STADIUM
TECH REPORT

Stadium Connectivity White Paper

Results & Analysis

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Return to venues:
The challenges of life after Covid

To be sure, the Covid pandemic has not completely disappeared, and may be with us in some form for some time. But as the number of active cases continues to decrease, for large public venues the top operational concern has shifted from dealing with Covid to figuring out how to run events once again at full capacity, with a host of changes brought about by the pandemic's aftermath.

The good news is that for our second annual Stadium Connectivity Outlook survey, an overwhelming majority of respondents now feel comfortable placing Covid at or near the bottom of their concerns. Instead, what venues told us this year is that challenges of bringing venues back to full capacity — like finding enough staff to run the buildings, and how to increase revenue while operating under the reduced budgets that the Covid shutdowns precipitated — are now front of mind.

Once again, in August and September of this year we reached out to the Stadium Tech Report community and asked them to participate in our second annual Stadium Connectivity Outlook survey, which included a wide range of questions about the current state of a venue's connectivity, and where

KEY TAKEAWAYS

1. Staffing, operating expenses and increasing revenue are top concerns, while Covid is near the bottom

2. Venues are looking to add more wireless connectivity, for fans and for back of house

3. Cashierless concessions and walk-through security technologies are being deployed rapidly

4. Private 5G is a target for supporting important back of house innovation

5. Even as venues feel good about their digital transformation journey, security remains a growing concern

RESPONDENT PROFILES

Thirty-six percent of respondents were directors of IT; another 28 percent were CIOs.

CEO 4%
Consultant 11%
Broadcast Tech 5%
Arena Ops 11%
IT Staff Exec 5%
CIO 28%
Director of IT 36%
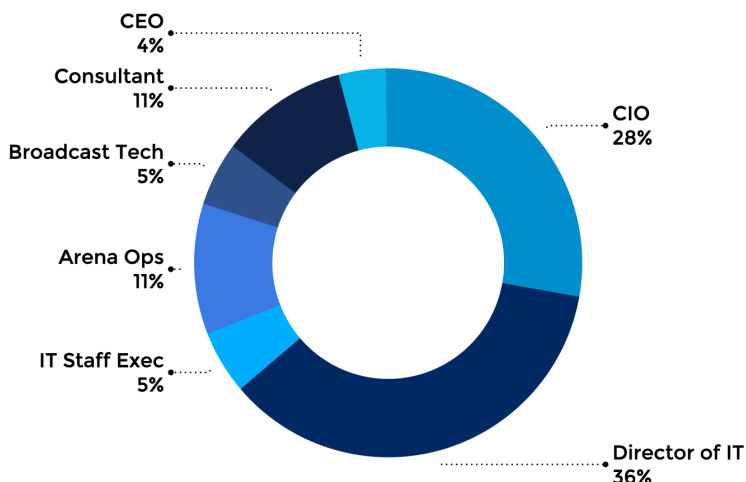
the venues, teams and schools would prioritize investments and strategies as the sporting and live entertainment world moved back to full arenas. We also asked very specific questions about some of the new technologies that started emerging last year, like walk-through security screening systems and cashierless concessions technology, and found out that the trend of adopting both was well-established and accelerating.

To be clear, these our not our views but the insights of our audience. Honest feedback that once again provides an industry-wide perspective on the common issues facing venues of all shapes and sizes, from large NFL and college football stadiums to MLB stadiums, to NBA and NHL arenas, as well as more intimate concert halls.

Perhaps due to the acceleration of technology deployments that Covid forced upon the stadium world — such as a more-rapid than planned adoption of digital ticketing across the board to promote better social distancing — one interesting change from last year to this year was that more respondents think they have improved their overall execution of a digital migration strategy, with more placing themselves "ahead of" other venues of similar sizes. But another interesting shift came in the area of security, where more venues this year than last said they felt like their overall security stance wasn't as good as it should be — perhaps, again, a result of having to take a harder look at all operations and to assess how a more digital future meant a corresponding need to step up security on all fronts.

> **"Connectivity is the foundation for delivering consistent QoE for venue guests. Quite simply, having better data and voice capabilities in a venue improves the guest experience."**
>
> **Kevan Akers, SME Connected Venues, Verizon**

And the move to more technology also seemed to solidify the respondents' belief that bringing more and better wireless connectivity to their venues is still a top priority, with fan-facing services at top of mind, and with new technologies like network slicing and private cellular networks getting attention for back-of-house operations, especially those with greater security and throughput concerns.

