

GVAV Case Study

University of Hertfordshire

The Forum Theatre



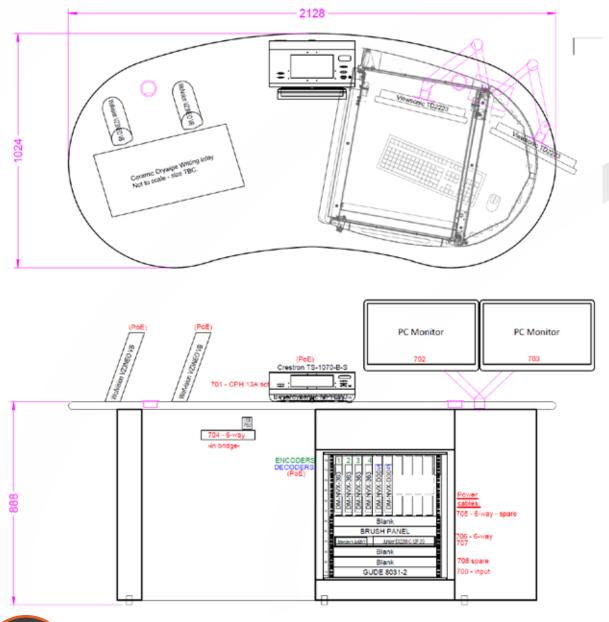
University of Hertfordshire



The Forum Lecture Theatre University of Hertfordshire

After a competitive tendering process, GVAV were appointed to lead an LED revolution across the University of Hertfordshire including several new state-of-the-art teaching spaces. This is the second of a three-part series of case studies centred around LED integration in signature spaces at the University.

Built in 2009 as a purpose-built social and entertainment facility, The Forum Building has been a central hub for students at the University of Hertfordshire for over a decade, with the main auditorium, the largest space within the building, serving as the main entertainment venue designed to host concerts and events for up to 1,000 people. As part of a major regeneration project in the Forum, the University sought to repurpose the auditorium to bring an flagship, innovative 250-seat teaching space to the building.







Above: The Forum is the social and entertainment hub of the University of Hertfordshire

This ambitious redevelopment was driven by a need to fulfil a long-standing request from the faculty for a state-of-the-art lecture theatre that could effectively display 4K media.

Existing facilities on campus lacked the capability to support high-quality visuals and advanced audio visual technology required across many of the creative arts courses.

The plans would also make the new space the biggest lecture theatre at the University, bringing new teaching and commercial opportunities alongside the social facilities in the building.

Working closely with key players including other contractors, the client, end users, PSCo, and consultant Hewshott, **GVAV** put together a strategy to deliver a scalable and flexible total audio visual solution for their flagship space.

It was also imperative to be pragmatic as logistical challenges presented themselves on this project, drawing on a wealth of experience in order to problem solve to efficiently meet the needs of the University.

AV Installed

- Sharp NEC LED video wall and displays
- Crestron AVoIP and control panel
- TOP-TEC lectern
- CORIOmaster processor
- Peerless brackets
- Tripleplay players
- WolfVision visualisers
- AVer PTZ cameras
- JBL speakers
- QSC amplifiers
- Shure mics
- Sennheiser hearing assist system





















Leading the way with LED

The standout feature of the Forum Theatre is the NEC 1.5mm pixel pitch 9-meter 4K LED wall supported by a custom-designed metal framework and cladding. At the time of install, this monumental display was the largest of its kind in UK higher education, providing stunning ultra-HD visuals that can be seen clearly by the entirety of the room.

The decision to opt for LED in the Forum as part of a wider rollout across the University signals a shift towards adopting this emerging technology as a viable alternative to projection. Whilst projection remains the industry standard and most cost-effective display option for the majority of lecture theatre projects, there were a lot of reasons why LED made sense in this space.

Firstly, location-specific logistical challenges relating to the installation, as well as blending and ventilation of projectors meant that the traditional option became an impractical solution. A change of approach was needed to fill the wall with such a large display.

As the pros and cons of different display options were assessed, it became clear that LED was the most cost-effective solution for the showpiece lecture theatre.

Product lifecycle was a top consideration in the planning stage from not only a budgetary perspective, but also to satisfy the client's requirement to their own sustainability commitments. LED technology is known for its superb longevity, and it was estimated that this option would gain up to a decade of extra use compared with traditional projection.



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A full analysis document was prepared by consultant Hewshott, who concluded that LED was the most cost-effective solution for this project.

Virtually any part of the LED wall can be swapped out with ease

As well as benefitting from a reduction in overall costs through bulb or product replacement, LED is a cleaner solution in terms of waste and carbon output, an essential consideration for the future facing the climate emergency.

