



Centricity™ Cardio Workflow helps to save cardiologists' time, enhances quality assurance, and improves hospital management, so that physicians and staff can spend more time on what matters most...patient care. Klinikum Nürnberg, Germany



Klinikum Nürnberg is one of the largest municipal hospitals in Europe, serving a surrounding population of one million people. The hospital has two sites consisting of 42 specialist departments, clinics and institutes, 2,370 beds and a staff of 6,000, and treats around 100,000 inpatients and 90,000 outpatients every year. The capacity of the central hospital increased in 2006 with the purchase of three additional facilities, including a further 330 beds, and the resources to treat 27,500 extra patient cases annually.

The Cardiology department at **Klinikum Nürnberg** consists of three intra-cardiac catheter operating rooms (ORs), two electrophysiology ORs and one pacemaker OR, along with seven echo and two pacemaker treatment rooms. There are 120 cardiovascular care beds, allowing doctors to perform approximately 4,000 catheterization procedures per year.

Klinikum Nürnberg approached GE Healthcare in 2010 to partner together and help enhance data flow, workflow and operational efficiency across the cardiology department. The objective was to create a multi-modality cardiovascular solution to interface with the clinic's PACS and SAP hospital information system (HIS), and the result was the creation of the Centricity™ Cardio Workflow solution.

In summary:

- **One of Europe's largest municipal hospitals**
- **2,730 operating beds and 6,000 staff**
- **Cardiology department consisting of 120 beds**
- **Long-standing partnership with GE Healthcare**
- **Centricity Cardio Workflow implemented and expanded over five years**

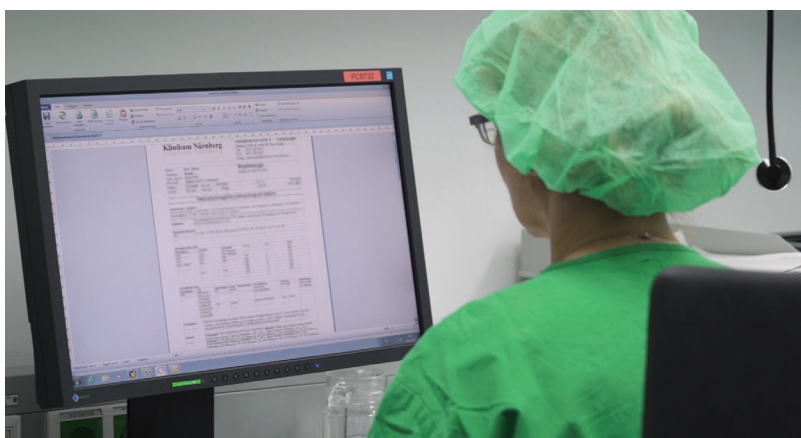
A centralized workflow helps to improve efficiency and patient care

Transitioning from multiple, non-interfaced systems with separate documentation procedures to a centralized solution has brought a whole host of time-saving opportunities to the department. The development of a single software interface that combines reporting and multi-modality images has helped to free up clinical staff to focus their attention on patients, helping to improve the quality of care.



Simple monitoring and report generation supports effective hospital management

Effective hospital management requires real-time monitoring, as well as the ability to keep track of inventory and material usage, in addition to maintaining records for quality assurance and control measurements. Interfaced with the HIS, Centricity Cardio Workflow provides the necessary information for the hospital management to keep its finger on the pulse of the cardiology department.



“ It is strategically very important to have a good cardiac workflow within the hospital. On one hand we must look after our patients well, achieve a high clinical competence, and on the other we need to tie this in with quick documentation of our clinical findings. It's very important for everything to run smoothly. ”

**Professor Dr Matthias Pauschinger,
Medical Director**



“ The decision to move to Cardio Workflow was based on improving general efficiency. Prior to using Cardio Workflow, we had many different, stand-alone, smaller systems, and there was not a centralized solution that allowed us to view all of the cardio images and perform the necessary reporting. There had been several previous attempts to bring all the systems together, but with limited success. We wanted a solution that could interface with our HIS, using modern technologies such as .NET and MS SQL. ”

