most affect, or are most material, to the venue and team as a business. Twenty percent have a sustainability management system in place to guide, evaluate, manage, and improve sustainability roadmaps for the venue as a whole.

It is important that this number increases in the coming years, as materiality assessments are the foundational playbook for a venue's sustainability practices.

Formal Sustainability Policy



In Development

56%
OF VENUES HAVE A DEDICATED ENVIRONMENTAL SUSTAINABILITY POSITION ON STAFF, UP FROM 24% IN 2022

43% SIT WITHIN THE FACILITIES/OPERATIONS TEAM

17% HAVE THEIR OWN SUSTAINABILITY TEAM

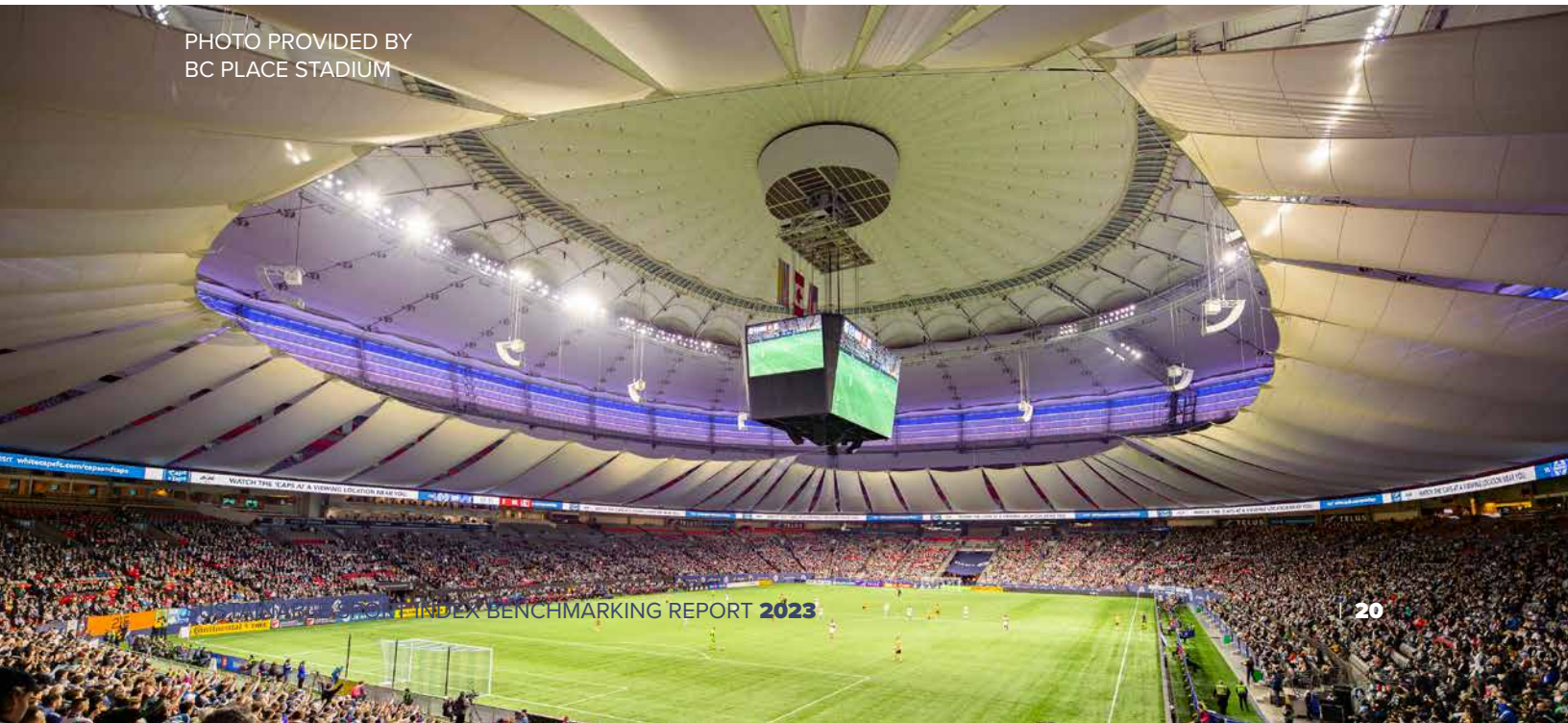
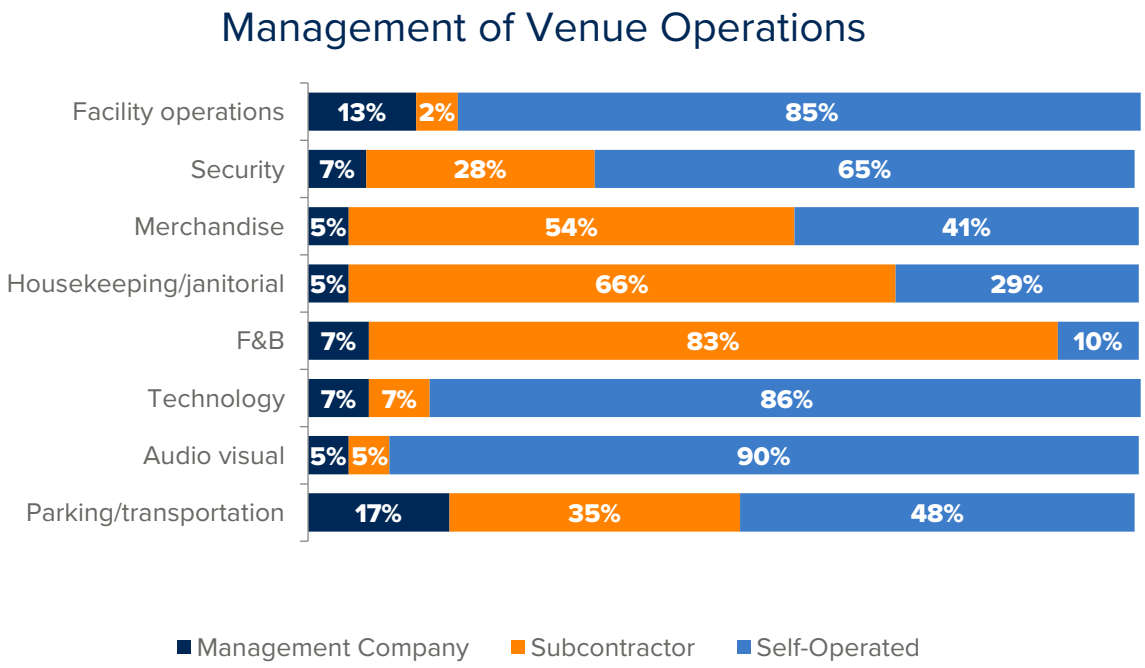


PHOTO PROVIDED BY BC PLACE STADIUM

Third-Party Vendor and Procurement Policies

In the complex environment of venue operations, third-party vendors play a large role in how a venue can reach its sustainability goals. Whether it is food and beverage (F&B) providers, housekeeping teams, or parking staff, these vendors and team members have a direct impact on how the venue operates.

It is important to review vendor contract language and develop procurement policies that support the venue's sustainability goals. Examples include ensuring that a landscaping subcontractor collects landscape waste for compost rather than landfill or that a F&B subcontractor is using only reusable, compostable, or aluminum serviceware if the venue seeks to eliminate single-use plastics.



Of the 28% of venues with a sustainability policy, 64% expect subcontractors to adhere to the venue's policy. Additionally, 22% have a sustainable purchasing policy or environmental procurement policy. These policies can affect all workstreams but especially F&B, housekeeping, and merchandise, all of which are commonly subcontracted.

While many venues do not have specific procurement policies in place, some are prioritizing vendors with positive environmental and social practices and are putting more emphasis on ensuring they are sourcing environmentally friendly products and services.

28%
OF VENUES HAVE A SUSTAINABILITY POLICY

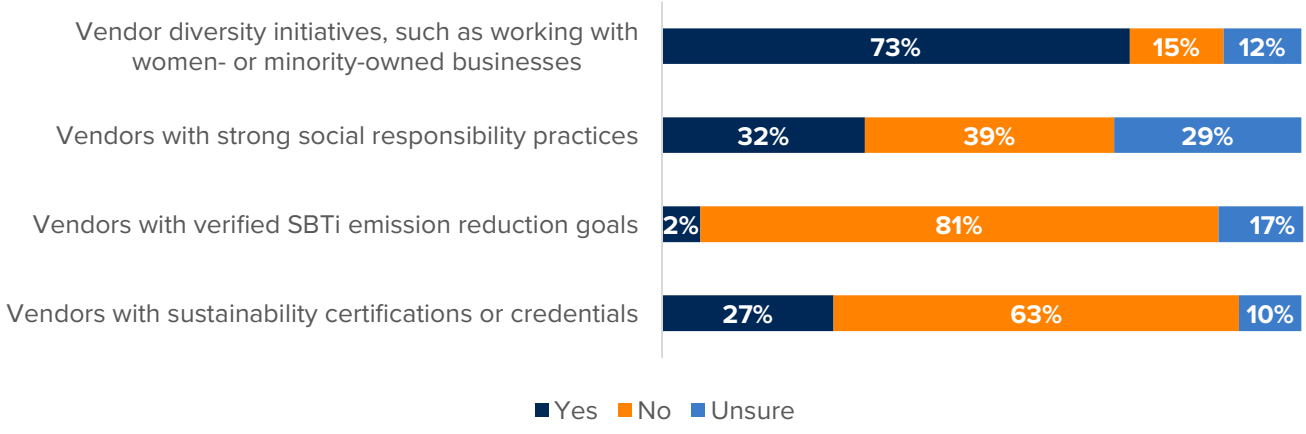
64% EXPECT SUBCONTRACTORS TO FOLLOW THE POLICY

72% REQUIRE F&B SUBCONTRACTORS TO FOLLOW VENUE SUSTAINABILITY POLICIES


PHOTO PROVIDED BY HARD ROCK STADIUM

22%
OF VENUES HAVE A VENDOR/ SUPPLIER CODE OF CONDUCT, SUSTAINABLE PURCHASING POLICY, OR ENVIRONMENTAL PROCUREMENT POLICY

Vendor Prioritization



Green Cleaning Policies

Green cleaning refers to operational practices and cleaning products that are made from nontoxic or biodegradable ingredients. These ingredients are safer for human health and have a lesser impact on the environment by reducing toxins entering water streams and air. They are often certified by third parties such as EcoLogo, Green Seal, EPA Safer Choice, etc.

The percentage of venues with a green cleaning policy, 49%, and those reviewing their policies with housekeeping teams, 83%, were consistent with 2022. Only 28% of venues reported tracking their spend on green certified cleaning products, which is one way to determine how well the policies are being implemented.

49%
OF VENUES HAVE A GREEN CLEANING POLICY

83%
OF VENUES HAVE AN ANNUAL POLICY REVIEW WITH JANITORIAL STAFF

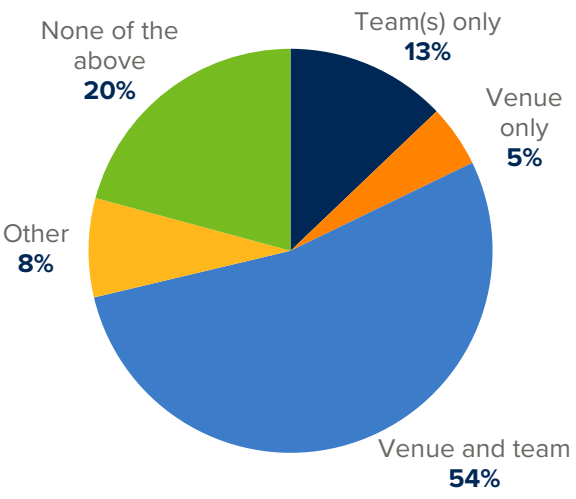
28%
OF VENUES TRACK SPEND ON GREEN PRODUCTS

84% OF THEIR PURCHASES ARE GREEN ON AVERAGE

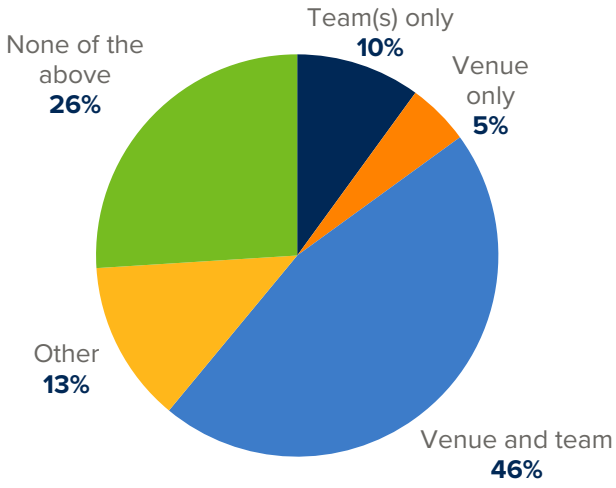
Diversity Policies

The percentage of venues that have a DEI policy in effect is 72%, an increase from 63% in 2022. And the percentage of venues that have a staff position dedicated to DEI is 61%, compared to 54% last year.

DEI Policy



DEI Position



DEI policies guide how people engage with one another and inspire them to take purposeful action in support of advancing inclusivity throughout the organization. Recommended policy elements include but are not limited to:

- **Objectives:** State your commitment to advancing DEI in all aspects of the business and the organizational goals you would like to achieve (e.g., recruiting, hiring, retention, professional development and training, employee engagement and retention, community outreach and partnerships, and supplier diversity).
- **Scope:** Clarify to whom and which areas the policy applies to within your organizations. Include all stakeholders, ranging from full- and part-time employees, contractors, vendors, suppliers, and job applicants. Initiatives are applicable but not limited to practices and policies on recruitment and selection, compensation and benefits, professional development and training, promotions, transfers, social and recreation programs, layoffs, terminations, and the ongoing development of a work environment built on the premise of equity.
- **Employee Responsibilities:** Every day, deliberate action is necessary. State how employees are responsible for upholding the DEI policy. Examples include but are not limited to:
  - Treat others with dignity and respect.
  - Always behave inclusively on and off the worksite.
  - Take deliberate action to promote belonging, equity, and diversity.
  - Complete DEI training.
- **Leadership Responsibilities:** State how leaders are responsible for completing specific DEI duties and accomplishing DEI results. These obligations include but are not limited to:
  - Ensure that decisions pertaining to employment are made without discrimination.
  - Establish specific DEI duties and fulfilling intended outcomes on their own teams.



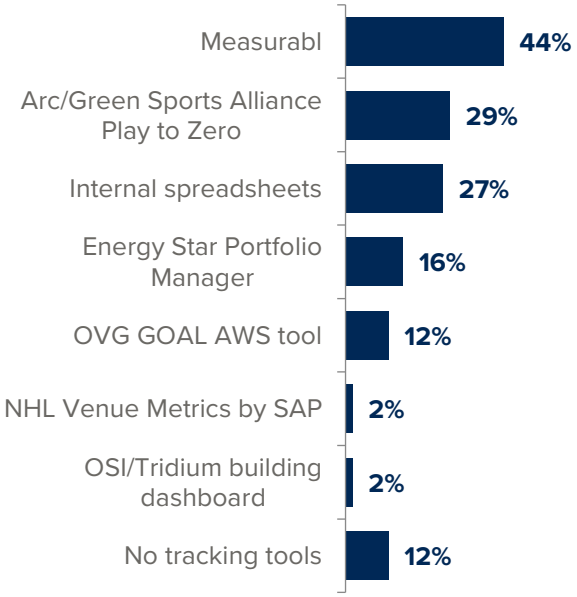
Tracking

At the core of goals, policies, and reporting is tracking. A venue cannot measure, manage, or change what it is not tracking. Among our participating venues, 12% are not using any tracking tools. Of the 88% that are, most use two tracking tools. The most common tool is Measurabl, which is provided by MLB, and its usage aligns with our proportion of participants that are MLB ballparks.

