Panasonic
BUSINESS

Visual Solutions

A Tech Blueprint for the Future of Higher Education

When a Swedish University wanted to build a new campus that would be the best place to study and work, it turned to Panasonic for its varied projector and camera requirements.

Client - Mälardalen University
Location - Eskilstuna/Sweden
Products Supplied - AW-HE40H, PT-RZ21K, PT-MZ770, PT-RZ570

Challenge
To build a cutting-edge university building with a technology infrastructure to deliver the blended learning future of Higher Education.

Solution
An AV-over-IP network to manage and control over 2000 connected endpoints with Panasonic projectors and remote cameras throughout.

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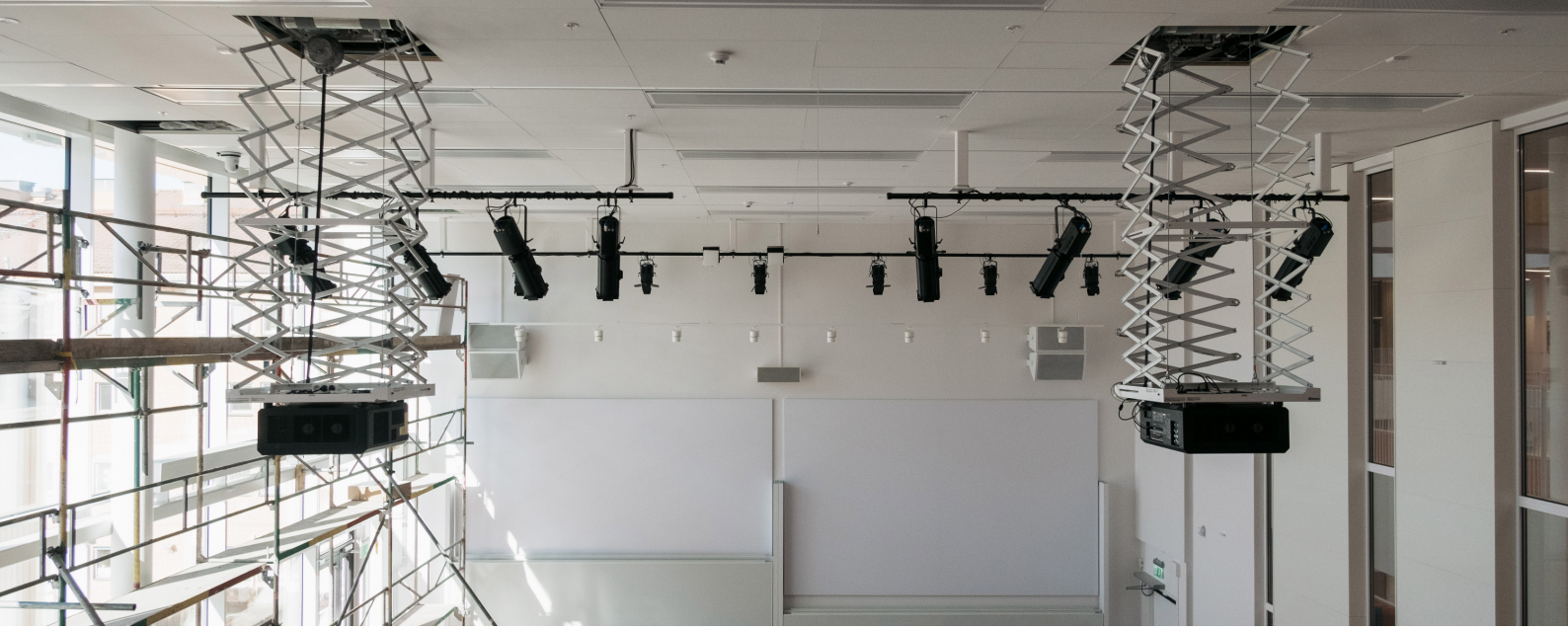
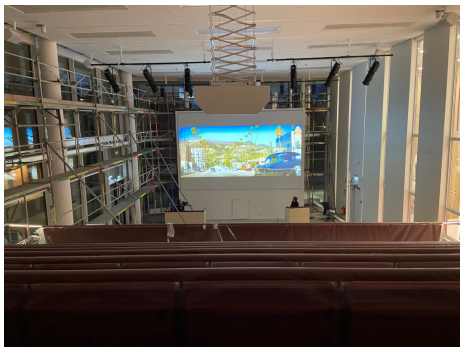
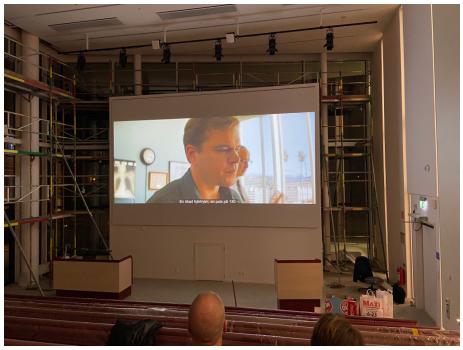
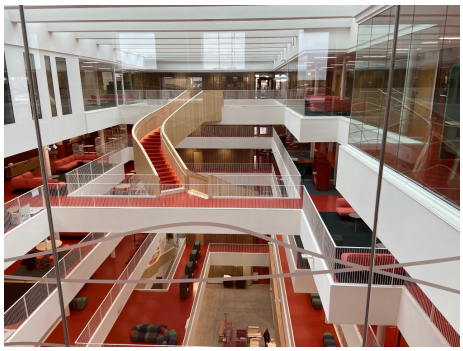
>
> Johan Larsson at Special-Elektronik

