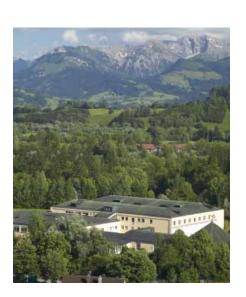


# Organisation

The Kempten-Oberallgäu hospital group is one of the leading institutions in heart surgery. The percutaneous replacement of the aortic valve, in which a cardiac valve is implanted through the femoral artery, has been honed and perfected by doctors at the institution over the past few years. The low-invasive procedure means this type of operation is particularly suited to older patients.

Broadcasting medical operations live via video is commonplace in German hospitals.
But in many places, crystal-clear HD quality remains the exception, and the solutions most commonly used are very expensive. The Kempten-Oberallgäu hospital group has now shown that there are affordable solutions available that also provide superb image quality.



#### Challenge

The Kempten-Oberallgäu hospital group was looking for a video conferencing system that would enable them to demonstrate heart surgery operations to doctors at Tongji University in Shanghai via a live broadcast to China.

## Solution

The hospital needed a solution that was affordable, but also provided HD audio and video. Decision makers at the hospital chose LifeSize® Room 220<sup>TM</sup> for its performance, affordability and easy of use.

#### Results

Kempten-Oberallgäu hospital group can now use their new HD video conferencing solution to broadcast images to other buildings on their premises in Immenstadt, and also internationally. In the future, the hospital is planning to broadcast more operations live, with the aim of offering expert audiences new insights and stimulating the interdisciplinary exchange of knowledge.

# Challenge



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surgery operations to doctors at Tongji University in Shanghai via a live broadcast to China. The hospital needed a solution that was affordable, but also provided HD audio and video.

## The hospitals key requirements are:

Ease of use

HD video and audio

Good price-performance ratio



# **Solution**



The hospital selected LifeSize Room 220 video collaboration solution, which met their needs precisely. The inputs of the system are

connected to two HD cameras, an X-ray (which shows the course of the endoscope in the artery during the operation) and an ECG image. A ceiling camera looks down on the operating area, and a front camera brings the surgeons into the picture.

Now, not only were the physicians in Shanghai able to see the doctors perform the procedure; they could also see subtle details such as the surgical instruments used.

"With the LifeSize solution, we have never had any kind of problem and were able to keep the technical overheads during the operation very low. With no cameraman getting in the way, surgeons are able to better focus on the task at hand."

- Dr. Lutz Wagner, Senior Physician, Oberallgäu-Kempten Cardiovascular Centre

## **Results**



For the first time in Germany, this kind of heart operation was broadcast live to China.

The operation was performed on two patients over the age of 80, and nearly 50 doctors at Tongii University in Shanghai, one of the country's leading universities, viewed the operations via HD video. The Chinese doctors had a chance to address their questions directly to experts on the German side during the broadcast. This kind of operation has only ever been performed twice in China to date.

The live broadcast took place as part of the Alexander von Humboldt Foundation's German Chancellor fellowship. Heart surgeon Dr Kefei Li from Tongji University is a guest at the cardiovascular centre in Immenstadt for a year, as a participant in the German Chancellor fellowship. Professor Jan Torzewski, chief physician at the centre, who is part of the Kempten-Oberallgäu hospital group and PhD supervisor of Kefei Li, performed both operations.

The goal of the project is to encourage cooperation between the German cardiovascular centre and the Shanghai university. According to Torzewski, "We can envisage having Chinese patients being operated on in Germany."

The video conferencing solution in the hospital is also used for events rather more close to home. On "Allgäu cardiovascular days", individual operations are broadcast via the video solution.

"Video broadcasts are valuable instruments which enable us to get referring doctors more involved in the operation. This means they provide a valuable contribution to interdisciplinary exchanges," said Dr Lutz Wagner, senior physician at the Oberallgäu-Kempten cardiovascular centre. "With the LifeSize solution, we have never had any kind of problem and were able to keep the technical overheads during the operation very low. With no cameraman getting in the way, surgeons are able to better focus on the task at hand."

To ensure that everything went smoothly for the spectators, the hospital managers chose to broadcast a single, ready-made stream as opposed to having a system transfer at the spectators' end. It was supplied by a doctor set up specifically for this purpose in the laboratory next to the operating theatre. He was responsible for zooming the camera in over the operating area and managing the direction of the camera.

Anton Seiler, the hospital's IT manager, praises the technical quality of the facilities. "We can broadcast the signals to another building in our premises in Immenstadt, or even to China," he said. "The image quality is particularly high and there is no noticeable time delay - exactly what we expected from the solution. We wanted a system that is easy to use and can be operated with a normal remote control, without needing specialist IT knowledge."

In the coming months, the hospital is planning to broadcast several more operations using the video system. "With the LifeSize HD solution, we will be able to offer expert audiences new insights in optimal quality," said Seiler.





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