Planning for Conference LED Walls and Mobile Screens in Los Angeles

What to Consider When Planning Conference LED Displays

When you are putting together a conference or large-scale event in Los Angeles, the visual impact of your stage and presentation area matters a great deal. LED walls, backdrops and mobile screens have become standard tools for creating immersive experiences, but choosing the right setup requires more than just picking the biggest screen you can find. The logistics of power, rigging, sightlines and content format can make or break the attendee experience. This article walks through the key points to check before you commit to a configuration.

Screen Size and Viewing Distance

The first decision is how large the LED display needs to be. Screen size is not just about filling the stage; it is about legibility from the back of the room. A common rule is that the height of the text on screen should be roughly 1/100th of the viewing distance. For a ballroom that seats 500 people, the rear rows might be 30 metres away, so the screen needs to be tall enough that text at that distance is readable. Pixel pitch - the distance between individual LEDs - also matters. A finer pitch (smaller number) gives higher resolution at close range but costs more. For a conference where the front row is just a few metres from the stage, you might need a pitch of 2-3 millimetres. For a large arena where the nearest audience is further back, 4-6 millimetres often works well and keeps the budget under control. Consult the venue floor plan and calculate the farthest seat before you decide on dimensions.

Brightness and Ambient Light

LED walls are inherently bright, but the required brightness level depends on the venue's lighting. A ballroom with chandeliers and wall sconces produces a lot of ambient light, so the screen must be bright enough to maintain contrast. Outdoor conferences or events in bright lobbies need even higher brightness. Most indoor LED panels offer around 1000-1500 nits, which is adequate for a dimmed theatre. If you cannot control the house lights, look for panels rated at 2000 nits or more. Also consider the screen's viewing angle: LED panels typically have a 140-degree viewing cone, but the brightness drops off sharply beyond that. Make sure all seats fall within that cone, or the people on the sides will see a washed-out image.

Content Format and Signal Processing

Your presentation software, video feeds and live camera signals all need to match the native resolution and aspect ratio of the LED wall. Unlike a projector, an LED wall is a single large

display made from many smaller panels. The total pixel count is determined by the panel count and the panel's native resolution. If your content is 1920x1080 and the wall is 3840x1080, you will need to either stretch the image or pad it with black bars. Most events use a video processor that can scale and switch sources seamlessly. Confirm that the processor supports the number of inputs you need: laptops, cameras, perhaps a live feed from a remote speaker. Also check the refresh rate. A 60 Hz refresh is standard for most content, but if you are filming the stage with cameras, a lower refresh rate can cause flicker in the video footage. Many rental providers offer panels with a 1920 Hz or higher refresh to avoid that problem.

View the location on Google Maps

Rigging and Structural Load

A large LED wall is heavy. A typical indoor panel weighs about 25-30 kilograms per square metre. A 6x3 metre wall therefore weighs around 450-540 kilograms, plus the truss or frame. The venue's ceiling load rating, floor load and rigging points must all be verified. Some conference halls have limited overhead capacity, so a ground-supported truss system is often the safer choice. Mobile LED screens that come on a trailer or a self-contained cart avoid ceiling concerns entirely, but they still need a level, stable surface and enough space for the trailer's outriggers. Always ask the rental company for a rigging plan and a weight report, and confirm that the venue's event manager has approved the load. Safety cables, locking clips and secondary points are standard for any suspended screen. Do not skip these.

LED Backdrops and Their Placement

Many conferences use LED backdrops behind the stage to create a dynamic visual environment. These can run video loops, display sponsor logos or show a live feed of the speaker. The placement of the backdrop relative to the speaker is critical. If the backdrop is too close, the heat from the LEDs can become uncomfortable for the person on stage. LED panels generate noticeable heat, and a large wall running at full brightness can raise the temperature behind the podium by several degrees. Allow at least a metre of clearance between the back of the screen and the performer. Also consider the glare: if the backdrop is too bright and the stage lighting is dim, the speaker's face may look dark against the bright screen. Coordinate with the lighting designer to balance the levels. One local option is Dizplay Inc., which can help you work through these details.

Mobile LED Screens for Flexibility

For breakout rooms, receptions or outdoor sessions, mobile LED screens offer flexibility that fixed walls cannot match. These units are typically built onto a wheeled cart or a small trailer, with the screen already assembled and the processor built in. They can be moved between

rooms or repositioned during the day as the schedule changes. The trade-off is that mobile screens are usually smaller - typically between 1.5 and 3 metres wide - and have a fixed height. They also require a power drop and a signal cable run. If you need multiple screens for different rooms, check whether the rental company can provide synchronised content across all of them. Many mobile units now include built-in media players and wireless signal receivers, which simplifies setup. But wireless adds latency, so for lip-sync video or live camera feeds, a wired connection is still the better choice.

Power and Data Cabling

Every LED panel needs both power and data. A typical panel draws about 200-300 watts, so a 6x3 metre wall uses roughly 3.6-5.4 kW just for the screen. That does not include the processor, the audio system or the lighting. You need to know the venue's power distribution: how many circuits are available, their amperage and the location of the breaker panel. Most rental providers will run a dedicated 20-amp circuit per section of the wall. Data cabling is usually a single Cat6 or fibre run from the processor to each panel, but some older systems use a daisy-chain of HDMI or SDI cables. Make sure the cable path is protected from foot traffic - use cable ramps or run it overhead. Also confirm that the venue has enough power for the entire production, not just the screen. A power drop that is shared with the catering kitchen or the HVAC system can trip when the air conditioning cycles on.

LED Backdrops as a Design Element

Beyond technical specs, **LED backdrops** serve a visual purpose. They can set the mood for the keynote, reinforce branding during breaks, or display a countdown timer between sessions. When planning the backdrop, think about the aspect ratio of your content. A wide panoramic shot looks great on a 16:9 wall, but if your backdrop is a tall narrow strip, you may need to crop the video or design custom graphics. Also consider the bezel gap between panels. High-end rental panels have very thin bezels, so the seam is almost invisible. Lower-cost panels may have a visible grid, which can be distracting if the camera pans across the screen during a live stream. If you are filming the event, ask the rental company for a demo of the panel's seam visibility before the event.

Setup Time and Dismantle Schedule

Conference venues often have tight load-in windows. A large LED wall can take a team of two or three technicians several hours to build, align and calibrate. Mobile screens are faster - often set up in under an hour - but still need time for power and signal checks. Plan for at least a half-day of setup for a wall larger than 4x3 metres. If the venue has a union crew, factor in additional labour costs and coordination. On the dismantle side, the screen must come down

before the venue's deadline, or you risk overtime charges. Confirm the rental period and the penalty for late return. Some providers offer a 24-hour rental that includes overnight storage, which is useful if your event runs late into the evening.

Final Practical Checks

Before you sign the rental agreement, confirm the following: the screen's pixel pitch and brightness, the processor's input count and resolution support, the rigging method and load approval, the power requirements and circuit availability, the cable path and protection, and the setup and dismantle timeline. Also ask about backup equipment. If a panel fails during the event, the provider should have spare panels on site and a technician who can swap them quickly. For mobile screens, a spare unit on site is ideal. Finally, do a site visit with the rental company's technician. Walk the room, measure the ceiling height, note the location of power outlets and plan the cable run. A site visit reveals issues that a floor plan cannot - such as a low-hanging chandelier that blocks the screen, or a pillar that splits the audience sightline.

If you are planning a conference in the Los Angeles area and need LED wall rental, you can reach Dizplay Inc. at 12400 Ventura Blvd, #611, Studio City, CA 91604, phone 888-827-8774.