

STADIUMS & VENUES



WELCOME

Welcome to the inaugural Sports Tech Annual, brought to you by Sports Tech World Series (STWS). The Sports Tech Annual is an industry research publication that brings together the most comprehensive and complete directory of companies in the global sports tech landscape. Each Chapter features interviews with industry experts sharing their insights on the current challenges, innovative use-cases, industry trends and future predictions in sports technology.

STWS Sports Tech Annual is your resource to navigate the revolutionary impact technology is having on how sports are played, administered and consumed around the world.

SPORTS TECHNOLOGY INDUSTRY FRAMEWORK

The 2020 Sports Tech Annual is divided into eight chapters reflecting the eight categories in the STWS Sports Technology Framework, highlighted below. This Framework was developed to give structure to the amorphous term "sports technology" and provides an exhaustive overview of the ecosystem.

Although the Framework provides an exhaustive overview of the sports tech ecosystem, each category is not mutually exclusive. There will inevitably be companies that fit amongst several categories.

Categorizations are therefore based on the company's primary function and area of product/service expertise. If a company is not present in a chapter it may be because they are better suited to another chapter/category.

This chapter focuses on companies working within Stadiums & Venues, including solutions designed to improve the efficiency and customer experience in stadiums and venues. From base level technology infrastructure, such as internet connectivity and POS systems to advanced match-day fan experience platforms.



ATHLETE PERFORMANCE & TRACKING

Devices and platforms used to measure or track athletes with the purpose of testing and improving performance such as GPS, activity trackers and sensors.



ATHLETE, TEAM & EVENT MANAGEMENT

Solutions that support the management of athletes, teams, leagues and events, with a focus on improving overall efficiencies at an individual and organisational level.



BETTING & FANTASY SPORTS

Solutions focused specifically on the unique challenges of betting and fantasy sports.



DATA CAPTURE & ANALYSIS

Data processing, capture and analysis solutions that support insights and decision making for a variety of sports related organizations.



ESPORTS

Solutions focused specifically on the unique challenges of Esport and gaming.



FAN & SPONSOR ENGAGEMENT

Solutions designed to enhance and improve the experience of the fan, or increase the value for the sponsor, including memberships and social media engagement.



MEDIA & BROADCAST

Solutions that enable and enhance the sharing and distribution of sports content such as streaming platforms, automated broadcast graphics and online content publishers.



STADIUMS & VENUES

Solutions designed to improve the efficiency and customer experience in stadiums and venues. From base level technology infrastructure, such as internet connectivity, to match-day fan experience platforms.



ABOUT STWS

Sports Tech World Series (STWS) is the global community for people at the intersection of sports, digital, and technology. Our mission is to be the trusted resource in helping companies, teams, and individuals excel in the global sports technology community. Founded in 2015, STWS work with our community to bring people together through our global network of physical and digital activities and services.

OUR SERVICES & ACTIVITIES



STWS CONSULTING

Consulting for Sports Tech, find out more contact us at consulting@sportstechworldseries.com

STWS INVESTOR NETWORK

Online platform connecting sports tech startups and investors (sportsinvestornetwork.com)

STWS NEWSLETTER

Weekly digest of the top news, content and industry deep dives in sports technology

Sports Tech Industry Awards (anzsta.com.au)

STWS RESEARCH

Sports Tech Industry Research and Insights, enquire with us at research@sportstechworldseries.com

STWS SPORTS TECH FEED

The Global Sports Technology Podcast (sportstechfeed.com)

STWS CONFERENCE

Global Conference Series (sportstechworldseries.com/events)



EXECUTIVE SUMMARY

As a result of the COVID-19 pandemic sporting stadiums and venues have been closed to fans for the majority of 2020. As sports return to play, the key challenge for these stadiums and venues is how to safely return fans to their stands?

We interviewed four Industry Experts, representing some of the world's most innovative and renowned sporting stadiums and venues, on how they are responding to the challenges and pressures wrought by COVID-19.



ANDREW SHANNON
AMB SPORTS + ENTERTAINMENT



SANDER VAN STIPHOUT JOHAN CRUIJFF ARENA



CHRISTINE STOFFEL-MOFFETT NASCAR



REY SUMARU
MELBOURNE CRICKET GROUND

A key theme that emerged from these insights is that the impact of COVID-19 has not necessarily created new trends within the industry, but accelerated existing ones.

An example is the focus on providing fans with a "seamless" or "frictionless" experience. Technology solutions such as digital ticketing, in-seat ordering and contactless payments all reduce fan friction points. Although these create operational efficiencies, adoption has traditionally be limited to a select "digitally native" subset of fans and so often seen as a "nice to have" for many stadiums. However in the new post-COVID paradigm, fans are looking to stadiums to demonstrate how they are protecting their health from the threat of a highly contagious virus in the same way they are for traditional safety threats (e.g. terrorism, violent or anti-social fans).

So the underlying business-case for these frictionless solutions has been strengthened and the timeline for implementation accelerated to meet changed fan expectations: eliminating queues and bottle necks are required to maintain social distancing; eliminating paper tickets and cash is required to reduce unnecessary physical contact between staff and patrons. Advanced technology solutions such as biometrics, including facial recognition, are also growing interest. There are still concerns with privacy but the ability to unify security, ticketing and payments into one is a high watermark in delivering a frictionless fan experience.

The move to digital ticketing and mobile payments also give greater opportunity for data capture on stadium users. By gathering richer data at all steps of the customer journey (from the time they purchase their ticket to the time they return home from the stadium), stadiums are able to build a 360 degree view of the fan. Applying Artificial Intelligence (AI) and Machine Learning (ML) platforms to this data then enables the stadium to send highly targeted information and personalized offers to specific fans. Thereby increasing fan engagement and sales conversions on F&B and retail purchases.

No individual or organization could have foreseen the impact of COVID-19, however innovative, forward-thinking organizations are constantly looking to how new technology can benefit their fans. 2020 showed that the ability to respond and pivot in the face of the unknown is reflected in the consistent investment in technology.

INDUSTRY EXPERT INSIGHTS

Sports will not be fully back until fans can return safely to the stands. These Experts represent the professionals, with the help of their technology partners, who are at the forefront of driving us towards making this a reality. We would like to thank them for their contribution to the Annual and for their part in bringing sports back.

NOTABLE STADIUM INVESTMENTS

These are select profiles of investments being made into new stadium construction or renovations across the world.

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INDUSTRY EXPERT INSIGHTS

ANDREW SHANNON DIRECTOR, EMERGING TECHNOLOGY AMB SPORTS + ENTERTAINMENT

Andrew Shannon is a technologist with a background in IoT and big data product development. His career has centered around technology, first in consulting, then building a startup, and now as an innovator-in-residence for AMBSE. Andrew is an Atlanta native, attending Georgia State University for his undergrad and Georgia Tech for his MBA and MS-CS.

Andrew got his start in tech entrepreneurship during his MBA, when he co-founded Aspirum Technologies. Later, he envisioned and commercialized many new products and features at Microsoft, including Windows Ink, Windows Focus Assistant, and Windows Timeline while on the Windows team, and Azure Sphere and Azure Time Series Insights while on the Azure IoT engineering team.

Andrew is currently the director of emerging technology for the Atlanta Falcons, United FC, and Mercedes-Benz Stadium. Outside of that, Andrew spends time advising and supporting tech startups and children and healthcare-focused non-profits.



Key challenges: What are the key challenges you're facing and what role can technology play in solving them?

Everything apart from player, staff and fan safety falls to the wayside until we are able to host events again. So, the technology is really focussed on sanitation and frictionless technologies. I think our chief job is to make sure that Mercedes-Benz stadium, and I'm sure my peers will feel the same about their venues, is the safest, cleanest facility in the world with the best processes and protocols to make sure that people are safe.

"I believe that security and ticketing should be one step and there's a variety of technologies that can get us there. I would like to see security and access control improvements to make that process more frictionless and more fan friendly"

That goes beyond just the technology itself, but also to the visual and the storytelling behind it to empower fans to feel safe when they return. It's giving fans confidence that we've done the right thing and are putting our investments, our money, where our mouth is to ensure they're protected. The other big piece of this is how do you engage with fans in a time period where they're not able to be present? What are the strategies and what are the technologies that enable that? The short answer to that is: investing in technologies that are going to allow us to engage with fans digitally on a more regular basis.

Innovative Use-Cases: What is the best or most innovative application of technology you've seen in the industry this year?

The first one is going cashless, which gives us the ability to be frictionless with our food and beverage transactions. I'll toot our own horn because (Mercedes-Benz Stadium) being the first to market with cashless has empowered us to help a variety of other clubs ramp up quickly in the space. When we hosted an open conference call with other clubs, I think we had about 900+ organizations on the call wanting to learn from what we did with cashless. I first have to give our own organization credit for this.

The other thing I think is really cool is the artificial crowd noise used by Manchester City, supported by their technology partner Salsa Sound. Our friend, Jeremy Maxton, is the head of events for Manchester City and we talked to him a lot. I've been really impressed with the work he and his team has done with using different sources of sound in a way that I perceive to be really innovative. To me it was solving the question of how do you take a stadium where you're hosting events without fans and make it feel real? How do you enhance the TV experience despite there not being fans there? Manchester City took a multipronged approach to it; they've got fans outside that are in a booth; they've got some fans inside for a visual presence; and they've got a DJ who can control the chants. If you've watched a Manchester City match since they've been back playing, it's amazing.



Trends: What major trends have emerged in the last 6-12 months in the application of technology, digital and data?

First and foremost is a heavier emphasis on really understanding fans and doing more with the existing data that we've got. That for us, and our peers, has been huge.

The second is collecting more data as there's still a lot of blind spots. For example, in Mercedes-Benz Stadium we have no idea where a fan is sitting when they make a purchase across the stadium or at our team store, unless they scan a little loyalty barcode, which is a very small number of transactions. We don't know who that fan is, and we don't know if that is their preference (for that product or that location). Trying to dig and trying to collect that data but doing it in a way that's responsible and having value for both us and the fan.

Improvements: What technology would you like to see developed or adopted over the next one to two years?

I believe that security and ticketing should be one step and there's a variety of technologies that can get us there. I would like to see security and access control improvements to make that process more frictionless and more fan friendly.

I'd also like to see more data accessibility and availability. If we can understand our fans better, we can do more for them. We make lots of demands of the data we've got but as I mentioned before there's still blind spots.

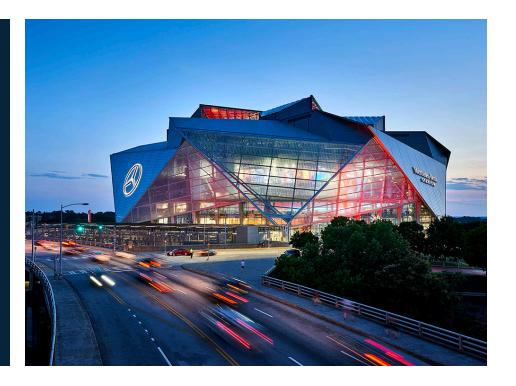
Finally, I'd hope to see more clarity around sanitation best practices. I think that if anything, COVID has exposed the sanitation market quite a bit. It's pretty opaque right now and we'd love to see that get better. Given how imperative it is to be really clean and having confidence that your venue is clean, that industry is hitting hockey stick growth.

