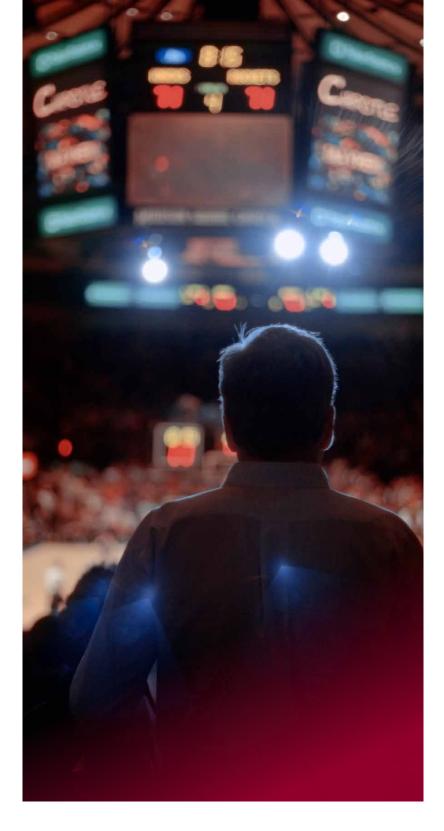
SPORTS, GAMING AND ROCK & ROLL: CONNECTIVITY AND THE FAN EXPERIENCE

A research report on why connectivity matters in sports and entertainment venues







Contents

Key findings at a glance	03
Before the event: Warming up	04
During the event: Hitting the right notes	09
Looking ahead: Bringing fans back for an encore	13
The fan journey in the stadium of the future	17
How we conducted this survey	20



Live events are fully back, bigger and better than ever.

From the earth-shaking numbers that came out for summer concerts to record-breaking attendance at live sports events including the US Open, the Women's NCAA Final Four, and Major League Soccer's regular season. After years of watching everything on screens, fans have triumphantly returned to stadiums, arenas, and theaters.

And while live events offer unique and memorable experiences, fans' expectations have evolved exponentially. They want a great show, but also to post about it - a lot.

They expect to queue but want to know how to beat the line with smarter wayfinding or live notifications. They are hungry for better food and drinks – if delivered directly to their seats. They want ridesharing to be easily accessible. For merch stores to be 'just walk out'. And most importantly, they are looking to call or message friends and family without worrying about the network.

At Boldyn Networks, we're passionate about connectivity and the fan experience. We commissioned a survey of thousands of fans in the UK and the US to understand what people really want from live events and how connectivity can enable it. What we found provided data to back up what we've known intuitively for some time - **today's fan experience is highly reliant on mobile devices, and fans expect the highest levels of connectivity.**

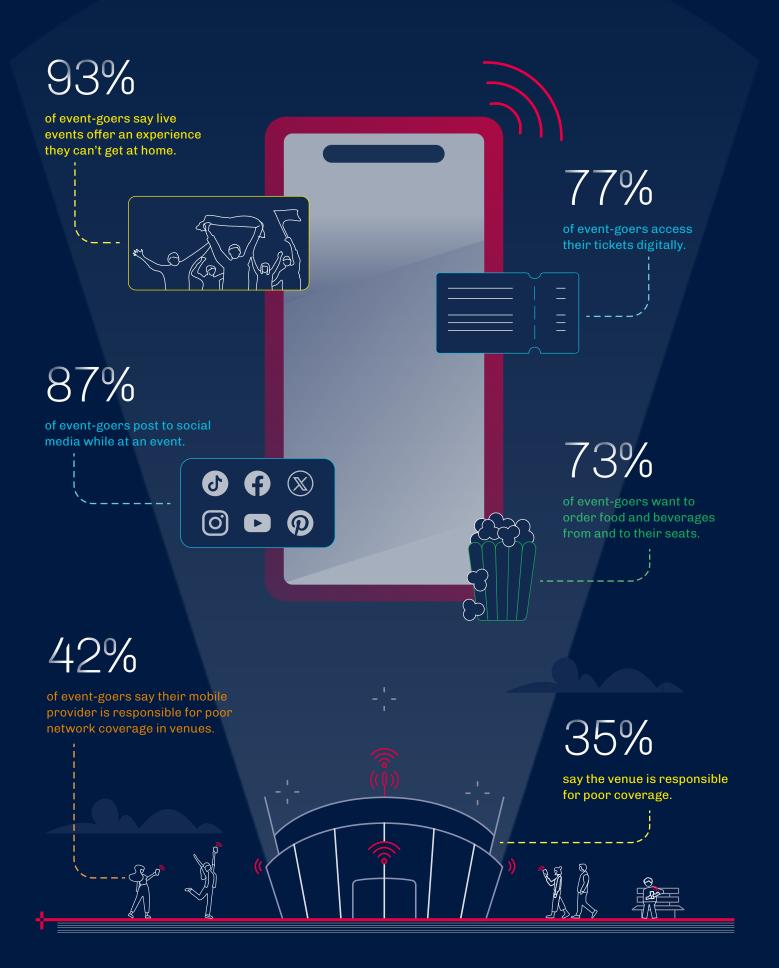
Venues with robust wireless networks provide a much better fan experience. Easy ticketing. Easy transactions. More immersive experiences. More convenient amenities and easier navigation. These are the attributes of a great venue. The kind of venue that encourages bigger artists to perform there. Attracts more sponsors. Brings fans back again and again. And entices them to stay longer and spend more on experiences they just can't get anywhere else.

