

With the AV integration in large venues like the *Yashobhoomi Convention Centre* and *Statue of Unity*, top systems integrators strive to create a benchmark with impeccable AV projects delivered in India. Presenting a view on the cutting-edge integration of Yashobhoomi Convention Centre, **Ritika Pandey** gets in touch with **Ajay Parwaney** and **Aarti Parwaney**, Directors at **Pyramid Technologies** to uncover the hard work that goes behind delivering such state-of-the-art AV projects and understand the dynamics from the team's perspectives.



Leading Systems Integrator PYRAMID TECHNOLOGIES Crowns YASHOBHOOMI with 8,800 sqm LED Façade

*Deploys Convention Centre with World-Class AV Solutions
and Sets New Standards for Large AV Convention Venues*



P pyramid Technologies is one of India's fastest-growing systems integration enterprises that ensures the delivery of turnkey AV solutions to businesses requiring best-in-class technologies and operational efficiencies. With the team's knowledge quotient on providing robust integrated solutions and their extensive systems integration experience, Pyramid Technologies caters to engineering, installing, and integrating across a multitude of systems with plenty of room for expansion and retrofits in the future.

The project's vision

Standing true to its name, the Yashob-

hoomi Convention Centre (earlier called India International Convention Centre (IICC) is the country's largest convention and exhibition centre aimed to position India as a prominent player in the global convention industry. The inauguration of this monumental achievement by none other than India's Prime Minister, Narendra Modi, on September 17, 2023, is a testament to its national significance. As one of the largest and most advanced MICE facilities worldwide, it now firmly secures itself among the leading modern convention centres, attracting many attendees and exhibitors from India and overseas. This achievement reaffirms the dedication to

crafting cutting-edge solutions that dazzle with their sheer scale and seamlessly integrate with the fabric of contemporary urban living.

Pyramid's role

Pyramid Technologies played a pivotal role by undertaking comprehensive system integration for both the outdoor LED façade and the extensive audiovisual systems, which contributed to transforming the audio-visual vision into reality. The impressive 8,800 square meter LED media façade and state-of-the-art audio-visual integrations inside the premises have elevated the convention centre's global



Hon'ble Prime Minister, Narendra Modi at one of the conference rooms on the day of Yashobhoomi Convention Centre's inauguration

visibility.

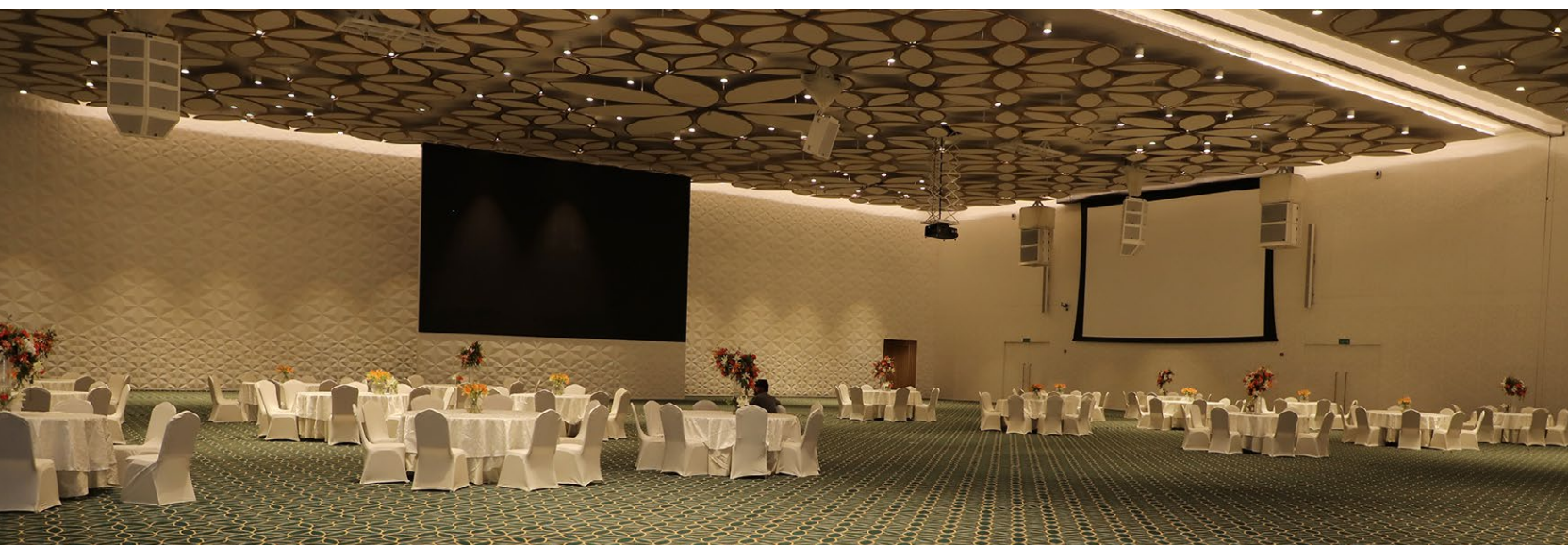
Pyramid's role involved engineering, supplying, installing, testing, and commissioning AV Systems for this sprawling 1 million square meter facility and an 8,800 square meter LED media façade, which envelops the entire 360° crown of the convention centre. The audiovisual systems package encompasses a wide range of cutting-edge technologies, including one of the largest wireless conference systems for over 1400 delegates, simultaneous interpretation systems of nearly 6000 delegates, audio for nearly 60,000 sqm of exhibition halls, massive projection screens within the convention centre going up to 552" diagonal, reinforced sound for the 6,000 seater auditorium in divisible configurations with unparalleled audio quality and uniform sound pressure level touching more than 110dB, digital signages across

