CASE STUDY

New Albano Campus powered by AVoIP network with Panasonic solutions

Client: Stockholm University
Location: Stockholm, Sweden

Product(s) supplied: PT-FRZ50   PT-RZ120   PT-VMZ40   AW-HN40H

Challenge

To deliver a state-of-the-art AV infrastructure for the Albano Campus that was intuitive to use, reliable, easy to maintain and capable of meeting the education and research requirements of today and tomorrow.

Solution

An AV-over-IP network to manage and control over 400 connected endpoints with Panasonic projectors, Intel SDM equipped displays and PTZ remote cameras throughout.

Panasonic Solution: 140 Panasonic displays, 82 projectors and 50 PTZ remote cameras for lectures, meetings rooms and live streaming installed across the facility.

- Panasonic SQE Series of displays with Intel SDM slot for WolfVision wireless presentation system, Cynap Pure
- Panasonic CQE Series of displays
- Panasonic PT-RZ120 1-Chip DLP Solid Shine laser projectors delivering 12,000lm for larger auditoriums.
- Panasonic PT-FRZ50 1-Chip DLP laser projectors that are ideal for in-person or remote learning spaces.
- Panasonic PT-VMZ40 LCD laser projectors for vivid high brightness images in a compact unit.
- Panasonic AW-HN40 integrated Panasonic PTZ cameras for hybrid and remote learning and lecture capture.

Installation: [Informationsteknik](#)
Distribution: [Special-Elektronik](#)
Photo credit: Informationsteknik & Special-Elektronik

"In terms of functionality, ease of use and maintenance and capability to take us into the future, I believe this AV solution is unrivalled in Europe."

Mauritz Torstenson

A new 70,000 sqm education and research facility capable of supporting the needs of up to 15,000 students requires an integrated AV network that can meet university needs both today and long into the future.

That was the brief for the new Albano Campus, a state-of-the-art facility for Stockholm University. Mauritz Torstenson, who had overall project management responsibility on behalf of Stockholm University, had a clear vision in mind.

"We wanted the AV systems to be consistent and easy to use for lecturers and students in every meeting space and auditorium – whether they were attending in-person or remotely," he explained. "In addition, we required high quality and reliable AV equipment that could cater to the needs of both today and tomorrow."

With more than 130 meeting rooms, 7 auditoriums and over 40 lecture rooms to equip, AV specialists and the 50m Kronor (€4.5m) bid winner's Informationsteknik were tasked with delivering the integrated AVoIP network with over 400 endpoints. They worked closely with the university and their AV consultant on the project, Jonas Backman.

Relying on a small number of quality manufacturers

"To meet the brief, it was important to identify a small number of specific product manufacturers to reduce the solution's complexity and make the overall project easier to manage," explained Mats Andreasson, one of the bid leaders at Informationsteknik.

The university had previous positive experience of using Creston and Panasonic products. The future-proof solution in the successful bid was a single AVoIP 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.

Panasonic projectors, PTZ cameras and displays were chosen to equip the different learning and meeting spaces. Initially a different manufacturer's displays were considered for the project but the inclusion of the Intel SDM slot in Panasonic's SQE Series displays swung the decision. This enabled the university to use Wolfvision's fully integrated wireless presentation system that uses the SDM slot in the display – removing the need for any additional cables and set-top boxes.

SDM important in AV future

Panasonic sees Intel SDM as an important capability in making its AV equipment flexible and scalable for any future-proofed solution. As a result, Intel SDM is now being included in the majority of new projectors and displays as standard.

"Ultimately, the Panasonic displays offered a better solution and higher brightness with improved viewing quality over the competition – all for a lesser price. It was an easy decision to make," said Mats.