Wireless, security and new hardware head up the list of planned IT infrastructure investments.
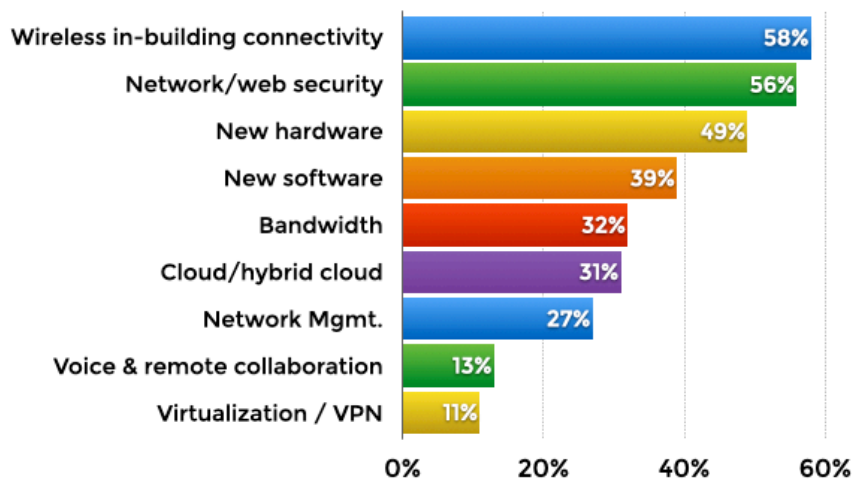
Survey Question: *Which areas will you be making changes in your IT infrastructure to support growth or reduce operating costs in the next 12-18 months? Check all that apply.*

Challenges: Staffing, not Covid, at top of concerns

After a year when a large majority of respondents cited Covid issues as their top concern, in 2022 that category dropped all the way to the bottom.
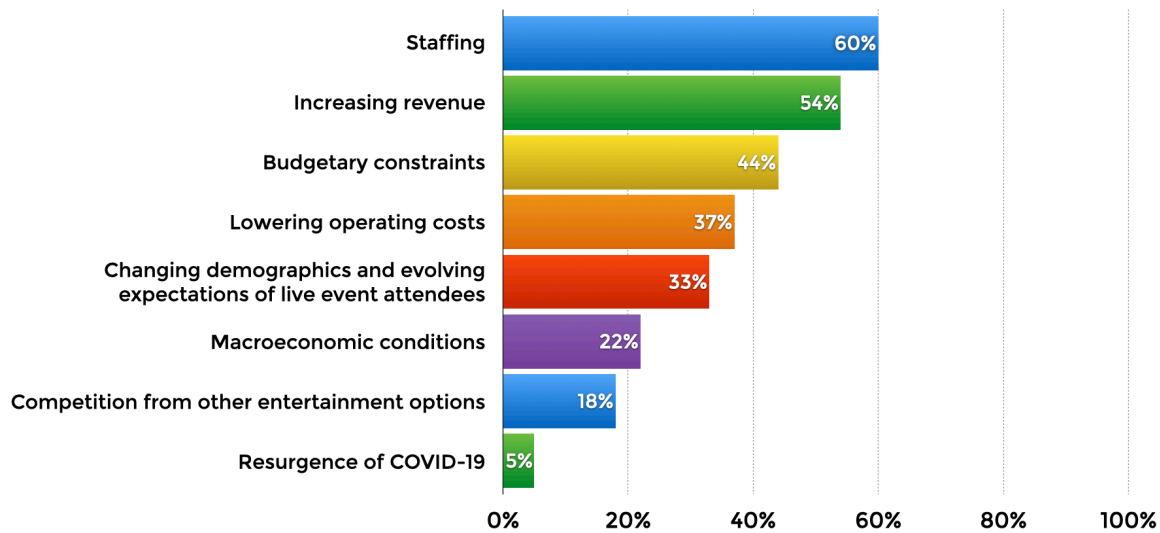

Survey Question: *What are the biggest challenges you face in the next 12 months?*

At the top of this year's concern list the runaway winner was staffing, with 61 percent of respondents citing it as their main worry. A close second was increasing revenue, an area where venues have adopted technology to help provide more game-day income. Budgetary constraints and lowering operating costs followed right behind, showing that as venues are coming back to full capacity, the revenue shortfalls of the Covid shutdowns are still making their presence felt.

