Stadium Connectivity Outlook Survey
Results and Analysis
October 2021

Presented by: Stadium Tech Report & verizon
RESEARCH OVERVIEW

Stadium Tech Report conducted the 2021 Stadium Connectivity Outlook survey in a partnership with Verizon. The research was conducted to find out the "state of the stadium" marketplace as it pertained to issues around venue connectivity, with a specific focus on challenges facing venues as they prepared for a post-pandemic world, including:

- What were their investment priorities in connectivity technology
- What fan experience pain points could connectivity technology help solve
- How would connectivity investments and strategy benefit the business bottom line
- How would venues also solve for necessary security measures in a more-connected world

METHODOLOGY

- The survey was conducted online by Stadium Tech Report during July and August, 2021, targeting our reader audience of stadium technology professionals. This includes professionals working directly for teams, schools and venues, as well as professional consultants contracted to assist venues in their technology deployments.
- More than 100 qualified respondents participated in the survey
- This was a blind data collection process, Verizon was not identified as the co-sponsor of the survey.
VENUE PROFILES

Respondents came from all corners of the stadium and arena world, including representatives from the NFL, MLB, NHL, NBA and MLS U.S. professional leagues. There were also respondents from a wide range of major U.S. universities, as well as from smaller schools and smaller venues, like concert halls and convention centers.
RESEARCH OVERVIEW

RESPONDENT PROFILES

More than 44 percent of respondents had titles of CEO, CIO or director of IT.

- CEO: 9%
- CIO: 13%
- Director of IT: 24%
- IT Staff Exec: 10%
- VP: 10%
- Broadcast Tech: 6%
- Arena Ops: 10%
- Consultant: 4%
- Other: 14%
RESEARCH OVERVIEW

KEY TAKEAWAYS

1. Most venues have basic connectivity deployed, predominantly 4G LTE and Wi-Fi

2. Covid-19 accelerated the process of adding technology to solve new issues

3. Technology is being asked to lower opex, generate more revenue and enable a better fan experience

4. New touchpoints call for increased cybersecurity across all operations

5. Many venues are still seeking information and direction for their technical journey.
DETAILLED FINDINGS
Venues pointed toward Covid-19 concerns as their greatest current challenge, especially with reduced budgets due to last year's shutdowns.

SURVEY QUESTION:
Which of the following represent the greatest challenges you face over the next 12 month period?
Venues are placing a priority on reducing OPEX while also looking to invest in more security infrastructure.

**SURVEY QUESTION:**

What are your top technology investment priorities over the next 12-18 month period?

**Respondents ranked answers in order of importance:**

1. Reduce operating costs
2. Strengthen cybersecurity measures
3. Enable new revenue streams
4. Upgrade ability to make data driven decisions
5. A/V systems, IPTV, Digital signage
6. On-premise health & safety solutions
7. In-venue broadcast production infrastructure
8. Wireless infrastructure

**Rank:**

1. Reduce operating costs
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8. Wireless infrastructure
Venues value Covid-proof enhancements like digital ticketing and touch-free concessions to eliminate fan pain points.

SURVEY QUESTION:
What are the solutions you value most in terms of removing potential pain points for customers?
Venues have embraced enhanced wireless and mobile ordering, while mobile wagering and in-venue sports book options are rare.

SURVEY QUESTION:
Which of the following in-venue services and/or second screen experiences are you offering to fans?

- Improved Wireless: Deployed 67%, Currently Piloting/Testing 7%, Available within 6 mo. 7%, Available within 7-18 mo. 10%, Not on our Roadmap 9%
- Mobile ordering (F&B/Merch): Deployed 41%, Currently Piloting/Testing 24%, Available within 6 mo. 7%, Available within 7-18 mo. 19%, Not on our Roadmap 9%
- Multiple Camera Angles; Instant Replays: Deployed 40%, Currently Piloting/Testing 6%, Available within 6 mo. 2%, Available within 7-18 mo. 23%, Not on our Roadmap 29%
- Mobile Interactive Fan Competitions: Deployed 33%, Currently Piloting/Testing 15%, Available within 6 mo. 4%, Available within 7-18 mo. 20%, Not on our Roadmap 28%
- AR/VR Experiences in the Stadium: Deployed 18%, Currently Piloting/Testing 10%, Available within 6 mo. 3%, Available within 7-18 mo. 15%, Not on our Roadmap 54%
- Co-Viewing Options: Deployed 15%, Currently Piloting/Testing 7%, Available within 6 mo. 10%, Available within 7-18 mo. 8%, Not on our Roadmap 60%
- Mobile Wagering: Deployed 7%, Currently Piloting/Testing 4%, Available within 6 mo. 3%, Available within 7-18 mo. 28%, Not on our Roadmap 66%
- In-Venue Sportsbook: Deployed 5%, Currently Piloting/Testing 2%, Available within 6 mo. 10%, Available within 7-18 mo. 22%, Not on our Roadmap 61%
Venues see personalized experiences and concessions-related offerings as better bets for revenue generation in the short term, over such new ideas as NFTs.

SURVEY QUESTION:
Which of the following fan engagement tactics do you think will have the best chance of generating incremental revenue for your organization?

Respondents ranked answers in order of importance.
Better network and web security is the top investment for both supporting growth and reducing operating expenses over the next 18 months.