In total, the Albano Campus has up to 140 Panasonic displays being used in 120 rooms, using a mix of Panasonic's SQE Series with WolfVision Cynap Pure wireless presentation systems using the SDM slot and entry-level CQE Series.
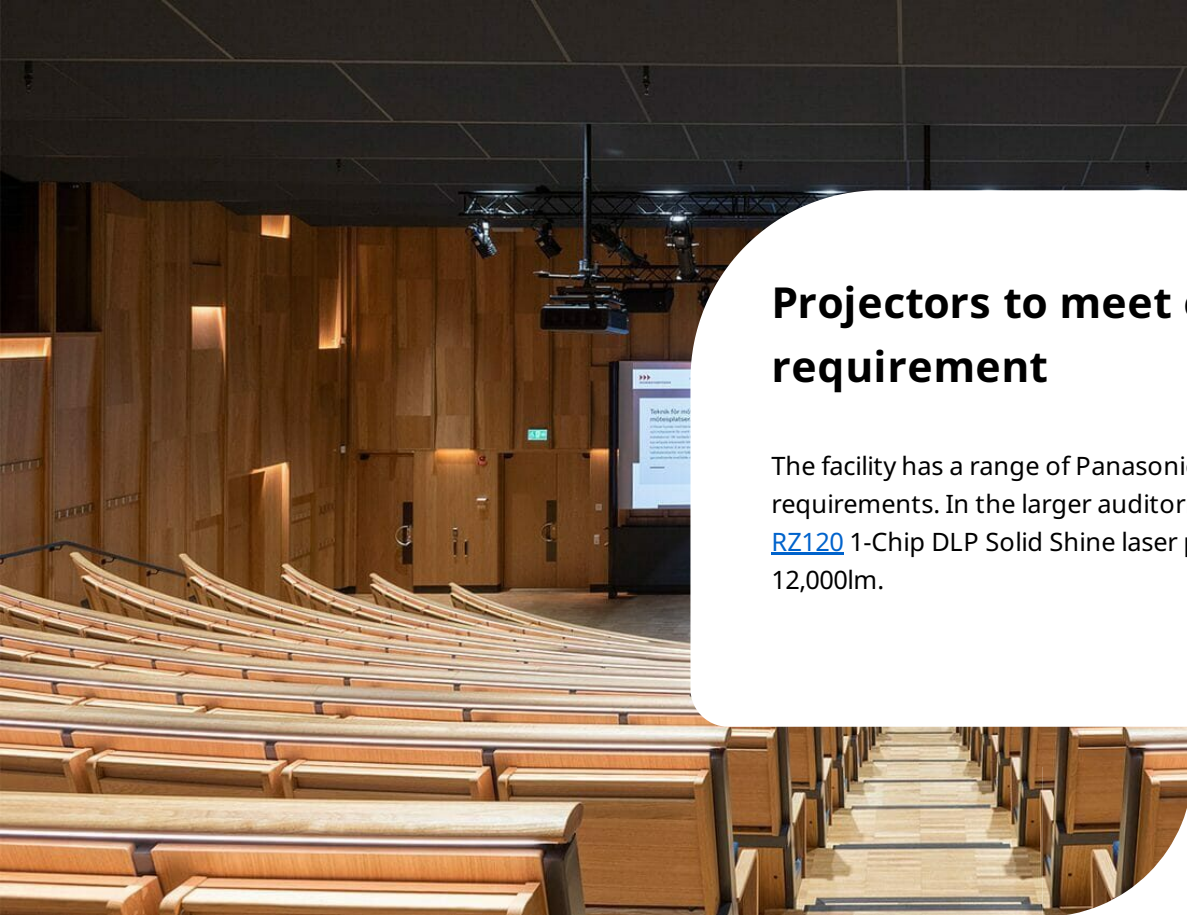
Projectors to meet every requirement

The facility has a range of Panasonic projectors to meet its requirements. In the larger auditoriums, there are 12 PT-RZ120 1-Chip DLP Solid Shine laser projectors delivering 12,000lm.

These projectors are designed for intensive use and long lasting brightness in an education environment. Ideal in larger auditoriums, they produce vivid, accurate and immersive images with WUXGA resolution and a 10,000:1 contrast ratio, while the System Daylight View 3 optimises the images even in bright environments.

