



## **Sennheiser powers campus-wide AV upgrade at Cardiff Metropolitan University**

**State-of-the-art audio technology transforms over 50 teaching spaces, setting new standard for hybrid education solutions**

*Marlow, UK, 12 September 2025* - Cardiff Metropolitan University, the prestigious Welsh institution serving over 11,000 students across its Llandaff and Cyncoed campuses, has completed a major transformation of its teaching facilities with advanced audio technology from Sennheiser. As part of the university's strategic initiative to enhance hybrid learning capabilities, Sennheiser has successfully implemented its cutting-edge ceiling microphone systems and audio solutions throughout the institution's learning spaces.

The comprehensive installation includes TeamConnect Ceiling 2 (TCC 2), TeamConnect Ceiling M (TCC M), and SpeechLine Digital Wireless (SL DW) microphones, as well as the Wi-Fi-based bi-directional communication solution MobileConnect, transforming over 50 teaching spaces with superior audio capture technology for hybrid learning environments.

When Cardiff Metropolitan University began its AV refresh project approximately five years ago, the institution faced the challenge of upgrading outdated technology to meet modern educational demands. The pandemic accelerated this need, transforming the project from simple lecture capture upgrades to advanced hybrid learning solutions.

“Around six years ago, an internal review highlighted the need to upgrade our current teaching room AV infrastructure,” explains Hollie Carter, AV Support Coordinator at Cardiff Met. “They were all old projectors. We were using microphones on the desk that were plugged in via USB to the PC, little webcams on the monitors, and Panopto to record all our lessons.”

After extensive testing of audio solutions from numerous manufacturers, Sennheiser TCC microphones emerged as the clear winner, delivering superior audio quality with minimal visual impact and maximum coverage flexibility.

The university has implemented 20 TCC 2s, which feature patented dynamic beamforming technology that automatically follows the active speaker's voice through 28 omnidirectional microphone capsules arranged in a matrix array. These systems provide 360° coverage with



automatic speaker tracking and multiple beam technology that can simultaneously capture multiple voices in the room. For smaller teaching spaces, Cardiff Met has deployed the newer TCC M microphones, which offer similar beamforming capabilities in a more compact design with 16 microphone elements. Both solutions integrate seamlessly with the university's existing AV infrastructure, including Extron control systems.

The TCC microphones feature multi-coloured LED status indicators that show when microphones are active (green) or muted (red), giving lecturers visual confirmation of recording status while supporting GDPR compliance. They're also configured to mute automatically when the AV system powers down, adding an extra layer of privacy. "That gives academics confidence as they know they can have confidential conversations when the system is off, and it's live and streaming to our MobileConnect system when it's on," explains Carter.

The ceiling microphones also offer advanced zone control, which has been especially useful for the university. "In the School of Management, the building uses natural ventilation, and sometimes you get a low-level hum when the air con kicks in," Carter continues. "With the TCC 2 mics, being able to prioritise and exclude zones has been brilliant. We can filter out that upper-level hum, focus on the lecturer, and still give secondary priority to students - it's amazing."

The TruVoicelift capability in the TCC 2 and TCC M is another useful feature, providing additional amplification of student voices to ensure that all participants can be heard clearly throughout larger spaces.

The implementation also includes 20 channels of SL DW for lecture theatres, operating on the license-free 1.9 GHz band and featuring lithium-ion battery technology for reliable operation and simplified management. The SL DW provides automatic frequency management, interference-free transmission, and AES 256-bit encryption for secure audio delivery.

Another key element of the installation is the deployment of 30 MobileConnect systems, which stream audio directly to users' smartphones via a dedicated app.

The comprehensive audio upgrade represents a significant investment in Cardiff Met's commitment to delivering exceptional student experiences. By creating more inclusive and engaging learning environments, the university ensures that all students — whether attending



in person or remotely — can fully participate in their education. The enhanced audio quality and accessibility features not only support diverse learning needs, but also prepare students for the increasingly digital and hybrid nature of modern professional environments.

“The university loved MobileConnect as a forward-thinking solution that didn't rely on older technology,” says Inesh Patel, Business Development Manager at Sennheiser. “Many hearing aid users no longer have telecoil devices, so traditional induction loop systems weren't a good fit. Moving across to MobileConnect made complete sense.”

Cardiff Met implemented a unique approach to MobileConnect deployment, utilising static pin codes displayed in each room for students to access the audio stream on the app. This simple yet effective method ensures all students can benefit from enhanced audio without drawing attention to those who require assistive listening.

“We went through a period where rooms were getting revamped at quite a quick rate, so with MobileConnect, being able to move it from one room to another with the mics at the click of a button was amazing,” says Carter. “It is also great for end users as they can enter the room, join the stream, and that's it, without needing to highlight themselves.”

The university's small technical team leverages Sennheiser's Control Cockpit software to remotely monitor and manage all audio devices across campus, reducing the need for in-person troubleshooting.

“Control Cockpit has been game-changing for us. No one wants to run around campus all day every day trying to fix things,” Carter emphasises. “The fact you can remotely see the status of the mics, you can firmware update them, you can mute and unmute remotely as well is really handy for us.”

The new audio technology has significantly enhanced the learning experience, according to Adrian Clark, Senior Learning Developer (Media) at Cardiff Met: “The Sennheiser product that's had the greatest impact within my role is the ceiling-mounted TCC 2. This mic array has clearly improved audio quality for students, and the broader coverage means staff can move freely - supporting better classroom engagement.”



Ed Taylor, Head of Digital Support Services at Cardiff Met, adds: “The TCC microphones have drastically improved audio in meeting and lecture spaces, ensuring a better experience for remote participants. MobileConnect also adds great value from an accessibility standpoint. The products integrate seamlessly within our ecosystem, and remote management is a perfect fit.”

The project was facilitated by Strive AV, who played a crucial role during the implementation. Natalie Barnett, Account Manager at Strive AV, notes the ongoing nature of the partnership: “We are doing 22 spaces this summer that have Sennheiser products across them, and it’s become a rolling refresh where there’s always something from Sennheiser on Hollie [Carter]’s kit list.”

Dean Phillips, Projects Manager at Strive AV, agrees and adds: “The university has been quick to recognise the evolving demands of hybrid education, especially post-pandemic. We were pleased to support them with the right solutions, like Sennheiser’s TCC systems, which meet the growing need for high-quality, flexible audio in modern learning spaces.”

The university plans to continue its rollout, aiming to equip all teaching spaces with Sennheiser audio technology over the next few years.

“The Cardiff Met project stands as a prime example of future-focused AV design, where the needs of students and staff are placed at the centre of the technology strategy,” concludes Patel. “The university’s approach to accessibility, security, and management of the systems demonstrates why they are one of the leaders in hybrid learning environments. We’re proud to continue our partnership with Cardiff Met as they complete their campus-wide transformation over the coming years.”

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