A Sharp/NEC solution was chosen to form the display. The modular nature of the display means that it can be pieced together to form any size or aspect ratio. The flexibility in this solution was beneficial for the requisite scale of the display and given that the display can be running every day of the year for up to 10 hours a day, it was also important that a low-maintenance system was selected for this installation.

Virtually any part of the LED wall can be swapped out with ease in the unlikely event of failure, reducing repair time, costs and wasted learning time.

The display is powered by a Coriomaster 2 with eight 4K outputs, providing exceptional visual quality and presentation flexibility.

A variation of display layouts are possible across the LED wall, allowing the potential to show teaching content from multiple input sources simultaneously including through integrated cameras, visualisers, the room's PC, and wirelessly or wired from users' own devices.



A familiar control system

A sophisticated Crestron AV over IP (AVoIP) control solution was installed in the lecture theatre, allowing seamless sharing of content from multiple devices within the room.

This comprehensive system enables staff to control audio and video inputs, lighting and 4K lecture capture through user-friendly control panels. The integration of the AVoIP system ensures efficient management of multimedia resources in the theatre.

In all, 19 Crestron NVX-363 AVoIP devices facilitate seven separate inputs to the Coriomaster video processor, including four from the TOP-TEC teaching lectern and three from the equipment rack.

The AVoIP technology also serves as the backbone data delivery system for AVer cameras and twin 43" comfort monitors positioned at the front of the stage.

Additionally, 10 NEC 43" displays, mounted on Peerless bracketry, are strategically placed across two floors, utilising Tripleplay digital players for comprehensive signage management.

A Solstice Pod GEN 3 Wireless Presentation system allows wireless content sharing from various devices. Two edge-blended WolfVision VZ3 NEO visualisers capture high-quality visuals from the teaching desk, while two Aver PTZ330N cameras provide video capture for live presentations, hybrid teaching and recording.

The audio system consists of four JBL CBT1000 speakers powered by QSC 8-channel Dante amplifiers, delivering immersive sound throughout the theatre.

Two Shure wireless handheld and lapel microphones, connected to a quad charging base and a 4-channel Shure wireless ceiling receiver ensure reliable and clear audio transmission.

The system enables control of audio and video inputs, lighting and 4K lecture capture through userfriendly control panels

A Sennheiser Mobile Connect 2 wireless hearing assist system was also installed.

A 10-inch Crestron touch panel with a bespoke-designed GUI is integrated to control the entire audio visual system. This panel interfaces with a QSC Core 110F audio DSP and a Crestron CP4n control processor, providing comprehensive control over the AV equipment and ensuring seamless operation.

From one central panel, the University's teaching staff can control audio, video, lighting and lecture capture in 4K.



"Feedback on the LED installations has been really good, the display is incredible. There are some people who are already designing content for the full width of the screen, which is excellent. We are now doing hybrid teaching and having that number of pixels to use is just giving us real benefit."

Adam Harvey, Solutions Architect for AV & Digital Media University of Hertfordshire



New facilities, new opportunities

While the regeneration of The Forum represented a significant initial investment by the University, the new facility will help bring in new business opportunities. Additional practical uses for the 250-seat space have opened up for external companies and local communities, such as guest lectures, presentations, film screenings and conferences.

According to Adam Harvey, Solution Architect for AV & Digital Media at the University, the improved spaces are also helping the University market themselves more effectively to prospective new students. The University's ability to attract top talent is an integral key to their success in a competitive market, and their new showcase high-spec facilities help give them a cutting edge over their rivals.

Aside from the obvious 'wow' factor, existing students are already benefitting from the practical implications of these new installations, with the University's creative courses now able to display their ultra-HD 4K productions in the intended full definition.

A complete solution

Combined with the comprehensive Crestron NVX AVoIP solution and the expansive LED wall, The Forum auditorium has transformed from a dated nightlife venue into the University's flagship teaching facility.

The flexibility of the display input options to the Forum LED wall means that the space can be used for a variety of purposes and has allowed the University to emerge from the COVID pandemic with dynamic, accessible hybrid teaching spaces.

This installation in The Forum Theatre offers a total solution including immersive visuals, advanced content sharing capabilities, and streamlined control of the AV system.

This has resulted in it becoming the most in-demand teaching space for the faculty, demonstrating the success of the project and proving the need for more of these spaces in future and another successful audio visual solution delivered by GVAV into the Higher Education space.





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Our highly skilled engineers build AV racks in-house to the highest quality and specification. With regional build centres located across the UK, you can rest assured we'll build your equipment rack locally - reducing time and travel.

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Predominantly built at one of our controlled facilities and designed to exact specifications, AV racks comply with industry standards. Arriving on site, fully assembled and tested, we provide installation, integration, commissioning and handover services as part of our comprehensive service. And, with large stocks of rack equipment, materials and integration hardware in stock, we can also accommodate last minute changes with ease.

