Case Study ›

Molex - helping shape the future of Wales

Opened by Her Majesty the Queen on St. David's day, 1st March 2006, the Senedd is the new home for the National Assembly for Wales. Molex's PowerCatTM 6 solution has been installed into the heart of this building to support the modern democratic government of Wales as part of this £67 million project.

The Senedd, National Assembly for Wales

The Senedd is the main public building of the National Assembly, the centre for democracy and devolution in Wales. The building and the technology housed within is designed to be open and accessible to the public. This environmentally friendly building, constructed of traditional and indigenous Welsh oak and slate also uses an earth exchange system – utilising the heat from the bottom of the old dock on which it stands, now known as Cardiff Bay, rainwater harvesting, and a Biomass boiler to reduce the carbon dioxide emissions using wood pellets as a fuel source. This 'green building' consequently achieved the highest Building Research Establishment Environmental Assessment Method (BREEAM) rating ever achieved in Wales.
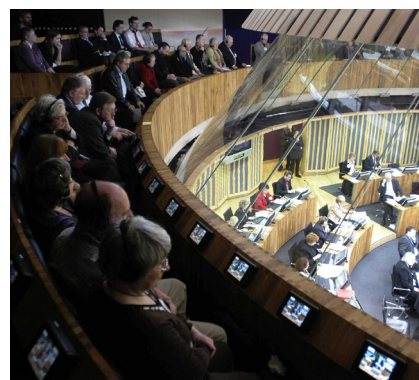

The building contains a debating chamber and committee rooms where assembly members meet and hold formal plenary sessions. It has been designed to provide a high quality working environment and enhanced public spaces - key criteria for the building design and layout, and would obviously have an impact on the IT infrastructure design process.

The Solution

Lucas Communications was appointed to implement the Structured Cabling Solution. Molex's PowerCat 6 system was the installer's proposal and the 25 Year System Performance Warranty was a key consideration to supporting the sustainability of the Senedd. Darral Rice, Project Manager at Lucas Communications commented that 'selecting the right Structured Cabling System for this project was critical, particularly when you consider the requirements of the assembly – e.g. touch screens, fan-less computers, audio conferencing, and video streaming. We proposed the Molex solution to the client for a number of reasons – their Category 6 solution provided the required bandwidth to support both current and future applications, the product quality is exemplary and their solution is underpinned by a 25 year System Performance Warranty'.

The Installation

Lucas Communications participated in the development of the design with both the Architect and BDSP, the building services design engineers. The whole team had to understand the complex design brief which included meeting the Assembly's constitutional responsibilities for sustainable development and current good practice. The criteria for the building involved a design life of one

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hundred years, use of indigenous materials, minimise energy consumption and waste, application of renewable technologies and to be 'exemplar' in terms of sustainability. Every element of the Senedd project has to consider sustainability as a key criteria, but it is the IT systems within the Senedd that makes the process of Welsh government open, accessible and efficient. Public visitors to the Senedd are privy to many access levels of the government processes, with viewing screens around the assembly and committee room areas that allow visitors to follow debates, access documents, and catch up on video archives. There were more than a quarter of a million visitors passing through the building/complex in its first 6 months and the systems coped with this admirably.

Within the assembly itself, members and the officials running the discussions and voting processes are also linked to the IT backbone. Every seat in the main debating chamber has a screen linked to voting and information systems, with servers providing background information and documentation, and access to members' own files from servers in the adjacent government offices.

This 'joined-up' government clearly has a uniqueness about it. The architecture of the building meant that the main service routes were via the building's under-croft (underground sub-floor), which carried the majority of the voice, data and fibre cabling to end-user positions in all areas, such as the debating chamber, committee rooms, media facilities and public areas. A fully resilient backbone infrastructure was implemented including diverse routing and network links to the adjacent Crickhowell building. The new building contains six communications rooms housing a total of twenty seven 42U Cabinets. Lucas Data technicians installed over 2000 Molex Category 6 outlets and 5000m of 24 core single and multimode fibre cable in total throughout the building. Mark Lucas of Lucas Communications commented that 'close coordination with the Assembly IT teams was essential and vital in ensuring that the Assembly's time scales and requirements were met. This project demonstrated effectively best practice in terms of collaborative working to deliver this landmark project on time and within budget'.

This project picked up "Major Project of the Year" award at the 2006 Building Services Awards.

The Partnership
Lucas Communications is a Bristol based installer and has been in partnership with Molex for over ten years. With the accreditation of Certified Installer, Lucas Communications has been installing structured cabling in numerous industry sectors, but is this particular project to which Mark Lucas commented that 'we are proud to be a key player in the development of this prestigious building, where the future of Wales will be shaped, and equally proud of distinguishing ourselves in the field as a Molex installation partner to promote our skills in design and delivery of a structured cabling solution – regardless of the project size or demands'.

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Conclusion

This project clearly defines the delicate balance of creating an eco friendly and sustainable building to withstand the years and fulfilling the modern demands of instantaneous and accessible information open to all, whilst preserving the current and future status of democratic Wales. Richard Wilson OBE, Head of the Assembly Building Project sums up the project in its entirety:

"The design brief for the Senedd project called for state of the art technology that was open, flexible and most importantly would support the business of a modern government. To put the project into context, a new democratic body had been formed and with it came the aspirations of a country looking to have control of their own destiny, from a building that has become the icon of Welsh democracy with those policies being debated, voted on and transmitted. The system needed to be government secure, yet accessible by the public. ICT systems (information and communication technology systems) were principally designed to be the working tools for the politicians, secondly as a broadcasting information system, and thirdly to be an interactive public information system. Each have with them a different set of challenges for different audiences simultaneously. While Plenary is the primary business where decisions are made, it is also an event with a live audience. In terms of the structured cabling, reliability and efficiency were key to the success of supporting this unique business and the innovative designs of the ICT systems".

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