What's on the roadmaps: More wireless, cashierless concessions and walk-through security

When we asked respondents which initiatives were on their roadmaps for 2023, the top two replies were improving wireless connectivity for fans (64 percent) and improving connectivity for operations (58 percent). So even though most venues already have some kind of wireless connectivity throughout their footprint, it's clear that the additional demands brought on by Covid-related changes and perhaps thoughts about what might be needed in the future are keeping wireless infrastructure top of mind.
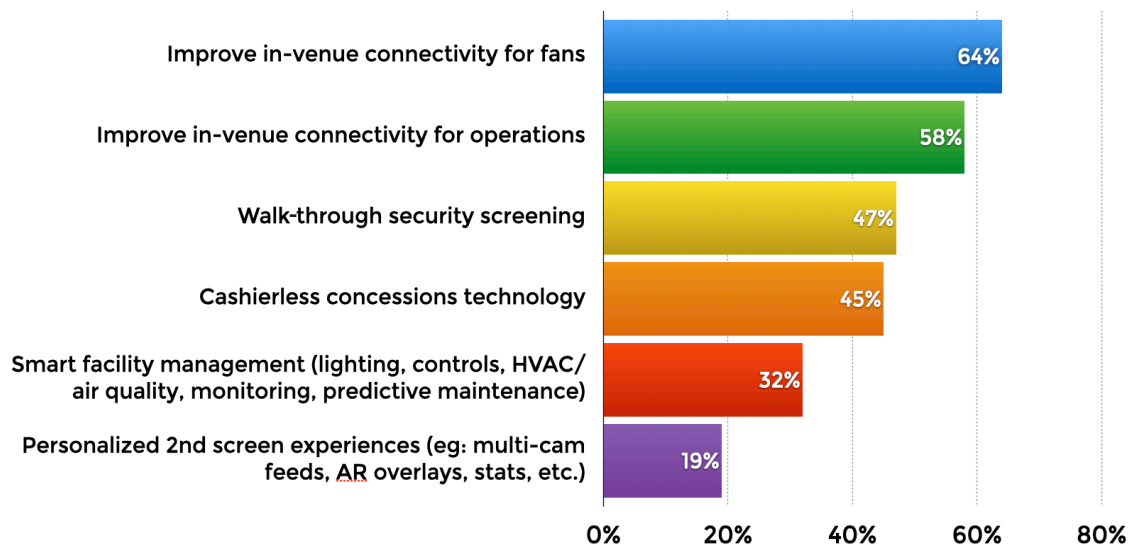

**Survey Question:** *Which initiatives are on your roadmap for 2023?*

Two very specific types of venue technology appeared next on the roadmap list, with walk-through security screening third (47 percent) followed by cashierless concessions technology (45 percent).

Indeed, some more granular questioning in the survey showed that 37 percent of respondents said they had experienced a "significant issue with delays or backups due to ticketing and/or security screening," perhaps showing that such incidents were not being taken lightly. In fact, 47 percent of respondents said they already had walk-through security screening systems in place, a fact that corresponds with great interest in the topic we have seen through our reporting and personal contacts with venue operators over the past year.

Does your venue have walk-through security screening?
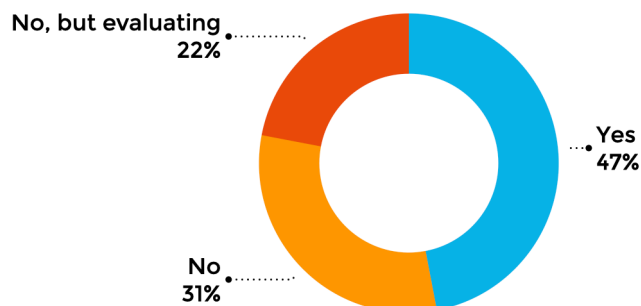
Does your venue have concession stands with cashierless checkout technology?
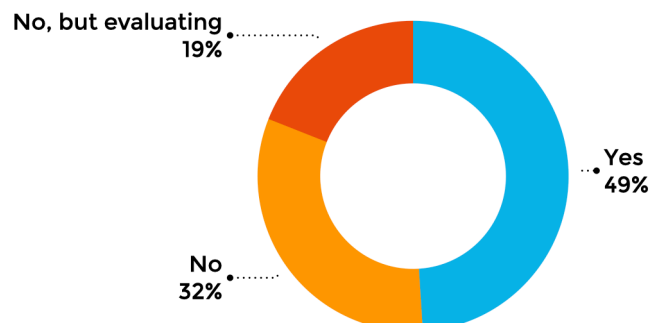
The deployment of cashierless concessions technology is also a confirmed trend already happening, with 49 percent of our respondents saying they already had some of the technology in their venues. Again, recent news reports of multiple such deployments is a sign that this trend has already taken off and will likely grow quickly over the next year as more venues see the obvious benefits of autonomous checkout–faster transactions, lower abandonment rates and improved fan experience.