There are also more creative solutions being looked at, an example we saw recently was using drones to spray disinfectant and cleaning across a large area such as a stadium. I think that was first used in agriculture for spraying large crops and now they're pivoting that solution in a completely different context and need in sports so it's great to see innovative solutions being explored.

Overall I would say there's also a growth in the research that is being done in this space, which is so imperative given that we're trying to get fans back in the stadium and trying to keep them safe. That's our biggest priority and technology is key to help us do that.

MERCEDES-BENZ STADIUM

LOCATION: Atlanta, GA, United States CAPACITY: 75,000 WEBSITE: mercedesbenzstadium.com USE: Mixed (American Football, Soccer, Concerts) HOME TEAMS: Atlanta Falcons (NFL), Atlanta United (MLS)



INDUSTRY EXPERT INSIGHTS

SANDER VAN STOPHOUT INTERNATIONAL DIRECTOR JOHAN CRUIJFF ARENA

Sander van Stiphout is program manager for innovation and director of the consultancy and management branch of the Johan Cruijff ArenA.

Sander likes to think of stadiums as living rooms of society and what drives him is to contribute to a well-managed, safe stadium with great fan engagement that makes profit and creates value to society. To achieve concrete goals for the stadium and its main stakeholders Ajax, KNVB, National Police and the City of Amsterdam he drives innovation among ecosystem partners such as KPN, KPMG, Microsoft, Signify, NISSAN, Honeywell, Heineken, ABN Amro, research institutes, universities, SME's and startups.

Sander has worked in stadium projects worldwide and was involved in projects related to all recent major tournaments, such as the Russia and Brazil World Cups. Sander was special stadium operations consultant to the Qatar Supreme Committee in relation to the FIFA World Cup 2022 preparations.



Key challenges: What are the key challenges you're facing and what role can technology play in solving them?

This period of the pandemic has been extremely challenging for us as a venue because we're encountering completely new challenges. We're used to dealing with security risks and now we're dealing with the added layer of complex health risks. So we have to re-engineer our entire customer journey again, looking at it from a completely different perspective: minimizing the physical touch points; ensuring that people keep a certain social distance; keeping fans moving quickly in and out of the stadium. And we know technology can help provide us with solutions to those challenges.

That's one of the reasons why we initiated the Reimagine Football open innovation platform (reimaginefootball.com) with our partners UEFA, City Football Group, KNVB (Dutch Football Federation), AFC Ajax and KPMG. We know that there's a lot of technology solutions out there that could potentially help us, but sometimes we have difficulties asking the right question and then finding that right solution. We know about blockchain, we know about AI, but we're not specialists in those areas. So to choose solutions we take an ecosystem approach where the best experts and the technology options come to us. Then from there we work with technology partners to develop specific, focussed solutions to the unique problems we face.

"Everyone talks about a 'seamless fan experience' and although nothing is seamless yet, I think facial recognition will get us closer to that point"



Innovative Use-Cases: What is the best or most innovative application of technology you've seen in the industry this year?

As part of our Change the Game initiative we trialled a blockchain-based ticketing app which dispenses tickets to ticket holders via their mobile phones. Ticket holders were able to enter our 54,990-capacity stadium using the blockchain, in which the ticket has a barcode that can only be activated if they are in a specified close range of the stadium during a set period.

That solution will have the biggest impact because it really dealt with the black-market of resales and counterfeit tickets starting during the 2020/2021 football season. But it will also give us the opportunity to return season tickets back into the platform to be redistributed if the ticket holder was not planning on attending a match. For example, some Ajax matches would have 20% of season ticket holders, which is 10,000 people, that don't show up. That's a huge number. So although the tickets are sold out nevertheless we had empty seats. Of course, the ticket redistributing itself is not a profit making exercise, but it definitely lowers no-shows in the stadium, which in turn helps increase our catering revenues and means more fans can experience the games they want to.

Improvements: What technology would you like to see developed or adopted over the next one to two years?

Stadiums are inward looking buildings that by their nature are very difficult to get into and relatively easy to leave. One thing I hope for is ways to adopt more technology to make that entry process as enjoyable and hassle free as the exit process. Everyone talks about a "seamless fan experience" and although nothing is seamless yet, I think facial recognition will get us closer to that point. Just imagine freely walking in the gate of the stadium or paying for your food and drinks without having to show a ticket or scan a card. It completely changes the dynamic of the fan's stadium experience.

There's obviously issues with ensuring appropriate privacy regulations are in place to ensure you opt-in for a service like this. But even considering that issue, facial recognition is not developing as quickly as I would have expected it to a couple of years ago.

The next advancement for facial and video recognition is developing it to a level where it can give the same assurance of security as the existing machinery and the solutions. For example, being able to detect weapons in a crowd in the same way a metal detector currently can. Our vision is that when the world is ready, the security layer around a stadium will not be a physical fence anymore, but a digital perimeter. I admit this is not going to happen anytime soon, but that vision is now adopted by the Netherlands National Police, the City of Amsterdam and the largest research Institute of the Netherlands. And they are actively working towards that every day, every match they're doing tests in the surrounding area of the stadium and have already improved the security in this way. So taking away these hurdles to stadium entry and using more technology to help you with that process, I see that as a big innovation and definitely some important changes happening over the next months and years in this space.

JOHAN CRUIJFF ARENA

LOCATION: Amsterdam, Netherlands CAPACITY: 71,000 WEBSITE: johancruijffarena.nl USE: Mixed (Soccer, Concerts) HOME TEAMS: AFC Ajax (Eredivisie), Netherlands National Football Team (KNVB)



INDUSTRY EXPERT INSIGHTS

CHRISTINE STOFFEL-MOFFETT VP, ENTERPRISE TECHNOLOGY NASCAR

Christine is the Head of Enterprise Technology & InfoSec at NASCAR where she leverages her wealth of global perspective, operations, and technology expertise to maximize productivity by streamlining operations, leveraging innovative and emerging technologies and tools that influence decision-making and drive process and efficiency. She brings an expansive rolodex of technology relationships to bring innovative technologies to the tracks, to the fans, to the racing industry as well as to enhance the overall business operations of NASCAR.

Christine has built upon her 30+ year technology leadership career and prior sports executive experiences by continuing to champion technology, thought-leadership, collaboration and innovation across the global sports and entertainment industry. She is recognized as the first Female Technology Executive hired across NHL and the first Female Technology Executive hired across MLB with previous roles at the Phoenix Coyotes and Arizona Diamondbacks respectively. Christine was the recipicient of Connected World Magazine's 2016 WoM2M Award as a leader in the IoT Industry; 2017 Smart Women in Meetings Award for being an innovator in the sports industry





Key challenges: What are the key challenges you're facing and what role can technology play in solving them?

As everyone knows, 2020 is unprecedented in business, technology with every type of organization and business across the world being required to pivot to a new world, new business models and new demands.

The sports and entertainment industry has been deeply hit by the global pandemic bringing many challenges with being required to evolve in a new state of doing business and trying to find a balance of keeping the fans loyal and creating new types of experiences for the fans while supporting social distance requirements.

But what this brings is the opportunity to breathe life and excitement into innovation! This new opportunity demanding the sports and entertainment businesses to become more creative, mindful and thoughtful with taking deep care and concern of the health and wellbeing for the fans, the athletes and the employees, is a great course of action for our industry and I believe will make us stronger!

"By creating more intimacy in the entertainment industry, we will help people to feel compliant with social distancing, but will also bring them closer to an engaging immersive experience by a 1:1 fan experience, rather than a 1 to many as previously applied in sports."

Trends: What major trends have emerged in the last 6-12 months in the application of technology, digital and data?

I believe that technology is on the forefront of this global movement of innovation and mindfulness. As the Enterprise Technology Leader at NASCAR and being a global sports leader across the sports and entertainment industry, I am looking for technology partners who can bring to life a new evolution of fan engagement through augmented reality, virtual reality, digital engagement, contactless solutions and leveraging technology to create unique, immersive experiences for intimate entertainment.

By creating more intimacy in the entertainment industry, we will help people to feel compliant with social distancing, but will also bring them closer to an engaging immersive experience by a 1:1 fan experience, rather than a 1 to many as previously applied in sports. I foresee that digital transformation will continue to be at the focus of business continuity for 2021 as well as the value of data, which will continue to increase in business ecosystems. This combined with a new wave of technology and business leaders will give way to an acceleration of business transformation in these evolutionary times.

Innovative Use-Cases: What is the best or most innovative application of technology you've seen in the industry this year?

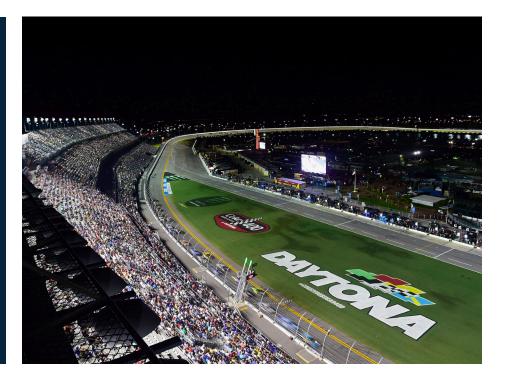
Companies like Planar, Comcast and 4Front are delivering these types of intimate immersive experiences alongside NASCAR and other sports organizations in an effort to solve the major challenges across the industry with revenue, maintaining fan loyalty and initiating new and exciting ways to engage and grow our fan base!

Improvements: What technology would you like to see developed or adopted over the next one to two years?

2021 and beyond is brightly lit with thoughtful innovation at our fingertips! I'm excited to see what the future holds as a progressive and innovative technology leader with being a change agent as my core, this new world brings optimism, fun, positive energy and renewed excitement with how technology will help us all to evolve in this ever-changing landscape.

NASCAR

LOCATION: 30 Different Tracks across the US and Canada WEBSITE: nascar.com **USE:** Motorsport





INDUSTRY EXPERT INSIGHTS

REY SUMARU GENERAL MANAGER - IT & INNOVATION MELBOURNE CRICKET CLUB

Rey has over 25 years' experience in managing technology and Innovation departments and delivery of technology projects globally across various environments. In his current role, Rey is responsible for the strategic directions and operations of the IT and innovation departments for the MCC, operators of the MCG.

As Australia's most attended sports and entertainment stadium, the MCG is a multipurpose venue accommodating international cricket, Australian Rules football, concerts, dinners and other major functions on its natural turf arena and in the surrounding purpose built facilities. The MCG continues to be a pivotal component of the strategies of the major sporting and government bodies in the region including the AFL and its clubs, Cricket Australia, Cricket Victoria, ARU, FFA, Tourism Victoria and the State and Federal Governments.

Rey also leads the MCG's Smart Stadium Initiative, which includes a fully Converged Network, Stadium Wide Wi-Fi, IPTV, CCTV, Audio, Video, Broadcasting , Digital Assets / Transformation and Innovative Technologies. Previously, Rey has held senior technical management roles for CSL Biotherapies and Sigma Pharmaceuticals.



Key challenges: What are the key challenges you're facing and what role can technology play in solving them?

