

# Kantonsspital Baden Optimises OR Resource Planning with Qlik

Transparency across staff and room resources for the annual coordination of about 15,000 operative procedures

## Challenges

Roll-out of a business-intelligence solution based on data from the ISMed-eOPPS OR management system to analyse and visualise the resource utilisation of OR operations.

## Solution

Connection of Qlik Sense to the OR management system ISMed-eOPPS; development and provision of a Qlik dashboard for mapping key figures and analyses that are relevant to OR operations.

## Advantages

- Greater transparency regarding the resource demands in OR operations
- Optimised resource planning
- Flexible ability to analyse data from the OR management system
- Easy to use dashboards
- Comprehensible visualisation of query results

## Solutions overview

### Client

Kantonsspital Baden

### Industry

Healthcare

### Region

Switzerland, Canton of Aargau

### Users

OR operation

### Partner

Informattec

## ROI



Greater transparency regarding data relevant to OR management

“As an OR manager, my task is to ensure a process-optimised, economical process during an operation and to simultaneously make sure that the medical staff is not overstrained and that the patients receive optimal care. For me, Qlik is an essential instrument to keep an overview of all resources at all time.”

Dr Janine Härtli, Head Physician of Anaesthesia and OR Manager, Kantonsspital Baden Hospital

## The client

The Kantonsspital Baden (KSB) hospital is both a primary care provider and a specialist provider. For more than 350,000 inhabitants in the eastern part of the canton of Aargau, the KSB offers safe health care close to their homes. In addition, specialists from various disciplines work closely together in various interdisciplinary centres. Roughly 20,700 patients were treated as inpatients at the KSB in 2019; the number of outpatient consultations in the same year was around 244,300. KSB has 2,524 employees, making it one of the largest employers in the region. Find out more at [www.kantonsspitalbaden.ch](http://www.kantonsspitalbaden.ch)

## Starting situation

The Kantonsspital Baden hospital wanted to know the precise utilisation of staff and space in the operating room - a very cost and resource intensive hospital area. It is all the more vital to properly plan important resources... “Until now, only part of the data from our OR management system has been evaluated,” reports Dr Janine Härtli, Senior Physician Anaesthesia and OR Manager at the Baden Cantonal Hospital. But our goal was to know, at all times, what our status is, what we could achieve and in which areas the limits of feasibility is reached. For we also want to prevent an overstraining of the staff in the interest of the patients.”

## CASE STUDY

The OR manager and her team coordinate around 11,500 surgical procedures every year. Eight operating theatres are available at the KSB in the main operating room for surgeries (one of them around the clock), and two more during the day in the outpatient operating centre. The ninth room is reserved for Caesarean sections. Based on data from the ISMed-eOPPS OR management system, KSB would like to display and analyse all the time spent by all the surgical, anaesthesiologic and OR nursing staff involved in the surgeries, as well as the capacity utilisation of the operating and recovery rooms.

### Solution

The analysis and reporting solution Qlik was to be used as the BI platform. It had already been successfully implemented at KSB by KSB ICT and is used for evaluations in areas such as radiology, laboratory, materials management, pharmacy and clinical issues as well as for evaluations in the area of materials management. The source data comes from the OR management system ISMed-eOPPS, to which Qlik is directly connected via an interface. As the IT partner for the implementation of the OR project, especially the development of applications, the hospital enlisted the help of Informatec, an IT service provider specialised in data intelligence. “It was very important to me to work with an IT service provider that has a certain amount of experience in the healthcare sector, but above all has expertise in technology and data intelligence,” recalls Dr Janine Härtli. “However, the fact that we have a consultant at our side who is so well versed in OR processes and OR management was a positive surprise. They immediately understood what we wanted and translated our requirements into applications. I greatly appreciated the high level of competence and the cooperative collaboration.” Informatec has built up competence in the healthcare sector through numerous projects. Among others, the IT service provider implemented data intelligence solutions for the University Hospital Basel, the Monvia Health Centre and the Psychiatric Services Aargau. Various Qlik dashboards are used, which are provided data from ISMed-eOPPS via a direct interface. Mapped and categorisable according to the type of surgery - some visceral, thoracic or general surgery - information on the time and personnel expended for the operative pre-surgery, operative post-surgery and anaesthesia drainage as well as the utilisation of the ORs or the recovery room is displayed. Typical key figures also cover the duration of the anaesthesia induction and the time needed to prepare the operating table. Further examples include the waiting time for the patient and the surgeon, respectively, and the cut-suture time for the duration of the operation. The suture-cut and change time can also be retrieved, which defines the average time between the end of post-operative measures and the release of the anaesthesia for the following patient, as well as the wake-up time until the patient can be transferred to the ward.

In addition, the OR utilisation in the form of the number of minutes of incision and suture time after operations during core hours is also displayed as well as the total number of operations according to criteria such as type of surgery, duration, day, week, etc. By using Qlik, the KSB gains more detailed insight into the figures from ISMed eOPPS that are relevant for OR management. The hospital can very swiftly and directly acquire information on the degree of capacity utilisation and the time required for each process step. “I can now exactly see, in a graphically visualised way, how much time we need in total for a major visceral operation - from the preparation to the transfer of the patient to the ward,” says Dr Janine Härtli. Detailed information on individual process steps is also available, adds the OR manager: “At the push of a button, for example, I can call up at which times the recovery room is most heavily used and how much time is spent in the recovery room depending on the operations, or on which days of the week there are particularly many operations. This makes it possible to plan resources much better.” A great advantage for the head physician of the anaesthesia department is the option to see directly when capacity limits are reached. “We must be diligent to provide good care for our patients. That also means that we only deploy our staff at a healthy level, as they are the most important service providers.” In addition, by using Qlik, KSB benefits from reduced effort in providing data for monitoring the quality of anaesthesia in Switzerland as part of the A-QUA benchmarking program. The program is an important part of the national, subject-specific quality programme in accordance with the legal basis for quality assurance. Dr Janine Härtli estimates that they save roughly half a day.

“Qlik allows me to display much more information relevant for OR management with one click than before.”

Dr Janine Härtli, Head Physician of Anaesthesia and OR Manager,  
Kantonsspital Baden Hospital