

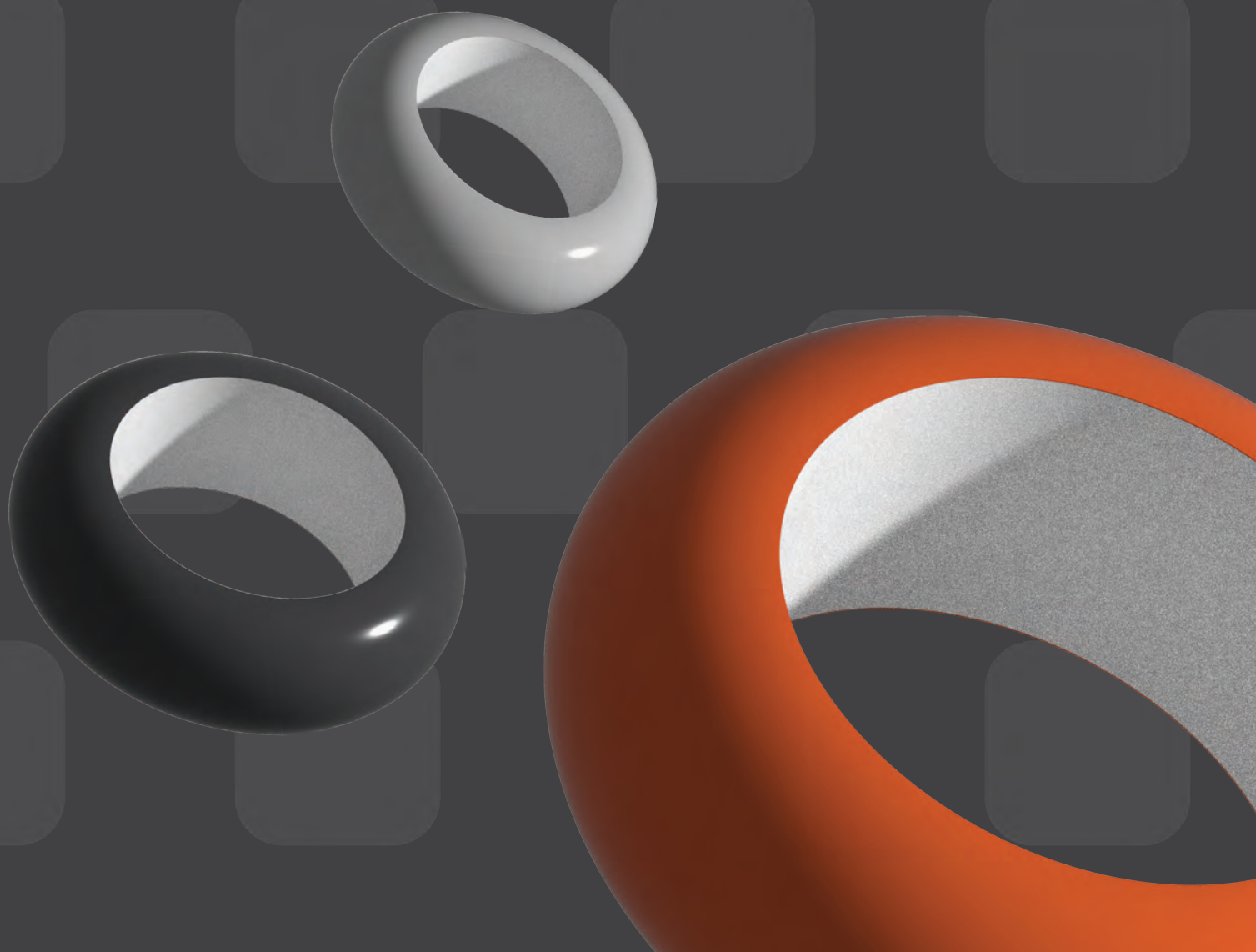
AV services you can rely on



GVAV Case Study

DARTeC | Cranfield

Unparalleled flexibility and Sharing





DARtec | Cranfield University

DARtec - The Digital Aviation Research and Technology Centre at Cranfield University is spearheading the UK's research into digital aviation technology.