Obviously, if you look at the current situation that coronavirus has thrown us into, then the immediate challenge is understanding what the operating model will look like when we eventually do reopen. I also think that the fan expectation is going to be very different to what it was 12 months ago.

Fans who are coming to the stadium are going to expect an assurance that while they are on our premises their health, safety and wellbeing are at the forefront of what we do. The use of technology will go a long way in facilitating this.

Queues, for example, are going to become a real issue for us both before the game and during breaks in play. Traditionally people queue going through security to enter the stadium, then get out of their seats and queue up to buy food and beverages during the game.

The customer journey starts when they buy the ticket not when arrive at the stadium so using technology such as data analytics and artificial intelligence (AI) coupled with fan profiles we can give fans personalized information on public transport, car parking, ingress wait times and direct them to the right gates to get them into their seats quicker.

Then once in the stadium offering customers in seat ordering with mobile "click and collect" for food and beverage. That coupled with express online or cashless payments will dramatically reduce wait times. We were already moving towards cashless payments before this year but were always told by our advisory board that you can't go totally cashless as you've got to allow society to be able to transact in the way they want. But I think the vibe now is people would want to be going to a cashless venue more than having cash transactions which are slower and less hygienic.

"Fans who are coming to the stadium are going to expect an assurance that while they are on our premises their health, safety and wellbeing are at the forefront of what we do. The use of technology will go a long way in facilitating this."



Innovative Use-Cases: What is the best or most innovative application of technology you've seen in the industry this year?

Following on from our aim of reducing queues, we've rolled out a solution called WaitTime which uses cameras, AI and advanced algorithms to recommend the quickest and nearest queues for F&B to our customers. So we send that personalized recommendation through our app to customers in those sections to direct them on which queues to go to.

From a cashless perspective, we've rolled out what we call a "loaded card" so you can upload funds to your MCC Membership Card. So for our members it's the one card that gets you entry into the stadium and also enables you to transact in the stadium for food and beverage.

Trends: What major trends have emerged in the last 6-12 months in the application of technology, digital and data?

A major trend is using a combination of business intelligence (BI) and AI to give fans highly targeted, personalized content delivered directly via app. Al enables data analytics to assist with operational efficiencies by being pro-active, instead of reactive to fans' needs

Fans will use your app more because it's more responsive to their needs. Once they're in there you can direct them to all sorts of facilities, like public transport network, car parking, their seat information, their food and beverage orders, and then they can be transacting through the app as well.

So instead of sending a promotional offer out to the whole section of the stadium, you'll send an offer to a particular set of fans based on their interests and preferences. This is much more likely to convert to a sale than a generic promotional blast.

Improvements: What technology would you like to see developed or adopted over the next one to two years?

I would like to see biometric solutions, such as facial recognition, adopt a global standard to provide a greater level of assurance to the public that their privacy is not being compromised when that technology is used.

Biometrics has the capability to provide a greater level of security and enhanced customer experience in stadium. For example, with facial recognition when a customer is coming through the entry gates they don't have to stop and be checked at all, this makes the transition so much easier and seamless which will provide for a better fan experience.

Our biggest competitor to the in-stadium fan experience is the live broadcast on TV (or other devices). So the question is what innovations will drag people out of the comfort of their lounge rooms and into the stadium?

LOCATION: Melbourne, Australia **CAPACITY:** 100,000 WEBSITE: mcg.org.au USE: Mixed (Australian Rules Football, Cricket, Concerts) **HOME TEAMS:** 5x Australian Rules Football Clubs (AFL), Victoria State Cricket Team, Australia National Cricket Team







NOTABLE STADIUM INVESTMENTS

ALLEGIANT STADIUM

LOCATION: Las Vegas, NV, USA

CAPACITY: 65,000

WEBSITE: allegiantstadium.com **SCHEDULED OPENING:** July 2020 COST: USD \$1.97 billion

PUBLIC FUNDING: USD \$750 million

NOTABLE INVESTORS: Las Vegas Stadium Authority, Las Vegas Raiders,

Bank of America

USE: Mixed (American Football, Concerts)

HOME TEAMS: Las Vegas Raiders (NFL); UNLV Rebels (NCAA) MAJOR EVENTS SCHEDULED: Pac-12 Championship Game (NCAA);

2021 Pro Bowl (NFL)

KEY FEATURES:

Located adjacent to the world-famous Las Vegas Strip, Allegiant Stadium will be a global events destination, highlighted by the arrival of the NFL's iconic Raiders. The 1.8 million-square-foot stadium is ideally located for both visitors and locals with fully enclosed climate-controlled environment to protect against the harsh desert heat. The technologically advanced stadium also features a retractable natural turf field, large operable walls that open to spectacular views of the Las Vegas Strip, a translucent roof, and a variety of premium spaces throughout all levels. The stadium project is expected to generate an economic benefit of \$620 million annually while creating 6,000 permanent jobs in Southern Nevada.



CLIMATE PLEDGE ARENA

LOCATION: Seattle, WA, USA

CAPACITY:18,100

WEBSITE: climatepledgearena.com **SCHEDULED OPENING: 2021** COST: USD\$930 million renovation **PUBLIC FUNDING: None**

NOTABLE INVESTORS: Oak View Group USE: Mixed (Ice Hockey, Basketball, Concerts)

HOME TEAMS: Seattle Kraken (NHL); Seattle Storm (WNBA)

MAJOR EVENTS SCHEDULED: N/A

KEY FEATURES:

Climate Pledge Arena is a renovation and redevelopment of the Key Arena, originally constructed for the 1962 Seattle World's Fair, doubling the footprint of the arena to a 800,000 square feet. It is the most significant private investment in Pacific Northwest sports and entertainment history. The Climate Pledge Arena will meet NBA standards and has been designed with basketball in mind, opening the door to attracting a future NBA tenant.

The goal of the Arena is to earn a Zero Carbon Certification from the International Living Future Institute, becoming the first live entertainment venue to achieve the milestone.



GUANGZHOU EVERGRANDE FOOTBALL STADIUM

LOCATION: Guangzhou, China

CAPACITY:100.000

WEBSITE: gzfc.evergrande.com **SCHEDULED OPENING: 2022**

COST: USD \$1.7 billion (CNY ¥12 billion)

PUBLIC FUNDING: N/A

NOTABLE INVESTORS: Evergrande Group; Alibaba Group

USE: Mixed (Soccer, Concerts)

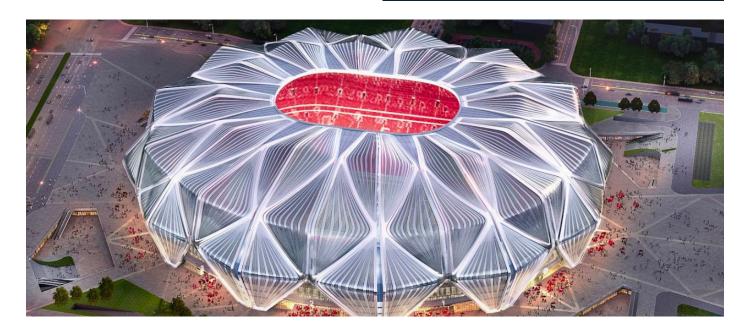
HOME TEAMS: Guangzhou Evergrande Taobao F.C. (Chinese Super

MAJOR EVENTS SCHEDULED: 2023 Asian Cup (proposed)

KEY FEATURES:

The stadium's distinct lotus flower design is inspired by Guangzhou's reputation as the "flower city". With a capacity of 100,000 seats the Stadium will become the world's largest soccer-specific stadium, surpassing the current capacity of FC Barcelona's Camp Nou.

Evergrande Group, one of China's largest property developers and owner of Guangzhou Evergrande, has indicated that they want to build up to five more comparable stadiums across China in the next few years. Developing soccer infrastructure, including large-scale stadiums, are part of a broader initiative to cultivate and popularize soccer in China. Guangzhou Evergrande is one of the most successful teams in Asia. The club has won eight Chinese Super League titles, as well as two Asian Champions Leagues, the first club to do so.



JAKARTA INTERNATIONAL STADIUM

LOCATION: Jakarta, Indonesia

CAPACITY:82.000 **WEBSITE:** N/A

SCHEDULED OPENING: 2022 COST: USD \$350 million (IDR 5 trillion)

PUBLIC FUNDING: N/A

NOTABLE INVESTORS: Jakarta Propertindo (Jakarta Provincial

Government) **USE:** Soccer

HOME TEAMS: Persija Jakarta (Liga 1, Indonesia)

MAJOR EVENTS SCHEDULED: N/A

The Stadium design will have a three-tiered stand with retractable roof. At the time of its completion, it is set to be largest capacity retractable roof stadium in the world, surpassing AT&T Stadium, home of the Dallas Cowboys, in Arlington, TX, USA. The total height of the stadium will be 80 meters making it one of the tallest stadiums in the world and features a rooftop viewing deck. The area surrounding the stadium will be developed as a multi-function area, including two outdoor training fields, community spaces and real estate development (hotel and apartments).



LUSAIL STADIUM

LOCATION: Doha, Qatar **CAPACITY:**80.000 WEBSITE: gatar2022.ga **SCHEDULED OPENING: 2022** COST: USD \$800 million **PUBLIC FUNDING: 100%**

NOTABLE INVESTORS: Supreme Committee for Delivery & Legacy

(State of Qatar) **USE:** Soccer **HOME TEAMS: N/A**

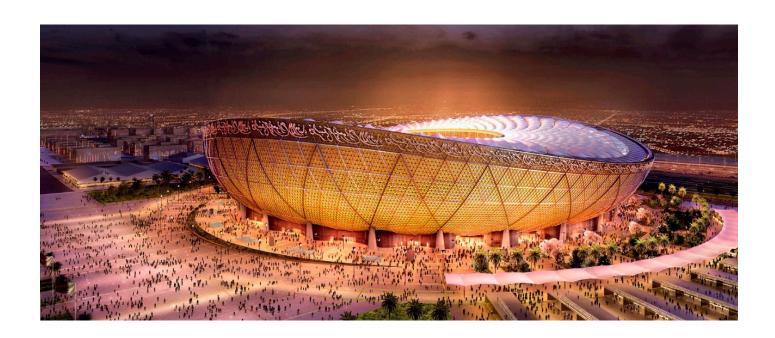
MAJOR EVENTS SCHEDULED: FIFA World Cup Qatar 2022 (Opening and

Final)

KEY FEATURES:

Lusail Stadium will be the flagship venue of the FIFA World Cup 2022 Qatar, hosting both the opening match and final of the tournament. Following the World Cup, it is expected to be reconfigured into a 40,000-seat stadium. Excess seating will be removed, and other parts of the building repurposed as a community space with shops, restaurants, athletic facilities and a health clinic.

As required for FIFA World Cup constructions, the stadium will boast a highly-efficient energy saving system as well as solar panels located over parking and service areas to produce additional energy for the stadium.