"There is a lot of redundancy involved with the built-in systems including the OCC room, data centre, and the back-up data centre where all the back-end equipment is housed for the façade and the control systems. However, the primary control is within each space where mixers, amplifier racks or system power ups including the AV head and equipment are situated."
Ajay Parwaney,
Director – Operations, Pyramid Technologies.

the facility of 140 endpoints and broadcast systems to name a few. Augmented reality video walls of various sizes, including a giant indoor LED wall, also form part of the pre-function spaces within the facility.

The scale of the install and the challenges

The install for both inside the Convention Centre and the façade was to be



Divisible conference rooms at the Yashobhoomi Convention Centre with wireless conferencing and live interpretation systems

simultaneous which involved synchronized installations of the entire spectrum of Audio and Video systems. The project involved deployment of an all-encompassing AV experience for the facility.

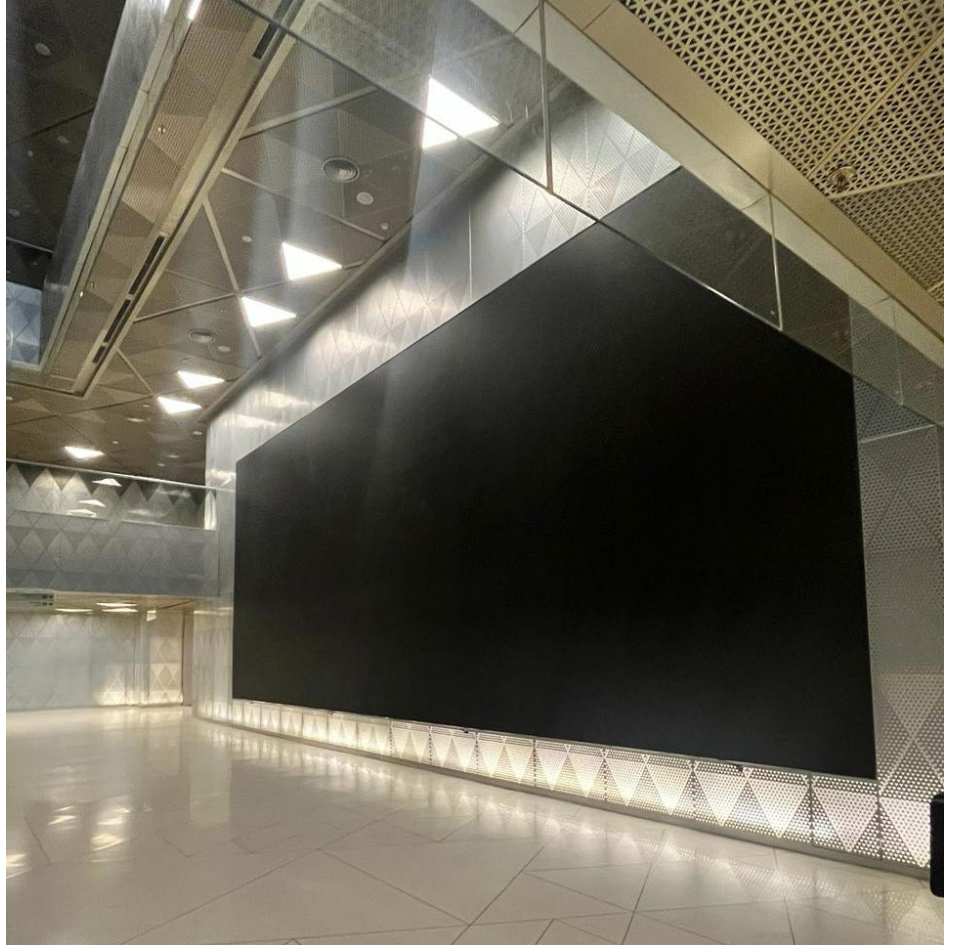
The LED media façade posed a particularly complex challenge due to the unique structural configuration, which featured a distinctive 44.5-degree angle. While visually striking, this architectural innovation presented complex hurdles during the installation process. To overcome this challenge, Pyramid employed extensive structural analysis, precise measurement techniques such as deflection studies, sun path analysis for daytime viewing, and meticulous alignment of the modules with the structure to maintain vertical linearity and eliminate any unsightly gaps. The expertise and precision brought to bear on this task ensured that the media façade has become a standout feature of the IICC.

Admiring the project delivered by the team, Ajay Parwane stated, "We are extremely proud to be part of this monumental project, which has brought India to the forefront of global convention events."

Commenting on the skill set required for Yashobhoomi's integration, he further shared that L&T Construction, the turn-key contractor for this project, defined stringent guidelines for appointing the AV partner for this project considering the duration of the project and the kind of systems installed. The integration company had to deliver according to the timelines for the project, adhering to the stringent