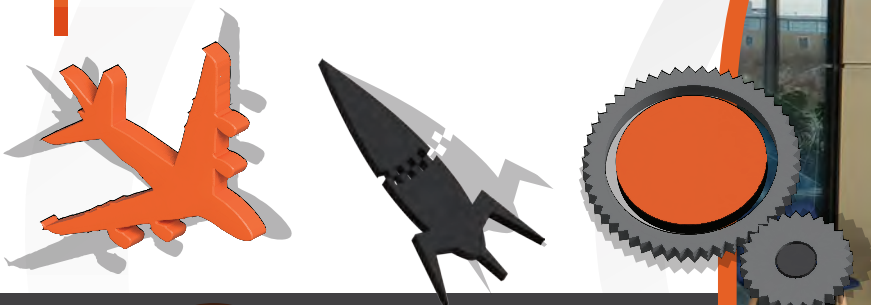
The Centre focuses on three areas of research:

Transport Systems, Aerospace and Manufacturing.

DARtec aims to address research challenges facing the aviation industry, such as:

- the integration of drones into civilian airspace
- increasing the efficiency of airports through technological advances
- creating safe, secure, shared airspace through secure data communication infrastructures
- increasing the reliability and availability of aircraft through self-sensing, self-aware technologies
- Game-changing technologies such as a digital air traffic control tower and next-generation radar technologies on the University's licensed airport create a unique research and development environment.

The DARtec consortium includes Aveillant, Blue Bear Systems Research, Boeing, BOXARR, the Connected Places Catapult, Cranfield University, Inmarsat, the International Air Transport Association (IATA), the IVHM Centre, Saab, the Satellite Applications Catapult and Thales, and has also received co-investment support from Research England.



About DARTeC project

DARTeC is a research building specialising in advancing the aviation sector and the airport of the future; the facility requires the provisioning of numerous research labs to support academic and postgraduate research alongside multiple aviation related DARTeC stakeholders.

Due to the commercially sensitive research being conducted on site, often by competing organisations working in their own laboratory space, a safe and secure system was required that would protect their privacy and IP whilst still allowing targeted collaboration with other partners within the facility.

As a completely new facility, DARTeC required a bespoke, flexible AV solution that met their Day 1 requirements and was fully scalable to meet their future needs. GVAV conducted a comprehensive review of available technologies that could be developed to meet the demands of the client's brief.

The facility's Passenger Experience area required specific customisation that included ambient noise, PA announcements and the ability to simulate the full airport hall environment, while emulating the passenger experience.

There were also requirements for zoned audio that delivered sound within a very localised area.

Experiential benefits were fundamental to GVAV's design. We focused on creating a system that would offer maximum flexibility and ease of operation for all users.

New user access is easy; an administrator simply logs into the admin page and assigns new users to the respective rooms.

The ease with which this system operates is a source of pride, as our primary goal was to offer a great user experience from day one. Maximising use, value and ROI.

The result is a testament to the planning, design and forethought of what we did for this project to ensure a scalable and flexible system.

In the Passenger Experience Lab, the building's most iconic location, we installed a pair of prominent Renkus Heinz line array column speakers on either side of the LED wall, which provide the programme audio for the space and creates a clear visual feature.

We also designed and installed 18 single monitor Dante line array Renkus Heinz speakers on a truss rail; the speakers were spaced with precision so that the entire lab area had full coverage audio.

We created numerous presets for user-requested audio configurations, allowing users to set each speaker to play different output audio or enable/disable particular speakers. As with all AV sources, this too was driven by NVX and utilised the Dante facility offered on the NVX-352, a high-performance AV over IP encoder/decoder supporting 4k 60fps video.

The entire building system uses Crestron Fusion, monitoring and scheduling software that allows support through alerts on Fusion or an on-demand support service. Users who need assistance can press the help button on any control panel menu and request rapid in-room support.

