The arena revolution: trends shaping the new era of entertainment venues

— by Raül Daussà & Albert Tapia

Picture this: A teenager at a concert in Barcelona, dancing and following the band as they perform far on the stage. Their augmented reality goggles display information about the song, the band, and a live feed of social media reactions. Meanwhile, special overlays in the arena paint different scenarios. Suddenly, the band appears to be playing on a tropical island!

A notification appears, and a friend joins the concert, but they are in Tokyo. Using their **virtual reality** headset, they can join a live performance worldwide and interact with friends, even high-fiving the lead singer. As the song ends, the teenager receives another notification: Drinks and food are ready to be picked up at the stand. Let's take a break from dancing!

While this might seem like a scene from a science fiction movie, the technology to create such an immersive experience already exists. But is this how we will enjoy live performances in the near future? We believe the answer has many nuances. **Even though technology will play a role in enriching the user experience in various ways, the human connection will remain at the centerpiece.** This is crucial because live music is booming, with concert sales recovering to pre-pandemic levels in 2023.

As the sale of physical music dwindles and streaming services generate higher revenues, **live shows become a key income source for artists.** This highlights their growing importance in the music industry, from promoters to venues.

Understanding this trend is essential for charting a successful future strategy for live performance arenas. Only those ready to embrace innovation and prepare their venues for the future of live performance shows will remain relevant in the circuit.

What will live shows be like in the future?

Holograms and Digital Twins take the stage

In 2012, Tupac Shakur's **hologram** made a surprise appearance at Coachella. In 2024, Hatsune Miku, a manga-like character whose live performances are a hit in Japan, performed at the same festival alongside international artists such as Lana del Rey, Bizarrap, Sabrina Carpenter, and Grimes. Just in February 2024, during the Mobile World Congress in Barcelona, renowned pianist Lang Lang performed in a duo with his **digital twin**, which was displayed as a hologram in the scenario, thanks to 4K cameras with almost zero latency and drones.

Towards a multisensory experience

Besides the holograms, **technology used at arenas is about enhancing the experience and not replacing the singer.** At the Mercedes Benz Arena in Berlin, a new opera show has been designed to use all the arena's technological advances — as the spectators enter the room, they can feel the smell and breeze of Egypt, thanks to immersive technologies we have all experienced in **5D cinemas.**

The Sphere, in Las Vegas has 10,000 seats with **haptic technology** that allows them to vibrate in accordance with the moment of the show or what is being projected on the interior screen.

At the same time, **these seats can generate wind, temperature, and smell effects.** For example, they can reduce the person's body temperature if a cloud or snowfall is being projected, to provide realism and achieve the greatest possible immersion.

Massive and interactive LEDs

Another trend is the use of LED screens, both inside and outside the arena. La Défense Paris arena is the largest arena in Europe, with a capacity of up to 40,000 spectators. It has the largest interactive screen in the world, with 1,400

square meters of projection surface. Spectators, via free Wi-Fi, can share images directly on the big screen, promoting an immersive experience.

How will the user experience evolve?

More than just watching

To delve into the user experience, let's journey to Korea, where **K-pop enthusiasts utilize their smartphones to vote for encores, activate special effects such as synchronized light shows,** or even engage in virtual dance challenges alongside the performers on stage
Indeed, we believe that live shows will be more than just watching a concert. **The future fan is an active participant,** not a passive observer, and those arenas that offer experiences before, during, and after the concert will have the upper hand.

A pivotal strategy for enhancing the user experience will be the **Arena's mobile app,** which offers a wide array of services. The most ambitious among these serve as a comprehensive platform for purchasing and enjoying any product, service, or experience available at the venue. Moreover, they provide information and engagement

The Sphere in Las Vegas. Image: Shutterstock

opportunities before and after the show to keep fans informed and involved. For instance, the OVO Arena Wembley's app allows users to **purchase tickets and preview the virtual view from their chosen location.** During the concert, fans can conveniently order snacks and drinks to be delivered directly to their seats.

