AV
MAGAZINE

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The French Special Forces rely on videowalls suitable for small control rooms, but also deployable in field operations. Designed for swift setups on even the most rugged terrain, using MultiSync displays from Sharp/NEC, SENTRY's systems retain all the benefits of a fixed infrastructure.

Serving your country

Government, defence and other branches of the public sector offer a huge range of opportunities for AV suppliers – and a raft of challenges to match.

Paul Bray finds out what it takes to serve those who serve their country.

A AV technology supports every facet of the public sector. "It's being used to improve communication, increase operational efficiency, enhance public safety, and help communicate with citizens," says Richard Jonker, vice-president of marketing and business development at Netgear.

"It's used in council chambers, courts and legislative bodies for meetings and broadcasting. Defence departments and law enforcement are deploying AV-over-IP to support secure, mission-critical control rooms with realtime video surveillance, communications and situational awareness."

In transport infrastructure, AV systems are powering digital signage for wayfinding, passenger information displays, and centralised control rooms for traffic and transport monitoring. And law enforcement, first responders and emergency services are using AV for mobile command centres, body cam streaming, realtime incident visualisation and evidence review."

A key driver of AV adoption seems to be the principle that government, like justice, must be not only done but seen to be done. "Assembly halls in parliamentary buildings rely on technologies such as microphones, loudspeakers, radio transmission, film recording and TV broadcasting to support transparent governance and public access to official proceedings," says Enno Finder, senior consultant at WSDG.

Even local councils and school boards often broadcast their meetings nowadays, adds Jonker.

Pro broadcast studio tech

In legislative assemblies and other parliamentary institutions, you will often find corporate AV solutions that do not look very different from a professional broadcast studio. "These include multi-camera setups, large-scale video routing and dedicated live streaming infrastructures," says Abe Abt, senior product consultant at AJA Video Systems.

High-grade video recorders, SDI-to-HDMI converters and routing systems are used to display video across large walls of monitors. Many sessions are now available not only on dedicated platforms like C-SPAN but also via online video channels as well as streaming devices like Roku and Apple TV, and the quality of these broadcasts has improved drastically.

"C-SPAN and the UK's House of Commons productions, for instance, often employ multiple cameras and speaker tracking to ensure the active speaker is seen and heard and to capture the reactions of those in attendance," says Abt. "Some government agencies are even beginning to explore virtual sets and green screen technology to better communicate complex ideas."

National Highways operations staff at the Yorkshire and North East ROC in Wakefield view traffic feeds from multiple sources on three large Sharp/NEC videowalls in the control room and on a 98-inch MultiSync display in the conference room for coordinated mission-critical monitoring and response management. This recent installation was orchestrated by Electrosonic.

SIMON WIFFEN
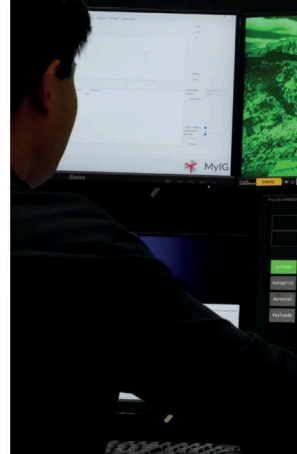
The war in Ukraine, and certain global leaders' response to it, has focused attention on defence. "It's no surprise that we see an increase in defence budgets in Europe (15-20 per cent in some countries)," says Mathieu Dobbeleir, vice-president of product and solutions at Barco. "This brings new opportunities for companies that can comply with the appropriate military-grade requirements."

> "Implementing robust cybersecurity legislation will enhance the overall security posture of the industry, like a 'rising tide that lifts all boats'."
> **Mathieu Dobbeleir, Barco**

Sophisticated control rooms provide situational awareness and aid co-ordinated response to events, while simulators can provide ultra-realistic environments for training and operations.

"Boeing Defence UK needed custom computing systems to power its high-fidelity flight simulator, used to train RAF pilots," says Nick Rogers, CEO of Exacta Technologies. "This simulator blends real-world and synthetic training, offering operational benefits like reduced fuel consumption and longer aircraft lifespan, while also delivering a highly realistic, immersive training environment. Our team delivered fifty four custom systems, built to exacting specs and tight deadlines, to ensure the simulator would perform flawlessly."

Even the humblest-sounding technology can be vital. "Audio plays a key role across public sector applications, including transport, military communications and law enforcement," says Dan Digre, CEO of Misco Speakers. "In defence and tactical applications, micro speakers are integrated into helmets and communication gear,

where clarity, durability and security are critical."

Cyber threats

Security is a key requirement across the board. "Cybersecurity continues to be top of mind, especially when regulatory bodies will start to enforce legislation (eg. NIS2 in the European Union)," says Dobbeleir. "Implementing robust cybersecurity legislation will enhance the overall security posture of the industry, like a 'rising tide that lifts all boats'."

Public sector control rooms are prime targets for cyber threats, ranging from individual hackers to state-sponsored attacks. "Since many AV projects in this space go through public tenders, sensitive details about their purpose, infrastructure and vulnerabilities can become accessible to malicious actors," says Stephen Wair, business lead for control rooms at Sharp NEC Display Solutions. "To counter this risk, public sector control rooms must implement stronger cybersecurity measures than their private counterparts. Systems should be designed for continuous upgrades,

ensuring defences remain effective against evolving threats."