MIAMI FREEDOM PARK STADIUM

LOCATION: Miami, FL, USA **CAPACITY:**25,000

WEBSITE: intermiamicf.com **SCHEDULED OPENING: 2022** COST: USD \$1 billion **PUBLIC FUNDING:** None

NOTABLE INVESTORS: David Beckham, Marcelo Claure, Masayoshi Son,

Jorge and Jose Mas

USE: Mixed (Soccer, Concerts) HOME TEAMS: Inter Miami CF (MLS) **MAJOR EVENTS SCHEDULED: N/A**

The Stadium is less than 10% (10.5-acres out of 131 acre) of the proposed Freedom Park development, which would include one million square feet of office, retail and commercial space, 750 hotel rooms, 23 acres of public soccer fields, and the remaining 58 acres retained as public parkland. A key component of Miami Freedom Park's office spaces is a Tech Hub that will "attract established and emerging companies", enhancing Miami's status as a global innovative city. Issues with soil containment at the proposed site have complicated and delayed the project's development.



SANTIAGO BERNABÉU STADIUM OF THE 21st CENTURY

LOCATION: Madrid, Spain **CAPACITY: 80,000**

WEBSITE: realmadrid.com/en/bernabeu-stadium

SCHEDULED OPENING: 2022

COST: USD \$617 million renovation (EUR €520 million)

PUBLIC FUNDING: N/A

NOTABLE INVESTORS: Real Madrid CF **USE:** Mixed (Soccer, Concerts) HOME TEAMS: Real Madrid CF (La Liga) **MAJOR EVENTS SCHEDULED:**

The Santiago Bernabéu is set to undergo a revamp to make it a more modern, comfortable and safe arena and see it enhanced with the addition of leisure, restaurant and entertainment areas. Technology takes its place at the heart of the project. There will be an area within the stadium devoted to Esports, whilst the arena will be fitted out with an impressive 360° scoreboard. The new arena will also offer the option for the pitch to be covered by both permanent and retractable roofs, a feature which will ensure that all of the seating areas are covered. The redevelopment will see the Santiago Bernabéu become a digital arena, in which technological advances and the use of audio-visual tools will be available across many areas of the stadium with a particular focus on the fan's "second screen" experience.

SOFI STADIUM

LOCATION: Los Angeles, CA, USA

CAPACITY: 70,000

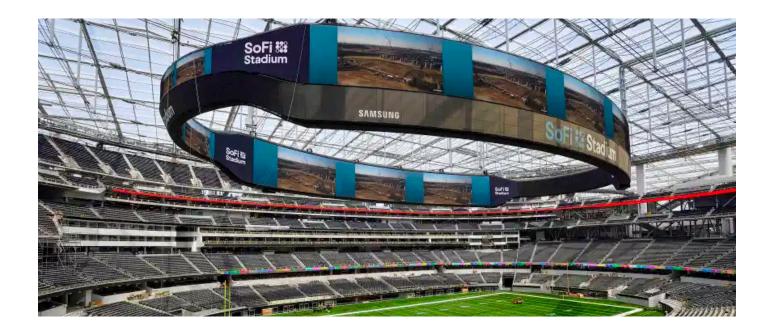
WEBSITE: sofistadium.com **SCHEDULED OPENING: 2020** COST: USD \$5 hillion **PUBLIC FUNDING: N/A**

NOTABLE INVESTORS: Stan Kroeneke **USE:** Mixed (American Football, Concerts)

HOME TEAMS: Los Angeles Chargers (NFL); Los Angeles Rams (NFL) MAJOR EVENTS SCHEDULED: Super Bowl LVI; 2023 College Football

Championship

SoFi Stadium is the world's first indoor-outdoor stadium and features expandable, seating to accommodate 100,000 capacity. The 298-acre Hollywood Park mixed-use development surrounding the stadium features retail, commercial office space, a hotel, residential units, and outdoor park spaces. The Stadium features more than 2,500 Wi-Fi 6 access points, making it the largest deployment of the next-generation wireless standard in a sports venue. Another component of the stadium's design is "the Oculus", a 70,000-sq-ft 4K double-sided video display board suspended from the center of the roof. The screens collectively have 80 million pixels, behind which sits 260+ speakers and 50+ 5G antennas creating a uniquely immersive fan experience.





COMPANY LISTINGS

ARUP

STADIUM ARCHITECTS AND VENUE OVERLAY EXPERTS

HEAD OFFICE: London, United Kingdom

EMPOYEES: 10,001+ ESTABLISHED: 2015 WEBSITE: arup.com EMAIL: sport@arup.com

KEY CLIENTS: United 2026, FC Barcelona, Birmingham City Council (UK), Kai Tak Sports Park (Hong Kong), Marvel Stadium (Aus) RELEVANT SPORTS: Applicable across all

TAGS: AI (Artificial Intelligence), VR (Virtual Reality) / AR (Augmented Reality)

Arup are a multi-disciplinary design and engineering company who have a proven track record in designing, engineering and delivering major stadia, indoor arenas and temporary venues. Our team offers venue owners, organizing committees, contractors and event operators a wide range of integrated multi-disciplinary solutions that can resolve the complex relationships specific to major venues. We also have expertise in the bidding process for major sporting events including Olympic Games and FIFA World Cups.

ARUP

WHAT'S EXCITING

Live sports project in the USA, UK, Europe, Asia and Australia are keeping our teams at the forefront of the industry. However, as an employee owned company we have also been able to dedicate ourselves to research in a wide range of areas including Esports, Data Driven Design and Virtual Reality (in design and event scenarios). We have also devoted our team to developing Generative Design tools that combine the power of our project data and skills of our design team.

STUBHUB

BRING THE JOY OF LIVE TO FANS GLOBALLY.

HEAD OFFICE: San Francisco, United States

EMPOYEES: 1,001-5,000 **ESTABLISHED:** 2000 WEBSITE: stubhub.com EMAIL: info@stubhub.com

KEY CLIENTS: Philadelphia 76ers, Alabama

Football, MLB, FIM Superbike

RELEVANT SPORTS: Applicable across all

TAGS: E-Commerce, Marketplace, Ticketing

SUMMARY

As the largest ticket marketplace in the world, we enable fans to buy and sell tickets to tens of thousands of events, whenever they want, through our desktop and mobile experiences, including our StubHub app for iPhone, iPad, Apple Watch and Android.

We enable experience-seekers to buy and sell tickets whenever and wherever they are through our desktop and mobile experiences. StubHub reinvented the ticket marketplace in 2000 and continues to lead it through innovation.

StubHub

WHAT'S EXCITING

In November 2019, viagogo acquired StubHub from eBay for \$4.05 Billion. Furthermore, StubHub were also named Exclusive Verified Ticket Marketplace of the inaugural VIRGIN FEST in 2020.





CISCO

ACCELERATING INNOVATION THROUGH MARKET LEADERSHIP

at hat h

HEAD OFFICE: San Jose, United States

EMPOYEES: 10,000+ ESTABLISHED: 1984 WEBSITE: cisco.com EMAIL: info@cisco.com

KEY CLIENTS: T-Mobile Arena, 02 Arena,

Sydney Cricket Ground

RELEVANT SPORTS: Applicable across all

sports

TAGS: Business Intelligence, Fan Analytics

SUMMARY

Cisco enables people to make powerful connections - whether in business, education, philanthropy, or creativity. Cisco hardware, software, and service offerings are used to create the Internet solutions that make networks possible - providing easy access to information anywhere, at any time.

Cisco sports and entertainment solutions have helped hundreds of venues, teams, and leagues around the world better engage fans and solve real business challenges.

WHAT'S EXCITING

As Tokyo prepares to host the 2020 Games (to be hosted in 2021), Cisco is building the network to connect every athlete and community across the world, leading Japan into a new era of digitization.

A Return to football requires Webex: With an empty stadium, Webex helped bring the fans to the players for Manchester City Football Club.



NCR CORPORATION

HARDWARE & SOFTWARE FOR TOMORROW

HEAD OFFICE: Atlanta, United States

EMPOYEES: 1,001-5,000 ESTABLISHED: 1884 WEBSITE: ncr.com EMAIL: info@ncr.com

KEY CLIENTS: T-Mobile Arena, Mercedes-Benz

Stadium

RELEVANT SPORTS: Applicable across all

sports

TAGS: Business Intelligence, Marketplace

SUMMARY

NCR Corporation (NYSE: NCR) is a leader in banking and commerce solutions, powering incredible experiences that make life easier. With its software, hardware, and portfolio of services, NCR enables transactions across financial, retail, hospitality, travel, telecom and technology industries.



WHAT'S EXCITING

Venues are beginning to shift towards cutting-edge technologies making the process of purchasing food, drinks and other merchandise as seamless as possible. NCR is helping drive change in the sports and entertainment industry.



GENSLER

SHAPING THE FUTURE OF CITIES

HEAD OFFICE: San Francisco, United States

EMPOYEES: 5,001-10,000 **ESTABLISHED:** 1965 WEBSITE: gensler.com EMAIL: info@gensler.com

KEY CLIENTS: Chase Center, Arena Corinthians, Moody Center at UT Austin,

Dodger Stadium

RELEVANT SPORTS: Applicable across all

TAGS: Business Intelligence, Fan Analytics

SUMMARY

Delivering successful facilities takes a dedicated team with global expertise in largescale place making and branded destinations.

Our expertise in professional, collegiate, and international sports venues, as well as urban planning, branding, retail, and hospitality, allow us to create holistic experiences for attendees and return on investment for owners and developers.

Gensler

WHAT'S EXCITING

Sports venues and convention centers can activate communities, generate revenue, and catalyze urban and campus revitalization as regional destinations. Demands for new technology, better service, and more amenities are constant drivers for venue owners and operators. Delivering successful facilities takes a dedicated team with global expertise in large-scale place making and branded destinations.



CLEAR

BIOMETRIC IDENTITY SYSTEMS

HEAD OFFICE: New York, United States **EMPOYEES:** 1,001-5,000

ESTABLISHED: 2010 WEBSITE: clearme.com EMAIL: media@clearme.com KEY CLIENTS: MLB, Centurylink Field, American Airlines Arena, Citi Field **RELEVANT SPORTS:** Applicable across all

TAGS: AI (Artificial Intelligence), Fan Analytics,

Video Analytics

SUMMARY

CLEAR is touchless. You are unstoppable. No crowds. No waiting. Keep moving at over 50+ airports, sports stadiums, and more.

We're defining and leading an entirely new industry, moving quickly with data-informed decisions, obsessing over our customers, and investing in great people to lead the way. Recently named on CNBC's Disruptor 50 List and winner of the SXSW Interactive Innovation Award, we're working tirelessly to create frictionless customer experiences for our 5+ million members across the country.



WHAT'S EXCITING

CLEAR's Caryn Seidman Becker and Ken Cornick were named Entrepreneur Of The Year in the 2019 US Technology Award winners. In 2020, CLEAR are poised to lead the multibillion-dollar biometric screening race for the coronavirus.



AMERICAN TOWER

INFRASTRUCTURE FOR MODERN DIGITAL COMMUNICATIONS



HEAD OFFICE:

Boston, United States **EMPOYEES:** 1,001-5,000 **ESTABLISHED:** 1966

WEBSITE: americantower.com EMAIL: info@americantower.com

KEY CLIENTS: AT&T, Verizon, Sprint, T-Mobile **RELEVANT SPORTS:** Applicable across all

sports

TAGS: Business Intelligence

American Tower is a Fortune 500, S&P 500 and Forbes Global 2000 company that provides the infrastructure for modern digital

Starting in 1995 with 2,700 towers, our global portfolio today includes over 171,000 owned or managed sites around the globe. Headquartered in Boston, Massachusetts, we have operations throughout the Americas, Europe, Africa and Asia.