Alongside the flexible, scalable nature of the AV design, we ensured that the system offered sustainable efficiencies. Each area with installed AV was fitted with occupancy sensors, reacting to motion and light levels and linked with

the room lighting and timed shutdowns programmed for day's end. After a period when sensors and control panels have not been activated, lighting and AV systems will shut down automatically.

Our designed system ensured maximum efficiency over the product's life and green efficiencies that additionally helped towards the BREEAM requirement for the building.

Also, GVAV factored in long-term maintenance and redundancies into the design.

By utilising AVoIP based solutions, any new or changing equipment will not require new cabling infrastructure.

Any additional sources that the client may need for future upgrades to the sharing system will only require an additional NVX, which they can then incorporate into the system themselves or via GVAV.

Our brief was to provide a world-class facility with a state-of-the-art system that is easy to use, with each space designed to suit both current and future requirements.

Our client sees this project as a great success. It offers them all the facilities needed today and still looks to the future.

We are proud to say we have managed to deliver this and much more besides.



The impact of the project

The creation of DARTeC and the subsequent installation of sophisticated AV have helped Cranfield University attract new partners, some of whom we have previously mentioned. It has also enhanced their ability to attract the best talent across a broad range of industry stakeholders.

Visually stunning and undoubtedly prestigious, DARTeC has become a technology showpiece. It is impressive aesthetically and offers outstanding facilities to platform great content and create a wow factor in the public areas.

It has provided a state-of-the-art space that supports research and learning.

The impacts on Cranfield University have been very positive and further increased the facility's prestige within the aerospace industry.

The AV systems installed by us have provided capabilities that continue to support this as a world-class campus.

When designing the DARTeC audio visual systems, many factors were vital, from the technical and environmental considerations to the methodology of the system's operation and the need for intuitive controls.

User experience was the spirit of the project right from the very outset.

Controls needed to have clarity, be elegantly organised and be easy to use, particularly given the variable experience levels anticipated within the pool of end users.



The equipment is called upon to carry out an enormous number of complex tasks almost transparently. At the push of a button, ergonomic controls run screens and sound whilst complex environmental scenarios activate. All are integral to the system's success.

Sophisticated routines automate entire room scenarios, and the advanced equipment has resulted in the buildings' diverse user group enjoying a fully interactive experience.

The client required the functionality to show diverse content simultaneously in the labs whilst also providing options to cycle content through various timed windowing options.

The level of system complexity was further enhanced in the two key labs (Passenger experience and MRO). The client wanted the additional option to treat these LED and video walls as a blank canvas. And, as only select users would require this particular level of functionality, enhanced training would be necessary for those users to use this capability.

Therefore, we created tiered access levels assignable through the system admin page. This could be performed on any of the touch panels or through the remote access web portal and ensures each user is appropriately assigned the facilities they require.

Furthermore, if these requirements changed over time, it would simply require reissuing additional systems permissions managed by the Cranfield AV support team.

The faculty can also easily update live content and information on the screens.

The awe-inspiring ability to transfer sources to and from any destination allows flexibility they could never have technically achieved before. It's a truly unique system with levels of flexibility unparalleled within this space.



Environmental considerations at DARTeC

GVAV are mindful of environmental considerations in every project we undertake, and we work with best-in-class partners, each striving to uphold excellence in the green space.

Independently awarded the ISO14001 accreditation, we are dedicated to well-managed, green, and environmentally sustainable solutions.

Similarly, we maintain the ISO9001:2015 accreditation for our quality management systems, helping ensure the highest standards for our solutions and services.

We demonstrated this commitment to high environmental standards in choosing manufacturers and products for this project. Our manufacturers and suppliers use eco-friendly packaging materials to minimise package size and waste bulk.

They partner with certified providers to utilise accredited compostable, environmentally sustainable materials from corn and ocean-bound plastics.

We are committed to taking further initiatives to decrease single-use plastics to mitigate our impact on climate change.

Such consideration is reflected in our packaging Re-use, Repurpose before Recycle practices, significantly reducing waste associated with this and all our projects.

At DARTeC, we calculate that more than 4m³ of recyclable waste was captured by this process.

Technologically, the project required us to install class-leading large-format LED technology from Samsung.