Additionally, states and cities are requiring commercial building owners to report on their energy usage and provide disclosure data. With this trend, it is advantageous for venues to develop a baseline and begin measuring and managing their data.

Tracking Tools

Multiple Responses



Reporting

While we know venues are taking steps to improve their sustainability practices, public reporting is limited. However, there are organizations leading the way in publishing strategies and reporting. The following is just a snapshot of the public reporting available, though it is important to note that it is uncommon to find public reports in the U.S. The following are all Europe-based organizations.

- FIFA Women's World Cup 2023™ Sustainability Strategy Report
- Formula E 2022 Sustainability Report
- Formula 1 2019 Sustainability Strategy and their progress report on 2022
- International Olympic Committee Sustainability Report 2021
- Liverpool FC 2023 Report

8%

OF VENUES PRODUCE A PUBLIC SUSTAINABILITY OR ESG REPORT

96%

OF S&P 500 COMPANIES VOLUNTARILY PUBLISH ESG REPORTS*

*Source: Globe Newswire, New G&A Institute Research Shows Sustainability Reporting by Largest U.S. Public Companies Reached All-Time Highs in 2021, 16 November 2022.

GREEN SPORTS ALLIANCE

Green Sports Alliance (GSA) leverages the cultural and market influence of sports to promote healthy, sustainable communities where we work, live, and play. APTIM and SSI are proud Play to Zero partners of GSA. Through this partnership, APTIM brings expertise and SSI benchmarking data to enhance GSA's membership tools and resources.

Play to Zero

Play to Zero is a tracking tool available to GSA members, accelerating climate action through performance-driven sustainability in sports and entertainment. It is a leadership recognition platform and free sustainability performance toolkit that guides and celebrates progress toward net zero energy, net zero water, zero waste, and a resilient future.

Building for the Next Generation

Download GSA's latest playbook, Building for the Next Generation, a consolidation of insights and best practices from leading practitioners, organizations, and firms in the built environment, including APTIM. This playbook is about more than pushing the boundaries of sustainable design and operations. It is a call to invest in superior design and technologies that reduce operating expenses, create partnership opportunities, enhance your brand, and play a part in a healthy and prosperous future.

Annual Summit

The annual GSA Summit convenes stakeholders each June. As the largest and most influential gathering for the sports and entertainment community to unite around sustainability, we bring together hundreds to learn about and share the latest innovations, discuss best practices, and harness a powerful moment in time to influence impact.

PLAY TO ZERO | GREEN SPORTS ALLIANCE

1 TRACK

2 BENCHMARK

3 ROADMAP

4 RECOGNIZE

5 ENGAGE



> Your venue's sustainability is a journey of continuous improvement, which begins with its blueprints. Designing new sports venues with energy efficiency, electrification, waste reduction, and material diversion in mind is critical to working toward net zero goals.
>
> *- Greg Coffman*
> *Senior Vice President*
> *APTIM Environmental & Energy Solutions*

ENERGY & GREENHOUSE GASES



Emissions from human activities accelerate climate change, causing intense weather events, rising sea levels, and declines in biodiversity. Many are familiar with the term "carbon footprint," referring to the total greenhouse gases (GHG) emitted into the atmosphere by a particular activity, person, product, group, or building.

Oftentimes carbon footprint and GHGs are used interchangeably, but technically, carbon dioxide (CO_2) is just one of many GHGs. Each GHG has a different level of intensity, so we talk about them in terms of their carbon equivalency to accurately reflect and compare GHG emissions. Accounting, reporting, and offsetting GHG emissions is becoming increasingly important and complex as sustainability advances.

This report focuses on net GHG emissions resulting from venue operations. While we often think of emissions related to electricity used to operate a venue and fuel for heating and transportation, a venue's GHG emissions are also generated by the activities of suppliers and vendors. Everything from stadium construction materials to concessions' serviceware have associated emissions that are part of a venue's operations.

Types of Greenhouse Gases

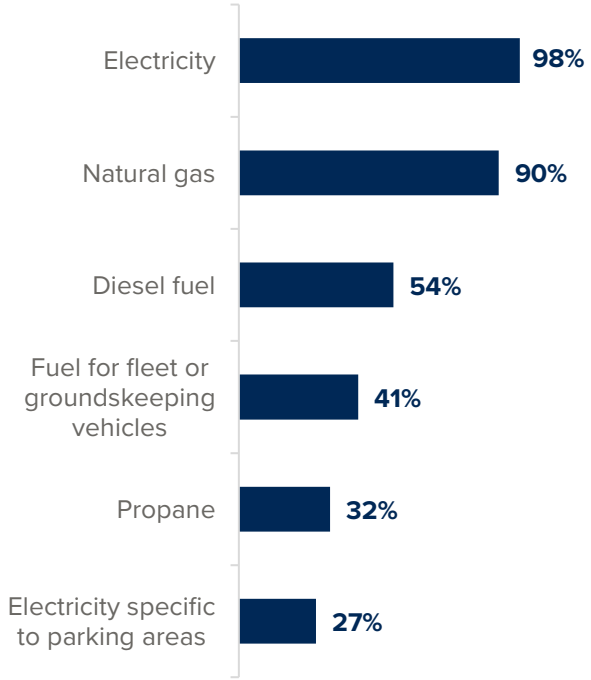
		GHG SCOPE	EXAMPLES	IMPROVEMENTS AND SOLUTIONS
SCOPE 1		Direct emissions combusted on site, such as natural gas or propane	▶ Heating ▶ Cooking ▶ Backup generators ▶ Vehicles or fossil-fuel powered machines, such as groundskeeping equipment, that are owned or leased	▶ Electrify fleet and groundskeeping vehicles ▶ Electrify heating and cooking (reallocates emissions to scope 2, which can be mitigated with renewable energy, per current GHG protocol)
SCOPE 2		Indirect emissions combusted off site to generate the energy purchased by the venue	▶ Purchased electricity or steam that is used on site	▶ Optimize systems and implement efficiency measures ▶ Generate renewable energy on site ▶ Purchase quality renewable energy credits (RECs)
SCOPE 3		Indirect emissions generated due to the venue's activities but typically not directly controlled by the venue	▶ Fan transportation ▶ Waste disposal ▶ Athlete travel ▶ Supplier activities to produce and transport products ▶ Employee commuting	▶ Develop supplier procurement policies ▶ Incentivize public transportation incentives ▶ Modify business and athlete travel, minimize plane charters, or consider ground transportation when possible ▶ Optimize waste disposal

Energy and GHG Tracking

It has become common practice for venues to track their basic energy usage; however, venues are slower to adopt GHG emissions tracking, which takes a bit more effort to sort data from numerous sources that may appear in multiple budgets and across multiple departments. Increasingly, municipalities and states are establishing Building Performance Standards (BPS), policies to reduce the GHG emissions of existing buildings. Colorado recently adopted Regulation 28, a law requiring most buildings 50,000 square feet (4,645 sqm) or larger to cut their 2021 GHG emissions by 7% by 2026 and 20% by 2030. This trend of establishing BPS is expected to continue across the U.S.

Energy Tracked Annually

Multiple Responses



39%
OF VENUES ARE TRACKING AT LEAST SOME GHG EMISSIONS

21%
OF VENUES HAVE SET GHG REDUCTION GOALS

53% ARE USING A THIRD-PARTY VERIFICATION SERVICE

3% HAVE SET THEM USING SBTI GUIDELINES

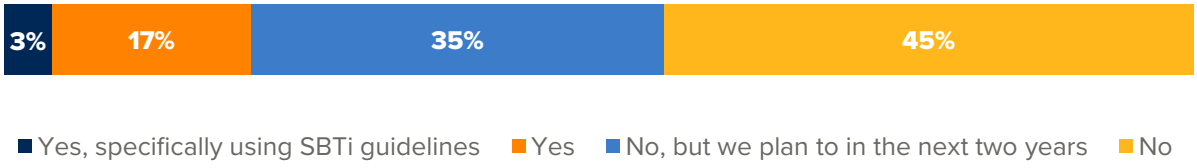
Venues Tracking GHG Emissions

SCOPE 1 ONLY	SCOPE 1 & 2	SCOPE 1, 2 & 3*	NOT CURRENTLY TRACKING
5%	16%	18%	61%

*May include partial accounting of scope 3.

After identifying inclusions for your venue's scope 1, 2, and 3 emissions, developing a tracking plan, and establishing a baseline, the next step is to establish GHG reduction goals and develop a plan to reach those goals. The Science Based Target Initiative (SBTi) supports companies by creating a clear path to reduce emissions in line with the Paris Agreement.

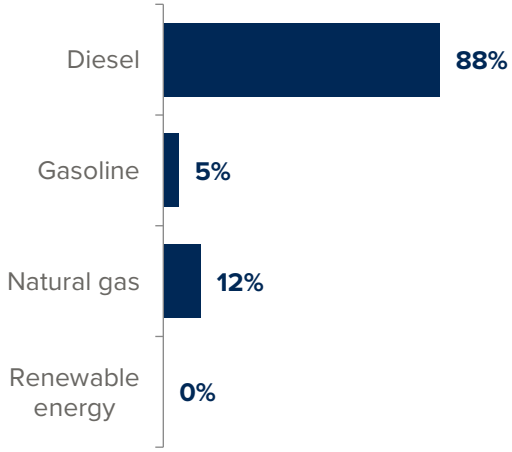
Setting GHG Reduction Goals



Scope 1 GHG emissions can be decreased by reducing or eliminating fossil fuels combusted on site through electrification of HVAC, cooking, fleet and groundskeeping vehicles, etc. While electrification may in turn increase scope 2 emissions, these can be mitigated through the current guidelines through renewable energy generation or purchase of renewable energy credits.

Fuel Type for Backup Generators

Multiple Responses



Energy Efficiency

Optimization through energy efficiency measures such as LED sport lighting, lighting controls or sensors, and HVAC controls often have short payback periods when energy savings, product life, and maintenance savings are included. Incentives are common for energy efficient upgrades and optimizations, making it even easier to build the business case for these upgrades. Check with your local utility for opportunities.

Commissioning and retrocommissioning can sometimes achieve significant energy savings by recalibrating existing equipment to operate more efficiently. It is particularly important to periodically evaluate HVAC systems, building automation systems (BAS), and networked lighting controls.

Additionally, 28% of venues are participating in energy demand response programs. Demand response programs are typically offered by electric utility companies to give a venue an opportunity to reduce its electricity usage during peak periods for discounted rates or other financial incentives.

LED Lighting in Non-Sport Areas



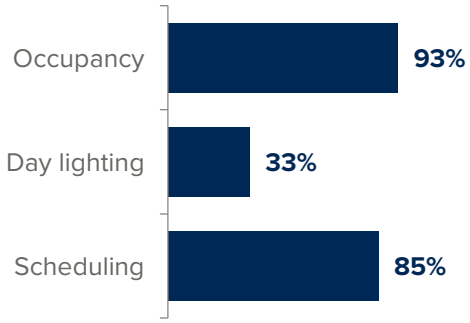
Lighting Controls



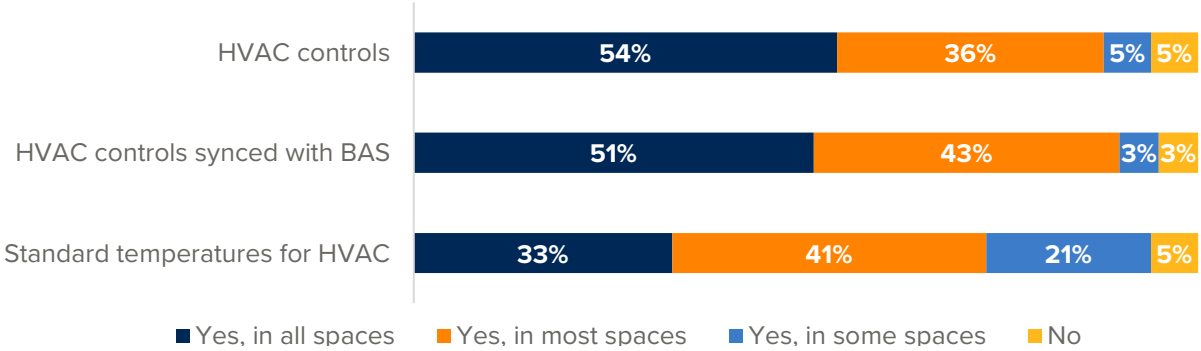
80%
OF VENUES HAVE LED SPORT LIGHTING

80%
OF VENUES HAVE LIGHTING CONTROLS SYNCED WITH BAS

Lighting Controls
Multiple Responses



HVAC and Temperature Controls

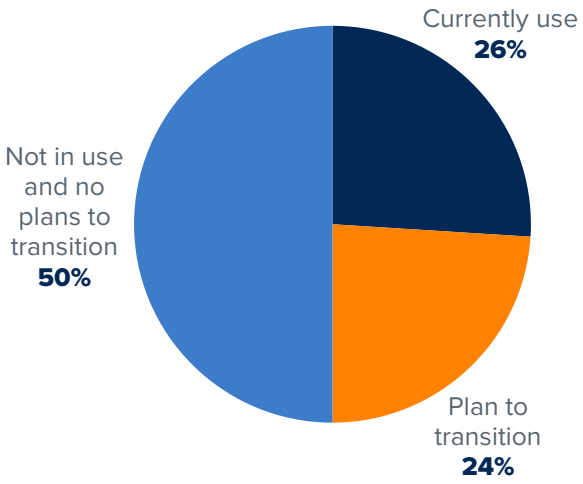


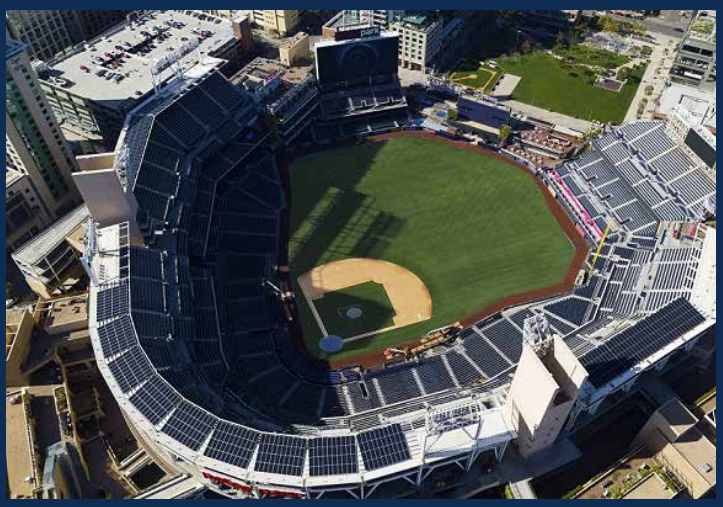
Refrigerants can also significantly contribute to GHG emissions. Chlorofluorocarbons, a common refrigerant before the 1987 Montreal Protocol, were largely replaced by hydrofluorocarbons and hydrochlorofluorocarbons, which are both potent GHGs. Twenty-six percent of venues are currently using refrigerants with low global warming potential.

