



GVAV Case Study

University of Plymouth

SoSC Crime Simulation Lab



UNIVERSITY OF
PLYMOUTH



SoSC | University of Plymouth

Built on top of the site of the biggest civilian loss of life in Plymouth during the Second World War, the Portland Square Building is home to some of the University of Plymouth's most forward-thinking schools including the new School of Society and Culture (SoSC).

Continuing a long and successful ongoing relationship with the University, **GVAV** were appointed to design and deliver audio visual installations within the SoSC Crime Simulation Lab across four new linked rooms in the Portland Square Building in 2022.

The refitted office spaces include a customisable crime scene inside a mock-up one-bed apartment, as well as two interview rooms joined with observation rooms and a seminar room.

This space will become an innovative and pivotal part of the University's Policing and Forensic Criminology courses, further contributing to the appeal for prospective new students and adding real value to those already studying.

Not only would this space facilitate practical training, but it also needed to act as a learning space in its own right – the seminar room would double up as a classroom/observation room with staff having full control over all cameras, microphones and displays within the system.



AV Installed

- Iiyama displays
- B-Tech wall mounts
- Extron control
- WolfVision Visualiser
- Lumens IP cameras
- Marshall cameras
- Audac speakers
- JBL speakers
- Shure microphones
- The t.bone microphones
- Audio-Technica microphones
- Ecler Paging Station
- Matrox Remote Recorders
- Kuando Busy Lights
- Top-Tec tables + lectern
- LANDE rack cabinet
- AVoIP network

Crime Simulation Lab

The client's requirements for this ambitious and exciting project meant that each room needed to be connected via a sophisticated network with video and sound capture as well as recording capabilities, meaning the right technology had to be meticulously planned and well-executed.

Despite completion being initially scheduled for September 2022, global supply chain volatility meant that lead times on kit pushed the project back to the end of the year.

This extra time was used to work with the client to further refine the design and detailed proposals. This ensured all key stakeholders understood the project approach and its benefits.

While the electrical and cosmetic contracting work could get underway over the summer as planned, the University were able to utilise another space for their students to allow the AV install to go ahead between October and December.

This **GVAV** installation was headed up by Technical Project Manager Darren Nutt alongside Lewis Todd and Iain Morrow.





Undoubtedly the focal point of this impressive new space is room A222, the Crime Simulation Lab. Consisting of an open-plan kitchen and living area as well as a bedroom and bathroom, this area allows students to dive into an immersive training experience within a realistic apartment environment. The rooms are filled with prop furniture and mannequins, allowing staff to set up the space to meet their flexible requirements and simulate different crime-scene scenarios.

This complex project required students and staff to be able to monitor all areas of the mock apartment and interview rooms from the seminar and observation rooms. For a project like this, having the right kit and systems in place was essential both in terms of usability and compatibility. This was at the forefront of the planning and design stage from the outset.

For video capture, 10 Lumens PTZ IP cameras are fitted across the suite. These cameras were the perfect selection for the requirements of this project due to their 4K capability, pan, tilt and zoom functions, giving University staff full control of the output.

“Staff and students are able to intuitively switch to and control any camera on the system”



A seamless solution

Lumens Compact Camera Controllers are designed for seamless compatibility with up to 250 IP cameras, and three of these were installed across the network to work in partnership with the Lumens PTZs. Staff and students are able to intuitively switch to and control any camera on the system from the seminar room or either observation room using these controllers.



Audio in the lab is captured by five Audio-Technica ES9450/XLR omnidirectional microphones integrated into the ceiling, with talkback into the lab possible from the other rooms via Audac CALI660 ceiling

speakers. For the seminar room, a Gooseneck Shure microphone and more Audac ceiling speakers ensure the presenter is heard, while two JBL Control 25-1 speakers accompany the room's three displays with high quality audio.

In the interview rooms, the impressive Shure MXA310 Microflex Table Array Microphone captures audio across four independent channels and polar patterns, meaning mic coverage can be customised depending on the seating arrangement and the number of people talking.

Simulating real-life police interrogation rooms, this technology integrates neatly into a Top-Tec Synergy Collaborative table alongside power options for other devices.

An Iiyama 43" display is mounted as well as an integrated Extron touch panel for comprehensive input and output options. All of the audio visual technology in the interview rooms is neatly built into the Synergy table design for a clean finish with no loose-hanging, messy cables.







Built today, for tomorrow

The flexible connectivity options throughout the suite are smartly facilitated by an AV over IP (AVoIP) system cleverly designed and implemented by GVAV, seamlessly connecting all devices in each room on a fast, efficient and secure network.

AVoIP is the backbone of this project and future-proofs the solution, allowing for potential future scalability and new features without the need to replace the whole system.

In line with other installations across the University, the client was keen to use Extron kit within the AVoIP system where possible. This would benefit the project both in terms of continuity with other spaces as well as minimising extra staff training.