While the benefits are clear, the commercial models and economics of in-venue connectivity are evolving quickly. Direct investment from wireless carriers in sports and entertainment spaces isn't guaranteed, even in the largest 'major league' venues. This means to stay competitive, stadiums, arenas and theaters need to partner with a neutral host like Boldyn Networks who deliver state-of-the-art cellular and Wi-Fi in a cost-effective model. All while ensuring the venue's schedule and quality requirements are adhered to.

Live events are back with a vengeance and forward-thinking venue owners and operators are stepping up their game, harnessing the power of connectivity to truly understand and elevate the fan experience. We're passionate about partnering with these venues to turn fan expectations into thrilling realities. Dive into our survey for insights on how connectivity is reshaping the future of live entertainment – I look forward to discussing how we can supercharge your venue's connectivity journey, together.

JASON CALIENTO | CHIEF COMMERCIAL OFFICER, US

Key findings at a glance





Before the event: Warming up

Connecting a better fan experience before they even arrive

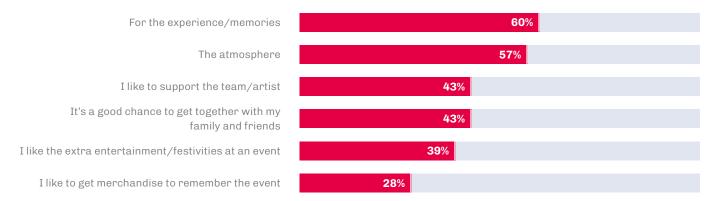
When fans head to a game or a concert, it's not just about the big event. The whole experience matters, from the second they click 'find tickets' online. The expectation is a frictionless experience with easy to make choices that can be decided before they enter the venue. They're choosing digital ticketing options, so they never lose their stub. Planning where they'll eat in advance. What merch they'll buy. How they'll get home at the end of the night. And when it all comes together, they're prepared to get there earlier to enjoy more of what they came for.

Why does this matter? Because these moments before the main event aren't just about building excitement; they're opportunities to step up the game.

An experience you just can't get at home

Despite the rise of live video streaming, the vast majority of respondents (93%) say seeing an event at an arena or stadium offers an experience they just can't get at home. For most (60%), it's about having the experience itself and creating memories. Almost as many (57%) mention the atmosphere as a reason for attending a live event. And nearly half see it as a way to support the team or artist, or as a good chance to get together with friends and family (43% for each). Whatever the reason, these experiences are something they want to share. Not just with those around them in the stands but with their networks online.

QUESTION: Why would you choose to attend an event at a stadium/arena over watching it at home?

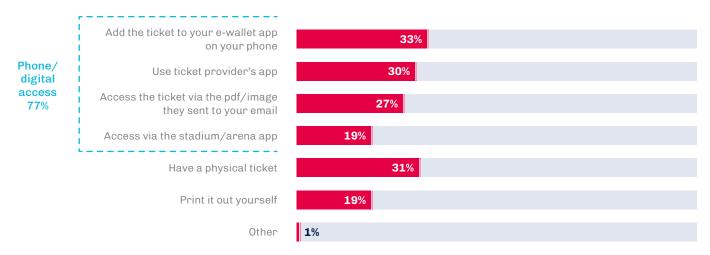




Digital tickets are taking over

Once upon a time, physical ticket stubs were part of the event experience, serving as mementos that often found long-term homes in scrapbooks or picture frames. But today, only about one-third (31%) of event-goers use physical tickets. In contrast, more than three-quarters (77%) access their tickets digitally. That includes those who access their tickets through their phone's e-wallet app (33%), the ticket provider's app (30%), a PDF sent to their email (27%) or the venue's app (19%). Whether fans use physical tickets or digital ones, it's vital for venues to ensure their scanners and back end systems can handle the demands of ticket processing.

QUESTION: Thinking about your ticket(s) for the event(s), did you?





of event-goers are using digital ticketing options.

Why use digital tickets?

Two-thirds (66%) of fans said they did so because it was convenient. Other benefits included less risk of losing their tickets (52%) or not getting them in time through the mail (44%), not having to print them out (42%), and having fewer items to carry at the event (42%).