On-Site Renewable Energy

While the payback period is often longer for renewable energy projects than other energy upgrades, incentives and power purchase agreements (PPA) can make renewable energy projects more attractive. A PPA is a long-term contract with an energy provider where the utility will pay the cost to install solar energy at your facility or you will purchase solar energy from them through an off-site facility. Contact your local utility or solar energy provider to see which option makes the most sense for your venue.

Use of Refrigerants with Low Global Warming or Ozone Depletion Potential





In 2022, Petco Park, home of the San Diego Padres became the first National League stadium to be powered by 100% renewable and carbon-free energy after partnering with San Diego Community Power, a not-for-profit community choice energy program.

35%
OF VENUES PRODUCE RENEWABLE ENERGY ON SITE

93% OF THESE UTILIZE SOLAR ENERGY

32% OF ENERGY IS PRODUCED BY RENEWABLES ON AVERAGE

RECs and Carbon Offsets

RECs and carbon offsets are used to reduce or offset emissions. Qualified RECs should only be used to reduce scope 2 emissions, those generated from purchased electricity. Carbon offsets can be used to reduce any scope of emissions. Note that carbon offsets are not accepted by the SBTi as a form of reducing GHG emissions. Check out this resource from the EPA for more information.

22%
OF VENUES ARE PURCHASING RECS

10%
OF VENUES ARE PURCHASING CARBON OFFSETS TO REDUCE VENUE CARBON EMISSIONS

8%
OF VENUES ARE PURCHASING CARBON OFFSETS RELATED TO TEAM TRAVEL



HIGHLIGHT: GILLETTE STADIUM ENERGY DEMAND RESPONSE PARTICIPATION

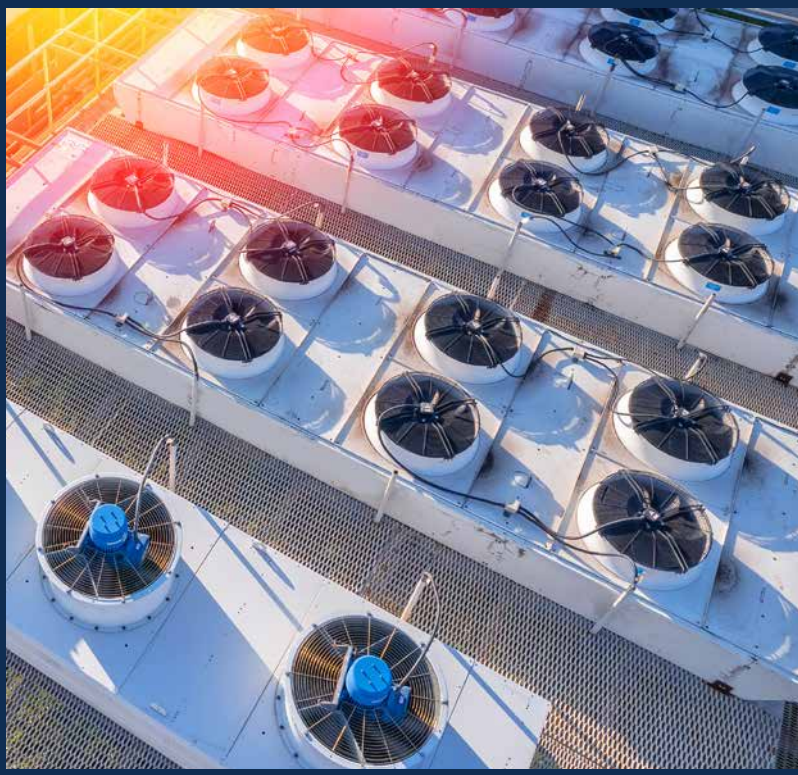
Gillette Stadium, home to the New England Patriots and New England Revolution, and a FIFA World Cup 26™ venue, is an active participant in Enel X's demand response program in Massachusetts. The stadium plays a crucial role in meeting the grid's demands during peak usage periods, such as the recent heatwaves experienced in the region. In return, the stadium receives compensation for scaling down non-essential areas when necessary, aiding the overall stability of the grid.

The stadium's plan for energy reduction includes:

- Temporarily deactivating HVAC units in selected areas of the stadium
- Switching off non-essential lighting
- Decreasing the usage of water chillers

In return, the stadium receives compensation and performance-based incentives. Since 2017, the stadium has earned more than $100,000 in incentives.

By mitigating the requirement for fossil fuel-based infrastructure to supply electricity during high-demand periods, these programs play a pivotal role in fostering a greener energy system. Gillette Stadium is not only reducing its energy-related expenses but also contributing to a more dependable, affordable electric grid in its local community.



TRANSPORTATION



Transportation to and from a venue has a significant impact on event and overall venue emissions, specifically scope 3 emissions. Examples include team travel for home and away games, employee commuting, and fan transportation.

In North America, team travel can be a significant portion of scope 3 transportation emissions. Countries with trains and other robust public transportation systems are at a carbon advantage, whereas with the lack of this infrastructure in the U.S., teams typically travel by plane, often private plane.

Daily commuting and fan transportation also have a substantive impact. Every mile driven in a single passenger vehicle emits around one pound of CO_2, but this carbon footprint can be mitigated when fans and staff choose public transportation or carpooling. Access to walking or bike paths, bike parking, and micromobility (e.g., shared bikes, e-bikes, and electric scooters) also decrease the need for personal vehicles. As a result, fewer GHG emissions and less traffic become a positive part of the game day experience.

Public Transit and Other Alternative Transportation

With tens of thousands of fans attending home games, the scope 3 emissions of fan and employee transportation can be significant. The transportation industry has shifted over the last 10 years with the popularity of rideshare applications, which have also evolved to shared micromobility rental options.

Twenty-four percent of responding venues offered some type of program to incentivize fans to take alternative transportation rather than a personal passenger vehicle. Even fewer venues, 20%, provide incentives to staff to take alternative transportation.

Examples of programs include a free shuttle from downtown to within one mile of the main venue or subsidized and free rides on public transportation on game day with the purchase of a ticket, which was offered by 12% of respondents.

95%
OF VENUES ARE WITHIN WALKING DISTANCE OF PUBLIC TRANSPORTATION

18%
OF VENUES HAVE DEDICATED PARKING SPOTS FOR THOSE MICROMOBILITY RENTAL OPTIONS

66%
OF VENUES HAVE MICROMOBILITY RENTAL OPTIONS AROUND THE VENUE

78%
OF VENUES HAVE DEDICATED PERSONAL BIKE PARKING





Other Transportation Metrics

At some venues, tailgating is part of the overall experience. One of the biggest opportunities for improvement is to offer recycling and compost bins in venue parking areas, especially if the venue typically hosts tailgates in the parking lots.

31%

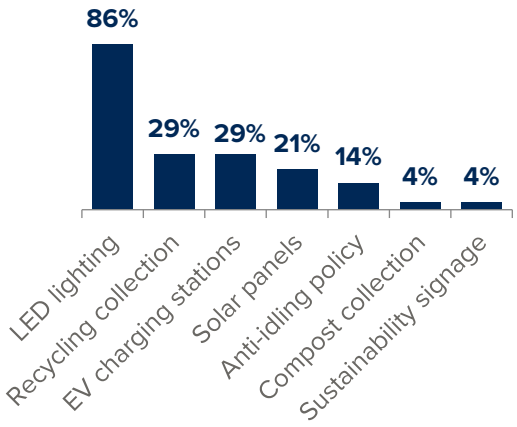
OF VENUES OFFER ELECTRIC VEHICLE CHARGING STATIONS FOR EMPLOYEES

29%

OF VENUES OFFER CHARGING STATIONS FOR FANS

Outdoor Parking Features

Multiple Responses



HIGHLIGHT: CHASE CENTER PUBLIC TRANSPORTATION COLLABORATION

The selection of Mission Bay as the site for the Chase Center, the new home to the Golden State Warriors, was heavily influenced by an opportunity to connect to public transit. As a transit-first building, the Golden State Warriors are focused on supporting the expansion of new avenues of travel.



The Warriors invested millions in transportation expansion. A new central subway line and planned ferry stop, to be completed in about three years, will significantly cut travel time for those coming from the East Bay. A large hospital facility is also in the Mission Bay area, and public transit investments by the Warriors helped to create easier access to the medical facilities and relieve traffic congestion.

In addition to infrastructure investment, the Golden State Warriors, Chase Center, and the San Francisco Municipal Transportation Authority have an innovative partnership, or “Transit Bundling” program. Through the program, all ticketed events also serve as a public transit ticket, funded by the Warriors and usable for the entire day.

WASTE



Waste is one of the most visible elements of a venue's sustainability plan. However, depending on the limitations of waste haulers and the knowledge and accountability of staff and fans, waste can also be one of the biggest challenges. Adding to the confusion: waste management, minimization, and diversion is becoming increasingly regulated by various single-use plastic bans and recycling and composting requirements.

In addition to local ordinances and state regulatory requirements, there are many factors to consider when implementing a successful waste management program, including:

- **Venue procurement practices**, types of materials, and packaging
- **Back-of-house (BOH) operations**, equipment selection, supplies, signage, and staff education
- **Front-of-house (FOH) waste container type**, configuration, signage, fan education, and engagement
- **Available waste collection and processing**

Diversion Rates

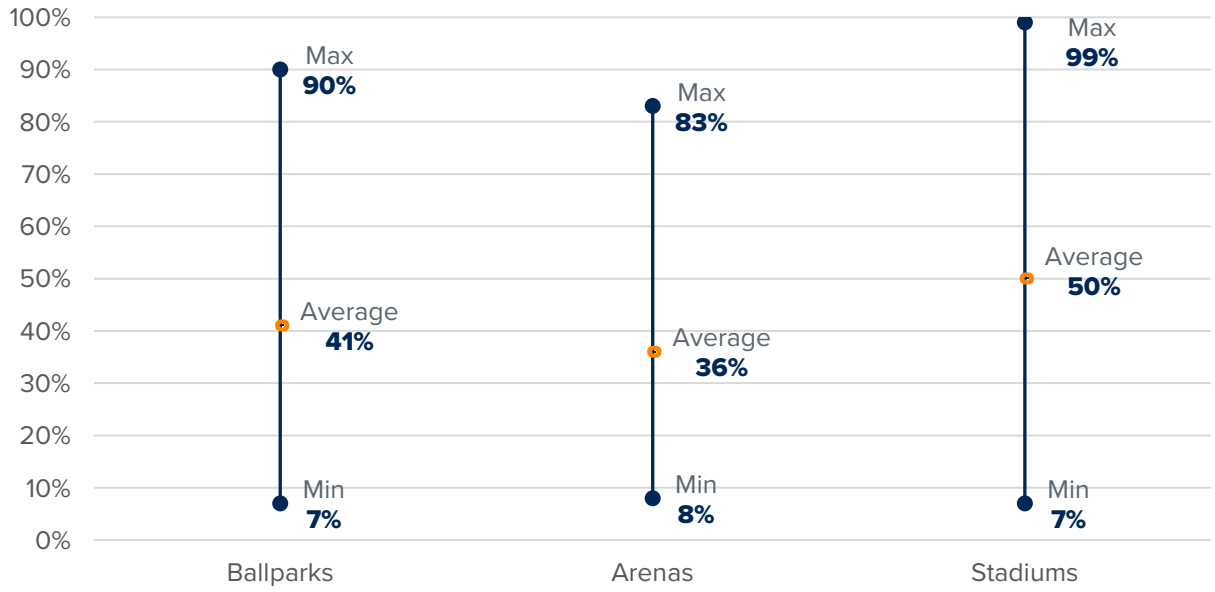
Waste diversion rate (WDR) is a common metric used when measuring the effectiveness of a waste management plan, but it is challenging to track and calculate.

The average waste diversion for a facility decreased from 52% last year to 44% this year, but as you will see in the chart below, there continues to be a wide range of self-reported waste diversion rates from our participants, which is similar to last year.

8%
OF VENUES HAVE PUBLICLY STATED A ZERO-WASTE GOAL

50% HAVE A CONFIDENTIAL, INTERNAL GOAL

2022 Venue Annual Waste Diversion Rate



While this metric is common in evaluating the success of a venue's sustainability program, there is not really an existing calculation standard in the sports industry. Defining a standard will help build consensus and establish benchmarks for sports and venue management. It is important to note that incineration and waste-to-energy bound materials are not considered sustainable waste diversion methods.

A widely used waste diversion calculation is below.

$$\text{WDR} = \frac{\text{Material Weight of: Recycled Waste + Reused Materials + Compost Waste + Other Diverted Waste, Including Donated Food \& Materials}}{\text{Material Weight of: All the Above + Landfill Waste + Incineration Waste + Waste-to-Energy Bound Materials}}$$

There are currently no federal regulations requiring waste diversion actions in the U.S., Canada, or Mexico, but some states, provinces, and municipalities are taking the initiative.

TRUE is a recognized and reputable waste certification program dedicated to measuring, improving, and recognizing zero-waste performance, often considered the gold standard. TRUE also factors reduced materials, which can be more appropriate for use in events. You can find more guidance in the TRUE Diversion Data Additional Guidance document.