Manufacturers may be called upon to provide chapter and verse on their products' security. "Government agencies frequently request detailed reports outlining which components of a product retain data (volatile vs. non-volatile memory), and what's preserved after power-down," says Abt.

Private-sector defence suppliers can face similar pressures.

"When I equip a meeting room in the secure classified world, the device must be made in the United States, TAA compliant, have no Wi-Fi, and be highly secure," says Gary Yarborough, infrastructure operations manager at Northrop Grumman Enterprise.

Sourcing suitable equipment can cause significant delays in purchasing, he adds.

Security provisions can lead to network complexity. "Multiple critical agencies (law enforcement, emergency services, fire departments, traffic management) may maintain completely separate networks that are intentionally isolated from one another for security purposes," says

ST Engineering Antycip works in various market sectors – from the university sector, to sports teams, to multinational defence contractors, (pictured – Merlin Flight Simulation Group), to engineering companies and premier car manufacturers.

The state parliament of North Rhine-Westphalia, Duesseldorf, Germany, main assembly hall was recently refurbished with a new AV system. Panasonic AW-UE 160 4K PTZ camera systems, Skaarhoj remote panels, Liliput video monitors, Blackmagic design Atem Constellation 8K video matrix switcher (installed in 2024), custom-adapted conference and voting system by Braehler Systems, and audio signal processing and routing by Q-SYS Core 510 (installed in 2025).

Dobbeleir. "These air-gapped networks create significant technical barriers when organisations seek to enhance collaboration, for example when consolidating control rooms.

"Modern control rooms address this by creating virtual environments where operators can access multiple networks from a single workstation, without establishing physical connections between secure networks – a significant advance from traditional setups where operators had to move between multiple computers."

The operations centre at London Heathrow Airport exemplifies this evolution. "By consolidating previously separate control rooms for ground movement, baggage handling and security into one integrated facility, it's dramatically improved operational efficiency while maintaining necessary security."

Supplier challenges

There is often more than a whiff of history about government institutions. While this may be quaint, it can pose challenges for technology suppliers.

"Clients often have dual expecta-

tions," says Finder. "There's a clear interest in upgrading to state-of-the-art systems, but also a strong desire to preserve established workflows that have been in use, unchanged in some cases, for twenty years or more.

"Even a relatively straightforward task, like updating a microphone conference system, can become complex when users expect the new system to function exactly like the old one, especially if they expect to retain existing infrastructure or furniture. In these cases, success often depends more on custom interface design, control logic and user adaptation than on the AV equipment itself."

Usability is often a priority, Finder adds. "In many public facilities, the end user is not a dedicated technician but a rotating team of administrative staff or elected officials, and simplicity and clarity in operation can matter more than AV advanced features."

Cash, or the lack of it, is a perennial issue.

"Budget volatility has become one of the most significant challenges in public sector AV planning," says Finder. "In recent years, the combined

impact of Covid, geopolitical instability, and shifting global trade conditions such as tariffs or supply chain constraints, has made it increasingly difficult to provide long-term cost estimates.

"This is particularly problematic in government projects, where accurate forecasting is often a prerequisite for approval. When budget discussions extend beyond the design timeline, which is increasingly common, it can trigger a need for redesigns or revised specifications that affect everything from equipment selection to implementation schedules.

"As a result, we're seeing a stronger need for modularity, scalability and planning flexibility. Systems must be designed to adapt, not just to changing technical standards, but to financial realities that may evolve mid-project."

Not that the public sector was ever renowned for making snappy decisions. "The public sector market is long-term relationship-driven, highly procedural, and burdened by strict procurement policies," says Jonker. "Patience and persistence are essen-

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tial. Sales cycles are long and require multiple touch-points with decision-makers, procurement, AV and IT stakeholders, and it's not unusual for a project to be scoped, paused, revised and restarted over the course of several fiscal years."

Frank Pellkofer, president of Utelogy Corporation, agrees. The sales process is elongated, and the bidding process is cumbersome because public money has to be satisfactorily applied to various government quotas.

"I've seen instances where a consultant was brought in to design an enterprise standard, another consultant was brought in to check the first consultant's work, all before an RFP was issued to refresh a small subset of rooms. By that time, the original design is dated and sometimes the original equipment is no longer available."

The very openness of the procurement process can make even more work for would-be suppliers.

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"The public sector offers open access to bidding for public service contracts, allowing any vendor to participate. From a vendor's perspective, this results in a less qualified tender process compared to working with consultants."
Guy Phelps, Sharp NEC Display Solutions

PHOTO: PAUL WILSON

NATO summit, Washington DC, July 2024: AVONIC cameras were used at the event. The company manufactures PTZ cameras and tracking software.

contracts, allowing any vendor to participate," explains Guy Phelps, UK end user sales manager at Sharp NEC Display Solutions. "From a vendor's perspective, this results in a less qualified tender process compared to working with consultants, often requiring more time and effort due to the number of competing bidders."

Despite this openness, however, successful bidders are unlikely to be rank outsiders, as the public sector sets great store by reputation and a demonstrable track record.

"My advice is to approach this sector with the mindset of building long-term partnerships," says Gordon Anderson, national manager for defence, intelligence and government at Lightware. "Public sector organisations place great emphasis on trust and transparency, and these relationships will determine long-term success." ■