technical documentation, including third-party factory acceptance tests for each system at the OEM's facilities globally. They needed someone who could manage the whole spectrum of project management, especially with its massive size, where all tasks were being performed parallelly on different segments, including different floors of the project and the façade itself." He added, "Façade is way beyond AV. It has complex mechanical engineering alongside electrical calculations, which are all required during the integration, including deflections, sun path analysis, and more. L&T appointed a special team to align with the interfacing requirements of the steel structures and the LED Media Façade to manage the immense work efficiently."

Integrating cutting-edge AV solutions

The client wanted to create a global hub for exhibitions and conferences.



15 meters AR wall at the main auditorium of Yashobhoomi Convention Centre provides glimpses on the development of India



Main auditorium of the site caters to as large as 6,000 people for grand gatherings or celebrations



Diving tech deep

Heritage wall at the centre of the venue ensures visitors experience the best-in-class technology while informing them about the cultures of India

The façade

The façade installation on the building's crown seemed like an impossible task because of the challenges involved with its construction. The crown is at 44.5° angle (approx. 45°) and for the edges to meet, the customization in the modules was quite significant. Every piece connecting to the sides was unique in terms of length because the strips must be altered to that length along with the further alteration capability at the sides. Another important part was the structural interfacing, as coordinating and installing anything at that height was a huge challenge, and therefore, the deflection study was done to evaluate the expansion-contraction phenomenon. The resolution was pre-decided as the requirements were quite clear about 70% visibility from inside to outside.

Augmented Reality

In the lobby of the main auditorium, there is a huge AR wall of around 15 meters width that gives a walkthrough on the development of India. Further there is a Heritage wall which majorly brings heritage content from different cities of India focused on informing the visitors about the country. There are media walls on several floors with a magic mirror deployment.