WHAT'S EXCITING

With the rollout of new wireless technologies like 5G, the explosive growth in the Internet of Things (IoT), and the continued proliferation of smartphones worldwide, there's never been a more exciting time to work in wireless.

EXTREME NETWORKS

CUSTOMER-DRIVEN NETWORKING

HEAD OFFICE:

San Jose, United States **EMPOYEES:** 1,001-5,000 **ESTABLISHED:** 1996

WEBSITE: extremenetworks.com EMAIL: feedback@extremenetworks.com KEY CLIENTS: NFL, Seattle Seahawks, Lowe's,

Novant Health

RELEVANT SPORTS: Applicable across all

TAGS: Business Intelligence, Fan Analytics

SUMMARY

Extreme Networks, Inc. (EXTR) creates effortless networking experiences that enable all of us to advance. We push the boundaries of technology leveraging the powers of machine learning, artificial intelligence, analytics, and automation.

Over 50,000 customers globally trust our endto-end, cloud-driven networking solutions and rely on our top-rated services and support to accelerate their digital transformation efforts and deliver progress like never before.



WHAT'S EXCITING

Our customer-driven solutions deliver quality, secure Wi-Fi connectivity to NFL fans; our network infrastructure delivers valuable analytics to the business while supporting the critical operations of the team and the stadium.

All in all, ensuring a seamless, enhanced, connected experience on gameday including record-breaking Wi-Fi Usage at Super Bowl LIV.

HKS

DESIGNS THAT INSPIRE, CONNECT AND PERFORM

HEAD OFFICE: Dallas, United States **EMPOYEES:** 1.001-5.000

ESTABLISHED: 1939 WEBSITE: hksinc.com EMAIL: info@hksinc.com

KEY CLIENTS: NFL, FC Nantes, Optus Stadium,

LSU, US Bank Stadium

RELEVANT SPORTS: Applicable across all

sports

TAGS: Business Intelligence, Marketplace

When the Dallas Cowboys' AT&T Stadium opened in 2009, HKS solidified our reputation as a paradigm-changing sports design firm. That one venue changed what fans expect when they attend a sporting event.

Since then, we've translated those transformative insights into design for sporting venues and entertainment districts around the world.



WHAT'S EXCITING

HKS-deigned Pro Football Hall of Fame's \$700m expansion will likely be like Disney for football fans.



VIAGOGO

TICKET EXCHANGE AND RESALE

HEAD OFFICE

New York, United States **EMPOYEES:** 501-1,000 **ESTABLISHED: 2006** WEBSITE: viagogo.com **EMAIL:** info@viagogo.com

KEY CLIENTS: Major Global Sports Brands **RELEVANT SPORTS:** Applicable across all

sports

TAGS: Ticketing



SUMMARY

Viagogo is a global online platform for live sport, music and entertainment tickets. Viagogo aims to provide ticket buyers with the widest possible choice of tickets to events across the world, and helps ticket sellers ranging from individuals with a spare ticket to large multi-national event organizers reach a global audience.

WHAT'S EXCITING

Viagogo has partnered with many of the world's leading brands in sport and entertainment, and has helped customers from almost every country in the world access tickets to their favorite events in the language, currency and on the device of their choice.



SEATGEEK

LIFE'S AN EVENT. WE HAVE THE TICKETS.

HEAD OFFICE:

New York, United States **EMPOYEES:** 251-500 ESTABLISHED: 2009 WEBSITE: seatgeek.com EMAIL: press@seatgeek.com

KEY CLIENTS: Dallas Cowboys, English National Opera, New Orleans Saints, Manchester City FC, Den Norske Opera &

RELEVANT SPORTS: Applicable across all

sports

TAGS: E-Commerce, Fan Analytics, Ticketing

SUMMARY

SeatGeek was built in 2009 as the only mobile ticketing marketplace created with fan experience top of mind. We are transforming the way fans buy and sell their tickets to their favorite live events across sports, music, and theater.

While we humbly believe we have the best consumer technology on the market, our mission goes beyond that, by bringing a technology-first approach to an entire industry sorely in need of a better solution, we aim to be a force for good in live entertainment.



WHAT'S EXCITING

SeatGeek's latest partners include Liverpool FC, to transform ticket buying process, and Arizona Bowl to bring mobilefirst ticketing to game.

In June 2020, SeatGeek launched SeatGeek Adapt to assist the return of fan-filled events following COVID-19 outbreak.



ADI.TV

GLOBAL LED SCREEN SOLUTIONS

HEAD OFFICE:

Lancashire, United Kingdom **EMPOYEES:** 100-250 ESTABLISHED: 1991 WEBSITE: adi.tv EMAIL: info@adi.tv

KEY CLIENTS: Samsung, Hamleys, Red Bull,

NFL, Rolls Royce

RELEVANT SPORTS: Applicable across all

TAGS: Computer Vision, Video Analytics

SUMMARY

ADI work with global events, brands, sports clubs, federations and broadcasters, providing highly innovative and specialised solutions to help our customers create lasting conversations with their customers.

We specialise in four key areas: technology, broadcast, engineering and media to provide industry leadership across a diverse portfolio of services.



WHAT'S EXCITING

Outdoor LED screen solutions for drivein cinemas during COVID-19, largescale LED installation at Vicarage Road Stadium, Home of Watford FC, 500sqm of LED installations at the King Abdulaziz Racetrack for the inaugural Saudi Cup.

GAMETIME

LAST-MINUTE EVENT TICKETS

HEAD OFFICE:

San Francisco, United States **EMPOYEES:** 101-250 ESTABLISHED: 2001 WEBSITE: gametime.co EMAIL: feedback@gametime.co

KEY CLIENTS: N/A

RELEVANT SPORTS: Applicable across all

sports

TAGS: Ticketing

SUMMARY

Gametime sells last-minute tickets to the most popular events in sports, music, and theater in more than 50 cities across the U.S. and Canada. We're passionate about enabling incredible shared experiences, so we build technology that gets people out into the real world together.

We're focused on making the process simple and smooth while you're on the move. We eliminated the need for printing tickets and built a better way to access the best live experiences right from your phone.



WHAT'S EXCITING

Gametime was listed by Built In SF as one of the '15 Sports Companies Changing The Game', and Top 20 tech companies hiring in San Francisco by BeSeen.com

GRAVY ANALYTICS

BETTER CUSTOMER EXPERIENCE WITH LOCATION INTELLIGENCE

HEAD OFFICE: Dulles, United States

EMPOYEES: 101-250 ESTABLISHED: 2011

WEBSITE: gravyanalytics.com EMAIL: info@gravyanalytics.com

KEY CLIENTS: Adobe, Oracle, AWS, Lotame,

LiveRamp

RELEVANT SPORTS: Applicable across all

sports

TAGS: Business Intelligence, Computer Vision,

Fan Analytics

Gravy Analytics is the leading provider of real-world location intelligence for marketers. Our patented AdmitOne engine verifies consumer attendances at millions of places, points-of-interest and local events, providing unprecedented visibility into the offline consumer journey.

Gravy Analytics processes billions of pseudonymous mobile location signals every day to create its industry-leading and privacyfriendly data services, insights, and audiences.



WHAT'S EXCITING

Using Gravy Analytics, fast food giants Chipotle converted more customers to its mobile army.

Gravy Analytics were also listed by Business Insider as one of the 17 advertising and marketing startups that investors say are poised to take off despite the coronavirus.



REALIFE TECH

THE EXPERIENCE AUTOMATION PLATFORM

HEAD OFFICE: London, United Kingdom

EMPOYEES: 101-250 ESTABLISHED: 2014 WEBSITE: realifetech.com EMAIL: info@realifetech.com

KEY CLIENTS: The 02 London, Tottenham Hotspurs, LA Galaxy, Indianapolis Motor

Speedway

RELEVANT SPORTS: Applicable across all

sports

TAGS: Computer Vision, News / Content, VR (Virtual Reality) / AR (Augmented Reality)

SUMMARY

We recognise that data can sometimes be impersonal, so many big tech businesses and big data companies forget that.

Realife's difference is that we understand that people are at the heart of what we do.

We understand that our lives are lived through experiences. Through feelings. Through connections.

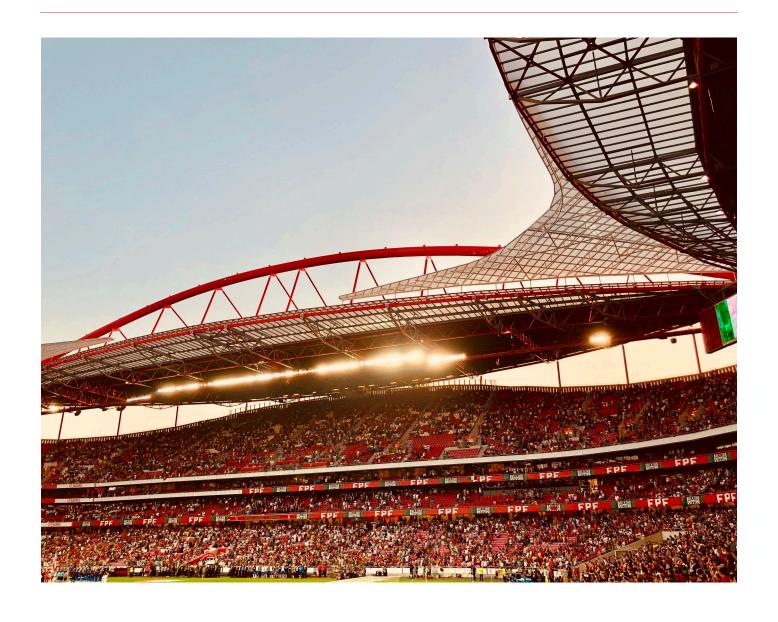


WHAT'S EXCITING

Rebranded in June 2020 as Realife Tech, in response to the ongoing impact of the COVID-19 pandemic.

Also launching its Post-COVID Fan Safety Hub to help prepare for when live event restrictions are lifted.

In 2020, Realife Tech raised over \$7.2 million in new funding.





GREAT SPORTSTECH

FITNESS TECH, PROTECTION / CONCUSSION,

HEAD OFFICE: Hyderabad, India

EMPOYEES: 51-100 **ESTABLISHED: 2004**

WEBSITE: greatsportstech.com EMAIL: info@greatsportsinfra.com KEY CLIENTS: Karnataka State Cricket Association, Urban Development & Poverty Alleviation Dept., Rajiv Gandhi Stadium in

Aizawl, PWD Kolkata **RELEVANT SPORTS:** Applicable across all

sports

TAGS: Fitness Tech, Protection / Concussion

SUMMARY

Great SportsTech, South Asia's leading turnkey solutions provider for sports infrastructure with over 6,000 installations consisting of 14 million sqft sports surfacing across 8 countries.