New ideas for private 5G: Back of house, and possibly gaming

Even as venues look to add more traditional wireless capacity for fan-facing networks, the new technology category of "private 5G" networks is getting attention from this year's survey respondents as a strategic method to bring more inherently secure and mobile connectivity to areas with higher security and lower latency needs.

When we asked what types of workflows venues might use private 5G services for, the top answer was "back of house/corporate operations." Since private 5G allows for building owners to set up completely private networks (that still use off-the-shelf device technology), it's no surprise that venues are looking to use private 5G for services like building operations and overall back-office functions, keeping such channels secure from public networks while also improving the reach and performance of internal network systems.
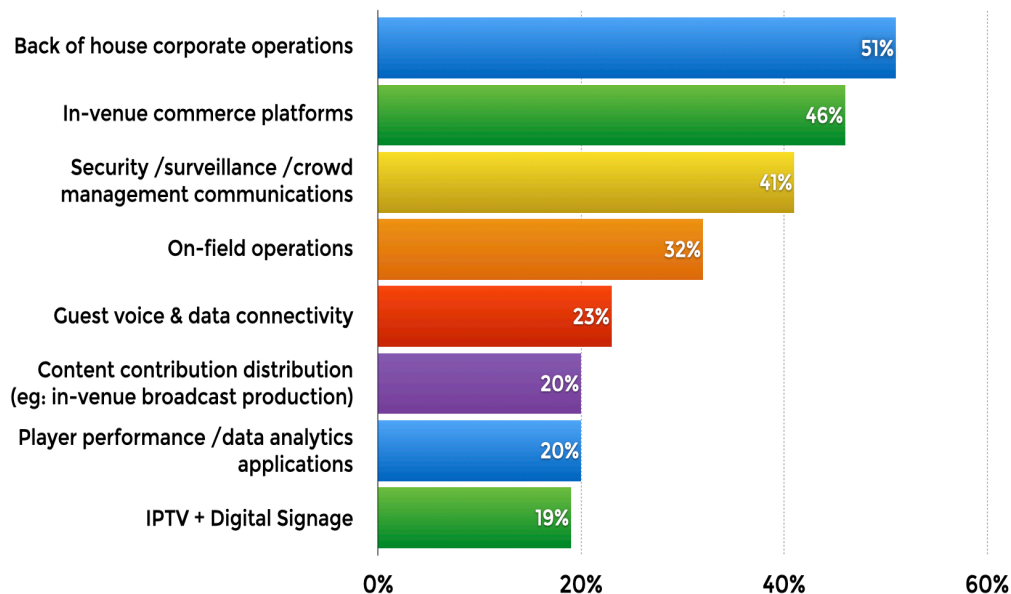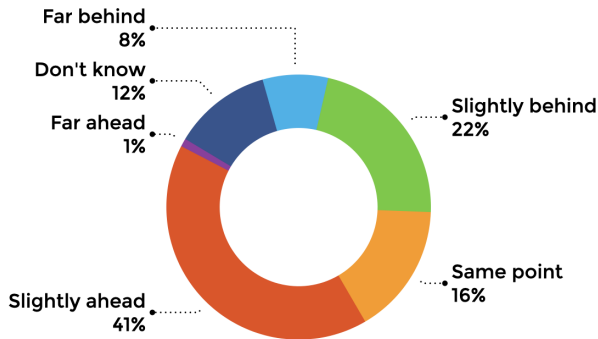

Survey Question: *With private 5G, you can isolate a portion of the bandwidth and dedicate it to a specific workflow. Which workflows would you use it for?*

The next most important use of private 5G was "in-venue commerce platforms," which according to our reporting and research includes concessions, parking and merchandise payments and operations, as well as payment processing systems. Given the inherently more secure out-of-the-box character of private 5G systems, using them for anything transaction-related makes sense. Similarly, the third answer, "Security /surveillance / crowd management communications," again shows interest in using private 5G for in-venue communications that require high degrees of reliability and protection.
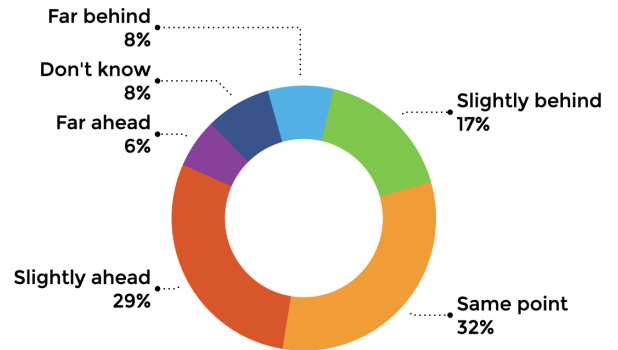
Venues this year: More advanced on digital transformation, more concerned about overall security

In order to get a sense of how the venue community was changing from year to year, we kept two questions exactly the same from last year's survey to this year's survey, questions about overall security posture and digital transformation execution.

