CASE STUDY

Client: Aberdeen Science Centre
Sector: Education, Tourism

The Brief

AV One Solutions was commissioned to outfit all AV aspects of the brand new Aberdeen Science Centre following a two-year, £6 million redevelopment project. The scope included the OPITO Theatre of Energy - a one-of-a-kind immersive and interactive experience designed to bring the energy story to life in an engaging way, and support STEM learning for children and adults. The space comprises three interactive displays: the Story of Energy, an Energy Wall, and an interactive Energy Game. Also included in the scope was the fitting out of a large meeting room with appropriate technology to enable in-person and remote meetings with options for live-streaming, device pairing and 'touchback' support.

Our Approach

The theatre includes two user experience walls, each 8m x 3m in size, one of which is interactive and controlled by motion sensors, and the other operated from three different user control panels sat within the square 8m x 8m room. We therefore had to maximise the canvas for content, while minimising interference with the control panels and general footfall space.

We mounted four Epson EB-L1505UH 3LCD laser projectors, each fitted with the unique ELPLX02 ultra-short-throw 'periscope' lens in the ceiling of the Theatre of Energy, with two of the projectors used to display the three user-controlled images on the interactive Energy Game.

The EB-L1505UH projectors each offer a reliable 12,000 lumens of colour brightness and WUXGA resolution with 4k enhancement, while the ELPLX02 lenses offer a zero-offset image whereby the projectors can be easily installed on the ceiling surface at a close distance to the wall, while still displaying immersive images from the top to the bottom.

We also installed two Epson EB-L1495U 9,000 lumens laser projectors in the main presentation area which is used for providing customer information and private venue hire.

In the meeting room, we installed an interactive, whiteboard screen which facilitates screen sharing, feedback, device pairing and touchback support, in addition to a tracking camera and speaker tracking, to improve the experience of remote meetings. A number of acoustic panels were also installed in the vaulted space above the meeting room to improve the sound quality of the room.

Outcome

The finished Energy Theatre is the first of its kind in the UK, featuring three unique experiences: the 'Story of Energy' uses the latest projection mapping technology to provide an introduction to energy stores and how they are shaped by people and demand. A combination of voice-over and rousing music in surround-sound, with fly-over graphics and zooming in and out creates a fully immersive and memorable experience. The 'Energy Wall' describes the range of energy stores, and gives visitors the chance to see their body take on the properties of each type, and in the avatar 'Energy Game', users are tasked with balancing the energy supply to an imaginary Aberdeen, preventing blackouts while ensuring minimum CO2 emissions.

The AV experience at Aberdeen Science Centre plays a key role in inspiring an interest in the applications of science and technology in children and young adults, preparing them for a future career in the energy sector and other STEM subject areas.

With its exceptional sound quality, cutting edge interactive screen and remote tracking technology, the meeting room is an exceptional space in which to hold live and virtual meetings, and a fantastic resource for the science centre and broader community.

Customer feedback

"Our mission is to create a lifelong interest in science by creating engaging experiences and the OPITO Theatre of Energy achieves that in abundance. The superb audio-visual displays, surround sound and interactivity make it one of our top exhibits and certainly the one that our visitors will always remember. There is nothing quite like it in the UK and that is thanks, in part, to the technologies utilised that have brought our ideas to life."

Bryan Snelling, CEO, Aberdeen Science Centre