Despite their size, 3m and 7.2m wide, the units are supremely energy efficient, one of the best in the market. Using the latest advanced screen technology resulted in extended product life and reduced environmental impact in their use.

We also ensured high standards were demonstrated across all of our supply chains in carbon reduction and waste management, opting for road delivery over air freight and the utilisation of UK suppliers wherever possible. Solutions for the DARTeC project were considered for their sustainability whilst allowing for future proofing, which was at the heart of our design philosophy. This closely aligns with the environmental sustainability goals of the DARTeC project.

Evolution rather than replacement formed a fundamental part of the project strategy allowing additions to the system without replacing cabling.

The resultant longevity and system lifespan significantly reduce electronic waste, packaging, and labour over the entire duration of the system life cycle.



We worked to achieve the environmental goals embraced by Cranfield University's Energy and Environment team and deliver their energy and environment objectives in line with ISO50001:2011 & ISO14001. The framework for setting and achieving the university's environmental goals.

We positively contributed to BREEAM standards with a particular focus on management and energy.

These requirements influenced the need to design advanced automation systems, reduce energy waste, and ensure unused equipment powers down automatically and unoccupied rooms do not remain lit or active.

By programming and integration of the correctly selected equipment, GVAV has helped ensure that energy is only used when necessary, reducing CO₂ and equipment's environmental impact over its life.

We are always aware of the environmental impacts of transportation associated with projects such as this. We can reduce project miles and associated environmental impact thanks to our multi-branch, local logistics and pre-integration techniques.

Additional Facts

The DARTeC Building won the South Eastern Regional LABC (Local Authority Building Control) Award, for Best Large Development.

The building has achieved BREEAM Excellent for Design Stage and is currently being assessed by BRE for Post Construction stage.

A Case study was published on the subject by PSCo

<https://youtu.be/DjqS2FQd7Kg>

Other Education Project Case Studies

<https://www.gvav.com/case-studies/higher-further-education>





Testimonials

“

Having worked with GV for many years, we were very confident in having them deliver the university's largest AV project to date. What was delivered was a state-of-the-art facility that has exceeded everyone's expectations and I thank GV for a job well done.

Charles McManus

IT Projects Manager

“

Given the size of the undertaking and the difficulties brought on by the pandemic, GV have managed to not only deliver the project within budget but also have achieved in delivering DARTeC with an outstanding AV setup that went beyond the original scope. The relationships we build with partners such as GV are key to the successes we have at Cranfield.

Edward Poll

Head of IT Infrastructure

“

We are extremely proud and excited to have an AV solution that matches the ambitions we are working to achieve here in DARTeC. What we have here is a great example of a concept being brought to reality, I can't be more pleased. Thank you GV.”