SURVEY QUESTION:
Which areas will you be making changes in your IT infrastructure to support growth or reduce operating costs over the next 12-18 months:

- Network/Web Security: 61%
- New Software: 54%
- New Hardware: 54%
- Wireless in-building Connectivity: 52%
- Cloud/Hybrid Cloud: 45%
- Bandwidth: 45%
- Network Mgmt.: 31%
- Virtualization/VPN: 19%
- Voice & Remote Collaboration: 13%
More than 85 percent of respondents see their security as "not good enough" or just "adequate."

**SURVEY QUESTION:**
My existing security posture / strategy is:

- Adequate: 75%
- Not Good Enough: 10%
- Ironclad: 12%
- Don’t Know: 3%
Venues have made wireless connectivity a priority, with almost every respondent having deployed 4G LTE, Wi-Fi and LAN/WAN infrastructure.

**SURVEY QUESTION:**
Which wired and wireless capabilities make up your connectivity footprint today?

- **Cellular 4G (public)**: Yes - 95%, No - 3%, I Don't Know - 2%
- **Traditional or Legacy LAN/WAN**: Yes - 95%, No - 2%, I Don't Know - 3%
- **Wi-Fi/Bluetooth**: Yes - 92%, No - 6%, I Don't Know - 2%
- **Virtualized Networks (VNS or VPN)**: Yes - 81%, No - 13%, I Don't Know - 6%
- **In-Building Distributed Antenna Systems (DAS)**: Yes - 81%, No - 16%, I Don't Know - 3%
- **Cellular 5G (public)**: Yes - 60%, No - 34%, I Don't Know - 6%
- **Software Defined Networks**: Yes - 39%, No - 46%, I Don't Know - 15%
- **100G Fiber Circuit(s)**: Yes - 35%, No - 44%, I Don't Know - 21%
- **SD-WLAN**: Yes - 35%, No - 41%, I Don't Know - 24%
- **Cellular 5G (private)**: Yes - 16%, No - 69%, I Don't Know - 15%
- **Long Range WLAN**: Yes - 31%, No - 49%, I Don't Know - 20%
- **NB-IoT**: Yes - 15%, No - 56%, I Don't Know - 29%
- **PLTE Using CBRS**: Yes - 13%, No - 52%, I Don't Know - 35%
- **LTE-M/CAT-M1**: Yes - 8%, No - 53%, I Don't Know - 39%
Network slices are seen as prime ways to provide dedicated, secure bandwidth for separate business functions.

**SURVEY QUESTION:**
I would like dedicated network slices for which of the following:

- Security / surveillance / crowd mgmt communications: 83%
- Back of house/corporate operations: 80%
- Content contribution distribution (eg: in-venue/ broadcast production): 69%
- IPTV + Digital Signage: 59%
- In-venue commerce platforms: 59%
- Guest voice & data connectivity: 57%
- On-field operations: 56%
- Player performance / data analytics applications: 51%
- Other: 5%
Venues see 5G / Mobile Edge Computing as a prime solution for latency-sensitive operations like content distribution and live streaming.

**SURVEY QUESTION:**

What aspects of 5G/MEC do you think might have the most impact on your business?

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Respondents ranked answers in order of importance:

- 1st
- 2nd
- 3rd
- 4th
- 5th
- 6th
- 7th
- 8th
- 9th
- 10th
41 percent of venues see themselves as being at the early stages of their digital transformation journey.

SURVEY QUESTION:

Which statement best describes where you are RIGHT NOW on your digital transformation journey:

- **STARTING**: I’ve listed the outcomes I want to achieve and prioritized the decisions necessary to reach my digital transformation goals. I’m evaluating existing business systems and technology infrastructure to identify gaps.

- **INNOVATING**: Deeper down the path of transformation. I can capture/analyze multiple data sources at scale in near real-time, allowing me to identify cost efficiencies, maintain operational agility, enhance security & explore new revenue models.

- **ADAPTING**: I’ve taken 1st steps to actualize my vision. Plan approved, I’m ready to invest in transformation. I’m vetting partners to source solutions that’ll enable operational efficiencies, new business opportunities & better customer experiences.

- **ELEVATING**: Executing my strategy. Proper infrastructure is in place. I’m seeing ops benefits – getting data from various places in my org & integrating it into centralized systems that provide flexibility, better analytics & faster decision-making.

- **DISRUPTING**: I’m at the cutting edge. By adding 5G-MEC to my core infrastructure, I’ve implemented the latest guest-centric advances like frictionless entry, crowd management, contactless payment & premium, immersive & personalized content.
Venues had wide agreement that they still needed assistance with their digital transformation objectives.

**SURVEY QUESTION:**

Which areas do you need assistance in order to achieve your digital transformation objectives?

- Turning a journey map into a design and managed implementation plan: 57%
- Understanding how the mix of Wi-Fi, CBRS, Private LTE, Public/Private 5G and MEC can be best utilized in my environment: 41%
- Creating a journey map outlining the steps to reach my goals: 41%
- Delivering ongoing lifecycle support: 35%
- Defining the strategy to achieve my objectives: 31%
- Assessing my current environment: 22%
- Other: 11%
25 percent of venues see themselves as behind their peers in digital transformation execution.

SURVEY QUESTION:
In terms of digital transformation execution I am:

- Far behind: 8%
- Don't know: 8%
- Slightly behind: 17%
- Same point: 32%
- Slightly ahead: 29%
- Far ahead: 6%
- I don't know: 8%

Far behind similar size organizations
Slightly behind similar size organizations
At the same point as similar size organizations
Slightly ahead of similar size organizations
Far ahead of similar size organizations
I don't know
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THANK YOU

FOR MORE INFORMATION

Paul Kapustka - Editor in Chief, Stadium Tech Report
E: Paul.Kapustka@stadiumtechreport.com