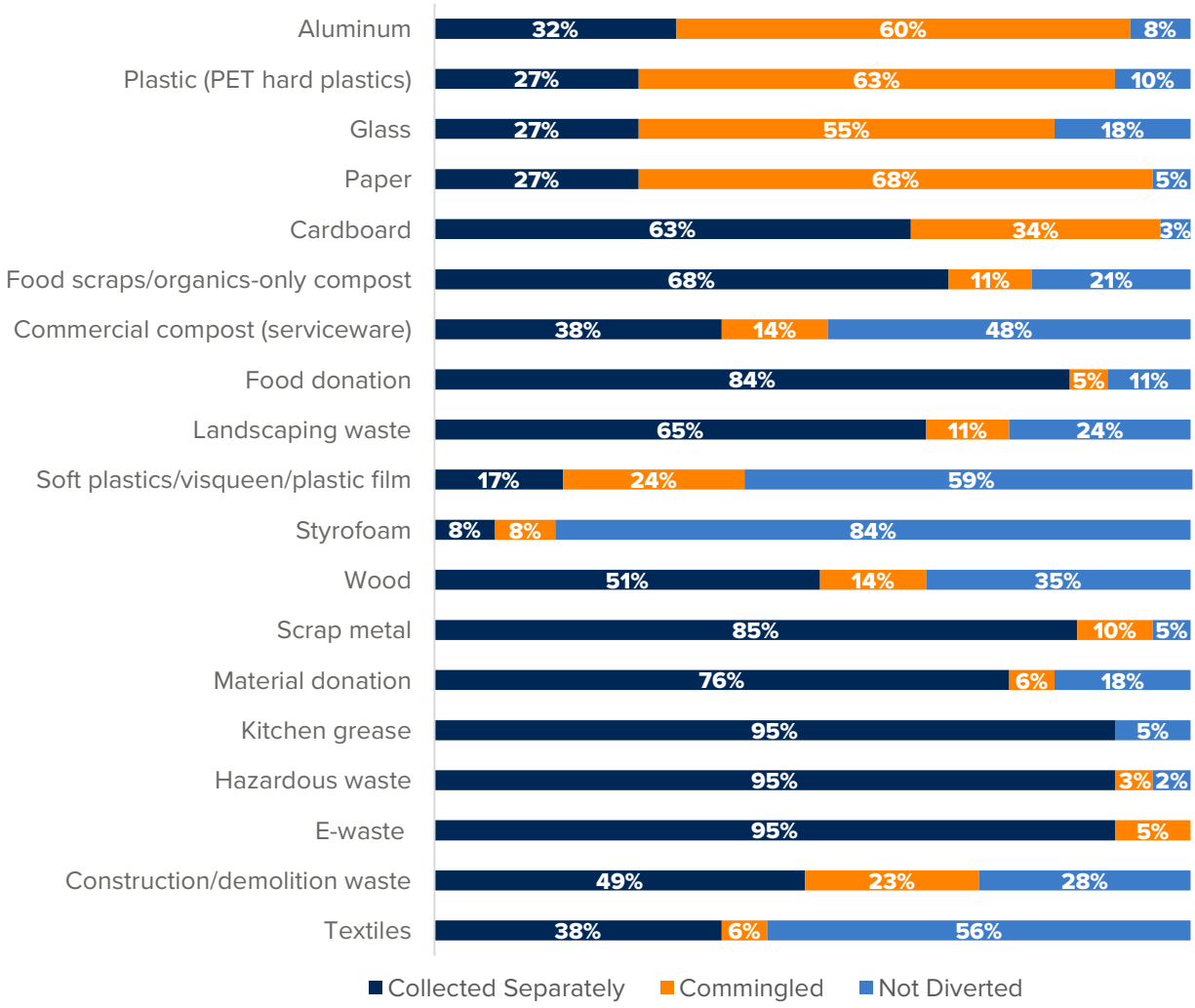
Waste Streams

One of the complexities of waste diversion is the various types of materials. Venues manage diversion through both separate and commingled diversion streams.

44%
OF VENUES ARE REQUIRED BY LAW TO RECYCLE

24%
OF VENUES ARE REQUIRED TO COMPOST

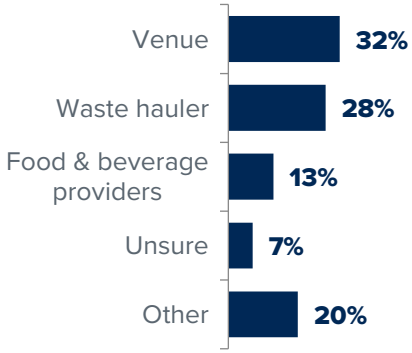
Venue Waste Stream Collection Practices



Recycling

Recycling is the most common form of diversion. It is becoming more common to monetize recycling streams, especially cardboard and aluminum. Determining who owns the rights to monetize aluminum can be complex.

Aluminum Waste Ownership



33%
OF VENUES COLLECT ALUMINUM SEPARATELY

63%
OF VENUES COLLECT CARDBOARD SEPARATELY

Organics and Compost

Composting food scraps, landscape waste, and compostable products like serviceware is becoming an increasingly popular waste minimization and diversion technique. However, successfully diverting compost is dependent upon collection, separation, and local infrastructure.

65%
OF VENUES COLLECT LANDSCAPING WASTE SEPARATELY

63%
OF VENUES COLLECT FOOD & ORGANICS SEPARATELY

63%
OF VENUES COLLECT COMPOSTABLE MATERIALS SEPARATELY



PHOTO PROVIDED BY MERCEDES-BENZ STADIUM

Waste Bins and Signage

Location, size, signage, and design are all important to effectively capture the correct waste stream and reduce contamination. Additionally, waste bins offer an opportunity for the organization to share their commitment to sustainability with fans since this is one of the few sustainability measures that fans directly participate in.

Best practices include bins that are connected, bins that are part of a multi-stream station, or individual bins that are paired together. Bins should also be clearly labeled, sized appropriately, and have distinct bag/liner colors for each waste stream, which may be required by your municipality (i.e., clear for recycling, green for compost, and black for landfill). Recycle Across America is a nonprofit organization offering standardized bin signage.

Types of Waste Bins

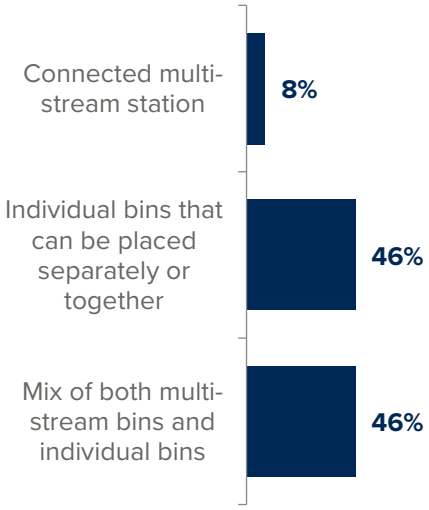




PHOTO PROVIDED BY BC PLACE STADIUM

73%

OF VENUES ARE PAIRING AT LEAST 75% OF RECYCLING AND LANDFILL BINS THROUGHOUT THE FACILITY

The Compost Conundrum

In last year's report, we identified a challenge we have coined "the compost conundrum." This challenge continues to exist this year. While 71% of participants said they are using compostable serviceware in their concessions, only 35% of respondents who offer compostable serviceware are also offering compostable waste bins for fans.

Some venues sort all waste post-event without fan-facing compost bins, but the majority of facilities are likely to be unnecessarily contaminating their recycling stream or adding to their landfill stream. Regardless of sorting, the best practice is to pair the types of waste bins located throughout a facility with the types of materials being sold and distributed. This helps to educate and build fan and staff behaviors, as well as reduce contamination.

To be successfully composted, organic waste, compostable serviceware, and other items require local commercial composting services that accept these products. Commercial composting may not be available in some locations, making it difficult to successfully divert organics and compostable materials from landfills. In landfills, organic waste is buried under other waste and does not have access to oxygen, causing it to undergo anaerobic decomposition, generating methane, a GHG.

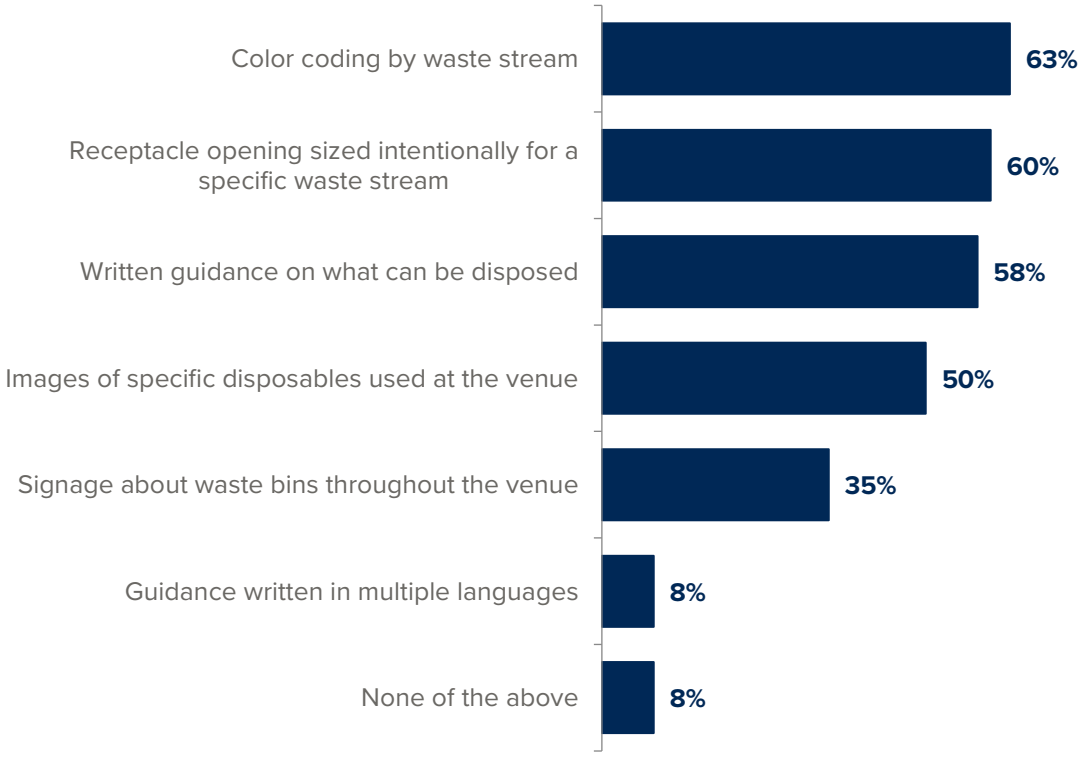
To be most effective, using and diverting organic waste and compostable products requires proper disposal in a commercial compost facility. It is best practice for venues to work with their waste hauler to ensure that compostables are being properly diverted.



PHOTO PROVIDED BY MERCEDES-BENZ STADIUM

Waste Bin Features

Multiple Responses



HIGHLIGHT: BALL ARENA PARTNERSHIP AND RECYCLING INITIATIVES

Home of NBA, NHL, and NLL champions, Ball Arena in Denver, Colorado, is championing the use of recyclable aluminum in pursuit of eliminating single-use plastics. In 2020, Ball Aluminum became the naming rights partner of Ball Arena, home to the 2023 NBA Champion Denver Nuggets, 2022 NHL Stanley Cup Champion Colorado Avalanche, and 2022 NLL Cup Champion Colorado Mammoth. The partnership has since put circularity at the forefront of sponsorship activation and stadium operations.



Last year Ball Arena recycled 183,000 pounds of aluminum while simultaneously preventing the use of 1.1 million plastic cups and bottles.

In 2019 Ball Arena declared it would be the first major professional sports venue to adopt single-use Ball Aluminum Cups® for concession sales. The initiative aims to achieve 100% aluminum for all fan beverage containers. This commitment is supported by a robust on-site aluminum recycling infrastructure, including over 240 recycling bins throughout the arena, ambassadors carrying Ball-branded mobile recycling backpacks, and an incentive program encouraging fans to recycle for a chance to win gift cards.

Aluminum beverage packaging stands as an endlessly recyclable material, crafted for circularity:

- Seventy-five percent of all aluminum ever manufactured remains in active use today.
- Boasting a 69% global recycling rate, aluminum beverage containers are the most recycled beverage packaging.
- The lifecycle of aluminum cans, cups, and bottles is only 60 days from initial use to collection, recycling, and returning to store shelves.

FOOD & BEVERAGE



Like waste, F&B is one of the most visible aspects of a facility's sustainability program. F&B sustainability-related initiatives include limiting the types of serviceware materials being used in concessions and suites, understanding where the food was procured, providing and labeling healthy and alternative food options, and implementing waste management and minimization practices. Since F&B concessions are usually subcontracted to a third party, it is important for venues to share their sustainability policies and expectations with their provider to maximize results.

The country's largest F&B providers often have their own sustainability policies and programs that are implemented across sports venues and other facilities, including entertainment, cultural, and corporate.

Policies and Procurement

Many of our participating venues work with some of the largest F&B providers, who in many cases have some of their own sustainability initiatives. That said, policies and procurement practices are consistent with last year's data and are higher than the percentage of venues who have their own standalone sustainability policy.

40%
OF VENUES SAY THEIR F&B PROVIDER HAS A FORMAL SUSTAINABILITY POLICY AT THE VENUE

44%
OF VENUES SAY THEIR F&B PROVIDER IS TRACKING ITEMS PROCURED LOCALLY (PRODUCED WITHIN 250 MILES)

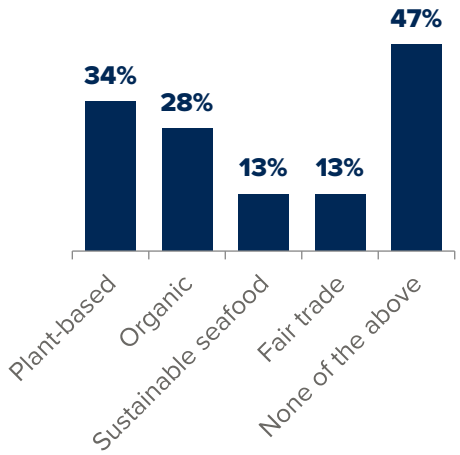
28%
OF VENUES OR F&B PROVIDERS HAVE EFFICIENCY REQUIREMENTS FOR FOOD SERVICE EQUIPMENT

Menu

Seventy-eight percent of venues serve vegetarian and/or vegan menu items. Of those, 54% are promoting these items via dedicated outlets, advertising, or other promotion. F&B providers are also beginning to track offerings with sustainable attributes.