Modular apps and AI: enhancing it all

Modular apps will build on functionality, adapting or including access to existing platforms like set.live, which caters to performers and offers analytical data of fan purchase behaviour. Obvious services, like **maps to navigate the entrance and exit of the arena, or live-queue information to direct fans to drink and food stands or toilets with less affluence**, should be also implemented and will also serve another important yet unseen factor in live shows — security and safety of the fans and orderly evacuation in case of an incident.

Artificial Intelligence is also being used to provide real-time analysis of potential threats in crowds, and predictive analysis helps alleviate areas where crowds could be congested. Finally, **AI-powered facial recognition** can identify individuals that have a history of vandalism, thus enabling targeted intervention.

Hyperpersonalization and hyperflexibility at the core

Let's go back to our teenager enjoying the concert in Barcelona. After collecting the drinks and snacks at the closest stand with less queues, they are back at the seat, enjoying the hit song of their favorite band. The app offers a 20% discount on merchandise during the song, with limited edition T-shirts and a raffle to a backstage tour. Everything is sold out in 30 seconds. Collecting the merchandise will be as easy as following the instructions on the app at the end of the concert, but we can also choose home delivery.

Happy with the purchase, our friend is curious about the ring the lead singer wears on their right hand. Using their app, they can **connect to the 4K live stream, choose a camera, and change the angle.** It's the same brand they like! Our friend can now **leave a comment on social media or buy it for their friend in Tokyo.** In any case, the amount of data generated by such apps will help arenas, performers, and promoters to give better services while generating higher revenues.

Arenas that invest in technological advances also unlock a world of **exclusive VIP services**, those premium ticket holders that need **personalized experiences and enhanced comfort and convenience.** These could be in the form of an AI-powered concierge in the Arena app, or access to exclusive content in their VIP lounges, before and after the show, like different live feeds of the backstage and a special QA session with the performer.

In less than a week, the same venue where the concert takes place, will host an indoor motorbike show. Different public, different seating arrangement, different promoter, and performers, but thanks to the technology behind the scenes, the cameras can adjust easily, the LED screen will load a different programme to show the scoring, and the products sold through the app will have different pictures and prices.

Recently built arenas already include many of the technological advances we have described, but **older arenas need to invest and adapt, or they will face a decline in artists and fans that want to meet there** because other venues offer more.

How should existing arenas adapt — in 3 key elements

What should existing arenas take into account if they have plans for transformation, adaptation, and expansion? At Anteverti, we have recently been assisting Barcelona in rethinking their main entertainment venues to create a greater economic impact in the future. Based on this experience, these three elements will be crucial.

1 | Anticipating the future

Arenas must prepare for the future already today; essential upgrades are crucial. First, no arena in the 21st century should open its doors without ubiquitous, reliable Wi-Fi. This is the foundation for all future tech. Connectivity of any kind, including the 5G and future 6G infrastructure to anticipate the demand in high-speed services must be planned and invested.

Smart renovations like **upgraded lighting, sound systems, and infrastructure** to seamlessly integrate future technologies. Shall we offer 5D experiences, and haptic seats? It is now time to think about it!

2 | If it's not sustainable, it's not success-proof

While doing all of this, add a win-win strategy, and make your arena more sustainable, **saving energy and water, and reducing waste,** including vegan options at the restaurants and a **zero-carbon supply chain.** Installing renewable energy sources, offering charging stations for electric vehicles, and betting on public transportation should be also considered. Technology should not be the only driving force.

3 | It'll be about meaningful connections

But remember: **the future of live shows isn't just about fancy gadgets. It's about creating meaningful connections, fostering participation, and embracing sustainability.** By focusing on these core values, we can ensure that the thrill of live entertainment continues to captivate audiences for generations to come.

→ **About the authors**

Raül Daussà
Consulting Director
Anteverti

Albert Tapia
Senior Consultant
Anteverti