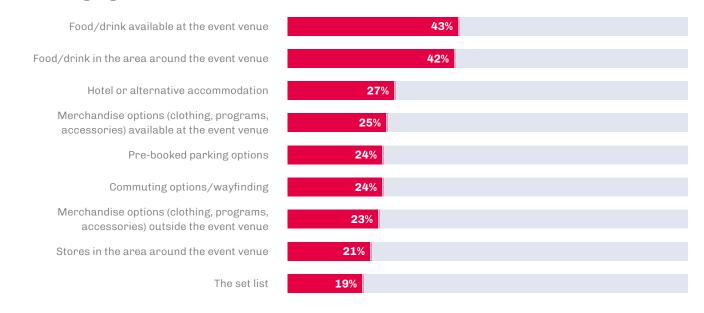
Event-goers like to be prepared

Almost all event-goers (94%) do some research before leaving for the stadium or arena. Food and drink options at and around the venue top the list of what they search for before and on the way to the event. Before an event, more than one-third look up food and drink available at the venue itself (43%) or in the area around the venue (42%). About as many look up that same information on the way to the event as well.

Before the event, around one-quarter look into hotels in the area (27%), merchandise options (25%), parking (24%), and commuting and wayfinding (24%). On the way to an event, 31% look up parking options, while 27% search how they'll get home after the event.

Venues can enhance the fan experience by making sure information about food and drink, merchandise, parking, and other on-site amenities is clearly accessible on their websites or through digital tickets – and by providing links to accommodations, transportation and other offsite services, too. Internet of Things (**IoT**) devices can deliver real-time notifications while fans are on their way to the venue so they know where the best place is to park, how much merchandise is in stock, or when a fresh batch of their favorite snack is hot and ready. Venues can even push personalized offers on items fans have expressed interest in or purchased during previous visits.

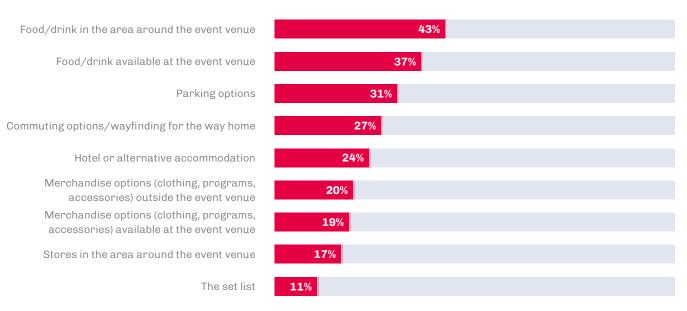
QUESTION: Once you have purchased your ticket, do you look into any of the following options before going to the event?







QUESTION: On the way to the event, do you look into any of the following options?

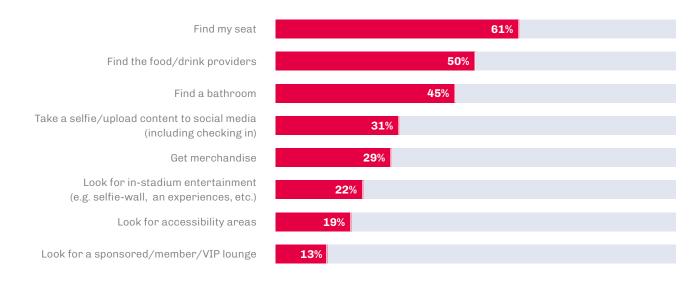


Most people arrive early

For most, arriving just in time for the opening whistle is not an ideal experience. Arriving early leaves more time to enjoy everything the night has to offer. On average, event-goers arrive about 50 minutes before an event starts. More than one-third (37% for sports; 38% for entertainment) arrive with an hour or more to spare. Finding their seats and finding a bathroom are among the first things event-goers do when they arrive (61% and 45%, respectively). However, 50% look for food and drink vendors, 29% seek out merchandise, and 31% post or check in to social media. And 22% actively look for in-stadium entertainment, like selfie walls and augmented/virtual reality (AR/VR) experiences.

Early arrivals are great for venues: the longer fans are on-site, the more opportunities venues have to drive revenue by providing enticing offers. With the right connectivity infrastructure, venues can offer monetized extras like band activations, unique shopping experiences, special offers on food and drink, and next-level AR/VR entertainment.

QUESTION: What are some of the first things you normally do once you get to your event venue?





The bottom line

In a nutshell, every step of a fan's journey – from ticket purchase to the final whistle or encore – is our playing field. Seamless connectivity onsite becomes part of the adventure. Imagine fans browsing and buying merch on their phones while in line for a snack. Or getting real-time updates on their travel plans, making the journey to and from the venue a breeze.

Using advanced connectivity, venues can enhance the pre-event experience – and drive revenue – with easy digital ticketing options, personalized information about on-site and local amenities, and pre-event extras.

During the event: Hitting the right notes

How connectivity helps upgrade the fan experience while they're at the venue

Today's fans are coming for the main event – but they want a complete experience. One enriched with sponsored extras, cutting-edge AR/ VR interactions, and opportunities to weave their mobile devices and online networks seamlessly into the fabric of their day. It's not just about watching; it's about participating, engaging, and sharing.