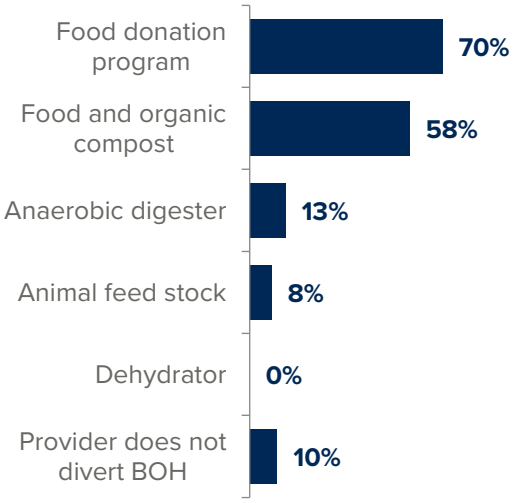
Sustainable Attributes Tracked by F&B Provider

Multiple Responses



BOH Food/Organics Diversion Techniques

Multiple Responses

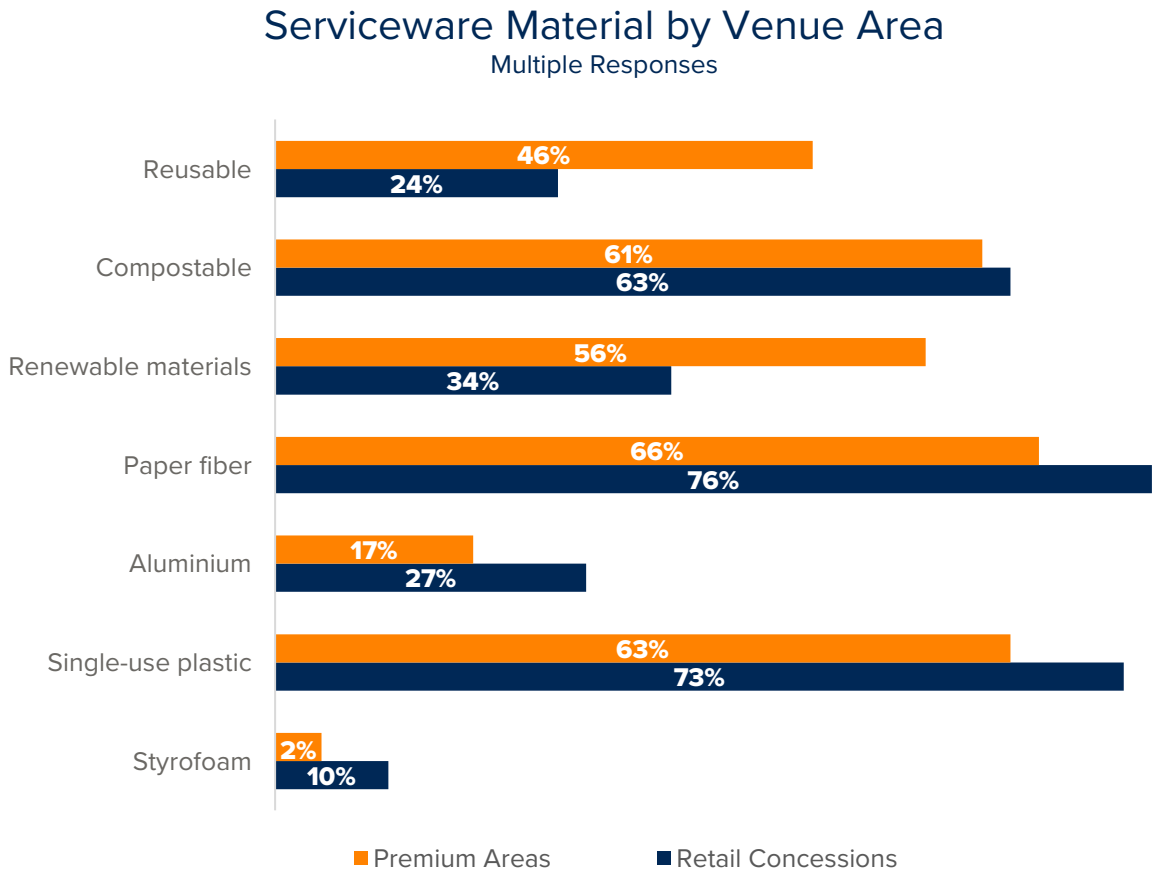


BOH Organics Diversion

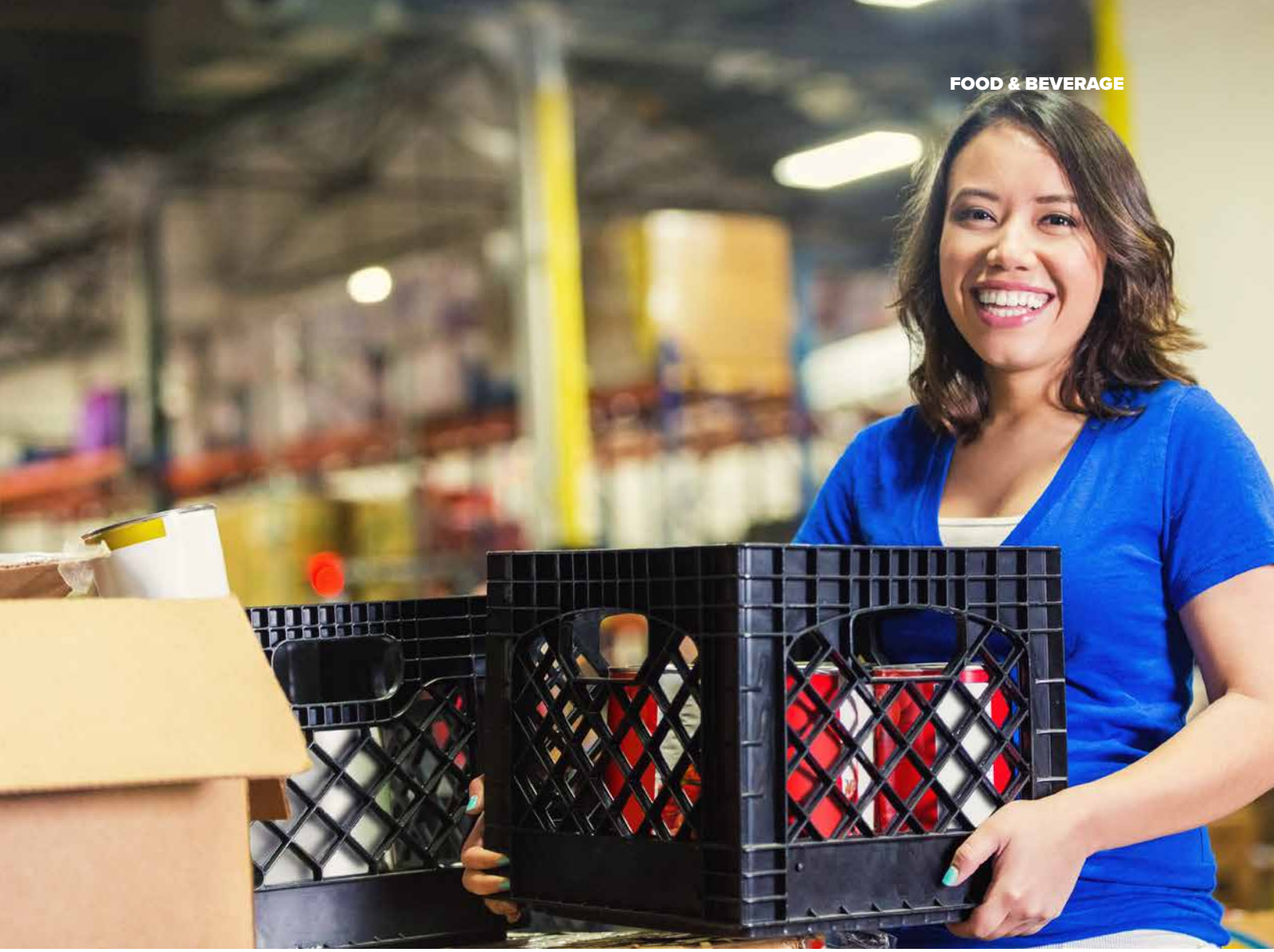
BOH organics diversion is the first step in food waste diversion. Many venues use more than one tactic, but commercial compost continues to be the most common way to divert BOH organics. The percentage of facilities who do not collect or divert BOH organics declined from 30% to 10%. This is largely attributed to year-over-year improvement from repeat participants. If supported by local commercial composting facilities, this is a great opportunity to improve waste diversion because BOH procedures can be controlled by staff and do not rely on fan behaviors.

Serviceware

Single-use plastic continues to be one of the most common materials used in concessions and premium areas. In concessions, 63% use plastic utensils, 57% use plastic cups, and 80% using plastic lids. In premium areas, it is more common for reusable cups to be used, but 65% still use plastic cups. Although it is a cheap material, single-use plastic serviceware is not recyclable in a municipal facility. Using alternative compostable, recyclable, or reusable materials is imperative to reducing waste. To reduce single-use plastics, some facilities and events are engaging reusable cup companies.







Water Bottle Refill Stations

The percentage of facilities offering water bottle refill stations is only 48%. While water bottle stations can be an easy way to reduce single-use plastics, the loss of concessions revenue from water bottle sales can pose an internal challenge. Of those offering water refill stations, 21% provide cups with 16% being paper/compostable and 5% being plastic.

Food Donation

Eighty-four percent of venues are donating unused food. Not only does this divert waste, but it also serves the community and prevents edible food from being wasted. By channeling uneaten food to donations, venues proactively enhance their waste diversion rate, emphasizing its significance within the broader framework of sustainability planning.

This effort is supported by legal frameworks in North America, as both the U.S. and Canada have instituted legal protections that shield entities from liability concerns when participating in food donation. In the U.S., these legal safeguards are known as the Good Samaritan Food Donation Act. Mexico also champions food donation and liability protection, and several Mexican states have liability protections.

WATER



Water is our life source, and it is essential to wellbeing but is often overshadowed by GHG emissions and waste management when it comes to sustainability. With rapid urbanization and climate change, water scarcity is on the rise. In 2023, GSA published a playbook called **All Sports are Water Sports: Water Playbook**, noting that 2.2 million people in the U.S. do not have access to clean and affordable water. Sports venues and teams have a responsibility to implement responsible water management practices to conserve this precious resource for our communities.

With the exception of courts, water plays an important role in maintaining the field of play. It takes approximately 12,000–15,000 gallons of water to make an ice sheet for hockey, and an NFL football field requires 36,000 gallons to water the field with one inch of water. Beyond the field of play, venues use water for housekeeping, restrooms, and sanitation, as well as F&B operations. Processes and technologies to track, minimize, recapture, and reuse water can help preserve this natural resource.

Tracking Water Consumption and Capturing Rainwater

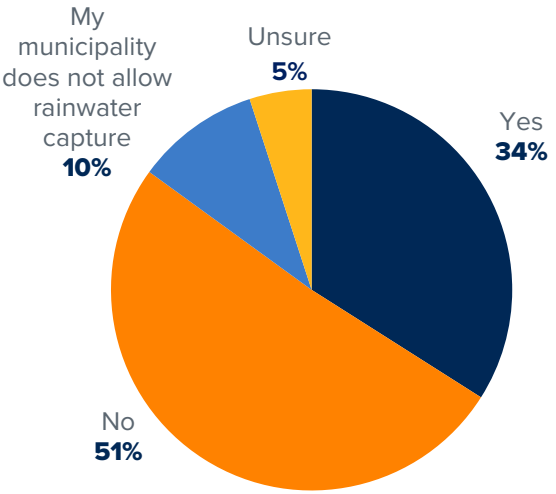
Tracking water usage is important for a variety of reasons, including helping venues quickly identify leaks in irrigation equipment, establishing baseline and goals, and tracking spend. Tracking has become the norm, with 93% of venues tracking water consumption annually. This year, there was also a rise in venues using sensors and monitoring solutions. Installing new equipment or optimizing existing moisture monitoring equipment and irrigation timers can reduce water waste and costs.

48%
OF VENUES ARE USING WATER METERS OR SENSORS TO MONITOR LEAKS

43%
OF VENUES ARE USING SMART SPRINKLERS

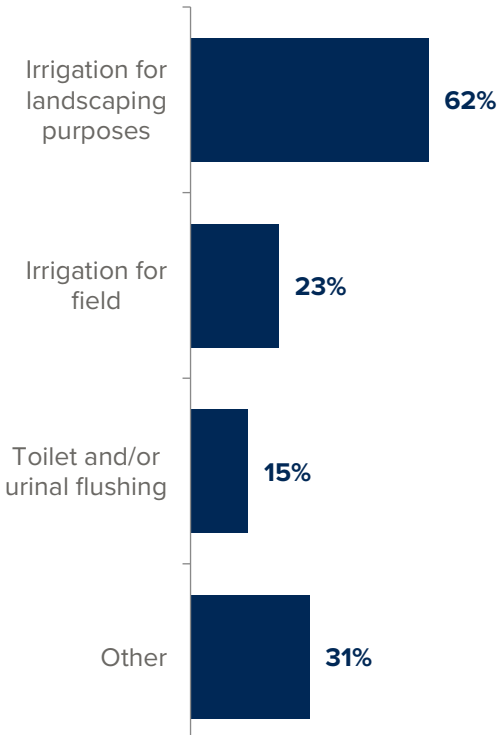
Water capture and reuse is a less common practice, as it may require additional permission or collaboration with the municipality. Collected rainwater is mostly used for landscape irrigation. In addition to field irrigation and toilet and/or urinal flushing, rainwater is also collected in retention ponds.

Rainwater Capture



Use of Collected Rainwater

Multiple Responses



Landscaping

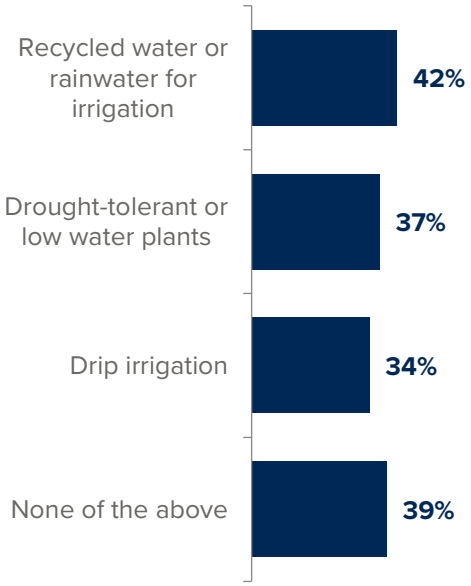
Landscape design can have multiple functions, including helping prevent heat gain, manage runoff, provide shade, and protect native plants and biodiversity. While many venues are implementing more green landscaping practices, only 8% have any policies protecting the flora, fauna, and biodiversity of the venue and surrounding perimeter.

7%

OF VENUES TREAT AND REUSE SEWAGE WATER FOR LANDSCAPE IRRIGATION

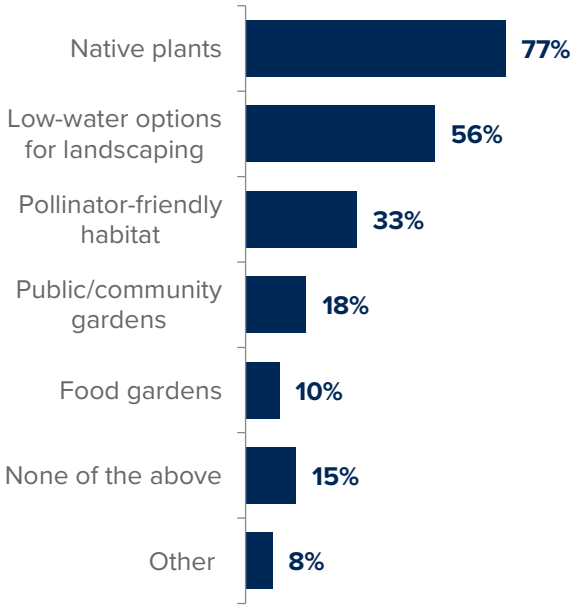
Water Conservation Measures for Landscaping

Multiple Responses



Landscaping Practices

Multiple Responses



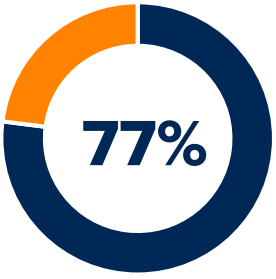




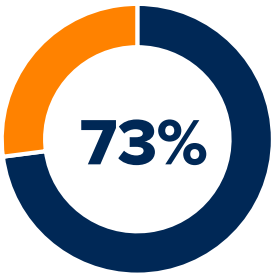
Water Fixtures

While not all venues require field irrigation or create ice, all venues do utilize a significant amount of water to keep their venues clean, fans fed, and bathrooms running. Installing more efficient fixtures can have a positive impact on a venue's bottom line. According to the EPA, WaterSense-labelled low flow fixtures can reduce water use by at least 30%. The following is the average percentage of efficient fixtures in venues.

Low-Flow Venue Faucets (<1.5 GPF)



High-Efficiency Venue Toilets (<1.28 GPF)



Waterless Urinals



Water Offsets

While energy offsets have emerged as a key form of mitigation for energy consumption, none of the responding facilities are currently purchasing Water Restoration Certificates® (WRCs) to compensate for water consumption during the year.