Our product portfolio includes FIFA and FIH certified synthetic grass from FieldTurf (USA), World Athletics certified synthetic athletic track from Porplastic (Germany), Modular Gallery from Alcor, France, Sub-surface aeration and vacuum powered drainage for sports fields from SubAir (USA).

WHAT'S EXCITING

Sub-surface aeration and vacuum powered drainage from SubAir helps by promoting grass and root growth ensuring healthy field with minimum rain disruption. Modular Gallery, an innovative technology from Alcor costing of RCC gallery, less than 1/4 of the time to build, highly durable, earthquake proof and portable. Turf protection tiles from Terraplas, used for hosting non-sporting events by covering the sports surface.

STANDARD COGNITION

AUTONOMOUS CHECKOUT FOR EXISTING RETAIL STORES

HEAD OFFICE: San Francisco, United States

EMPOYEES: 51-100 ESTABLISHED: 2016 WEBSITE: standard.ai EMAIL: info@standard.ai **KEY CLIENTS:** Boston Red Sox

RELEVANT SPORTS: Applicable across all

TAGS: AI (Artificial Intelligence), Computer

Vision, E-Commerce

Standard Cognition is transforming retail, with the first autonomous checkout solution that works in any existing store and allows customers to walk in, grab what they need, and walk out without waiting in line or stopping to scan or pay. The company's machine vision and AI-powered solution is the only one that can be quickly and easily installed in retailers' existing stores, representing a giant leap forward for retail tech and enabling retailers to rapidly deliver an amazing new shopping experience to customers.

WHAT'S EXCITING

One of Standard's early customers is the Worcester Red Sox. Chair Larry Lucchino and team are building a new world-class ballpark in Worcester, Massachusetts, the second-largest city in New England. The store will be stocked with snacks, drinks, and souvenirs, and will leverage Standard's Artificial Intelligence and Machine Vision technology to allow customers to shop and pay without any scanning, waiting in line, or stopping to check out.

3D DIGITAL VENUE

INTERACTIVE DIGITAL MANAGEMENT VENUE SOLUTIONS

HEAD OFFICE: Barcelona, Spain

EMPOYEES: 11-50 ESTABLISHED: 2012

WEBSITE: 3ddigitalvenue.com **EMAIL:** enquiries@3ddigitalvenue.com

KEY CLIENTS: FC Barcelona, Real Madrid, Manchester City, Liverpool FC, Cleveland

Cavaliers

RELEVANT SPORTS: Applicable across all

TAGS: Business Intelligence, Ticketing, VR (Virtual Reality) / AR (Augmented Reality)

3D Digital Venue provides Interactive Digital Venue Management Solutions to Sports Venues.

Our platform includes: Ticketing3D to enhance Ticket Sales & Fan Purchase experience using our interactive 3D views from all Blocks and Seats; 3D Season Tickets achieve higher renewal rates from season ticket holders by offering 360 degree 3D Views of the seats even before the existing venue is refurbished or a new stadium is built.



WHAT'S EXCITING

We have recently launched a new service allowing clients to maximise ticketing revenues while maintaining distancing rules when stadiums reopen following COVID-19.

Venue Business Intelligence (VBI) has been unveiled as a tool to help stadium and arena management teams achieve maximum efficiency when seating their clients while maintaining the safety distances.



ADRENALINE HUNTER

GLOBAL BOOKING PLATFORM FOR OUTDOOR SPORT ACTIVITIES

HEAD OFFICE: Paris, France **EMPOYEES:** 11-50 **ESTABLISHED: 2006**

WEBSITE: adrenaline-hunter.com EMAIL: contact@adrenaline-hunter.com

KEY CLIENTS: B2C

RELEVANT SPORTS: Action Extreme TAGS: E-Commerce, Marketplace, Ticketing

Adrenaline Hunter is a marketplace/booking platform to book outdoor sport activities when traveling. At the crossroads between sport and tourism, Adrenaline Hunter works with 2200 professional suppliers of fantastic sport activities whom propose 7200 activities on the platform.

With a presence in more than 30 countries, Adrenaline Hunter covers most tourism markets in Europe, Africa, Asia and Oceania, with a platform accessible in English, French, German and Spanish.



WHAT'S EXCITING

With COVID-19 forcing a lot of people to cancel their trips and forcing them to revisit their priorities, Adrenaline Hunter stands out as one of the only WEBSITE proposing a wide array of sport activities people can practice outdoors, and in small groups, with limited contamination risks. Outdoor sport is the mammoth in the room no one seems to notice, yet we are convinced it will emerge stronger from the crisis.



BLINK IDENTITY

PRIVACY-PRESERVING, CONTACTLESS, HIGH SPEED ACCESS CONTROL

HEAD OFFICE: Austin, United States

EMPOYEES: 11-50 ESTABLISHED: 2018 WEBSITE: blinkidentity.com EMAIL: info@blinkidentity.com

 $\mbox{\bf KEY CLIENTS:}$ Live Nation, The Big House USA **RELEVANT SPORTS:** Applicable across all

TAGS: AI (Artificial Intelligence), Computer

Vision, Ticketing

SUMMARY

Blink Identity is a privacy focused "identity as a service" platform that provides highthroughput, contactless identification of people in the physical world. Our combination of hardware and software can identify people with a high degree of accuracy in any lighting condition. Users self-enroll in seconds by taking a selfie with their cell phone and have complete control and visibility to their data. The Blink Identity platform is a complete endto-end solution that frees companies from the responsibility of compliance.



WHAT'S EXCITING

Blink Identity offers revolutionary, and fully contactless, access control systems that use facial recognition to get patrons into venues in the blink of an eye. Our systems have a throughput of up to 60 people a minute, in any lighting conditions - even total darkness. Users enroll on their own phones simply by taking a selfie - they can be added to the database in seconds either at the door or well in advance, and then simply walk into their venue of choice.



EOLA

ONLINE BOOKING AND BUSINESS MANAGEMENT PLATFORM

EMPOYEES: 11-50 ESTABLISHED: 2017 WEBSITE: business.eola.co EMAIL: hello@eola.co

KEY CLIENTS: Active Nation, Welsh Water Adventures, Active 360, Cardiff Ski and Snowboard

HEAD OFFICE: London, United Kingdom

RELEVANT SPORTS: Applicable across all

sports

TAGS: E-Commerce, Marketplace, Ticketing

SUMMARY

eola is a cutting-edge business management platform for experience businesses. Working with 100+ businesses across the UK, Ireland and worldwide, clients vary from small solo operators to government entities and multinational companies.

eola makes it easy to manage all day-to-day admin via one beautifully simple platform, saving businesses time to focus on delivering experiences. With our platform, it's possible for a husiness to monetise all their owned social channels, as well as their website.

FANFOOD

WHAT'S EXCITING

eola is a rapidly evolving technology platform incorporating every facet of business management in order to bring the outdoors online. Recently we have created two new major developments in rentals and memberships to enable our businesses to automate even more of their admin, and generate more revenue guicker.

We also launched our marketplace, which allows businesses to broaden their customer reach using eola's acquisition

FANFOOD

IN-VENUE ONLINE AND MOBILE ORDERING

HEAD OFFICE: Chicago, United States

EMPOYEES: 11-50 ESTABLISHED: 2015 WEBSITE: fanfoodapp.com

EMAIL: marketing@fanfoodapp.com KEY CLIENTS: University of South Carolina, Durham Bulls Athletic Park, Washington State University, National Sports Center, University of Tennessee

RELEVANT SPORTS: Applicable across all

TAGS: Fan Analytics, Marketplace, Sponsorship

Analytics

SUMMARY

FanFood delivers the ultimate customer experience by providing the tools and services to make contactless ordering easy for merchants and frictionless for customers. We are a commission-free, online & mobile ordering platform for contactless concessions at sporting events. Fans can order anywhere, anytime from their phones for express pickup or delivery. We have both a browser-based web app and a downloadable app, both of which allow for instant ordering and order ahead.

WHAT'S EXCITING

We have over 150 venue partners in over 3 countries, including pro stadiums, minor league ballparks, colleges, sports complexes, raceways, golf courses, high schools and more. We also have many partners in the live entertainment space, hospitality, and even the largest mall in the world: the Dubai Mall.

GRUPO ECSA

TECHNOLOGICAL SOLUTIONS FOR THE SPORTS AND MAJOR EVENTS

HEAD OFFICE: Buenos Aires, Argentina

EMPOYEES: 11-50 ESTABLISHED: 2001 WEBSITE: grupoecsa.com EMAIL: info@grupoecsa.com

KEY CLIENTS: River Plate, Boca Juniors, Rosario Central, Lanus, San Lorenzo de

Almagro

RELEVANT SPORTS: Soccer

TAGS: Business Intelligence, Fan Analytics,

Video Analytics

Grupo ECSA is a group of companies with more than 20 years of expierience in development and implementation on management, service and integration of technlogies.

We offer technological solutions in the following areas: Access Control, Video Surveillance Systems, Sport Dedicated Equipment and Fan Engagement.

We are market leaders in Argentina in access control in the football industry.



WHAT'S EXCITING

We are a dynamic company specialized in offering technological solutions to the main sports entities. With an IT area in charge of developing products aimed at meeting the new opportunities in the industry.



PAM WAYFINDING

SMARTER NAVIGATION FOR ICONIC PRECINCTS

HEAD OFFICE: Sydney, Australia

EMPOYEES: 11-50 ESTABLISHED: 2014 WEBSITE: pam.co EMAIL: inquiry@pam.co

KEY CLIENTS: NFL Stadiums, World Cup

Stadiums, Olympic Stadiums

RELEVANT SPORTS: Applicable across all

sports

TAGS: Disability / Mobility, News / Content, VR (Virtual Reality) / AR (Augmented Reality)

SUMMARY

PAM is the world leader in smart navigation, enabling your environment and your customers to completely understand one another. PAM creates powerful customer experiences, seamlessly connecting your visitors with events and brands in real-time. Engage your guests from the moment they decide to come to your venue, from anywhere in the city. Provide a personalized journey using the best routing, transport and parking to create a more pleasurable, productive, and profitable precinct.



WHAT'S EXCITING

PAM provides a single management system for all precinct navigation. Use PAM to power your digital navigation touchpoints, 3D Mapping with PAM's 360 Explorer provides directions anywhere on your property and shows the best route to any service or amenity on any mobile device.

PMY GROUP

TECHNOLOGY ADVISORY, DELIVERY & INVESTMENT

HEAD OFFICE: Melbourne, Australia

EMPOYEES: 11-50 ESTABLISHED: 2009 **WEBSITE:** pmygroup.com EMAIL: info@pmygroup.com

KEY CLIENTS: Paris 2014 Olympics, Tokyo 2020 Olympics, English and Wales Cricket Board, US Open Tennis, Wimbledon **RELEVANT SPORTS:** Applicable across all

TAGS: Business Intelligence, Fan Analytics,

Marketplace

PMY Group is a Technology Advisory, Delivery and Investment company. We specialise in sport and entertainment venues, public and private assets, and major events globally.

We have a global footprint with high profile clients in the USA, Australia, New Zealand, Hong Kong, Macau, United Kingdom, Ireland and Europe. PMY plans, designs, implements, manages and monetizes technology, digital and data projects.



