



Silesian Centre for Heart Diseases

INTRODUCTION

The Silesian Centre for Heart Diseases (SCHD) in Zabrze has been setting the standards for modern cardiology and cardiac surgery in Poland for more than 40 years. A long tradition of innovation, combined with access to advanced medical equipment and the pursuit of an educational mission, allows the center to operate at the level of the largest medical facilities in the world.

"THE NEW AV TECHNOLOGY IMPLEMENTATION ALLOWS FOR BETTER UTILIZATION OF THE MEDICAL PROCEDURES TAKING PLACE HERE FOR EDUCATION OF STUDENTS AND DOCTORS. THE FULL PROCEDURE CAN BE TRANSMITTED, PRESENTED, AND DISCUSSED IN A SAFE WAY."

Oskar Kowalski
*Cardiologist,
Silesian Centre for Heart Diseases*



THE CHALLENGE

During renovations, SCHED wanted to update its existing technology infrastructure and offerings with the latest technologies. In many different spaces, such as the treatment areas and seminar rooms, SCHED needed secure and consistent management that would enable hands-on education for students without disrupting complex, often risky operations.

THE SOLUTION

Integrator A+V was tasked with the full scope of the project, and with their expertise, their team looked for a solution that would be flexible, scalable, and reliable. To transmit high-quality images and sound with minimal delay, A+V chose Crestron AV-over-IP technology for SCHED. This approach enables the center to honor its commitment to teaching at the highest level while maintaining a sterile environment for operations and protecting patient privacy.

"WE HAVE SELECTED CRESTRON SOLUTIONS AS WE TESTED AND TRIALED IT IN VARIOUS OTHER PROJECTS AND WE KNEW IT WOULD OFFER THE BEST QUALITY, FLEXIBILITY, AND SCALABILITY FOR THE CENTRE."

Marcin Bogaczyk
*AV System Design Team Manager,
A+V*



THE TECHNOLOGY

Crestron DM NVX® AV-over-IP technology is at the core of this project, since it offers flexibility, ease of use and management, and scalability. Each of the brand-new major room types was additionally equipped for collaboration with a large screen, Crestron FlipTop™ cable management systems, and Crestron AirMedia® wireless technology, allowing for wireless presentation and conferencing between students and faculty. Crestron DM NVX technology was used to seamlessly transmit video throughout the rooms with no delay.

Treatment rooms were designed to address certain specialties, such as hemodynamics and electrophysiology. Each space is equipped with similar technology, including a wall-mounted Crestron touch screen as the interface for establishing voice communication and adjusting audio levels. All display devices have independent Crestron DM NVX video receivers to showcase real-time medical events with zero latency.

"THANKS TO CRESTRON DM NVX, STUDENTS IN THE AUDITORIUM, SEMINAR ROOMS, AND TRAINING ROOMS CAN NOT ONLY SEE WHAT IS HAPPENING IN THE OPERATION ZONE, BUT ALSO LOOK AT MEDICAL IMAGES AND SEE WHAT THE STAFF IS DOING WITHOUT INTERFERING WITH THE PROCEDURE."

Oskar Kowalski
*Cardiologist,
Silesian Centre for Heart Diseases*

The five seminar rooms use Crestron DM NVX technology to provide seamless and efficient multimedia presentations. Live feeds from the treatment rooms, along with two-way voice communication, are important pieces for student education. Through DM NVX distribution, the presenter can share content from their laptop or phone and display a live broadcast of the medical procedure taking place in the treatment room at the time. This allows the faculty and students to talk about different approaches being taken in the treatment room.

These rooms have been equipped with Crestron AirMedia wireless presentation and conferencing systems for content sharing to the monitor from mobile devices such as laptops, tablets, and smartphones. Crestron touch screens were also installed to control the in-room technology, such as launching the presentation system, displaying images on the monitor, adjusting the sound level, and controlling the lighting and blinds.

Due to the high requirements for system stability, the network structure was designed with the utmost care, taking into account security mechanisms such as the redundancy of the connections of all major system components. In addition, to provide the technical staff with wireless access to the Crestron system, a dedicated Wi-Fi® wireless technology network was implemented so the technician can manage the system from any key location in the building.

In the existing buildings, previous AV systems were upgraded and integrated with the newly designed Crestron systems to facilitate the display of high-resolution images in the auditorium. The modernization involved replacing some of the devices in the existing system to ensure signal compatibility.





RESULTS

Crestron solutions enable the Silesian Centre for Heart Diseases to achieve its educational objectives while adhering to safety standards and required procedures. With the new technology in place, students can discuss practical situations with lecturers in a focused, interference-free environment.

"We are very grateful for the opportunity to work on a project so important to every patient and to contribute to the development of great doctors. Our implementation for the Silesian Centre for Heart Diseases is an example of how effectively designed audiovisual systems have a significant impact on the quality of learning, as well as the comfort of students, lecturers, and patients," says Kamil Wolczyński, Senior Account Manager at A+V.

Featured Products

3-Series® Control System
CP3N

DM NVX® 4K60 4:4:4 HDR Network AV Encoder/Decoder with Downmixing
DM-NVX-351

DM NVX® 4K60 4:4:4 HDR Network AV Decoder Card
DM-NVX-D30C

DM NVX® 4K60 4:4:4 HDR Network AV Encoder Card
DM-NVX-E30C

AirMedia® Presentation System 200
AM-200

10.1 in. Touch Screen
TSW-1060