Interactive sponsorships and immersive technologies, entice fans to spend more on exclusive experiences and merchandise. Each shared moment and interaction on TikTok - an opportunity to extend the venue's brand or sponsor's reach, turning every attendee into a potential brand ambassador.

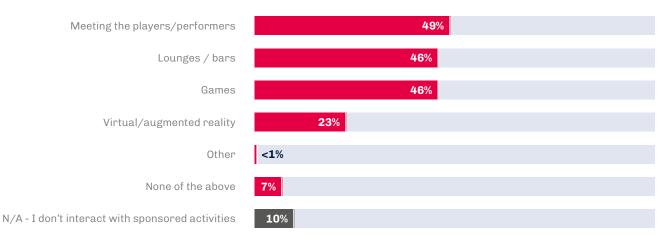
What do all these things have in common? They all mean being connected in more ways than one.

Sponsored events and new technologies make the experience more memorable

Sponsorships are a great way to bring in more revenue while providing unique and exciting experiences for fans. And fans are on board: 81% say they enjoy participating in sponsored activities at the event. Nearly half (49%) want to meet the players or performers, and almost as many like spending time in sponsored lounges or bars (46%) or playing sponsored games (46%). Games are especially popular with younger event-goers, with 56% of those aged 18–24 enjoying them compared to just 19% of those aged 60 and older.

Around one-quarter (23%) of event-goers enjoy AR/VR sponsored interactions, with 68% saying these technologies have become an integral part of the fan experience. To deliver these kinds of experiences for thousands of fans at once, venues need rock-solid connectivity with very low latency.

QUESTION: What kinds of sponsored interactions do you typically enjoy at a stadium/arena?

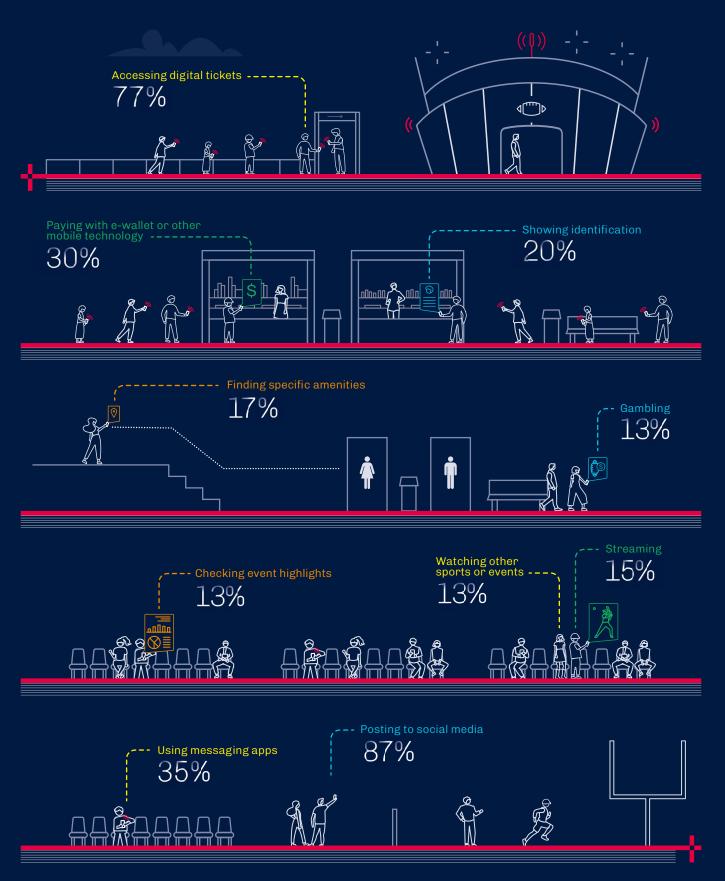




of event-goers say AR/VR technologies have become an integral part of the fan experience.

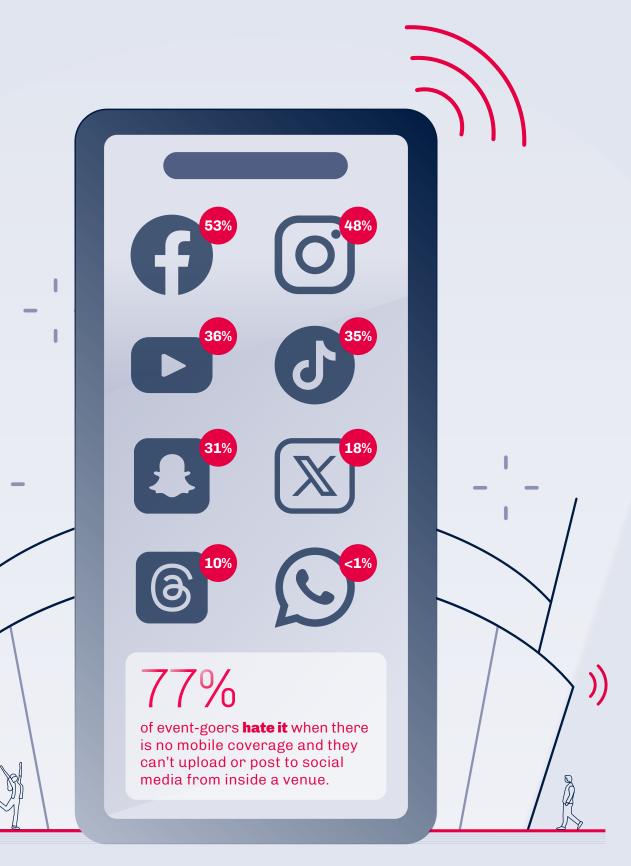
Mobile phones: A vital part of the fan experience