WHAT'S EXCITING

We continue to grow our global client base as the Trusted Advisor / Owner's Representative regarding technology across major sporting events and venues. We support our clients by identifying the best technologies to help them achieve their desired outcomes - helping them buy the right solutions.

We are also building our global Delivery capability, enabling us to support clients by deploying the most appropriate technologies.







A TECHNOLOGY ADVISORY, INVESTMENT AND DELIVERY COMPANY WORKING WITH HIGH PROFILE CLIENTS ON COMPLEX PROJECTS **AROUND THE WORLD**

STADIA. VENUES & **ARENAS**

SPORTS & MAJOR **EVENTS**

PUBLIC PRECINCTS PROPERTY & URBAN **DEVELOPMENTS**

LEISURE & RETAIL

EDUCATION INSTITUTIONS









KAI TAK SPORTS PARK





SUPERBOWL



FULHAM FC









AUSTRALIAN TURF CLUB



US OPEN TENNIS





ADVISORY



TECHNICAL AND FINANCIAL STRATEGY

Our Advisory team provide strategic, technical and commercial advice, trusted by major venues, events, and public places looking to enhance their customer experiences, operations and financial value.





TECHNOLOGY INFRASTRUCTURE INVESTMENT

Our Investment division is focused on developing partnerships, to invest in the design, procurement, build and operation of new technology infrastructure.

DELIVERY



INSTALLATION AND MANAGED SERVICES

Our team of delivery experts combine hands-on experience and technical expertise to provide end-toend program management, deployment, integration and operational services for all phases of a venue or event lifecycle.







CONNECTIVITY



BUILDING MANAGEMENT

IAN





SAFETY & SECURITY





F-COMMERCE /

MULTIMEDIA



AUDIO VISUAL



CLOUD SERVICES





MOBILE DEVICES CROWD INTELLIGENCE

UNITED KINGDOM

USA

ASIA PACIFIC HEADQUARTERS



PTI

ACTIVATING DIGITAL ENGAGEMENT

HEAD OFFICE: Bristol, United Kingdom

EMPOYEES: 11-50 ESTABLISHED: 2018

WEBSITE: ptidigitalgroup.com **EMAIL:** info@ptidigitalgroup.com

KEY CLIENTS: Edgbaston, Norwich City, Bristol

Sport, Nottingham Forest

RELEVANT SPORTS: Applicable across all

sports

TAGS: Business Intelligence, Fan Analytics,

Sponsorship Analytics

SUMMARY

PTI is a igital agency, consulting on media sales, data insight and technology within sports and entertainment. We specialize in activating digital media, delivering fan engagement, activating smart venues, driving technical insight, high impact brand activation and delivering targeted audiences

We work with 40% of Premier League teams and 49% of the 92 professional clubs in England, plus 70+ Clubs and Venues.



WHAT'S EXCITING

We recently rebranded on 1st June 2020, centralising our business to the aims of activating digital engagement. We have announced recent partnerships with Rover, Turnstile, 3D Digital Venue and Satisfi Labs to enhance our vision further.



PUREWRIST

CONTACTLESS PAYMENT BRACELET

HEAD OFFICE: New York, United States

EMPOYEES: 11-50 ESTABLISHED: 2013 WEBSITE: purewrist.com EMAIL: ian@purewrist.com

KEY CLIENTS: Hard Rock hotel, banco de

colombia, Brazil Pre-Pagos

RELEVANT SPORTS: American Football **TAGS:** Business Intelligence, Fan Analytics,

Ticketing

SUMMARY

We are focused on passive wearables. What this means is the power is coming from the reader. Think about a contactless payment card... this is similar to what technology is found inside our bracelet. We then create customized designs for our customers depending on their logo and branding.

The product can be used wherever mastercard contactless payments are accepted. On top of that if set up accordingly a ticket can also be connected to the chip. Purewrist is also a pre paid issuer program manager as well.



WHAT'S EXCITING

We focus primarily on open loop payment; think about a pre paid mastercard and put this on a customized bracelet that can make payments where Apple Pay is accepted. What is special about open loop is that when the consumer leaves the stadium they can use the bracelet wherever Apple Pay is accepted. So the stadium/sports franchise is able to capture spending habits of fans outside the stadium as well.

SATISFI LABS

AI-POWERED ANSWERS FOR ANY PHYSICAL LOCATION

HEAD OFFICE: New York, United States

EMPOYEES: 11-50 ESTABLISHED: 2016 WEBSITE: satisfilabs.com **EMAIL:** jack@relativity.ventures

KEY CLIENTS: TD Garden, Minnesota Vikings, Los Angeles Football Club, Major League

Baseball

RELEVANT SPORTS: Applicable across all

sports

TAGS: AI (Artificial Intelligence), Business

Intelligence, Ticketing

SUMMARY

Satisfi Labs is an AI-powered Knowledge Management Platform that makes conversations with places possible.

Its proprietary Answer Engine allows popular locations to directly answer customer questions on-demand through conversational Al. The platform makes data Al-ready, powering virtual assistants for messaging apps, voice assistants, and chatbots.



WHAT'S EXCITING

Leading the development of conversational Al for major sports, tourism, and entertainment destinations, the Satisfi Labs platform helps places discover new customer insights, increase sales, and improve customer experience. Satisfi Labs is backed by major investors including Google, MLB, Red Light Management, and TechStars. Satisfi Labs recently announced a new virtual COVID-19 Assistant which provides on-demand answers to questions about venues' and popular locations'.

SEATSERVE

IN-VENUE ONLINE AND MOBILE ORDERING

HEAD OFFICE: New York, United States

EMPOYEES: 11-50 ESTABLISHED: 2014 WEBSITE: seatserve.com EMAIL: info@seatserve.com **KEY CLIENTS:** Liverpool FC

RELEVANT SPORTS: Applicable across all

TAGS: E-Commerce, Fan Analytics,

Marketplace

SUMMARY

Welcome to the future of stadium concessions. SeatServe proudly provides venues with the technology and infrastructure to improve the fan purchasing experience and increase food, beverage and merchandise revenue.

With our workforce efficiency system and data analytics tools, SeatServe brings your stadium, specifically your concessions and merchandising, into the age of connected

SEATSER/E

WHAT'S EXCITING

Euroleague Basketball announces 2020 Fan XP Innovation Challenge winners -SeatServe chosen for Best Pitch.

A trial of the platform was launched at the Tokyo National Olympic Stadium to showcase its potential to senior executives from Dentsu, the official marketing agency of the Tokyo 2020 Games.

SeatServe live at Anfield, home of Liverpool FC.

VENUENEXT

TRANSFORMING THE WAY CONSUMERS SHOP, PURCHASE, AND PAY.

HEAD OFFICE: Santa Clara, United States **EMPOYEES: 11-50**

ESTABLISHED: 2014 WEBSITE: venuenext.com **EMAIL:** cailen@venuenext.com

KEY CLIENTS: San Francisco 49ers, Orlando Magic, DC United, Minnesota Timberwolves, Utah Jazz

RELEVANT SPORTS: Applicable across all

TAGS: E-Commerce

VenueNext is a next-generation point-of-sale company transforming the way consumers shop, purchase, and pay. Their ecosystem of products combines physical and digital solutions to create a frictionless shopping experience, offering products such as pointof-sale solutions, online ordering, branded apps, and branded payments. VenueNext's powerful platform makes commerce simple for consumers, and easy for brands to incentivize and reward their most valuable customers for their loyalty.

V E N U E **N E X T**

WHAT'S EXCITING

VenueNext has been at the forefront of the evolution of contactless payments and continues to pave the way for commerce at some of the largest entertainment and attraction venues across the globe. A recently announced partnership with SIDEARM Sports aligns with the necessity to drive contactless transactions and displays VenueNext's ability to work across all digital platforms.





VENUETIZE

INNOVATIVE VENUE TECHNOLOGY

HEAD OFFICE: Tampa, United States

EMPOYEES: 11-50 ESTABLISHED: 2014 WEBSITE: venuetize.com EMAIL: info@venuetize.com

KEY CLIENTS: Memphis Grizzlies, Miami

Dolphins, AMALIE Arena

RELEVANT SPORTS: Applicable across all

sports

TAGS: Business Intelligence, Fan Analytics, VR (Virtual Reality) / AR (Augmented Reality)

SUMMARY

Venuetize makes the way people experience spaces easier, more personal, and enjoyable. Our mobile platform integrates with existing venue infrastructure to deliver mobile wallets, contextual advertising and information, and other applications that improve and innovate the fan experience.

Founded in 2014, Venuetize works with leading sports teams, arenas, municipalities and destinations throughout North America.



WHAT'S EXCITING

Venuetize continue to partner with more and more NBA, MLB and FML teams and stadiums.

VOGO

IN-VENUE LIVE & REPLAY

HEAD OFFICE: Montpillier, France

EMPOYEES: 11-50 ESTABLISHED: 2013 WEBSITE: vogo-group.com EMAIL: contact@vogo.fr

KEY CLIENTS: French Rugby Federation, Volleyball Canada, Allianz Riviera (Nice

Stadium)

RELEVANT SPORTS: Applicable across all

sports

TAGS: Video Analytics

SUMMARY

VOGO develops, markets and distributes live & replay, audio and video solutions for spectators and professionals in sports venues. We deliver several real-time video feeds to thousands of people in a single location combined with replay and zoom features on mobile devices.

WHAT'S EXCITING

VOGO has covered over 1,000 events across more than 20 sports.

The company is now deploying its solution for other event types, such as live concerts, operas, and fashion shows for prestigious brands.

WAITTIME

CROWD TRACKING INTELLIGENCE & REDISTRIBUTION

HEAD OFFICE: Detroit, United States

EMPOYEES: 11-50 ESTABLISHED: 2014 WEBSITE: thewaittimes.com **EMAIL:** zachary@thewaittimes.com

KEY CLIENTS: Miami Heat, Melbourne Cricket

Ground, Sydney Cricket Ground, USTA,

T-Mobile Arena

RELEVANT SPORTS: Applicable across all

TAGS: AI (Artificial Intelligence), Computer

Vision, Video Analytics

Real-Time Crowd Intelligence.

WaitTime's state-of-the-art, patented artificial intelligence leverages both a quest platform and an operator's platform to observe, measure, and maximize the impact of the WaitTime system using real-time data and historical analysis on crowd behavior.

WHAT'S EXCITING

Global partnerships with top of industry technology and managed services companies that are leveraging WaitTime's platform to help out with the "new normal" post COVID-19.



2020 SEATING

STADIUM SEATING FOR ALL

HEAD OFFICE: Cookham, United Kingdom

EMPOYEES: 1-10 ESTABLISHED: 2016 WEBSITE: 2020seat.co.uk

EMAIL: michael.cunnah@2020seat.co.uk KEY CLIENTS: Wycombe Wanderers FC,

Hibernian FC

RELEVANT SPORTS: Applicable across all

sports

TAGS: Disability / Mobility

SUMMARY

Delivers unique next generation seating which transforms everyone's match day experience and safety.



WHAT'S EXCITING

Everyone regardless of physical abilities and height will be able to see the action, even if those around them are standing.

