Royal College of Art
Postgraduate Art & Design
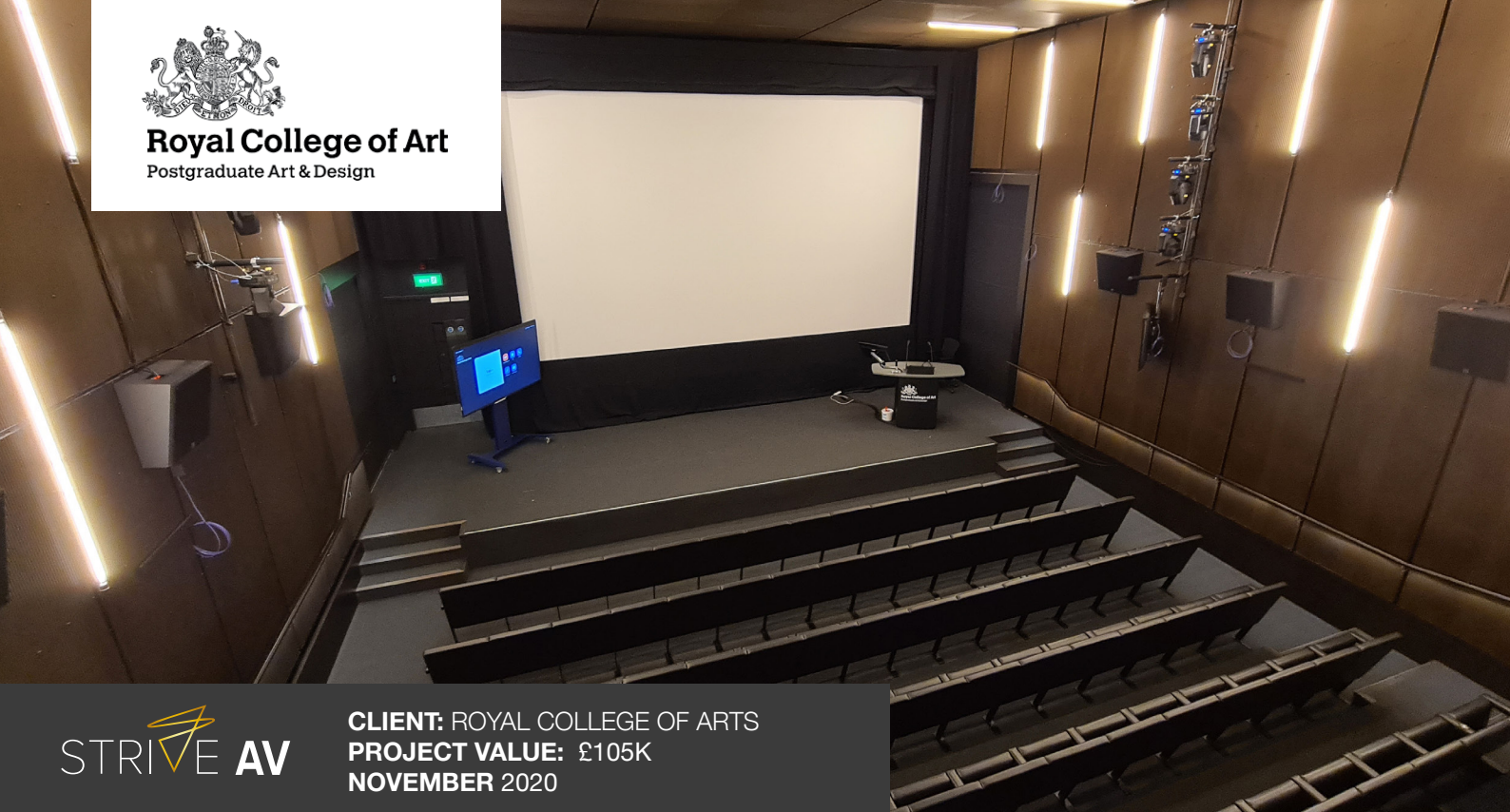
STRIVE AV

CLIENT: ROYAL COLLEGE OF ARTS
PROJECT VALUE: £105K
NOVEMBER 2020

SELF SERVICE THREATRE

Strive AV demonstrated commitment to design excellence and achieved a high quality functional, economical, and accessible design, at the Gorvy Lecture Theatre at the Royal College of Art (RCA).

Strive AV has been sole AV supplier at RCA since November 2018, working closely with the RCA team to develop an installation that not only reflected the upgrading of AV in existing spaces, but also involved working proactively on the design of a flagship new building completed in the Autumn of 2020.

PROJECT BRIEF

The client required a flexible audio-visual communications system to allow audio and video content from any space to be sent to another – or multiple spaces – in the building. Strive needed to deliver on the following objectives:

1. Flexible use of open plan spaces for teaching to include multiple source and display devices to adapt to changing class sizes
2. Refresh obsolete AV systems with new softwaredefined technology
3. Deliver a customised user experience suitable for visiting tutors and users
4. Provide a web portal for remote support by local IT staff

and to distribute signals to other rooms on campus via the switched network
5. Integrate existing theatre equipment (lighting, projection, sound) via a single user interface to deliver a "self-service" experience in the space with no technician required for 80% of events
6. Meet the customer's budget expectations

The Gorvy project required a lot of technical research prior to design, principally to understand the existing cabling, hardware and use cases that the solution would need to work around. The new integration would sit on an existing wired network, so a full assessment of the infrastructure and its capabilities was required. Strive AV looked for bottlenecks or performance limitations that could impact the stability of the network if misconfigured.