Increasingly, freshwater systems across the globe are being taxed by extreme heat and the changing climate. Restoring water to critically dewatered rivers and streams by purchasing WRCs helps restore the ecological, recreational, and economic health of critical freshwater ecosystems. If possible, venues should consider investing in WRCs in a local watershed to offset their environmental impact.

You can learn more about how purchasing WRCs from the Bonneville Environment Foundation (BEF) can support your local projects by visiting the BEF WRC Portfolio.

ENVIRONMENTAL RESILIENCE



This year, the survey included new questions about planning for climate-related disasters. The addition of the environmental resilience section is in response to the increasing occurrence and severity of climate disasters globally. Their destruction invokes safety concerns and a constant rise in recovery funding year over year.

NOAA National Centers for Environmental Information (NCEI) reported $1.4 trillion in damages from extreme weather and related disasters in the U.S. from 2010 to 2022. In 2022, there were 18 separate disasters that each resulted in at least $1 billion in damages. These represent a wide range of disasters including winter storms, cold wave events, wildfires, droughts and heat waves, flooding, tornadoes, and hurricanes.

As of Sept. 11, 2023, NCEI reported 23 weather or climate disasters in the U.S. with losses exceeding $1 billion each and resulting in 253 deaths. This year's data aligns with recent trends in occurrence of climate disasters.

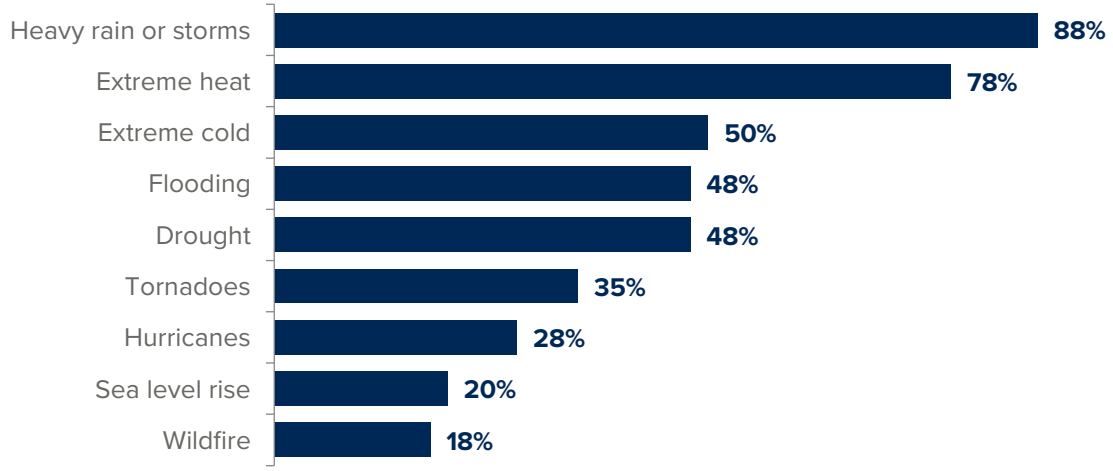
It is our goal to bring awareness to facilities to encourage them to prepare and adapt to these ever-growing climate challenges.

APTIM collaborated with Rebuild by Design on the Atlas of Disaster, a project synthesizing data into county-by-county information on climate-related disasters. The Atlas of Disaster confirmed that 90% of counties in the U.S. have had a federal disaster due to extreme weather in the past 10 or more years. These disasters impact transportation networks, supply chains, utility services, and local economies. Between 2011 and 2021, federal programs spent over $91 billion in post-disaster assistance. This emphasizes the need for mitigation to prevent future losses and the opportunity to utilize federal funding to support collaborative hazard mitigation through resilient redevelopment.

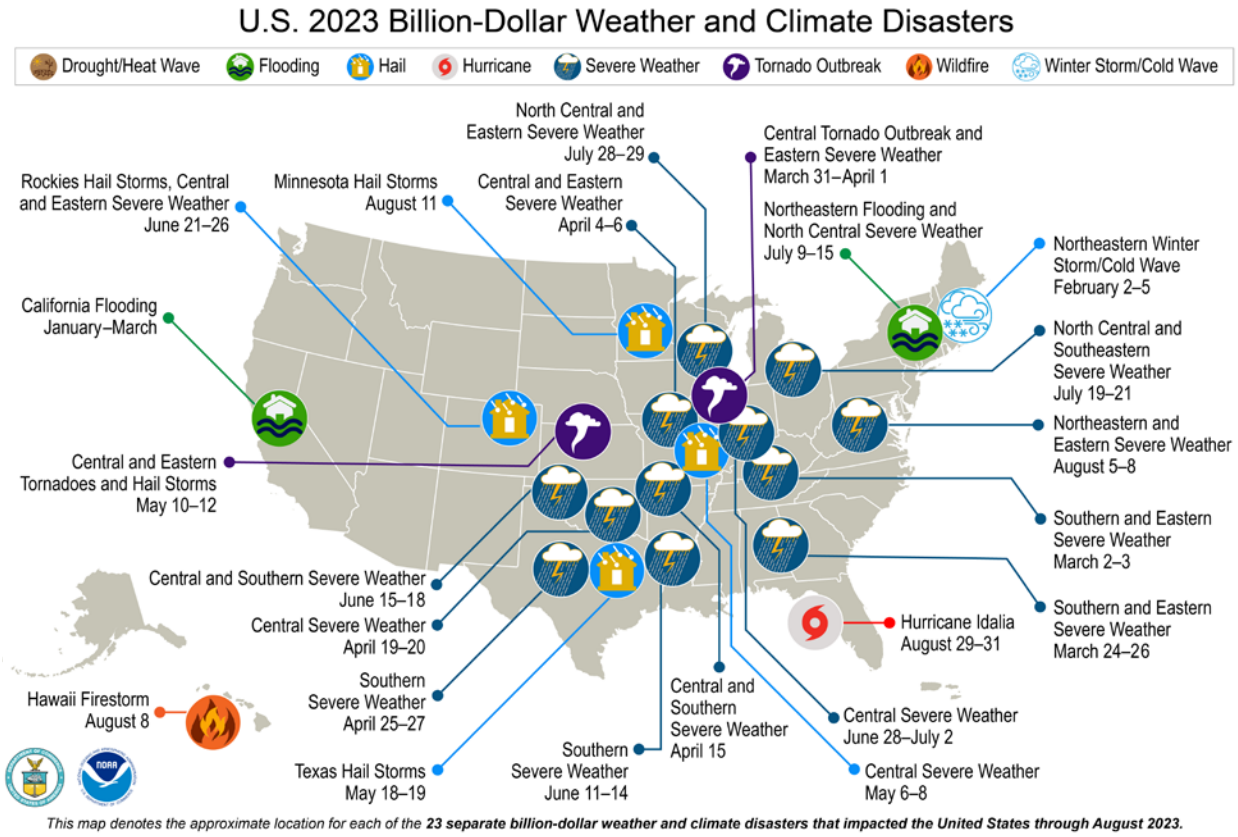
With the increasing threat of disasters, 45% of venues have considered vulnerabilities they may face due to the chronic stressors of climate change. Of those who have considered these vulnerabilities, only 8% have a climate adaptation plan for their venue. However, 33% plan to develop an approach in the next two years.

Climate Risks Considered by Venues

Multiple Responses



Considering the disasters that are more prevalent in a venue's region and prioritizing resilience efforts based on potential risks could help reduce damages and improve safety measures. The map below only illustrates the most expensive individual climate disasters in the U.S., but areas may be plagued by any variety of events that are less costly.



Source: [NOAA NCEI U.S. Billion-Dollar Weather and Climate Disasters (2023)](#).

Get Started with Your Environmental Resilience Planning

Step 1: Assess Your Weather and Climate-Related Disaster Risks

Begin by understanding the weather and climate-related risks and natural disasters that are common in your venue's region. There are a variety of tools available to gather information:

- [Federal Emergency Management Agency | National Risk Index Map](#)
- [National Hurricane Center | Storm Surge Risk Maps](#)
- [NCEI | Risk and Vulnerability Mapping Tool](#)
- [NOAA | Climate Mapping for Resilience and Adaptation](#)
- [NOAA | Sea Level Rise Viewer](#)
- [Rebuild by Design | Atlas of Disaster](#)
- [Risk Factor | Find Your Property's Climate Risks](#)

Review the code (municode) and land use plans of your local county and municipality.

- Identify plans related to the floodplain, seawalls, sea level rise, future conditions, or groundwater elevations.
- Determine the minimum elevations for new structures and systems if replacing or adding protective infrastructure to mitigate losses.

Step 2: Operational Vulnerabilities

Consider how climate-related disasters might affect your venue operations, including its:

- General ability to host games and events
- Supply chain disruptions
- Energy reliability
- Water reliability
- Waste management and hauler disruptions
- Parking or transportation disruptions
- Effects on full-time employees and game-day staff
- Insurance coverage availability or changes

Step 3: Collaborate with Your Community

Engage with your city and county for disaster planning, response, and recovery efforts.

- Contact your local county emergency manager and engage in local planning.
- Consider joining the National Adaptation Forum.
- Participate in community forums to encourage your municipality to mitigate hazard impacts, improve your Community Rating System score, and plan for changes in future conditions and increased costs associated with insurance. This tool projects changes to flood insurance premiums if no community scale mitigation measures are implemented.

Step 4: Plan to Mitigate Risks

In addition to developing plans to mitigate the damage and effects to your facility, you can consider projects that support your community, such as:

- Developing and updating your emergency management plans
- Creating water diversion and storage that supports rainwater capture
- Increasing green spaces by planting trees and vegetation that can create shade, reduce urban heat and surface temperatures, and reduce rainwater runoff
- Leveraging backup power generation or renewable energy for the community in case of emergency

Step 5: Find Local Funding and Grants for Resilient Infrastructure

Funding and incentives are available for a variety of sustainability initiatives, as well as resilient infrastructure.

- **Coastal Resilience Regional Challenge:** As part of the Inflation Reduction Act, $575 million is available through the NOAA Climate Resilience Regional Challenge to build resilience in coastal regions with an emphasis on risk reduction, regional collaboration, equity, and building enduring capacity. Learn more here.
- **Naturals Resources Canada's Climate Change Adaptation Program** (2022–2027): This program was created to fund cost-shared projects that advance adaptation progress in Canada. The latest round of proposals closed in September 2023, but stay informed here.

COMMUNICATION, FAN ENGAGEMENT & SOCIAL SUSTAINABILITY PROGRAMS



An effective sustainability communications strategy creates internal and external awareness, develops buy-in for programs, and offers opportunities for fan and employee education. As sustainability-focused processes become fully integrated in facilities, it is important they are shared.

Community and social responsibility programs and charitable partnerships are more developed and mature across the sports industry than most environmental programs. Many teams and venues have established programming, communications, and engagement for their community and philanthropic programs.

For example, the Jimmy Fund first partnered with the Boston Red Sox (then the Boston Braves) in 1948 to host a radio broadcast at the bedside of a young cancer patient, “Jimmy,” who was surprised by Braves players. The Jimmy Fund is still an official charity of the Boston Red Sox.

Website Communications

Prominence and transparency are key to web communications. This year, with the addition of new responding venues, there was an overall decrease in the percentage of venues that have website space dedicated to sustainability messaging, dropping from 52% to 40%. This is a missed opportunity as website presence can serve as a hub for additional information for fans and key stakeholders.

Website Communications

Yes: **40%**	No: **60%**

Branded Sustainability Programs

Branded programs create opportunities to establish consistent, recognizable messaging and assets that could be activated by sponsors. Thirty percent of venues have a branded program, down from 36% last year.

Branded Sustainability Programs

Yes: **30%**	No: **70%**

"Let's Go Green, Let's Go Bucs"
is the public sustainability program for PNC Park, home of the Pittsburgh Pirates. Under that umbrella, the Pirates and PNC Park promote their partnership with Duquesne Light and their Power Hitters Program to support planting trees, their urban garden, and their sustainability highlights.



PHOTO PROVIDED BY LINCOLN FINANCIAL FIELD

Permanent Sustainability Messaging

Yes: **31%**	No: **69%**

In-Venue Messaging

In-venue messaging is imperative to educating and beginning to change fan behavior. Seventy-two percent of venues have some type of in-stadium messaging via announcements, temporary signage, big screens, etc. However, only 31% have any permanent sustainability messaging in the venue.

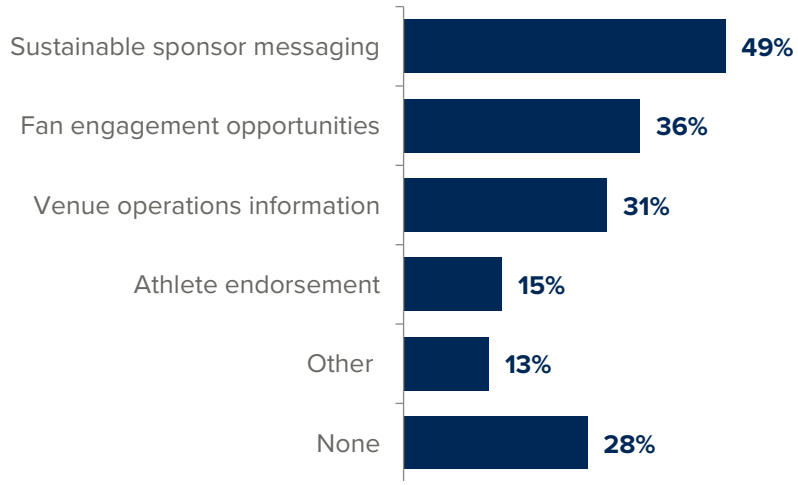
Messaging can be generally informative about the venue's practices or instructional (i.e., related to waste separation). Venues indicate that sponsor-related sustainability messaging is most common. Some venues even add a little humor, such as this sign above the urinals at Lincoln Financial Field.



PHOTO PROVIDED BY ROCKET MORTGAGE FIELDHOUSE

Types of Sustainability Messaging

Multiple Responses



Social Sustainability and Community Programs

Sports teams have had community and social responsibility programs for decades, and programs are typically more developed than environmental sustainability programs. Teams and venues focus on a variety of key causes, including youth enrichment, mental health, health or cancer awareness and research, community charities, and more. Overall, 68% dedicate a day or a game to community engagement or social responsibility initiatives. Many respondents have foundations and branded community engagement programs. It is also common to see reporting from leagues, teams, and venues related to their social responsibility efforts.

73%
OF VENUES HAVE SOCIAL RESPONSIBILITY POSITIONS

68% OF THOSE HAVE A DEDICATED DEPARTMENT

ADDITIONAL PROGRAMS: GREEN TEAMS, WELLNESS & ACCESSIBILITY



Employee and fan wellness and accessibility is a growing trend. This inclusion goes beyond the legal requirements of safety, accommodations, and equal opportunity and instead aims to welcome and accommodate employees and fans. Engaged employees will be more efficient and more likely to be retained.

Green Teams and Employee Engagement

Green teams, or sustainability committees, are crucial for an organization to achieve their sustainability goals. Sustainability policies require support from multiple departments across the facility. From facility operations to engineering to marketing, these departments should all have their own sustainability lead, which when combined, will make up the green team. These committees increase collaboration across departments and often lead to new ideas and solutions that may not have been obvious to just one person or department. Additionally, green teams play an important role in engaging other employees and educating them on the sustainability goals of the organization.