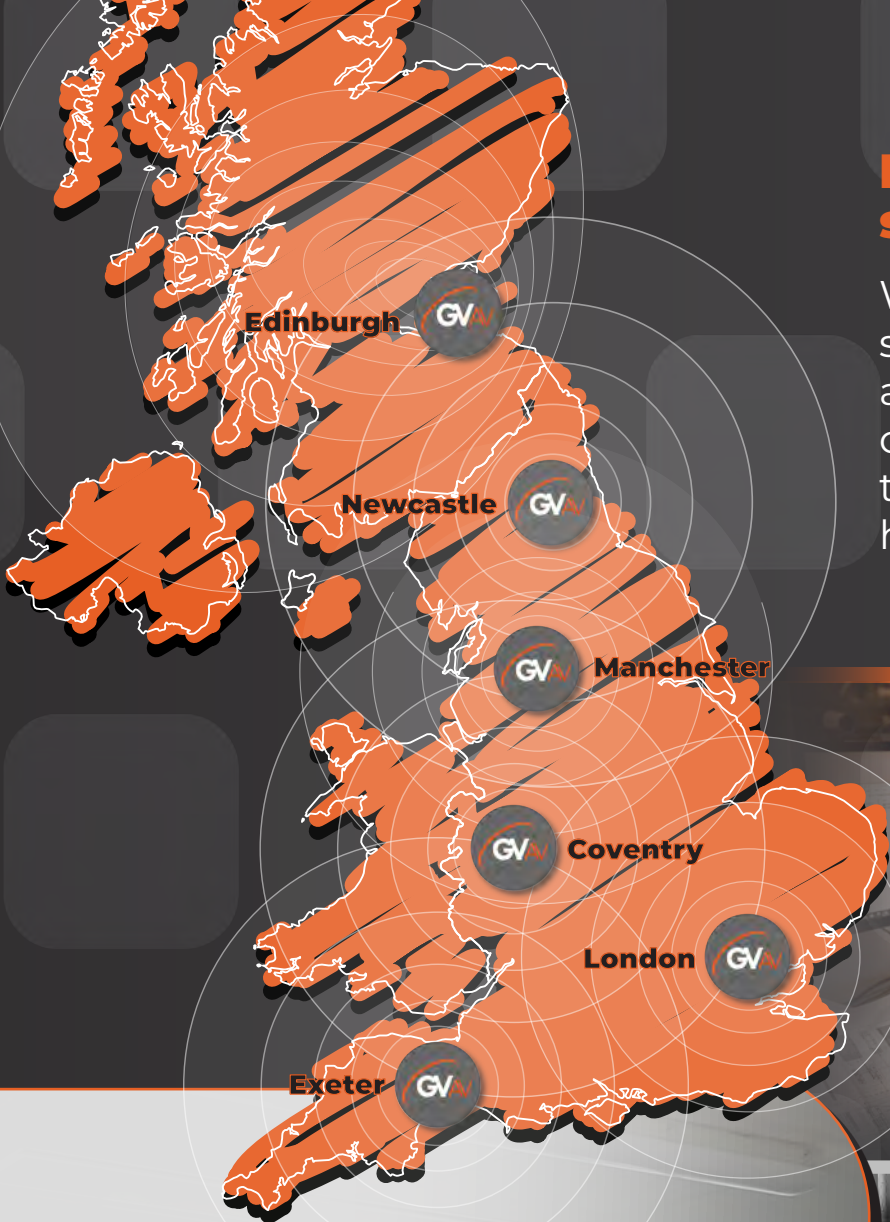
Adrian Cole

Programme Manager



Ready to deliver the systems you need

We deliver a full range of service offers 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 learning!

COVID changed our world almost overnight, but we collectively overcame the challenges; we stopped, we reset, and we started to find new solutions, solving the problems of working apart.

With a return to an altered normal, we have taken all those lessons learnt and pushed them even further.

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

Drop us a line, give us a call, speak to your local branch today and find out how our dedicated team can help you achieve your goals!



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.