Whether your project is small or large, GV rack build is here to get the job done fast.

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GVAV have the skills and resources to ensure success and get the best return on your investment.

With decades of experience, we offer refined designs delivered by highly skilled solution designers who know how to realise your AV requirements.

We partner with our customers to generate the most innovative, cost effective and feature rich solutions and work to the respected, enhanced AVIXA standards to ensure consistency and performance across all of our projects.

No matter the size of your project, we've got you covered.







Project management

We understand the importance of excellent project management, and our experienced team of trained, accredited professionals do too.

As a company we invest heavily in our national PM teams supporting training to accredited standards particularly PRINCE2 and CTS.

Flexible project reporting ensures transparency for customers who can view their project progress throughout the process, and our system helps deliver agile, timely visibility to key stakeholders. Ensuring projects stay on time and in budget.

We will provide additional project managers giving appropriate support depending on the project size. PMs will focus on contractual, multi-trade, SHESQ and onboarding elements of the broader project with tangible benefits to our clients.

This capability is hugely beneficial when the work forms part of an overarching construction project or multiple jobs require management. We will integrate tightly with the principal contractor project team.

Training

We recognise the difficulties organisations face in implementing new technologies, promoting user adoption and building operational confidence amongst end users.

They are the fundamental elements that help guarantee you're getting the most out of your system.

No matter the level of in-house technical knowledge, adopting new products and work methods can be complex. But, taking on these challenges allows you to augment your business practices, provide your customers with better service, and compete more effectively.

Technology changes fast, and AV is constantly evolving, making it a truly exciting field. However, we understand this is a daunting prospect if you don't deal with AV all the time. We can provide the reassurance you need through training.

Training is an essential element of any well designed AV solution and represents a powerful tool for promoting user adoption. It maximises the benefits of the technology by enabling it to reach its full potential.

Technical support

GVAV knows how vital good technical support is to our customers and understands their wide range of support needs. We will match support levels to your specific requirements considering user experience and system complexity.

Our support services include access to GVCore, our support and service desk solution for incident logging, management and resolution, accessible by phone, email or secure login

Customer satisfaction is of paramount priority, and we take pride in the quality and professionalism of our support services. You will receive expert advice on usage, helping you get the best out of your equipment and keeping it working in peak condition.



Control systems

Since its inception, GVAV has been at the forefront of bespoke integrated AV systems for business and education. Our mission, to deliver designs that offer excellence to our customers technically and in user experience.

Whether using Crestron, AMX, Extron, or one of our other excellent manufacturers, the foundation is simple, logical, elegant, well-programmed interfaces that make our solutions work for you.

Our highly qualified experts have designed, programmed and supplied a wealth of projects from individual meeting rooms, classrooms and lecture theatres to expansive building wide installations. We incorporate estate-wide management that handles lighting, audio and building control, and we support environmental room monitoring and asset booking.

Our team carries certifications from all major system manufacturers so that you can expect an efficient and timely control solution. Whether for a new system or to update your existing one. Our interfaces are intuitive and reliable.





With our nationwide network of branches, we offer local expertise, which means you get the support you need!

Offering a wide range of maintenance services supported by our skilled engineers, we will manage your request every step in a friendly, helpful and efficient manner from your very first call.

Our maintenance packages offer excellent value, protects your AV system, reduces downtime, and ensures that it will run smoothly for years to come providing a great return on your investment.







Your go-to AV guide



READ ONLINE



Head Office (London & South East)-

GVAV Ltd Head Office, 676 River Gardens, North Feltham Trading Estate, London, TW14 ORB

- 6 0208 814 5950
- ™ ncutting@gvav.com



South West & South Wales

Unit 4, The Omega Centre, Bittern Road, Sowton Industrial Estate Exeter. EX2 7LT

- 6 01392 499399
- ™ rwatts@gvav.com

- Midlands & Mid Wales

Unit 2E, 4020 Siskin Parkway East, Middlemarch Business Park, Coventry. CV3 4SU

- **6** 01455 221587
- ≥ kliddle@gvav.com

North West, North Wales & NI

Units 3-4, Bag Lane Enterprise Centre, Bag Lane, Atherton, Manchester, M46 0JN

- 6 01942 884433
- **■** jmcgarty@gvav.com

North East

Unit 6B, Chevychase Court, Seaham Grange Industrial Estate, Seaham, County Durham, SR7 0PR

- 6 0191 303 9648
- ™ matkinson@gvav.com

Scotland

Unit 23, Block C, 10 Tom Johnston Road, Dundee, Angus, DD4 8XR

- **6** 01382 848680
- ™ ngraham@gvav.com

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