From the moment fans arrive at an event until the final whistle blows, mobile phones play a huge role in today's sports and entertainment experience. Here's how fans use their devices while at a venue.



Fans love to share their experiences on social media

If you don't post about an event on social media, did it really happen? 87% of event-goers post while they're at an event. These are the platforms they use:



((

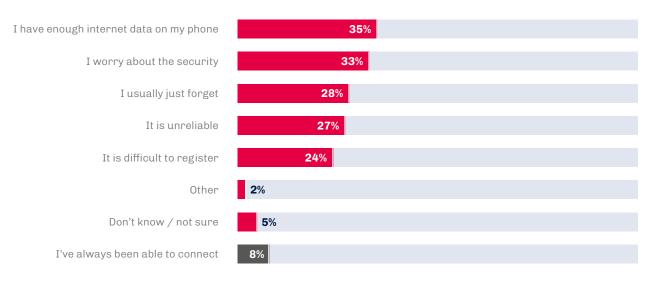
Wi-Fi helps event-goers share the excitement

Almost three-quarters (72%) of event-goers use the venue's Wi-Fi. Nearly half (44%) use it to share photos. They also use Wi-Fi to share social media posts (37%), videos (35%), tickets (29%) and contact details (14%).

But there are many reasons why event-goers might choose not to use the venue's Wi-Fi. Around one-third (35%) don't use it because they have enough data on their phones, while 28% say they just forget to use it. Others have concerns about its security (33%) or reliability (27%). And some say the registration process is too hard (24%).

Venues can improve the fan experience by ensuring their Wi-Fi is easy to access, performs well and is highly secure. When the Wi-Fi meets these three criteria, fans are more likely fans to use it – and the information they provide when logging in can become a valuable source of data on demographics and other details venues can use to tailor the fan experience and future marketing campaigns.

QUESTION: What are the reasons you haven't connected to the venue Wi-Fi at an event?





The end goal

Connectivity isn't just a nice feature at live events; it's the heartbeat. Being immersed in sponsored AR engagements, breezing through payments with a tap, effortlessly navigating the twists and turns of the venue, and instantly sharing your epic moments on social media. This isn't just convenience – it's memory making magic. To make it happen, venues need to ensure event goers have robust, secure connectivity (both mobile and Wi-Fi) everywhere inside and outside the venue.

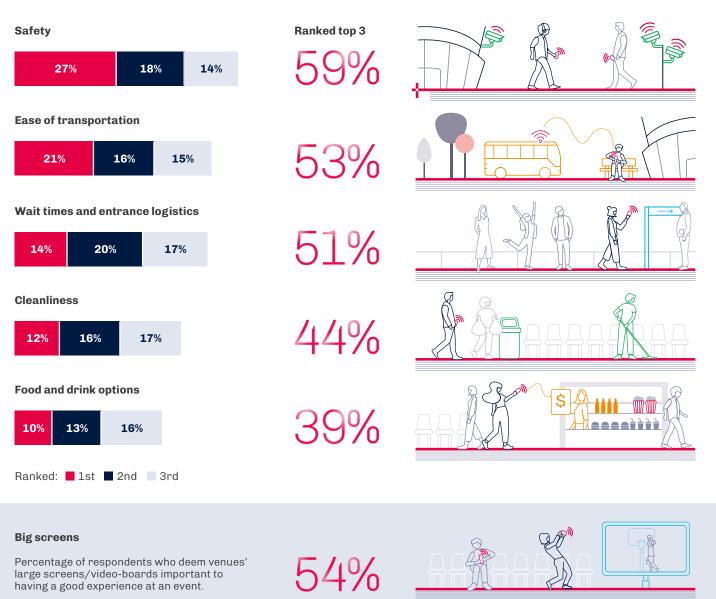
Looking ahead: Bringing fans back for an encore

How connectivity drives fan loyalty

Event-goers have embraced connectivity-enabled conveniences that streamline the live experience. And there are opportunities to take those conveniences to the next level. Smart wayfinding to easily navigate to their seats. Handy in-seat ordering that brings concessions and merchandise right to them. Behind the scenes, technologies like IoT sensors that ensure garbage cans are emptied, soap dispensers are restocked and spills are cleaned up promptly. So nothing gets in the way of a great time. Because the more seamless and effortless the experience, the more likely eventgoers are to want to come back again and again.