Facilitating Active Learning

There are also four Active Learning Centres that encourage interactive teaching and creativity amongst students. Each area is equipped with round tables, common whiteboards, a display and wireless presentation system. The technology facilitates collaboration between the students as they can use their own computer, tablet or mobile phone to share content to the group's common display or all displays in the hall. Group exercises in the hall allow the teacher to participate in discussions and follow how the students interact with each other.

All image sources are sent over networks (AVoIP) to the desired monitors or projectors located in the hall. Through the AVoIP technology, the image source can be displayed simultaneously in other premises without visible delay. The halls are also equipped with projectors, speakers, microphones and visualizers (document cameras) for easy sharing with screens at the tables.

The technology is aimed to be as easy and flexible as possible to use and by integrating all technology in the training rooms with a control system, the teacher gets full control over all functions such as lighting, volume, starting the projector or camera from a single touch panel. And no matter which room is used, the technology is the same.
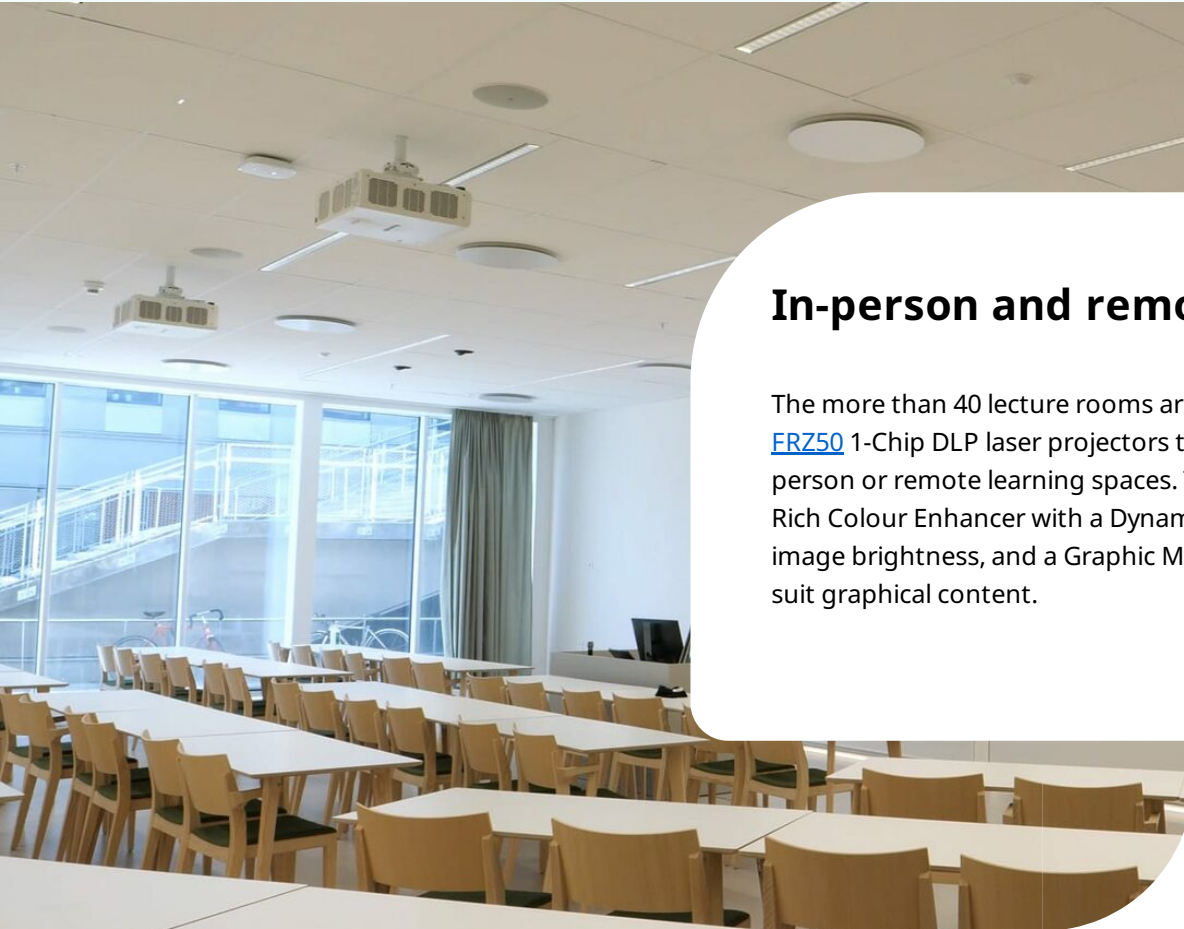
In-person and remote learning