Markus Schmidt, IT project leader



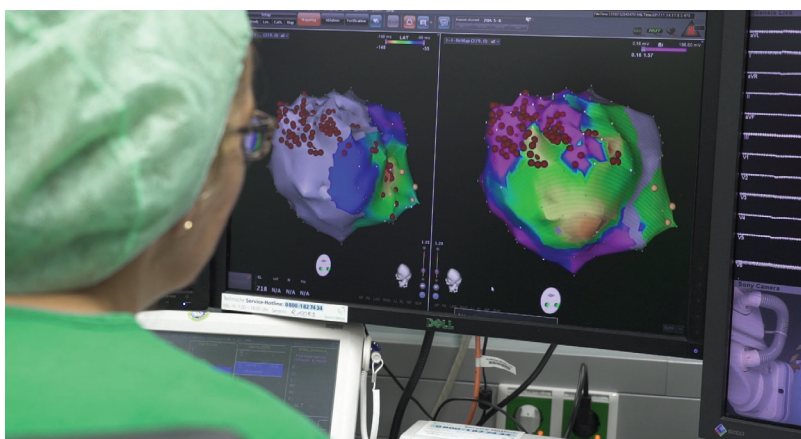
“ Cardio Workflow has made our image access and documentation processes far more efficient. Doctors and nurses can now find a patient's medical history and accompanying images from PACS with just a couple of clicks of the mouse. They no longer need to search separate disconnected systems in other locations, or call someone to track down hard copy archives, which could take up to two days. Filling out paperwork is a thing of the past. Centricity Cardio Workflow helps to lessen the risk of losing or overlooking patient information, and the time required to generate reports has been reduced from 15 to 20 minutes per report to 5 to 10 minutes. Overall, the improvement in documentation and instant access to images has saved approximately 60 percent of doctors' time – time we can now spend on what's important...the patients. ”

Dr Siegberto Haetinger, senior physician



Technical expertise and company support are critical for a successful installation

Configuring and implementing software across multiple systems and instruments, alongside staff training, is not an easy task, and often requires a staggered roll-out to ensure that any potential issues are quickly highlighted and rectified. A close working relationship between GE Healthcare and the IT division at Klinikum Nürnberg enabled the hospital to successfully deliver the project in three stages, from developing the initial interfacing in 2011 to launching an electronic intervention request in 2015.



The interfaced solution improves overall efficiency and places patients first

Centricity Cardio Workflow offers Klinikum Nürnberg's cardiology department an optimized workflow that seamlessly interfaces with both the HIS and PACS. The new software combines multiple sub-systems from various suppliers into a unified, easily manageable system that simplifies data flow, reduces paperwork and frees up doctors and nurses' time to be focused on their primary goal – improving patient care.

© 2018 General Electric Company. All rights reserved. JB54813XXd.

*GE, the GE Monogram and imagination at work are trademarks of General Electric Company.



“ The new system has greatly improved inventory management. In the past, a nurse had to visit the storage room to review the stock and determine if more supplies needed to be ordered. Now, they simply run a quick query to generate a report, which saves us around two hours a day.

Quality assurance and quality control of our workflow is centralized by an official agency in Germany, which mandates healthcare facilities send specific information of every examination to be validated. We have now reached 100 percent compliance – which is up from 95 to 98 percent in the past – since all the information is now managed by and stored in Centricity Cardio Workflow. ”

Markus Schmidt

“ The information and statistics that are now quickly and easily available from Cardio Workflow are very valuable to the department, as well as the hospital administration. We can clearly see where we are doing a good job and where improvements can still be made. Data on the number of patients and procedures, as well as the types of procedure, are easily collated, providing critical information for making strategic and economic plans for the future. ”

Dr Siegberto Haetinger

“ We chose to partner with GE Healthcare because it offered us the best technological solutions and what I really like is that, for such a large company, it is very flexible. Before we bought the product, we visited the R&D department in Freiburg; the group there is very ambitious and really passionate about the product, and that influenced our decision to buy Centricity Cardio Workflow. ”

**Dr Alexander März,
Head of Clinical Applications**



“ GE Healthcare has been an excellent partner to work with, and the one partner who could offer what we wanted; it is a major global company backed by over 15 years of experience in developing cardiology information systems, and we knew they could see the project through to completion.

During development, we visited the GE Healthcare team in Freiburg twice; it was important for us to have local support and frequent meetings at the hospital. It's been a win-win situation; GE Healthcare has had input from our doctors, nurses and the IT division, and we have a program that is custom for our needs. Centricity Cardio Workflow is one of the best integrated systems with the HL7 interface I have seen; I get daily emails from other systems telling me that a particular report didn't reach the HIS, however, with Centricity Cardio Workflow, I receive an email once every six months. The new software has fulfilled our expectations, and we are very lucky to have it. ”

Markus Schmidt