



LEEDS UNIVERSITY: MULTIMODE PROJECT

Established in 1904, the University of Leeds is one of the largest universities in the UK. Part of the Russell Group of research-intensive universities the University is renowned globally for the quality of its research and teaching.

THE BRIEF:

The University of Leeds were planning to pilot 'hybrid teaching' for multi-mode functionality in 13 of the University's teaching rooms and were seeking to appoint an experienced AV specialist from the NEUPC AV Framework to collaborate with on this project.

The successful company would be expected to work jointly and flexibly in partnership with the University during the pilot to develop its understanding of the deployment of the AV technology in the rooms selected for the exercise and to inform the potential for wider installations and enhancements of these types of facilities. A wider roll-out to embed hybrid teaching functionality across the University's teaching rooms would be dependent on the pilot scheme.



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CONTEXT OF THE PILOT:

For the purposes of the project hybrid teaching describes the delivery of content in a teaching room to both in-room and remote students simultaneously, whilst supporting audio and video interaction between all participants. This interaction may also be extended to include break-out activities between in-room and remote participants.

The intention of the pilot is to provide as similar an experience as possible to both remote and in-room students. This means that all students will be able to see, hear and exchange information with each other effectively during the teaching session and to bring remote students virtually into the campus classroom.

The pilot includes a range of different types of teaching rooms such as:

- Tiered lecture theatres
- Flat floor teaching rooms
- Small seminar rooms
- Collaborative teaching spaces

The pilot will provide a range of enhanced video and audio capability within each of the rooms which have been designed to enable staff and students to evaluate a range of alternative video and audio options.

The hybrid teaching pilots are being planned and managed in close partnership and collaboration with academic staff. These findings will influence the strategy for future roll-out of these facilities, helping to underpin the university's digital and on-line learning agenda.

The appointed supplier will collaborate with the University to deliver an Audio-Visual solution in each of the selected pilot rooms to bring the remote students virtually into the campus classroom.



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SINGLE SOURCE, DESIGN & DEVELOPING SOLUTIONS:

After a vigorous tendering process we were awarded a single source agreement with the University of Leeds to collaborate with the University and help develop their multimode campus-wide (hybrid) program.

Universal AV were tasked with developing the existing estate to maintain an excellence of teaching for both the remote and in-room student. The University's vision was that whether you were in the classroom or joining remotely, you had the same opportunity to be seen and heard, contributing to an effective seminar or lecture.

Phase one was a pilot scheme of 13 spaces across campus. They represented a sample of different teaching spaces from small seminar rooms to lecture theatres, each architecturally and aesthetically different, with different methods of teaching. Essentially, they wanted to retain as much of the existing equipment as possible and upgrade with a camera solution, repeater displays, audio, and any necessary distribution and switching to ensure seamless integration with Microsoft Teams.

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SINGLE SOURCE, DESIGN & DEVELOPING SOLUTIONS (Continued):

While all rooms had existing lecterns, they needed assessing to see if there would be space for additional equipment, and if so, would any additional ventilation be needed. If room and ventilation was a problem, could we position an auxiliary cabinet?

The aim of the pilot was to use our expertise to assess different technologies that fundamentally performed the same with the ambition to develop standards. For instance for voice enhancement we trialled Sennheiser, QSC, Shure, Audio Technica and Bi- Amp, all recognised as quality manufacturers of professional audio products.

We worked with our key manufacturers to attend site and demonstrate products so that we could assess suitability for each space, often loan equipment was left for evaluation.

Due to the many different spaces all unique in respect to size, shape and construction it became apparent early on in the design phase that flexibility was key and that no one solution would suit all spaces. We assessed a multitude of products as to suitability and aligned different products from

various manufacturers to provide the most cost-effective solution that would meet the criteria and specification of the University whilst working in each room dynamic.



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WORKING IN DIFFERENT SPACES

During the pilot, it was evident that the best overall solution wasn't a one size fits all and several solutions were installed across the pilot. Products installed were:

- Aver camera as this had the inbuilt tracking required/Q-Sys cameras were also used in varying spaces as well as the Ecosystem
- Sennheiser ceiling mounted microphone
- Presenter choice of platforms available
- Crestron UC Flex MTR

INSTALLATION:

These rooms were delivered in term time, which meant the rooms were taken from central time tabling. Attention to detail when producing project plans and planning with time tabling was vital. We highlighted the length of time to complete each one, ensured that we had visibility of lead times and prepared a Gantt chart that the AV team used to engage with timetabling.

The intention was to assess the different products upon reliability, quality, functionality, ease of integration in challenging spaces, ease of use, student engagement and of course value for money. Feedback was sought from the AV team, the academic staff and us. This was appraised and enabled the University to develop room standards and plan Phase 2.



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FAMILIARITY:

Whilst working on the project it became clear that there needed to be a balance between finding the right solution for the space, whilst maintaining a level of “familiarity” across the teaching estate. For instance, the academic wants to have the same user experience in a lecture theatre as they would in a small teaching space, despite different equipment being used. Therefore, whilst the cameras and microphones will differ in a lecture theatre to a small meeting room, the user interface, often represented by a touchscreen control panel, will remain the same. By building in “familiarity” in to the system designs, Universal AV were able to ensure early adoption by all users. This benefited Leeds University by ensuring their investment was well received and worthwhile.

The use of “Pilot” rooms allowed equipment to be used “in anger” and for all stakeholders to have a say in the solutions. This was crucial to ensure early adoption of the technology across all the users. Working in partnership with regular communication on a project of this scale and complexity was at the heart of the project’s success.

“*When you are in the middle of a pandemic and the supply chain is in chaos, you need a company like UAV on your side. UAV worked tirelessly to source equipment globally and kept the project team updated with a live tracker of lead times. Designs and purchase orders were revised sometimes a dozen times due to hardware shortages. I do not believe any other company would have allowed us to have the level of flexibility that was needed to deliver the project during those unprecedented times.*”

Jon Stothard

Interim Head of Service - Teaching Spaces | University of Leeds

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