The more than 40 lecture rooms are equipped with 2 PT-FRZ50 1-Chip DLP laser projectors that are ideal for in-person or remote learning spaces. These projectors include Rich Colour Enhancer with a Dynamic Mode that prioritises image brightness, and a Graphic Mode/Standard Mode to suit graphical content.

With more lessons and meetings now taking place online, it's important to use a projector that won't drown out the discussion. The FRZ50 includes a Quiet Mode that enables practically inaudible 27dB operation. They support 4K/60p input signals for the ability to play Ultra HD video at the projectors' resolution even when distributing the same signal to multiple 4K-ready endpoints of differing screen resolutions. Installation is stress-free because the projectors are equipped with a 2.0x optical zoom lens that supports a wide range of throw-distances while filling the screen with a large, bright image.

For internal meeting rooms, the university has deployed 10 PT-VMZ40 LCD laser projectors for vivid high brightness images in a compact unit that just like all Panasonic projectors offers 20,000 hours maintenance-free projection.

Cameras for hybrid learning and streaming

In all auditoriums and lecture rooms, there are a total of 50 AW-HN40 integrated Panasonic PTZ cameras for hybrid and remote learning and lecture capture. Part of the world's most popular PTZ line-up, these cameras are designed for image quality, speed of implementation, reliability and industry standard inter-operability. In its largest auditorium, the multiple cameras are controlled using a Panasonic AW-RP60 remote camera controller.

Intuitive to use

With the system now fully operational, Mauritz said that the feedback from staff and students has been very positive. "Everyone finds the solution intuitive to use and they appreciate how they work in harmony together," he added. "The viewing quality is excellent and the system is reliable and simple to manage – with just one AV technician supporting all rooms."
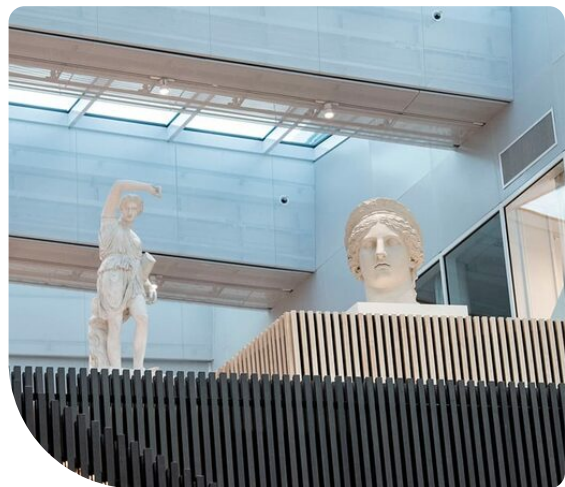
"We had one of Europe's leading Economist professors visiting recently to lecture and he commented that it was the best AV system that he had ever used."

Both Maurtiz and Mats agreed that the key to the success of the two-year project had been the close working relationship between the customer, integrator and product manufacturers.

"There is no doubt that it was a complex project and it was not all plain sailing," said Mats. "There were some small bumps in the road along the way but nothing major. The initial planning for the integration of the IT and AV networks was very important. But once we were onto implementation, the products just slotted together into the solution."

Looking forward, Mauritz believes that the Albano Campus has an AV solution that matches the ambitions of the new facility. "In terms of functionality, ease of use and maintenance and capability to take us into the future, I believe this AV solution is unrivalled in Europe."