ITM MEETING SOLUTIONS
SPECIALELEKTRONIK









When Mälardalen University (MDH) planned to bring together its two existing locations into one purpose-designed super campus, its ambition was to create the best place to study and work in Sweden. Everything in the facility would be new and designed to cater for the future needs of education. MDH is one of Sweden's largest Higher Education Institutions, with almost 17000 students reading courses and programmes in Business, Health, Engineering and Education, and internationally recognised research facilities.

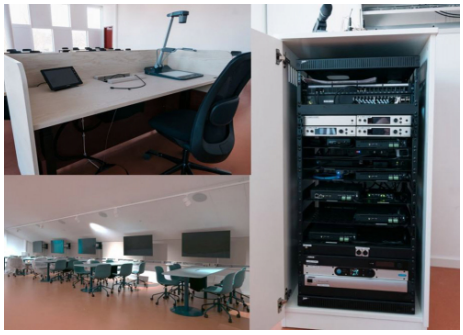
One of the major challenges in ensuring the success of the project was the implementation of a modern technology infrastructure that could meet the needs of students and teachers alike. The scale of the first completed facility is stunning with a total of around 140 classrooms and meeting rooms. These include five large auditoriums, traditional classrooms, Active Learning Classrooms, computer rooms and group rooms for student areas and meeting and conference rooms for teachers and other staff.

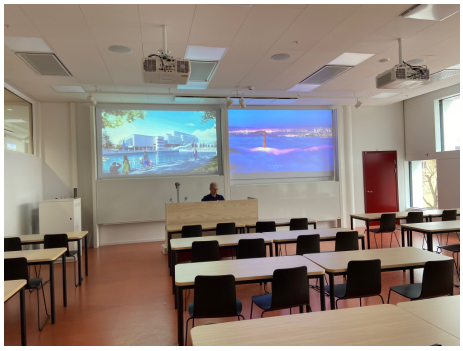
The €2.28m public technology tender for the building was won by ITM Meeting Solutions. "Our future-proof solution was a single AV-over-IP network, based on Crestron and its DM-NVX technology, to carry all equipment signals for image, sound and control over a single network, avoiding the need to run cabling everywhere," explained Johan Kinnerfors, CEO at ITM Meeting Solutions.

The AV equipment was standardised throughout the building and where projectors and cameras were required, Panasonic was the provider of choice, supplied by local distributor Special-Elektronik.

"On the old campus, the technology set-up was different in every room," explained Jonas Karlsson, IT System Administration Manager, at Mälardalen University. "A teacher would arrive at a room and the technology would vary greatly. They might be unfamiliar with the set-up and if there was a problem, they would need to call for support. The whole process was inefficient from a teaching and a maintenance perspective."

In the new facility, the technology in each teaching environment has been standardised and equipped for a blended learning environment with students present in the room and/or attending via Zoom. All AV equipment is managed via a control panel connected to the network. The IT support team can also monitor the status of the AV equipment via the network, meaning they can be proactive in identifying and rectifying faults at any of the 2000 plus IP connected devices.