The original recommendation was to separate the client's network from the AV network in order to avoid running into potential issues with the

bandwidth demands of the AVoIP solution.

However, the University were eager to use their existing network and switches and were confident about their traffic handling and port capacity. Once this was modelled with Extron and confirmed that the existing network spec had been tested and was capable of running the AVoIP system smoothly, all parties were happy to proceed with the proposal.

During the installation and commissioning of the AVoIP system, **GVAV** worked closely with the University's IT department to configure the network switches to the configuration associated with setting up this type of network.

It was important to ensure that all Extron AVoIP encoders and decoders needed to be connected on the same network switch to eliminate bandwidth issues, preventing issues like poor video quality.

The network connects three large displays in the seminar room for observation and presentation purposes.

Students are able to sit and observe their colleagues in this spacious room with three wall-mounted Iiyama displays comprising two 55" displays and a huge 86" interactive touchscreen display.

The large screens were chosen and mounted at a height to ensure everybody has a perfect view.

“AVoIP is the backbone of this project and future-proofs the solution”



University staff members have full control of what is shown on each display in the seminar room through the Extron control panel built into a Top-Tec lectern.

The lectern, which is customised with the University's logo, is also home to a WolfVision 4K Visualiser, Iiyama and Lenovo displays and a Lumens Compact Camera Controller.

A ceiling-mounted Marshall CV506 Mini Broadcast Camera captures the room for those joining the seminar remotely.



As well as video capture and projection over displays within the suite, another important requirement of this project was the ability to record all content.

This is facilitated by 10 Matrox Maevex 6020 Remote Recorders, allowing multiple video and audio input sources to be securely recorded simultaneously.

The Matrox system gives University staff uncomplicated and convenient access to footage at their fingertips, allowing them to look back at the material for analysis.

While the requirements for this project were unique and complex, the strength of knowledge and experience within **GVAV** meant that solutions were agreed upon and obstacles were overcome in the planning stage.

The team worked closely with parties across the University as well as external contractors to deliver an outstanding final product within a state-of-the-art facility.

This complex project could not have been a success without effective communication from all parties at every level.

The new audio visual installation within the School of Society and Culture will serve the University's students for many years to come and solidify Plymouth University's standing as a world leader in higher education.

“These digital crime simulation facilities allow us to provide our students with an education at the frontiers of the field. They will help ensure our Criminology and Policing students graduate with cutting edge experience and knowledge that sets them apart in the job market”

Dr Ed Braund | Deputy Head of School



Rooms installed

- Interview room x 2
- Observation room x 2
- Apartment living room
- Apartment kitchen
- Apartment bathroom
- Apartment bedroom
- Seminar room



Ready to deliver the systems you need

Our six dedicated local hubs across the UK offer a full range of services to make your AV ambitions come to life. From consultation, planning, design, training and maintenance, we have the experience to deliver.



Meet the team

GVAV is delivering the next generation of collaborative spaces!

With a return to the new normal, we have taken all the lessons learnt from COVID and pushed them even further.

GVAV's nationwide team are ready and waiting to support this new world. We deliver outstanding AV solutions that allow you to work more closely than ever, no matter how far apart. Collaboration has genuinely become a superpower for success.

Speak to your local branch today and find out how our dedicated team can help you revolutionise your space!



Systems Integration

Acknowledged in the industry for providing top quality integrated solutions. We develop systems that are easy to use and offer a great user experience.

Working efficiently on site alongside third parties and contractors, we seamlessly integrate cutting edge technologies into legacy systems.

And, with our commitment to uncompromising Project Management, we've got the experience needed to smoothly integrate into any construction or refurbishment scheme, no matter the size.

With technical teams continuously receiving the latest training and development, we ensure they have the most up-to-date skills and product knowledge.

With GVAV you can be confident in gaining a beautifully designed and robust AV solution.

Rack build

At GVAV, we don't just excel at systems design...

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.

With dedicated rack wiremen and our extensive portfolio of AV products, our AV racks are consistent with the highest standard and ready to fit.

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, CV rack build is here to get the job done fast.

Solutions choice and design

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.



Maintenance

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.





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.



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AV services you can rely on

Six local branches across the UK

GVAV has installed thousands of projects nationwide. With local branches covering the entire country and a central hub of systems and resources, we are ready for any project, no matter the size or complexity.

At GV, we have the skills, local resources and experience to take your needs from a concept to a fully integrated and supported Audio Visual solution.

On hand to help

GVAV provides sales, service and support, accessible via mobile, web or email. Our customers can contact us whenever and wherever they need to, and we take customer satisfaction very seriously, so training, support and effective project management are critical to all we do.

Maintenance and support

Our nationwide network of branches means local, experienced engineering resources for our customers. From essential preventative maintenance to site-resident engineers, extended hours and short term events or full operational support, whatever you need, GVAV can help.

Our project, technical, and programming teams ensure your AV projects deliver on every level.

We pride ourselves on offering the best quality goods and services, and our customers know they always get great value for money.

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