What makes an enjoyable event

Fan expectations today are higher than ever. And it's more than just the quality of the show or the excitement of the game that determines whether or not they have a good time. Here are some of the other factors that contribute to a great fan experience:



20%

Merchandise selection

Percentage of respondents who believe that the availability of merchandise affects the overall environment/mood of the event the most.

What do all these elements have in common? **The right connectivity can make them all better.**

Fans are ready to spend more money

Almost all event-goers (98%) buy food and drinks at an event, and most (86%) also buy merchandise. On average, event-goers spend \$50/£41 on food/drink and \$67/£55 on merchandise. And those numbers could be even higher. More than three-quarters of event-goers (81%) say they would spend more if ordering were more convenient. Most want to be able to order food and drink (81%) or merchandise (73%) from their seats – and have it delivered directly to them. They also want to see options like preordering (50% for food/drink, 46% for merchandise) and being able to look up merchandise lists ahead of time (44%). The takeaway is clear: venues can drive profitability by making it easier and faster for fans to get their snacks and t-shirts.

81%

of event-goers would spend more on food, drink and merchandise if ordering were more convenient.

Not just hot dogs and jerseys

Many fans (85%) would use an app that notified them of ticket availability so they could buy seat upgrades. And among those who attend sporting events, 56% spend money betting on the game they're watching, wagering an average of \$101/£83.

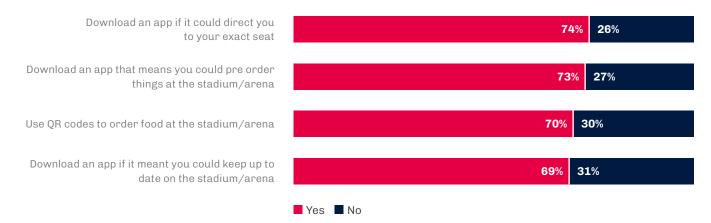
Fans want new capabilities from mobile apps

Most event-goers (71%) wish they could use their phones to connect more to an event. That includes getting live stats while the game is on (72%) or more AR/VR experiences (62%) – like AR overlays that let fans see realtime stats by pointing their phone at a particular player. Many would also download apps to make the experience more convenient, from being directed to their seats (74%) to pre-ordering items to buy at the venue (73%). Almost as many (69%) would download an app to keep them up to date on the stadium or arena.

These numbers are driven mainly by the younger generations. While only 4% of those aged 18 to 24 would not use any of these conveniences, 33% of those aged 60 and older said they were not interested in them.

More than half (57%) of those surveyed were under the age of 40. That makes it critical for venues to strengthen how they engage with younger audiences. By developing smart, easy-to-use apps that deliver the functionality those fans want.

QUESTION: Thinking about stadium/arena events, would you do any of the following?

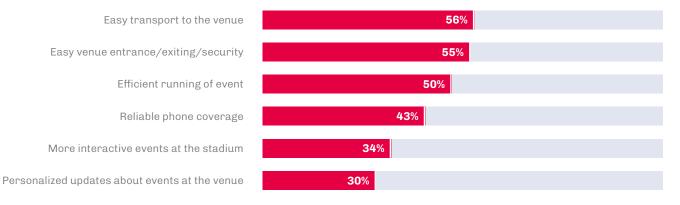


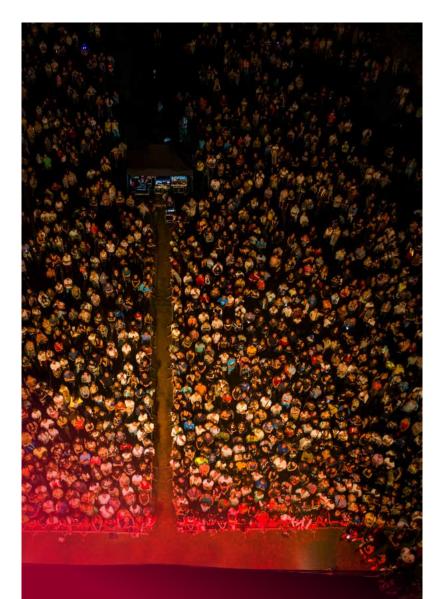
A seamless experience will bring fans back for more

Convenience and efficiency topped the list of factors that would make event-goers likely to attend another event at the same venue. Around half said ease of transportation to get to the venue (56%), ease of entering and exiting the building, including security protocols (55%), and how efficiently the event itself was run (50%) would make them want to return. Others mentioned reliable cell phone coverage (43%) and interactive events at the venue (34%) as key factors. About one-third (30%) said personalized updates about future events at the venue would bring them back.