2022: *In terms of digital transformation execution I am:*
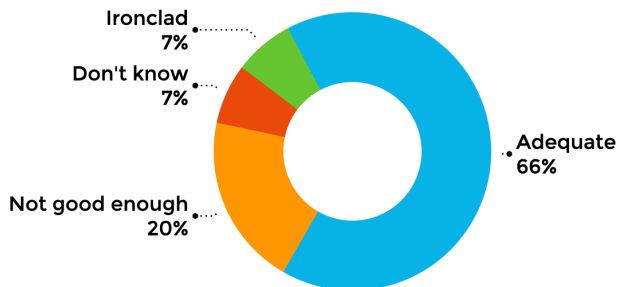
Far behind
8%

Don't know
12%

Far ahead
1%

Slightly behind
22%

Same point
16%

Slightly ahead
41%

2021: *In terms of digital transformation execution I am:*

Far behind
8%

Don't know
8%

Far ahead
6%
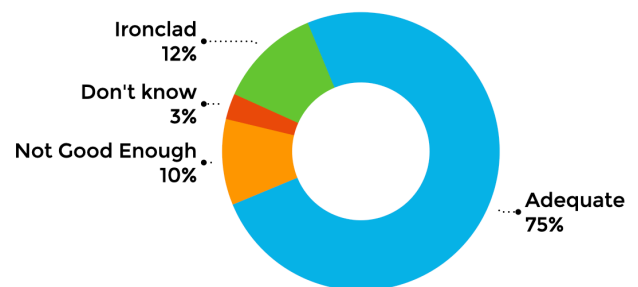
Slightly behind
17%

Same point
32%

Slightly ahead
29%

The first comparison question from last year to this year showed that more respondents think they have improved their overall execution of a digital migration strategy, with more placing themselves "ahead of" other venues of similar sizes. Last year, only 29 percent of respondents thought they were "slightly ahead" of other similar venues, while 32 percent felt they were at the same point as others, and 17 percent thought they were slightly behind. This year, the same question saw 41 percent feel like they were slightly ahead of other similar venues, with 16 percent saying they were about the same and almost 22 percent saying they felt a little bit behind. Interestingly, those who felt they were "far behind" stayed almost the same as last year, 8 percent of respondents.

2022: *My existing security posture / strategy is:*

Ironclad
7%

Don't know
7%

Not good enough
20%

Adequate
66%

2021: *My existing security posture / strategy is:*

Ironclad
12%

Don't know
3%

Not Good Enough
10%

Adequate
75%

Another interesting shift came in the area of security, where more venues this year than last said they felt like their overall security stance wasn't as good as it should be. Last year, 75 percent of respondents said they felt their security posture and strategy was "adequate," but that number dropped to 66 percent in this year's survey. The shift seemed to happen in the category of "not good enough," with 20 percent this year versus 10 percent from the previous survey.

To us, the shift seems like a result of venues having to take a harder look at all operations and to assess how a more digital future meant a corresponding need to step up security on all fronts. Combined with the high priority given to plans to beef up security from an earlier question in the survey, it's fairly clear that venues of all sizes are recalibrating their security stances and making the appropriate strategic and tactical plans to improve.

> "As connected digital technologies evolve, new threats are emerging that endanger the intellectual property and business operations of teams and venues. To protect themselves, these organizations must make cybersecurity a priority."
>
> **Mike Ruhnke, Group Vice President, Verizon**

Overall conclusions: Technology has helped venues get past Covid challenges, and will inform a revamped road map for the new reality

As fans return to venues in significant numbers, it's clear that an emphasis on technology deployments has helped venues get past the initial Covid challenges. What is also apparent from our respondents' insights is that the "new reality" requires a revamped road map, one that has changed rapidly in the past few years.

The good news for venue connectivity teams and stadium technology professionals is that experienced partners and proven new technologies are available, and ready to help immediately. Early positive reviews of walk-through security screening and the rapid adoption of cashierless concessions are both good signs that venue operators and fans alike are able to quickly embrace new technologies if they reduce friction, streamline the in-person experience and deliver tangible ROI.

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FOR MORE INFORMATION

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