This year, there is an increase in the percentage of venues that have green teams as well as those who conduct annual trainings. Trainings are mostly conducted with the housekeeping and facilities and operations teams.

Integrating sustainability into employee goals is rising: 29% of participating venues are reporting that sustainability is integrated into goals for facilities and operations team members, 27% for housekeeping, and 17% for F&B. However, only 7% note that sustainability is part of the goals for administration and front office.

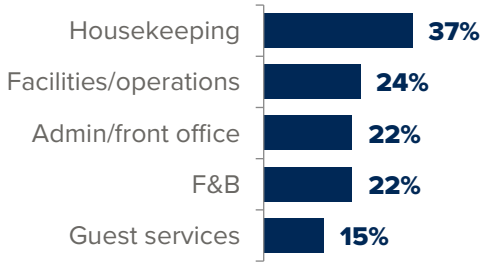
53%
OF VENUES HAVE GREEN COMMITTEES

41%
OF VENUES CONDUCT ANNUAL SUSTAINABILITY TRAININGS

20%
OF VENUES RECOGNIZED OR INCENTIVIZED* STAFF WHO PARTICIPATE IN THE VENUE'S SUSTAINABILITY EFFORTS

Departments Conducting Annual Sustainability Training

Multiple Responses



*Incentives include drawings and giveaways, bonuses, special recognition, and annual lunches.



PHOTO PROVIDED BY BUSCH STADIUM

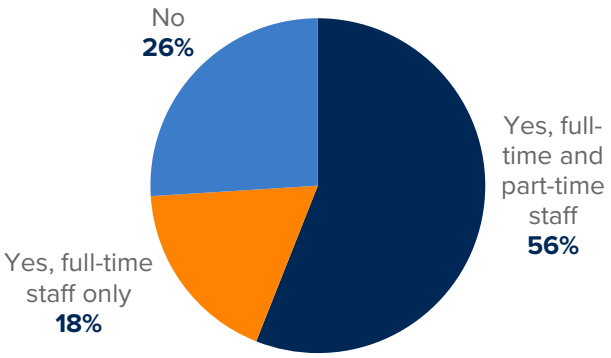
Employee Wellbeing

Wellness programs support employees by encouraging behaviors that improve health and create a happier work environment. Benefits of an employee wellness program may include increased productivity, morale, and retention.

More venues have a wellbeing policy in place this year, applying to both full-time and part-time employees, compared to 46% in 2022.



Wellbeing Policies in Place

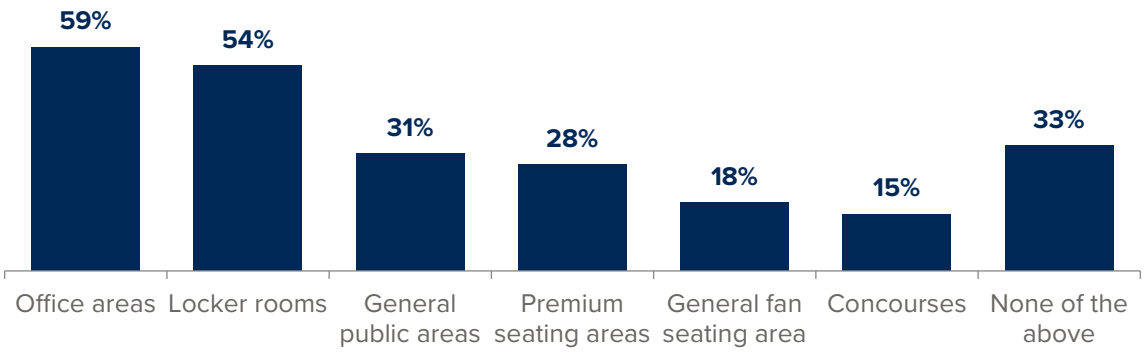


Air Quality

This year, the percentage of venues monitoring air quality in indoor spaces has decreased overall with the addition of new participants.

Monitoring Indoor Air Quality

Multiple Responses



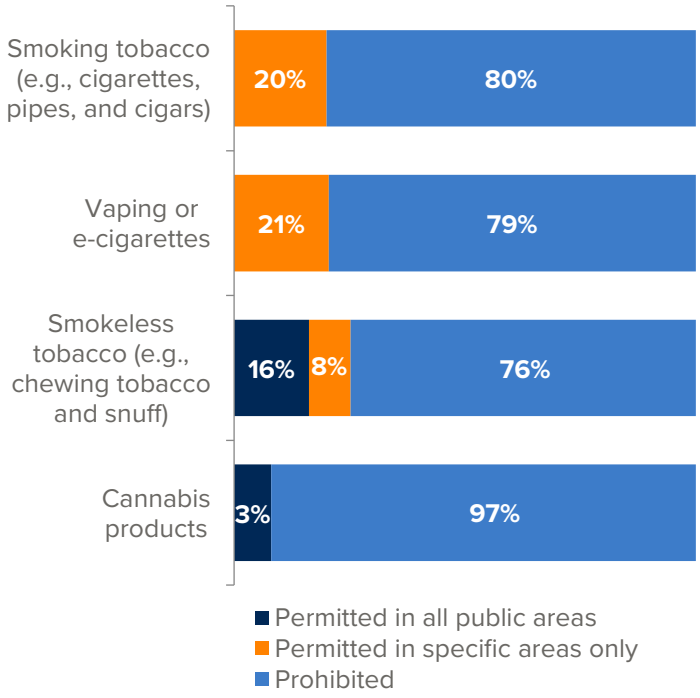
Tobacco

Banning smoking in public places is common practice and required by law in most places. However, permitting tobacco in other forms, such as chewing tobacco, vaping, and e-cigarettes, still varies.

Inclusive Accommodations

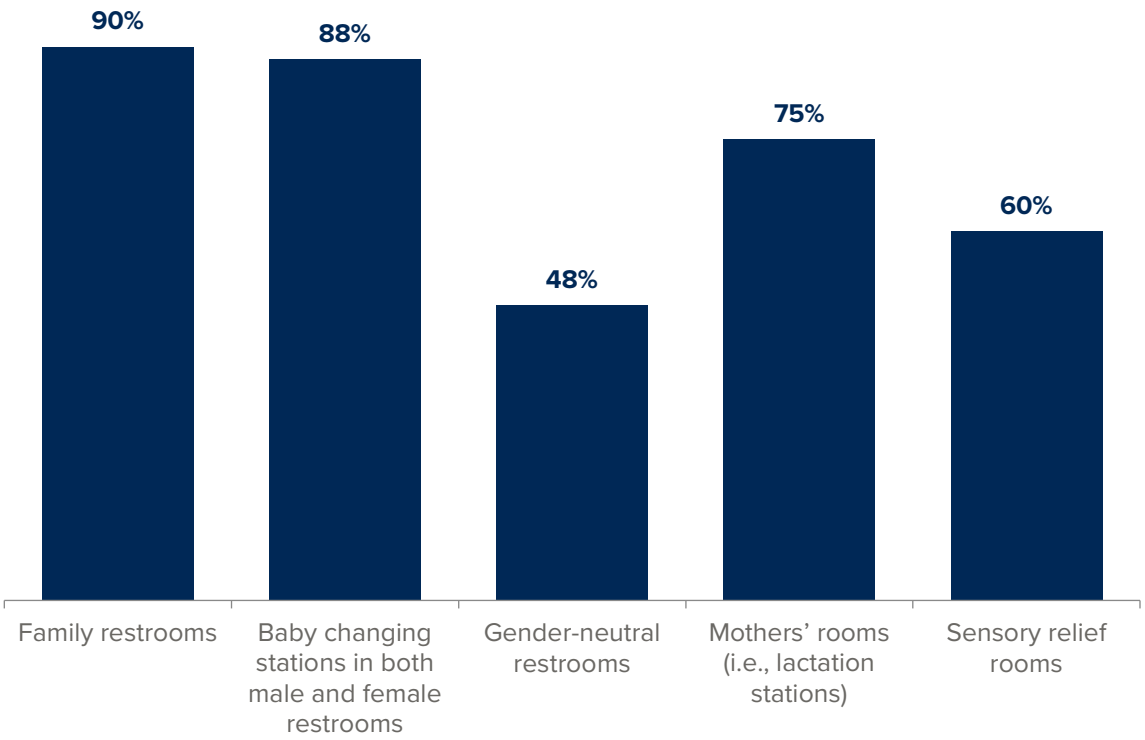
Most, if not all, facilities provide inclusive accommodations, such as lactation rooms, sensory relief rooms, and family bathrooms.

Tobacco Policies



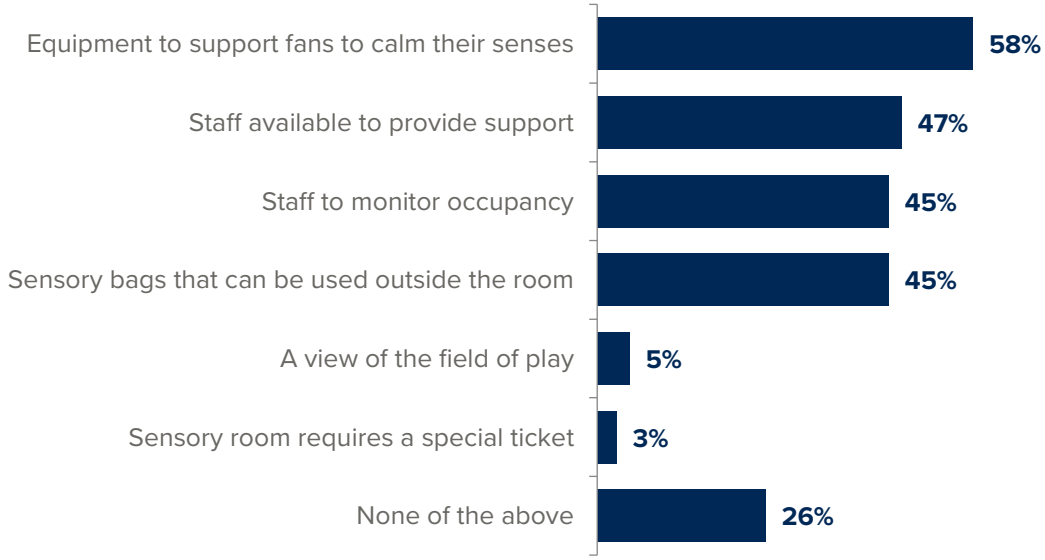
Inclusive Offerings at Venues

Multiple Responses



Sensory Room Features

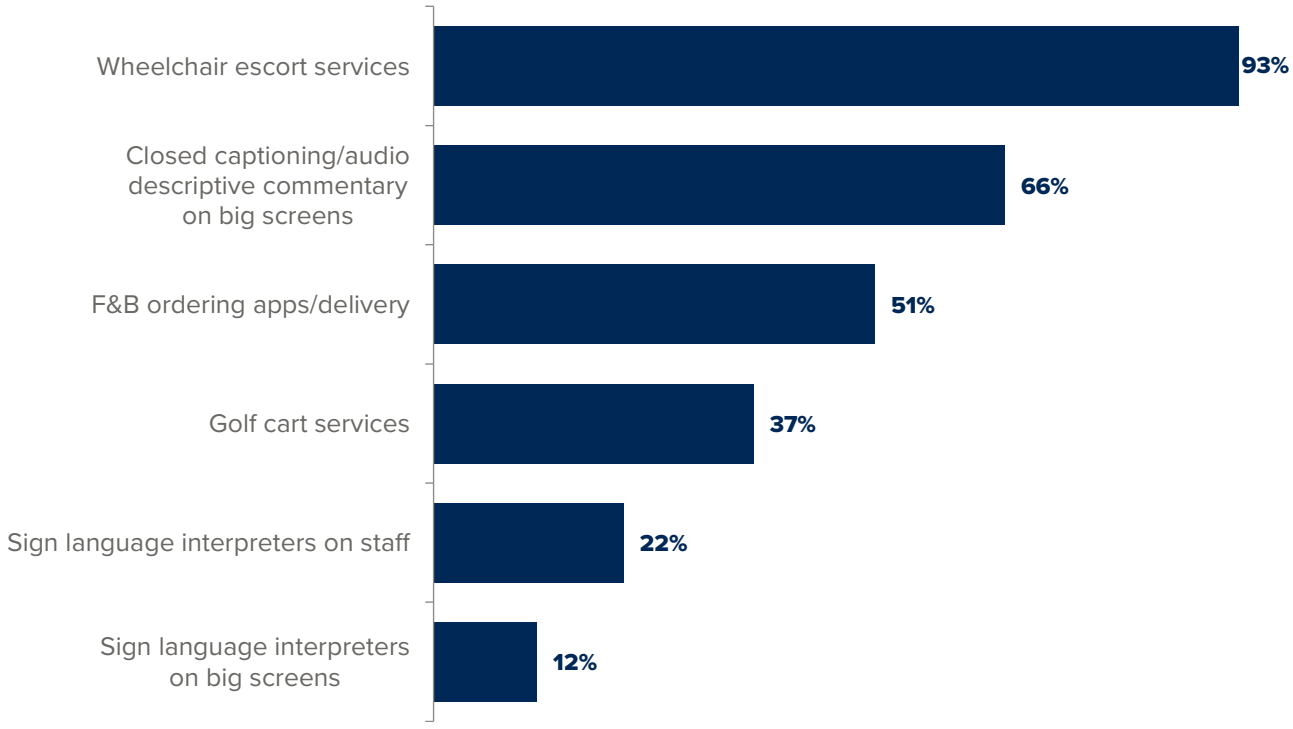
Multiple Responses



In addition to accommodations required by law for fans and employees, 73% of U.S. venues provide more accessible seating than required by the Americans with Disabilities Act. Some stadiums are implementing additional inclusive accommodations, but that proportion is relatively low.

Additional Accessibility Accommodations

Multiple Responses



SPONSORSHIP



As consumers and fans become more educated about and engaged in environmental sustainability, they are beginning to apply that to their spending behaviors. Research by PDI Technologies found that willingness to pay more for environmentally friendly products crosses demographic boundaries, including household income, politics, geography, and generation. This is particularly true for Gen Z.

Brands are investing with teams and venues for environmental sustainability and social responsibility activation opportunities. The brands of the future across a variety of categories are being built and led by a generation of entrepreneurs who recognize shifts in consumer expectations and purchasing behavior. Sports properties should prepare authentic, transparent sustainability platforms in anticipation of this wave of future corporate partners.

For example, Huera Foods will promote its plant-based foods via a sponsorship with FC Barcelona Femeni of Spain's Liga F (women's soccer league). Similarly, Oatly signed on with VfL Wolfsburg, German Frauen-Bundesliga (women's soccer league) champions, to support the club's Race to Zero initiative, in which the club wants to achieve climate neutrality and net zero emissions by 2025. It is interesting to note that these two examples are in women's professional soccer/football.

Sustainability Partners and Activations

In addition to traditional partner categories that are leveraging sports partnerships for their sustainability platforms, companies endemic to environmental sustainability are leveraging sports media and sponsorship to reach their target audiences, creating new sponsorship categories.

