





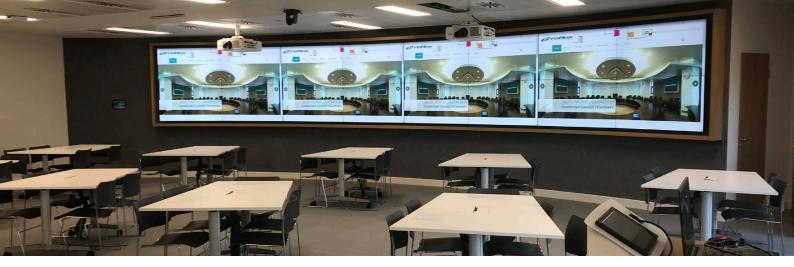
Harvard-style teaching room with multi-modal enhancements



Flexible and divisible space for group or whole-room learning



Intuitive, easy-to-use technology ensures focus on education



## **BUSINESS CHALLENGE**

Imperial College London is a world-class university with a mission to benefit society through excellence in science, engineering, medicine and business – and its Business School's new facilities at the Scale Space building are central to this aim.

Scale Space is an impressive 200,000ft2 multidisciplinary research hub for leading scale-ups and innovative businesses across the technology, digital and life sciences sectors. Elements of the Business School's suite of MBA and Master's degree programmes are taught within two new teaching areas.

Here, students get the opportunity to experience Imperial's White City campus whilst forging connections with the scale-up companies based within the facility, as well as the wider entrepreneurial community of White City.

Having been a long-term client of Reflex, now part of Aura, Imperial's choice of trusted partner for the design of the audiovisual systems within these teaching spaces was straightforward. A nine-month development period saw the creation of designs which would bring the best of AV technology to the Business School, supporting Imperial's move towards flipped, collaborative and hybrid learning approaches.

## **SOLUTION**

A Harvard-style teaching room – close in feel to a traditional lecture theatre but with a 'turn and learn' seating style – features dual projection with side repeater screens, and multiple connections for laptops. It is comprehensively specified with a Wolfvision high quality visualiser, Revolabs microphones, Panopto lecture capture, and a Crestron DigitalMedia presentation switcher and control system. Multimodal teaching enhancements include low-level confidence screens for the lecturer, Shure ceiling microphone arrays, a Zoom Room system and additional cameras.

The system is controlled by two 10" Crestron touch panels. One runs the standard college user interface, for familiarity and ease of use, while the second specifically controls the Zoom Room functionality.

The second area is a flexible, multi-modal space which is ideal for collaborative group or whole-room learning, and is divisible into two when smaller teaching spaces are required. Each side features a curved LCD wall, comprising 16 ultranarrow bezel 55-inch panels configured as four 4K UHD displays. When the partitions are in place, there are two pairs of high-definition projectors and drop-down screens on each side of the divide for conventional teaching.

A Crestron DigitalMedia matrix routes multiple sources, including Cynap, laptop input, signage and Zoom Rooms, to the video walls and projectors. The Wolfvision Cynap collaborative learning system gives groups the ability to work on a display each, while the lecturer can share content between groups or to the whole room – whether the partitions are open or closed. A lecture capture option pack integrates with Panopto, meaning lectures can be recorded and viewed again later by students.

When the partition is open, the space functions as a Zoom Room enabling remote participants to see and hear the collaborative work being done in the space. Aver cameras provide the video feeds, while Shure ceiling microphone arrays capture audio, ensuring excellent visual and sound quality for virtual participants.

For open days and other events, one of the LCD walls can be driven from a set of ONELAN digital signage players.



It was a pleasure working with Reflex, part of Aura, on this project. They really understood the brief, and how we envisioned the space being utilised.

Caroline Carter, Technology Delivery Manager (AV), Imperial College London

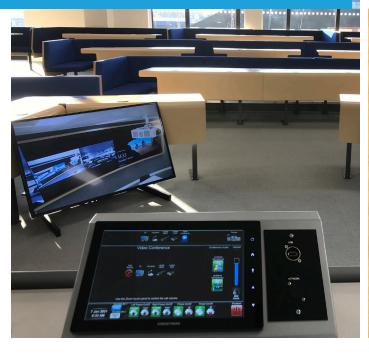
## **BUSINESS OUTCOME**

With the project originally scheduled to start in Q2 2020, there was some delay due to the global pandemic, and late-stage alterations were made to the specification to accommodate Imperial's new AV requirement in the context of pandemic-era challenges. Tailoring the specification to support hybrid learning was key to the Business School continuing to deliver its MBA and Master's programmes.

The new spaces have not only enabled the continuation of teaching under pandemic conditions, but improved the student and staff experience, facilitating better participation, discussion and collaboration. The rooms can be set up in different modes quickly and easily, enabling lecturers to focus on the teaching itself, while remote students are able to enjoy an experience that is as close to the in-room alternative as possible.

Right and below: Multi-Modal space with curved LCD wall, comprising 16 ultra-narrow bezel 55-inch panels.

Below: The Harvard-Style meeting room featuring dual projection with side repeater screens and multiple connections for laptops.









This was an extremely satisfying and very well-delivered project. Exemplary collaboration between everyone involved, focus on the common goal, and great attention to detail enabled an amazing result given all the challenges of COVID-19, all within cost and programme and to a very high quality. The vision, technical knowledge and flexibility was truly commendable.



Monika Kojak, Estates Operations Manager, Imperial College London