With a good understanding of the infrastructure, Strive AV then looked into an optimal user interface. The team worked with end-users in the IT department to demonstrate a number of commercial technologies, known for being user-friendly. By collating this valuable user feedback,

Strive AV were able to identify key features that the software should include in order to succeed with the user community.

OVERCOMING CHALLENGES

A key challenge was integrating with an existing networktopology that was (at the start of the project) unknown to Strive AV in terms of its capability and performance. The client was particularly keen that we do not disrupt the existing performance of the network with our solution, so a work around was required.

The design process involved indepth
research to determine which technologies could support the project requirements Audio is equally as sharp with echo cancellation and sound conditioning to deliver extraordinarily clear acoustic output, ensuring every student can hear every detail.

Another challenge was sourcing the right products. This was a premier space for RCA and designing a new system to meet their needs was not possible with off-the-shelf components.

Strive AV consulted with existing supply partners to find an ideal solution, but there wasn't a suitable do-it-all solution available to support the high performance and future-proofing requirements of this client. Therefore, Strive AV created something new and bespoke for the client using hardware components sourced from a range of new suppliers – this posed a risk for Strive AV having to negotiate commercially viable terms with new suppliers. A customised software solution integrated these components into a coherent and easy to use interface. The resulting solution provided a balance between cost, risk and features.

WORKING COLLABORATIVELY

Strive AV also had to consider the in-house team currently supporting the legacy solution, who would need to be part of the design process. Their specific knowledge and skills would impact the final solution, ensuring it could be seamlessly managed and supported by the on-site team. Strive AV needed to provide a mechanism for up-skilling the on-site team – a risk for Strive AV as failure to do so would result in expensive developers and programmers having to provide support.

THE SOLUTION

The client needed a solution that could support modern formats and standards such as 4K video, Dolby-DTS sound, and gigabit networking. To ensure the solution was accessible for the RCA AV support team - who were unskilled in networking and AV distribution – Strive AV developed both a web portal interface and an in-room interface, that included a touchscreen controller to send and receive AV signals.

At the request of the client, Strive AV utilised the building's existing ethernet network, including its core and edge network switches. A significant amount of research and development was required in order to ensure that the configuration was compatible. This led to risks during the project as the switches were from Huawei and our hardware components were sourced from an American firm, so we were required to work closely with both parties throughout.

AN AV MATERPIECE

In conclusion, the result is a state-of-the-art system that went beyond technological solutions that existed in the sector at that time.

The Strive AV team has always been committed to providing a solution which fits every element of the context, and in this instance, despite a number of challenges to overcome, the team was successful in achieving this. Pivotal to this success was working collaboratively, with the buy-in of all stakeholders, and all parties on-board with the design and installation. As a result Strive AV were appointed to design and implement the AV integration in the new RCA flagship building.
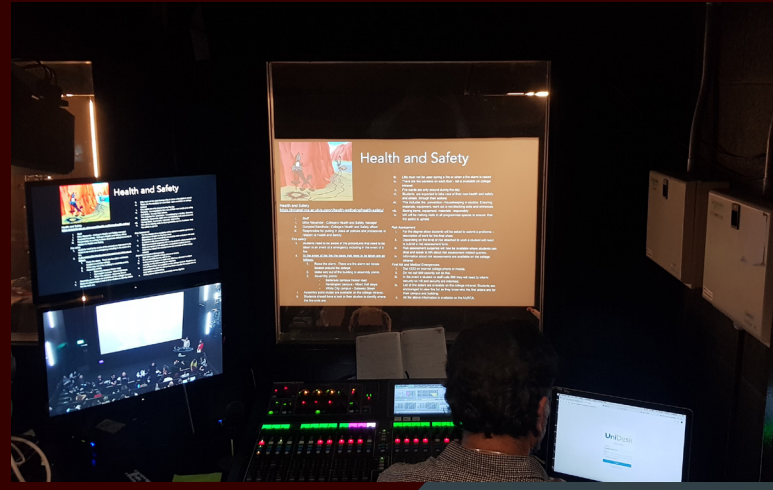
KIT LIST

- DIGITAL PROJECTION E-VISION LASER 11000
- BLACK 4K UHD LED MONITOR
- ATLONA AT-VTP-800-BL 8" TOUCH SCREEN
- DATASAT AP25 8 CHANNEL AUDIO PROCESSOR
- ATLONA 4K HDR FOUR-OUTPUT HDMI
- DISTRIBUTION AMPLIFIER
- ATLONA SINGLE-CHANNEL NETWORKED AV DECODER
- FOCUSRITE REDNET D16R 1U 16 CHANNEL AES INTERFACE WITH REDUNDANCY
- M-DANTE-A GLD DANTE CARD FOR GLD-80
- CATCHBOX PLUS AUDIENCE MICROPHONE
- SENNHEISER EW SERIES WIRELESS MICROPHONES
- TOP-TEC MONO 1500 STANDARD
- EXTRA EXTENDED WORKTOP WITH 16U RACK UNIT DMX LIGHTING CONTROLLER
- MARTIN RUSH MH 6 WASH
- MARTIN RUSH MH 5 PROFILE
- EUROLITE QUICKDMX WIRELESS BUNDLE
- Q-LINE DISPLAY - 4K UHD