While venues may not be able to control transportation options, they can ensure the experience is seamless once fans arrive. Technology to reduce time spent in queues, IoT devices that give fans real-time information on amenities and high-quality mobile network coverage will be worthwhile investments for any venue.

QUESTION: Which of the following would make you more likely to return to a particular stadium/arena?





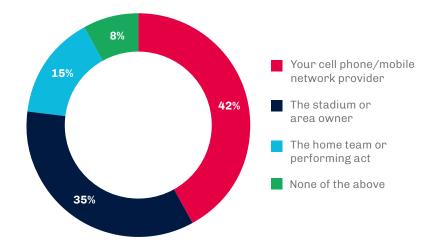


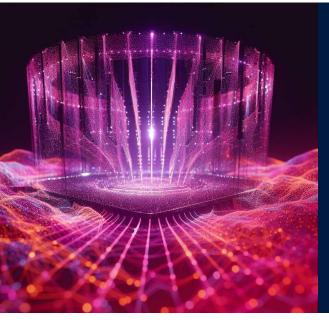
Fans are divided over who's responsible for network coverage

When event-goers experience poor network coverage in a stadium or arena, 42% believe it's an issue with their own mobile phone provider. Around one-third (35%) believe it's the venue's responsibility, while 15% blame the home team or performing act.

No matter who fans blame for poor coverage, the venue has more to lose. While few people would likely change mobile providers because of bad service in a venue, they might choose not to go to future events at a venue where they can't get coverage – even if they think it's a problem with their own provider. Venues can reduce that risk and take greater control over the quality of the fan experience they deliver by working collaboratively with mobile operators and shared infrastructure providers to create a solution that works for everyone.

QUESTION: Who do you believe is primarily responsible if you experience poor phone coverage/network connection in a stadium or arena during an event?





The final note

Event-goers are already taking advantage of some connectivity-enabled conveniences. But they're hungry for more. They want easier ways to get around. To order concessions. To be notified about events and ticket sales. To immerse themselves with AR/VR experiences. Stadium and arena operators need to be on the constant lookout for innovative ways to enhance the experience for every fan so they can't wait to come back for the next event. That depends on robust network coverage throughout the entire venue. Because great connectivity is no longer a luxury. Fans now expect it – and venues must deliver.

The fan journey in the stadium of the future

What does the fan experience look like in the stadium of the future? It will be seamless. Secure. Interactive. Convenient. So fans don't have to worry about anything but enjoying themselves.

1 Arriving



As fans enter the stadium, scanners automatically log their e-tickets. So there's no waiting in line to get to the good stuff.



2 Security



Smart cameras scan crowd movement and behavior, stopping fans only if something seems amiss. So fans stay safe – without having to deal with tedious security lines.

Fans say venue safety is the **#1** factor in enjoying an event

(())

))

3 Wayfinding

Fans get personalized directions straight to their seats. So there's no risk of getting lost and missing any part of the show.

74%

of event-goers would download an app that directs them to their assets

((

4 AR selfie opportunity

5 In-seat ordering

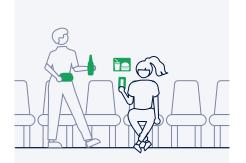
6 AR stats



On the way to their seats, they stop to take a selfie with an AR rendition of their favorite player. Helping fans feel connected with a more immersive experience.

87% of event-goers share content on social media while at an event

7 Maintaining cleanliness



They can use their phones to buy snacks, delivered to their seats. No fuss. No waiting. So fans don't miss a second of the action.

57%

of event-goers would spend more on snacks if they could do in-seat ordering

8 Sports betting

They can use an AR overlay to see stats on player speed, current and past performance, and more – all in real time. Enabling fans control their own viewing experience.

68% of event-goers say AR/VR are an integral part of the experience

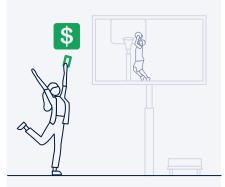
9 Leaving



Connected sensors let custodial staff know when trash cans need emptying or supplies are running low. Providing fans with a clean, comfortable experience throughout the event.

44%

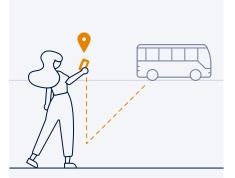
of event-goers rank cleanliness in their top 3 most important elements to enjoy an event



They view real-time stats on their phones and place bets without going anywhere. So fans can score big when their team wins.

Fans who bet on sports spend an average of

\$101/£83



After the game, they can get directions to the best exit to take, whether they're heading to the parking lot or catching a bus. So leaving is just as seamless as arriving.