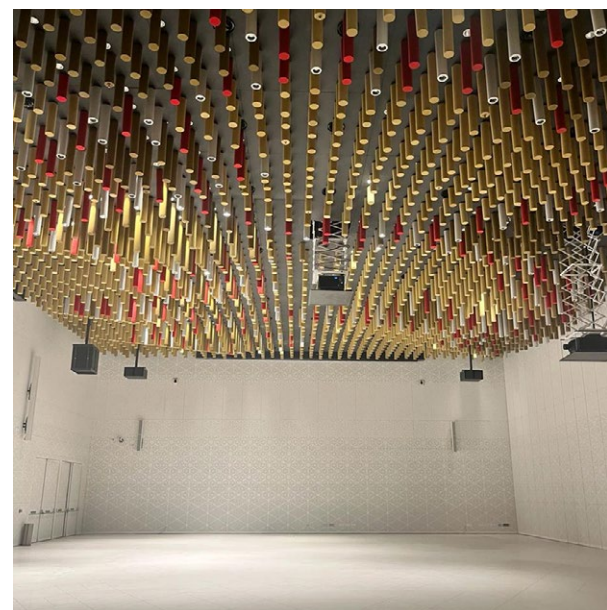
Conferencing and interpretation

Inside the Yashobhoomi Convention

Heritage wall at the centre of the venue ensures visitors experience the best-in-class technology while informing them about the cultures of India

From the façade to the conference rooms, the top-notch technologies facilitated at the convention centre speak a lot about the team's focus on the little details that justify every corner of the facility. When talking about the AV systems design, Ajay Parwane highlighted, "The redundancy involved with the built-in systems, including the OCC room, data centre, and back-up data centre where all the back-end equipment is housed for the façade and the control systems. Reflecting on the challenges encountered during project design and execution, what truly stands out as a remarkable conclusion is the meticulous verification

of each feature outlined in the datasheet during handover. This thorough process ensures that every functionality is not just promised but demonstrated, ensuring a successful outcome. This whole project was well-thought-of, documented, and approved by the required authorities, and that's why we think it is aligned beautifully with what we imagined." Parwane continues, "These are the projects where your patience is tested. From project management, every step requires perfect planning and execution because the pre-conditions towards any downtime are stringent, directly affecting the outcome."



Multiple conference rooms at the site allow visitors to catch up on the most important agendas of the industries together

Centre, the teams have constructed world-class conference rooms on all floors that can host multiple audiences. Ranging from 900 to as small as 8 people in a conference room, different rooms are setup to hold the audience based on the meeting's requirements. The conference halls are equipped with wireless conferencing and have over 1400 delegate units. These rooms are divisible and can cater to the meetings based on the conference needs. Furthermore, the control units with the translators at the conference halls help manage the 6000 delegate interpretation systems, built-in with multiple languages to understand communications in the users' desired language.

Connecting attendees and exhibitors

Yashobhoomi centres its attention on a visitor-centric facility and, therefore, invites many exhibitors and attendees to participate. In fact, a government official stated that more than 200 exhibitions at the venue are planned within the next two years majorly focusing on digital innovation, smart manufacturing, and many other exhibitions from major sectors.



A view of the entrance towards the exhibition halls at the Yashobhoomi Convention Centre

The facility's exhibition halls are about 60,000 sq. m. and are integrated with complete AV systems, which is massive in terms of magnitude. The space is shared between Exhibition Halls 1 and 2. With the construction of the Delhi Express Metro Line right across the facility, it will become more feasible for the attendees to join the exhibitors on the show floor.

Conclusion

With spot-on system design and integration involved in the construction of this

venue and the fact that it is the largest convention centre in India, Yashobhoomi is surely going to make the list of the world's largest convention centres.

Concluding the conversation with the AV-ICN team, team Pyramid said, "It was a highly satisfying install and with the help of support from the OEMs, L&T, and the overall Project Management team, this project is our pride." Ajay and Aarti Parwane added that the Media Façade is not only the crown of Yashobhoomi but also the crown of our projects."