However, the industry is susceptible to greenwashing and sportswashing, and rightsholders must be able to offer legitimate sustainability initiatives, as well as do their due diligence to engage with brands who can authentically align with those initiatives.

Increased sponsorship revenue is a recognized benefit of sustainability practices. Sixty-four percent of venues reported that sponsorship revenue has increased 'somewhat' or 'a lot' because of sustainability programs, compared to 47% last year.

Forty-seven percent of participants said they have in-game activations or messaging that supports sustainability. Sponsor revenue can be an important source of funding for sustainability improvements.

48%

OF VENUES SAID THEY HAVE SPONSORS WITH A SUSTAINABILITY FOCUS





THE BUSINESS CASE FOR SUSTAINABILITY



In today's rapidly evolving landscape, sustainability transcends altruism as a vital business imperative. While the focus aligns with environmental and social goals, its benefits extend to economic realms.

From driving cost savings to fostering expanded revenue possibilities, the case for adopting sustainability measures is grounded in tangible business gains. This holistic approach underscores its support of the triple bottom line: economic, environmental, and social benefits.

For sports venues, return on investment (ROI) can result from reduced operating costs; increased revenue from fan engagement, sponsors, and special events; employee engagement; and improved brand reputation—all of which are promoted by sustainable operations and communications.

Reducing Operating Costs

Some sustainability activities can reduce operating costs. Implementing energy efficient lighting, advanced HVAC systems, and renewable energy sources can significantly reduce energy consumption, resulting in lower utility bills and enhanced ROI over time.

Energy efficiency and renewable energy projects can have utility incentives or tax benefits available to help offset the initial investment. Prior to making any investment decisions, consult your local utility to understand available programs and venue eligibility for such incentives. The DSIRE database can serve as a valuable resource, offering a snapshot of initiatives available within your state.

Efficient water management systems, such as installing low-flow fixtures and optimizing irrigation, lead to reduced water usage, which translates to decreased operational expenses. Waste reduction strategies, including comprehensive recycling and composting programs, also minimize waste disposal costs, further increasing cost savings.

The surge in consumer demand for sustainable products, evolving regulatory landscape, and financial incentives stemming from policies like the Infrastructure Bill collectively propel the rapid development of more efficient technologies. As a result, costs are decreasing while these technologies are achieving scale.

A prime example is the significant cost reduction in LEDs over recent years, driven by a staggering 15-fold decrease thanks to the increase in sales volume. This impressively dynamic environment underscores the need for ongoing assessment and adaption of sustainable strategies.

Increasing Revenue

While sports enthusiasts may not prioritize sustainability any more or any less than the average American, the surge of interest among younger generations and the broader population is compelling. This evolving consumer behavior trend sees individuals increasingly using their dollars to reward companies that share their values. Reports such as Sports Innovation Lab's, Getting into the Game, and Knit's research on Gen Z delve into these trends, unveiling the potential of sustainability-driven strategies to foster revenue growth and resonate with a conscious consumer base.

Sponsors are well-aware of the growing consumer demand for sustainable brands and are increasingly likely to invest their money in teams and venues that reinforce their sustainability brand positioning. Additionally, the SEC indicated that ESG reporting will likely impact access to financing and could suggest that current and potential sponsors will also look to invest in teams and venues that will strengthen their ESG report. In certain cases, sponsors are motivated to directly fund specific sustainability initiatives, reinforcing the link between sustainability and revenue growth. Nielsen Sports predicts that rightsholders with a sustainability agenda may see an 11% increase in sponsorship revenue over the next three to five years.

In addition, the ability for a venue to attract special events and music tours may also depend on its sustainability initiatives. From Coldplay to Billie Eilish to the Super Bowl, Olympic Games, and FIFA World Cup™, talent and organizations are providing sustainability requirements as part of the bid or selection process for hosting special events.



PHOTO PROVIDED BY HARD ROCK STADIUM

Employee Experience

The ROI extends to enhancing employee experiences through initiatives like green teams and DEI programs. These efforts provide benefits that may not be immediately quantifiable but can enhance employee retention and drive improvements to operational efficiency. By fostering a workplace environment that values sustainability and inclusivity, venues can reduce expenses associated with staff turnover, including the loss of valuable institutional knowledge.

These initiatives provide employees with avenues to take pride in contributing to something meaningful beyond their routine tasks, leading to increased job satisfaction and overall engagement. Investing in such programs yields intangible yet significant returns, aligning the venue's core values with employees' wellbeing, while fostering a culture of shared purpose and commitment.

Brand Reputation and Community Engagement

Sustainability initiatives contribute to building a positive brand reputation and fostering strong community engagement. The commitment to sustainable practices resonates with stakeholders and patrons who increasingly seek brands that prioritize environmental responsibility. Such alignment strengthens brand loyalty and positions the venue as a conscientious entity dedicated to a larger purpose.

Sustainability-driven venues actively engage with their local communities through events, workshops, and marketing initiatives, creating meaningful interactions that contribute to community wellbeing. This connection not only enhances the venue's image but also translates into deeper community support, ultimately enhancing market position and attractiveness to fans and partners.

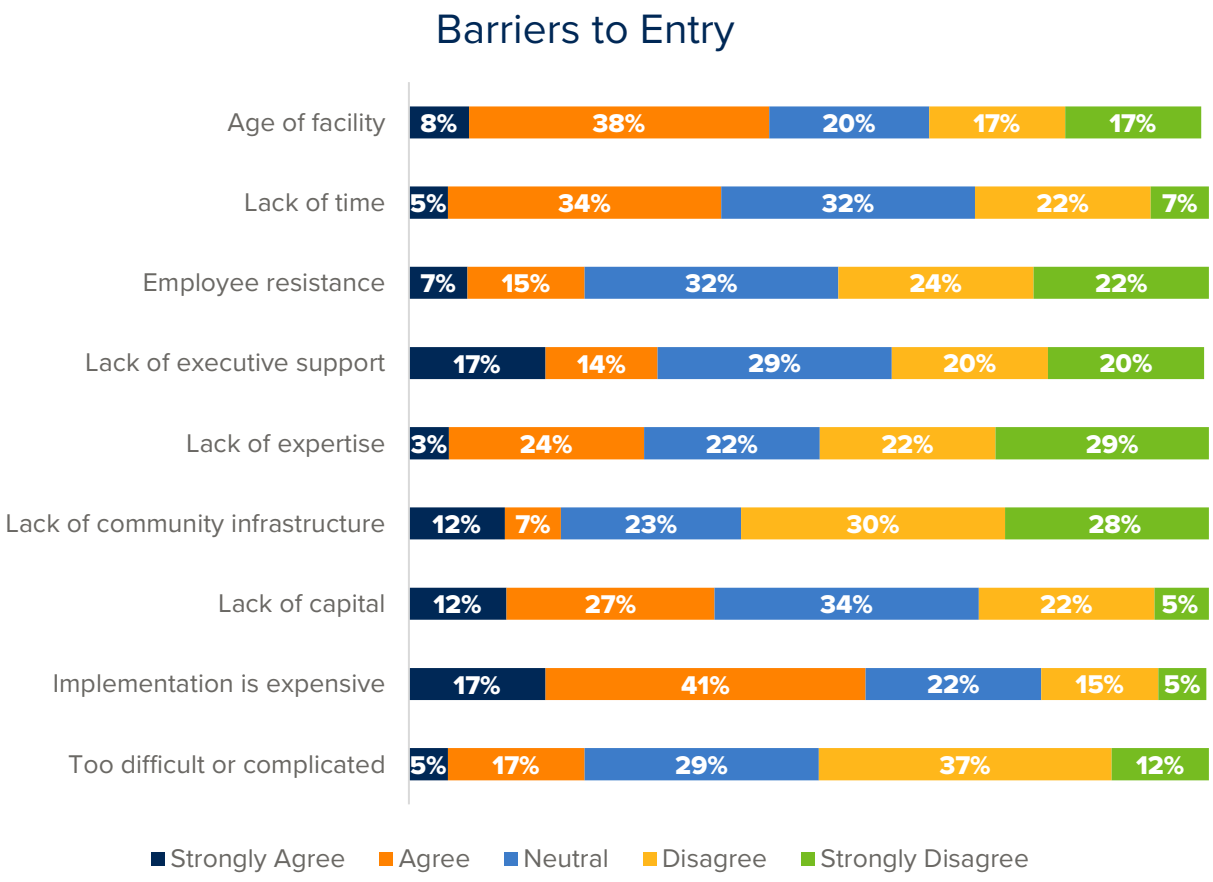
Barriers and Benefits

The barriers to sustainability efforts are important to understand in order to better collaborate to overcome them. We asked participants how strongly they agree or disagree with potential barriers to sustainability efforts.

The most common challenges include:

- Cost of implementation (58% agree or strongly agree)
- Age of the facility (46% agree or strongly agree)
- Lack of executive support (31% agree or strongly agree)
- Lack of capital (39% agree or strongly agree)

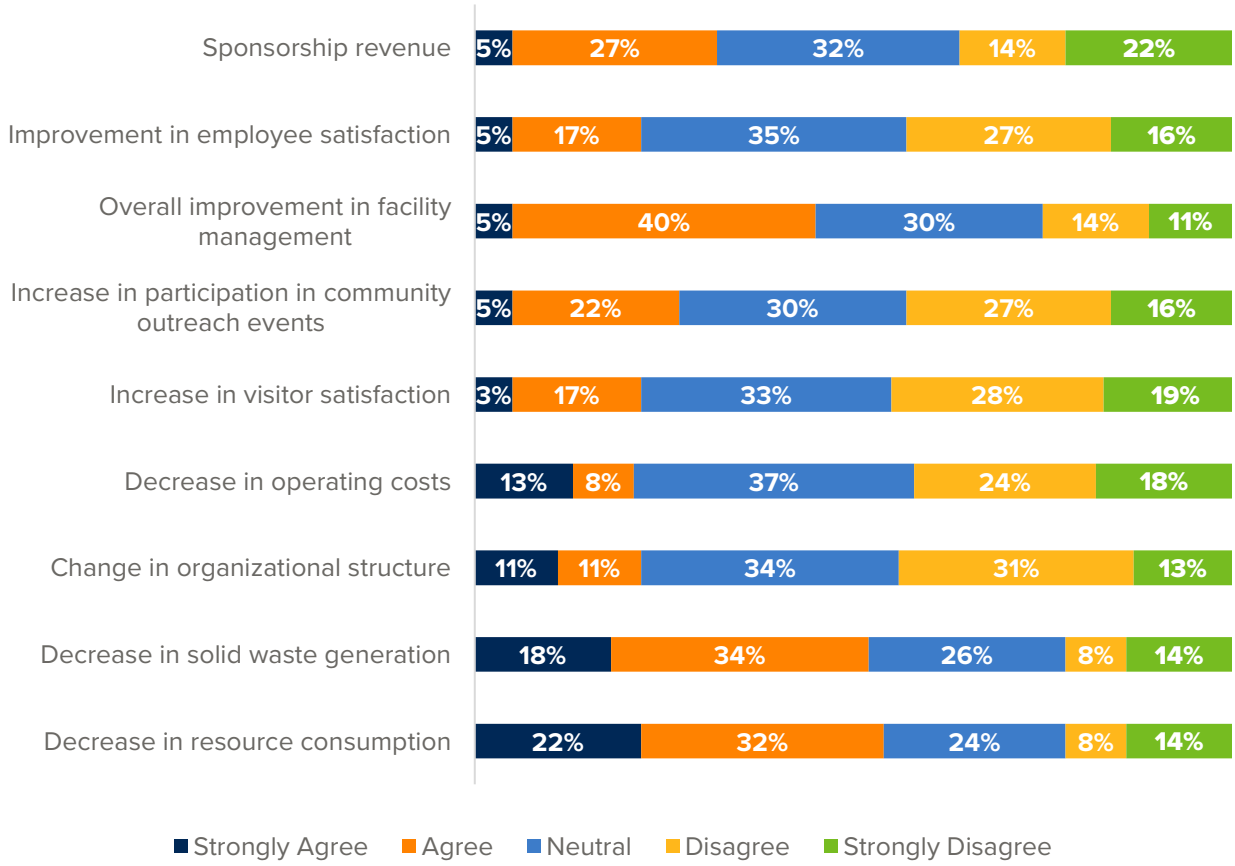
Respondents were also asked about the potential positive results they have seen from their sustainability programs. Similarly, we asked respondents to share what they perceived as benefits to sustainability. These benefits include financial, operational, and less tangible benefits related to employee or fan sentiment.



The most common benefits include:

- Decrease in resource use (54% agree or strongly agree)
- Decrease in waste generation (51% agree or strongly agree)
- Overall improvement in facility management (45% agree or strongly agree)

Benefits



LOOKING TO THE FUTURE



In the third year of SSI, we experienced significant growth in participation and are proud to have retained 96% of 2022 participants. This year we engaged with GSA to become a Play to Zero partner; co-authored the GSA playbook, Building for the Next Generation: Venue Playbook; and participated in conferences and webinars.

As we look ahead to 2024, we will continue to recruit additional participants. Arenas are lagging behind ballpark and stadium participants, so we hope to further engage arenas to have a more representative sample of sustainability practices. Thank you again to the early adopters who recognized the value of the first iterations of reporting. Visit SustainableSportIndex.com for more information, to provide feedback, or to participate in 2024.

ABOUT APTIM'S SUSTAINABILITY SERVICES



APTIM's **Sustainability Solutions** team supports clients in achieving ESG goals. Our team of sustainability experts craft data-driven solutions to address each client's unique needs. Our solutions encompass strategic planning, policy formulation, and operational performance evaluation, including:

- Sustainability action planning and reporting
- Climate action planning and GHG accounting
- ESG survey, questionnaire, and ratings management
- Environmental justice risk evaluation
- ESG policy review and development
- Grant and incentive management
- Industry-specific energy, water, and waste benchmarking
- Facility and process sustainability assessments
- Sustainability certification administration

Our team members possess relevant industry certifications, which complement their expertise crafting unique solutions to address our clients' sustainability challenges through **strategy, policy,** and **performance** lenses:

- **Strategy:** Achieving ESG goals begins with ensuring that organizational and sustainability goals are well aligned and complement each other. We can revisit existing or develop new action plans to provide a practical path to realizing your goals.
- **Policy:** Effective policies demonstrate to your stakeholders your commitment to a sustainable future and facilitate the achievement of your ESG goals. We can evaluate your existing policies and help you create new ones to ensure they will assist you in realizing your goals.
- **Performance:** Evaluating performance against your ESG goals provides a snapshot of your progress and provides insight into the success of your plan and policies. We can visit your facilities, assess operational performance, and provide guidance to ensure you are on track.

Technical Notes

- All questions related to performance data are for the 2022 calendar year. Comparisons to last year's report were based off of 2021 calendar year data.
- The number of responses per question is different across questions and categories. The average response rate per question was 80%.
- Due to challenges with standardization in the industry, questions related to reporting the number of events, attendees, or floor area do not follow any specific standardization on calculation methodology.
- The data and information for callouts in the report were supplied by participants and are assumed to be accurate and complete. Information was not verified.
- Instances of data inconsistencies or weaknesses are addressed in the report, and extreme outlying data was omitted for analysis.
- The data set remains confidential.

SUSTAINABLE SPORT INDEX