69%

of event-goers use their phones to check commuting options as they're leaving a venue



Conclusion

Connectivity takes live events to the next level

Live sports, concerts and other events continue to command the attention and devotion of fans around the world. Many have even found a new appreciation for live events after experiencing life without them during the pandemic. They no longer take those events for granted, so they are demanding exceptional experiences every time they go out. The rise of digital has heightened those expectations even further. It has opened up new opportunities to enhance the live experience with greater convenience, interactivity and exclusive perks. Today's fans are using digital tickets to enter the venue. They're enjoying extra entertainment options they access through their phones. Sharing their best moments on social media.

And they're looking for more. They want to order, pay for and receive snacks and merchandise right from their seats. They want navigational assistance to help them get around the venue – and to sort out transportation to and from the event. They want to be able to check in on other events going on at the same time. And they're prepared to download apps that will make their experiences more convenient.

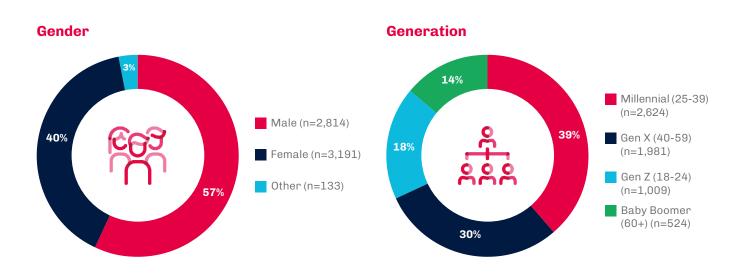
Venues can make their events memorable and keep fans coming back for more by embracing digital technologies. By continually pushing boundaries to offer new ways to enhance the fan experience. And happy fans spend more money. Connected digital technologies offer new opportunities for commercialization that will drive revenue and greater returns on investment.

But none of that is possible without great connectivity. It's no longer a 'nice to have.' It's a must. With shared network infrastructure from Boldyn Networks, venues can deliver secure, reliable coverage with no dead spots and consistent performance, no matter how many people are in attendance. So fans can enjoy every moment. Feel safe and secure. Spend less time waiting. And share the magic.

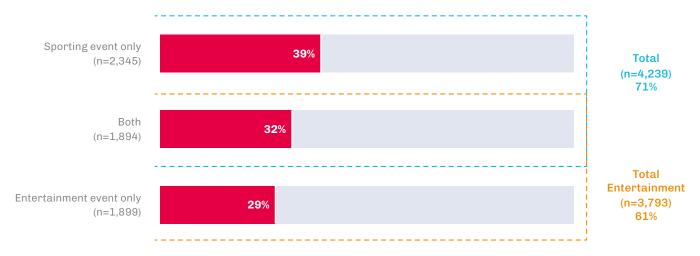
How we conducted this survey

Boldyn Networks conducted this survey to investigate the perception and use of connectivity by people attending sports and entertainment events at stadiums and arenas in the UK and the US. We asked about what event-goers do at the venue, how they use their mobile devices while they're there and what else they'd like to be able to do that connectivity could enable.

The research was commissioned by Boldyn Networks and conducted by Lonergan Research in accordance with the ISO 20252 standard. A total of 6,138 individuals were surveyed in the UK and the US, with the sample broken down as follows:

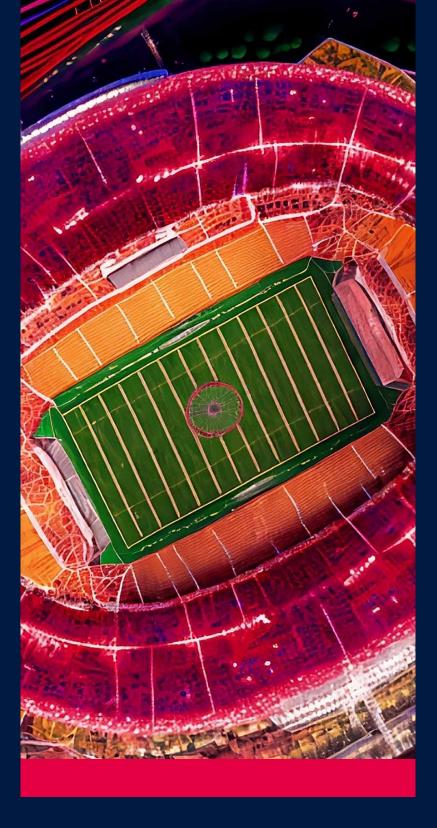


Past 12-month stadium/arena event attendance



N (6,138)
(0,100)
3,112
3,026

The 20-question survey was conducted online between August 25 and 29, 2023. After interviewing, data was weighted to the latest population estimates sourced from the US Census Bureau, the UK Office for National Statistics, the National Records of Scotland and the Northern Ireland Statistics and Research Agency.





Boldyn Networks delivers the advanced shared network infrastructure needed for a smart, inclusive, and sustainable future. From interconnected transit to venues, and enterprises to smart cities, we enable new possibilities in the way people live, work and play.

We don't just talk about the future. We exist to help build it. Creating the foundation from which a better collective future can be imagined.

To learn more visit **boldyn.com**