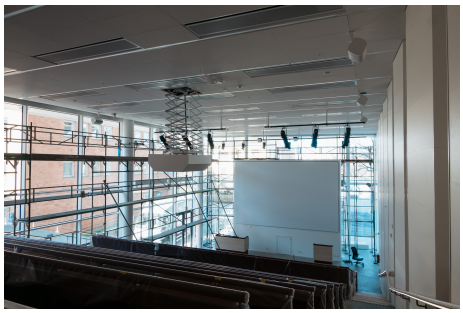


Photo credit: ITM Meeting Solutions

In total, there are 40 Panasonic projectors and 7 remote cameras for lecture capture and live streaming installed across the facility.

In each of the nine traditional classrooms, there are two Panasonic PR-MZ770 projectors equipped with ET-ELW20 lenses to provide the ultimate flexible learning environment.

"The teaching staff are able to easily set-up the room in any way they wish by selecting the input source for the projectors at the touch of a button via the control panel," explained Dragan Todorovic, CTO at ITM Meeting Solutions. "For example, content can be displayed via one projector and students participating via Zoom could be projected onto another screen."

Teachers and students can also present content or share screens via HDMI or USBC using their tablets, laptops or phones, with the projectors and a Wolfvision Cynap wireless presentation solution. A similar set-up, with a single Panasonic projector, is also used in the university's five computer rooms and the Innovation room, as well as in the two smaller lecture auditoriums.

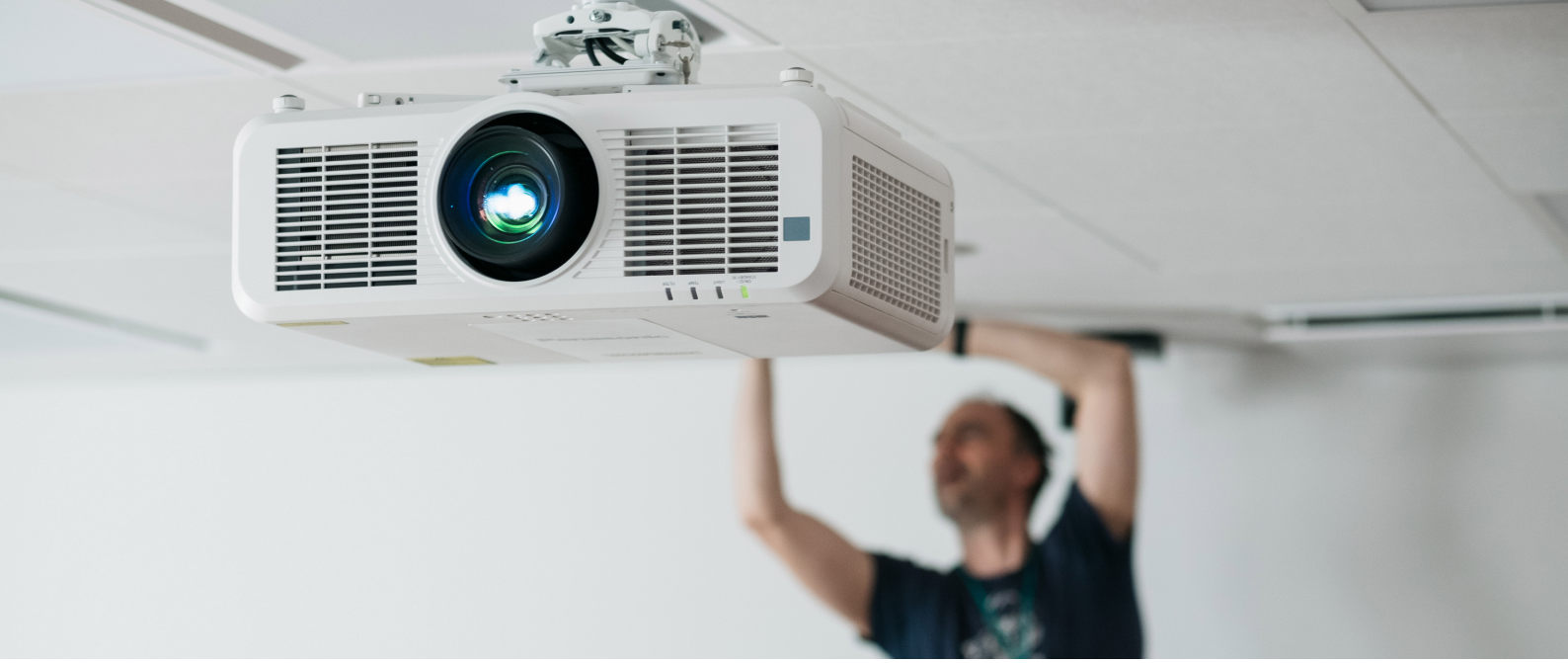
The Panasonic PT-MZ770 projector is a flexible and low maintenance Solid Shine laser projector designed with advanced collaboration technologies for education. It delivers bright, high quality images with 8000 lumens brightness and WUXGA resolution, in a compact and lightweight body, designed for ultra-low noise operation (28dB).