ARMORED THINGS

REAL-TIME CROWD INTELLIGENCE

HEAD OFFICE: Boston, United States

EMPOYEES: 1-10 ESTABLISHED: 2016

WEBSITE: armoredthings.com EMAIL: info@armoredthings.com KEY CLIENTS: Banc of California Stadium,

Home of LAFC

RELEVANT SPORTS: Applicable across all

sports

TAGS: AI (Artificial Intelligence), Fan Analytics,

Video Analytics

SUMMARY

Safety is at the core of what we do and why we do it. That is why we build our products like we manage our relationships, with trust and transparency. Since we were founded in 2016, Armored Things has built a team of experts across security and technology to deliver world-class solutions to stadiums, corporations, and campuses around the country. As a team, we're pushing technology towards a safer future.



WHAT'S EXCITING

"One of our 19 startups to watch in 2019, Armored Things, uses artificial intelligence to transform data into safety insights. It engages in technology, like cameras and smart door locks, that is already being used in venues to gather data to provide physical security." - Newsroom

CRICKETGRAPH

A CRICKET MEDIA PORTAL FOR LOCAL CRICKET

HEAD OFFICE: Mumbai, India **EMPOYEES:** 1-10

ESTABLISHED: 2012 WEBSITE: cricketgraph.com EMAIL: admin@cricketgraph.com **KEY CLIENTS:** Hell Energy **RELEVANT SPORTS: Cricket**

TAGS: Grassroots / Youth, News / Content,

Social Media

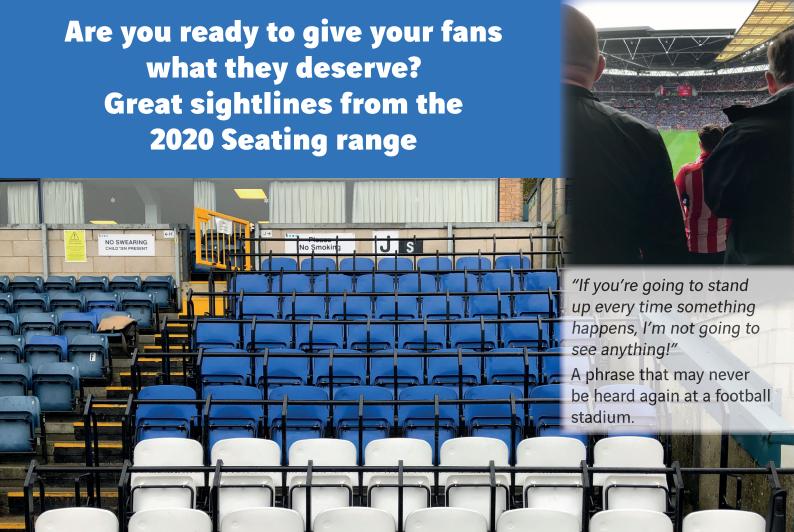
Cricketgraph.com is a cricket media portal based out of Mumbai, india. We are into cricket academies, managing & promoting cricket tournaments, player management & promotions and conducing sports events.



WHAT'S EXCITING

The media part of cricketgraph is the most exciting one since it provides unparalleled coverage to local cricketers for their achievements.





"We have been following the progress of safe standing/seating initiatives and this innovative development ensures both the comfort and safety of fans whether they choose to sit or stand.

"Feedback has been very positive since their installation here at Adams Park and we are delighted to recommend their installation at any stadia." Michael Davies - General Manager, Wycombe Wanderers

Designed in accordance with and compliant with Green Guide 6.

For more information, contact us on: info@2020seat.co.uk



FAN SEATS

COMPARE REAL-TIME FOOTBALL TICKET PRICES

HEAD OFFICE: Manchester, United Kingdom

EMPOYEES: 1-10 ESTABLISHED: 2000 WEBSITE: fanseats.co.uk EMAIL: info@fanseats.co.uk **KEY CLIENTS: N/A RELEVANT SPORTS: Soccer**

TAGS: Ticketing

SUMMARY

Fan Seats are a dedicated website providing competitive prices for football tickets in the UK and Europe. Based in Manchester and London, England, we have helped thousands of fans secure seats to the best matches. This ticket website was created to ensure that football fans get the lowest priced tickets for the best matches. Whilst many matches are sold out officially, by working with safe and secure secondary ticket agencies, FanSeats.co.uk are able to provide competitive prices.



WHAT'S EXCITING

Fan Seats provides the lowest prices for football tickets, offers safe and secure ticket transactions and value in the ticketing industry, with a a transparent pricing system for visitors.

FLOTEQ TECHNOLOGIES

SPORTS AND HOSPITALITY BEVERAGE MONITORING SYSTEM

HEAD OFFICE: Sydney, Australia

EMPOYEES: 1-10 ESTABLISHED: 2018 WEBSITE: floteq.com.au EMAIL: miles@floteq.com.au

KEY CLIENTS: MCG, SCG, Bankwest Stadium,

ANZ Stadium, Delaware North Group,

Rockpool Dining Group

RELEVANT SPORTS: Applicable across all

TAGS: AI (Artificial Intelligence), Business Intelligence, Performance Data Analytics

Sporting, entertainment and hospitality venues have an average of 9-12% beverage wastage across their beverage outlets. Waste is classified as unauthorized pour, poorly trained staff in dispensing beverages, over and underpours and poor system maintenance resulting in losses. With our intelligent IoT sensors and controllers, Floteg provides clear insights and reports into wastage, stock control, temperature and brand integrity as well as consumer behaviour in real-time. We reduce wastage by 40-60% and increase overall revenue by 20-30%.



WHAT'S EXCITING

We service stadiums, entertainment venues, festivals and outdoor events as well as hospitality to allow them to effectively and quickly manage cost due to wastage. Our smart analytics system provides deep insights into consumer behaviour and consumption in real-time, as well as intelligent AI for predictive maintenance of your system and compliance with health and safety regulations.

GAMEDAY

ON-LINE AGGREGATOR AND A RESERVATION PLATFORM FOR SPORTS

HEAD OFFICE: Chennai, India **EMPOYEES:** 1-10

ESTABLISHED: 2015 WEBSITE: gameday.asia EMAIL: huddle@gameday.asia

KEY CLIENTS: Turf 137, Smashbounce Sports, Dugout Sports, Chaos, Festember (NIT Trichy)

RELEVANT SPORTS: Applicable across all

sports

TAGS: AMS (Athlete Management System),

E-Commerce, Ticketing

At Gameday, we are building technology products that inspire recreational sports participation. Gameday started in 2015 as an organizing firm, conducting tournaments across different sports. Later, Gameday evolved to an online aggregator listing all sports facilities across the city and the services they offered, and managing bookings and reservations using our SaaS accessible by facility owners and managers. After gaining a stand in the market, Gameday stepped into merchandising through our own e-commerce and amazon.com.



WHAT'S EXCITING

Gameday is building exciting and inspiring products that inspire sports aspirants and recreational sports. One such recent feature, that's set to be launched is the Gameday Challenges, which are a short format mini tournaments with rewards. Individual players or teams pitted against others randomly at Gameday authorized venues, where they compete or challenge for stake.



INTELLICUP

INNOVATIVE VENUE TECHNOLOGY

HEAD OFFICE: Port Louis, Mauritius

EMPOYEES: 1-10 ESTABLISHED: 2016 WEBSITE: intellicup.com EMAIL: info@intellicup.com KEY CLIENTS: Compass Group, AEG Worldwide UK, NASCAR, 02 Arena London,

NEC Birmingham RELEVANT SPORTS: Applicable across all

sports

TAGS: E-Commerce, Marketplace, Wearables /

Smart Devices

SUMMARY

IntelliCUP is an integrated, hygienic, high speed, cashless, perfect serving system that significantly increases merchant profitability and enhances the customer experience providing real time trade and personable first party consumer data.

The self cleaning dispensing IntelliHead can be retrofitted or mobile. A multi-use biodegradable cup with a unique NFC tag links the customer to the point of purchase and consumption.



WHAT'S EXCITING

Full operational system Patents granted in Australia, South Africa, Canada, Japan, China. Hong Kong, Europe (including the UK) and Mexico. Currently on the fast track in the USA, Brazil and India.

Signed licensees across USA, UK and South Africa.

SEATZ

SKIP THE LINE. NOT THE GAME

HEAD OFFICE: Houston, United States

EMPOYEES: 1-10 ESTABLISHED: 2018 WEBSITE: seatzapp.com EMAIL: info@seatzapp.com

KEY CLIENTS: Houston Astros, Houston Texans, Rice University, CONCACAF **RELEVANT SPORTS:** Applicable across all

sports

TAGS: E-Commerce, Fan Analytics,

Marketplace

SUMMARY

sEATz is an in-seat delivery app available at many sports, event and music venues around the United States. Download the sEATz app, order your favorite food, drink or even apparel and let sEATz bring it directly to your seat! #skipthelinenotthegame



WHAT'S EXCITING

In September 2019, sEATz raised over \$1.3m in funding. The sEATz app is used at Houston Rodeo from March 2020.

SECOND SUN

COST-EFFICIENT AND SUSTAINABLE PITCH MAINTENANCE

HEAD OFFICE: Copenhagen, Denmark

EMPOYEES: 1-10 ESTABLISHED: 2016 WEBSITE: secondsun.dk EMAIL: nm@secondsun.dk KEY CLIENTS: Brondby IF

RELEVANT SPORTS: Applicable across all

TAGS: AI (Artificial Intelligence), Computer

Vision

Second Sun offers an intelligent solar reflector system for sports stadiums. The system is based on an innovative mechatronic design with an intelligent control algorithm that ensures the sunlight is reflected to the areas on the pitch in need of additional sunlight.

Second Sun is an engineering company with high-skilled profiles within mechanics, electronics and software development and our products are making the day-to-day activities of a groundsman easier while reducing the costs associated.



WHAT'S EXCITING

We are currently testing our latest prototype together with the Danish football club, Brondby IF, and their highly renowned groundsman, Chris Hague. Promising results are already prevailing and we will soon extend the current installation to include more mirrors. Furthermore, we have concrete interest from multiple highprofile stadiums across the globe and thus we are doing everything we can to finalize the full installation in Brondby to create a reference for interested clients.



ADDITIONAL COMPANIES -INNOVATIVE & EMERGING

In addition to the key companies highlighted above, we have also included a collection of innovative and emerging companies working with stadiums and venues.

COMPANY NAME	SUMMARY	WEBSITE
Ariel AI	Developing the next generation of consumer experiences on mobile devices through pixel-accurate, real-time 3D Human Perception and Reconstruction.	arielai.com
BindiMaps	BindiMaps is an app for indoor navigation (so just like google maps, but indoors) that everyone can use, but is optimised for people with vision impairment.	bindimaps.com
FlipTix	Fans leave events early, and FlipTix sells brand new tickets for the remaining time to new fans.	fliptix.com
Looking Glass Factory	Holographic displays and experiential marketing installations	lookingglassfactory.com
Pivotal Commware	A 5G focused company making military grade beamforming viable for commercial markets.	pivotalcommware.com
Salsa Sound	Use digital signal processing to produce an outstanding audio experience for stadium and TV audiences	salsasound.com
vGIS	vGIS is a visualization platform that transforms traditional BIM, CAD, GIS and other types of data into stunning augmented reality visuals.	vgis.io