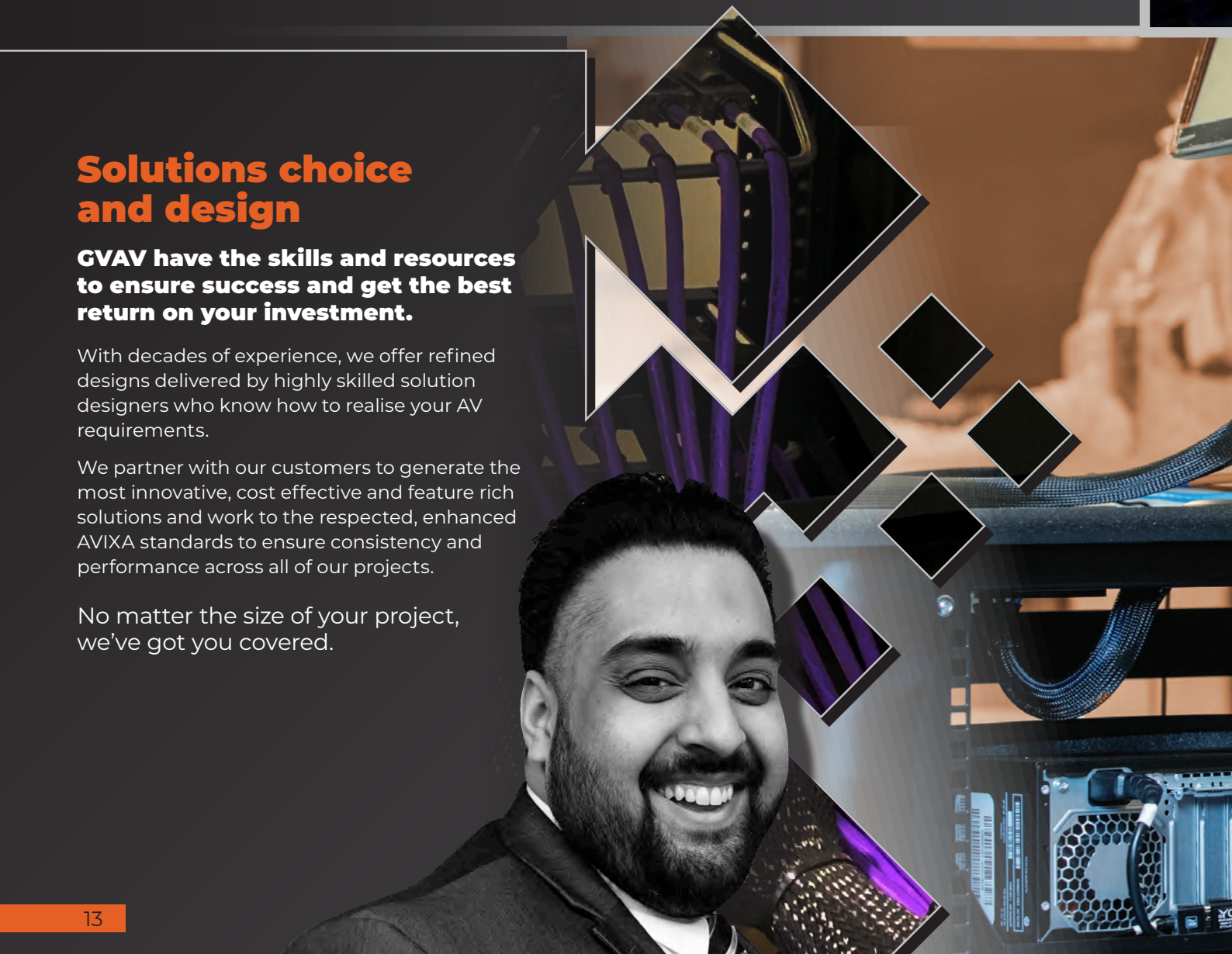
Solutions choice and design

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.

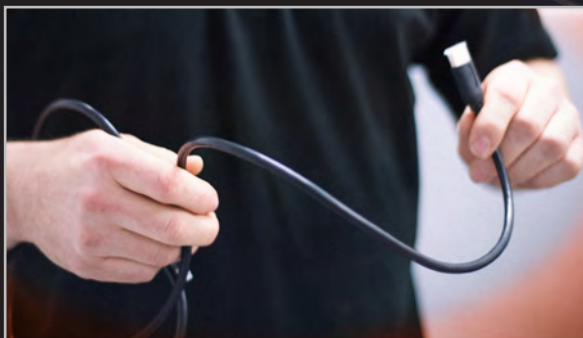


Maintenance

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 buildingwide 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.



Head Office (London & South East)

Unit 1, Inwood Business Park,
Whitton Road, Hounslow,
Middlesex. TW3 2EB

☎ 0208 814 5950

✉ ncutting@gvav.com

South West & South Wales

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

☎ 01392 499399

✉ rwatts@gvav.com

Midlands & Mid Wales

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

☎ 01455 221587

✉ kliddle@gvav.com

North West & North Wales

Unit 4, Bag Lane Enterprise Centre,
Bag Lane, Atherton,
Manchester. M46 0JN

☎ 01942 884433

✉ jmcgarty@gvav.com

North East & Scotland

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

☎ 0191 303 9648

✉ matkinson@gvav.com

AV services you can rely on

Five local branches across the nation

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.

08000 27 40 06
www.gvav.com