It's packed with a wide range of collaboration technologies such as 5Ghz wireless projection from multiple devices, secure streaming & networking, PC-less presentation and audio loop-through. Exchangeable lenses are available for flexible installation in any classroom.

In the three larger Auditoriums and the IT Studio, one or two Panasonic PT-RZ21 projectors are used to deliver stunning image quality from a compact and a low maintenance chassis. The PT-RZ21 is a leading compact and lightweight projector in the high-brightness class, with one of the smallest footprints of any 20,000lm projector. It's lamp-free laser projection, with dust resistant liquid cooling system, offers 20,000 hours of maintenance-free operation.

"The projectors in the largest auditorium display onto a 7m wide screen in a room that can hold up to 300 people," said Johan. "Due the projectors close proximity to the student seating area, Panasonic also assisted in the design of a specific sound box for the projectors, which dampened noise levels below 30db."

Each auditorium is equipped with Panasonic Full HD AW-HE40H remote cameras with integrated pan-tilt to enable recording and live streaming of lectures using the Kaltura video content management solution, as well as the capability to broadcast lectures into neighbouring auditoriums to cope with any overflow of student numbers. The cameras are configured with pre-sets to ensure students have the best view of the lecturer and any content at all times.



The six Group Rooms are equipped with a Panasonic PT-RZ570 laser 1-Chip DLP projector. With high brightness of 5400 lumens and excellent WUXGA image resolution and quality, with a 20,000:1 contrast ratio, it's an ideal solution for educational environments. The 360 degree installation option and up to 20,000 hours of maintenance-free operation, provide a highly flexible and reliable device.

The completion of the AV network and equipment roll-out took just four months and ITM Meeting Solutions and Special-Elektronik were confident that Panasonic would provide the best projectors for the job. "There were three main reasons we chose to standardise on Panasonic - the picture quality, ease of use and reliability of the projectors," explained Johan Larsson, Project and System Design Manager at Special-Elektronik. "It was an easy choice. We are used to working with Panasonic and we rarely have any issues with the equipment and when we do, they are always resolved in a really quick and efficient manner."

Jonas Karlsson added: "On a project of this size and complexity, there were bound to be some technology teething problems

University uses downtime to upgrade tech

With higher education facilities closed during the pandemic, the AV technology solution in the new facility has been a godsend, enabling students to continue to learn by working remotely. In many ways, the absence of students and many teaching staff was also the perfect time to install and test the new systems.

Currently, Jonas believes university staff are using just a fraction of the facilities new technology capabilities but this will change. "The students are already very familiar with the technologies but it will be a gradual transition to new teaching methods as staff become more familiar with the incredible tools available and learn how to make best use of them."

However, he strongly believes that the new facility and its technology infrastructure are the foundation for the future success of the university. "I believe we have truly delivered the best place to study and teach in Sweden and that it will continue to help us attract the highest calibre national and international students and opportunities for Government and public sector sponsored ground-breaking research," he concluded.

Dragan added that the design adopted by Mälardalen University would rapidly become the future model for higher education. "The young people of today use these integrated multimedia technologies in their personal lives and expect them to be available in their learning and work environments. In addition, the pandemic has helped everyone to recognise the benefits of digital learning and meetings - the time saving, productivity and environmental benefits of using this technology. Universities that are slow to adopt these new solutions will no doubt be left behind."

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