

• CASE STUDY



Introduction of a central Service Desk at Nuremberg Hospital

With 5,200 employees and approximately 2,400 beds at two locations in the north and south of Nuremberg, the hospital cares for 83,000 in-patient and 53,000 out-patient cases each year. The Nuremberg Hospital counts as one of the largest municipal hospitals in Europe. Since 2005, the hospital has been using USU technology and expertise for the central Service Desk.

➤ **Initial Situation and Aim**

In order to fulfill their tasks in the service process, the staff at Nuremberg Hospital are increasingly dependent upon the availability of information technology at their workstations. The penetration of IT in the hospitals is constantly growing (number of terminals per planned bed in 1994: 0.22; in 2005: 1.14). The complexity of the IT and the increased volume of medical documentation force more and more hospital staff to use the devices. Nearly 5,000 employees work with the central IT system. The actual numbers are 2,700 terminals, 1,800 printers, 2,600 email accounts and 2,100 internet users.

An analysis of service requirements in 2004 yielded various areas with potential for optimization: from the users' point of view, availability, responsibilities, response times and response quality; from the point of view of IT staff, the lack of important monitoring data as basis information / image factor. These areas were the reason a central Service Desk was introduced at Nuremberg Hospital. In a preliminary survey, the number and type of calls were logged by the IT staff concerned. The

resulting number and frequency distribution of calls is shown in Fig. 1. Another focus of the preliminary survey was to make use of the experiences and references in other hospitals. The project team from Nuremberg Hospital visited Ludwigshafen Municipal Hospital and the University Hospitals in Heidelberg and Munich. In the course of open, constructive conversations with their colleagues at the other hospitals, new information was acquired and incorporated into the project work.

Nuremberg Hospital pursued the following goals with the introduction of a Service Management System:

- To focus IT services on the current and future demands of the hospital and its IT users
- To improve the quality of rendered IT services (availability, central contact point for all problems, initial resolution rate of 70 percent for sophisticated tasks)

With the goal of „increasing customer satisfaction“ as the starting point, the implementation of a Service Desk and Incident Management system in the hospital was a top priority. The Service Desk was to be the central contact partner for all users in the entire hospital – available at defined times – for all IT problems and requests. These problems and requests should be taken care of as quickly and as cost-effectively as possible, with the aim of improving the relationship between the department for information processing and the DP users (customers).

There were a few framework conditions to observe:

- Process integration within the framework of ITIL
- Resources could only be expanded by a maximum of one employee

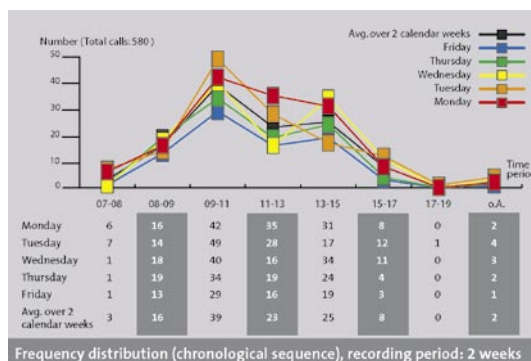


Figure 1, Number and distribution of calls

- Positions were to be filled in a rolling manner with their own employees (specialists) from the fields of PC Service and SAP S-H/IS-H*med
- Users should be dialed-in directly to the Service Desk without having to enter additional selection numbers for problem classification (1 = IS-H, 2 = Printer, ...)
- No „big bang“ implementation; instead, introduction through a pilot test with reduced occupancy at the Service Desk in order to gain experience

The plan was that the Service Desk would serve as a medium for steering, and for controlling IT Services. By documenting all Service Desk services rendered on the side of the IT department, an overview of costs arising was to be ensured. Services needed to be recorded in this way, due to an upcoming cost calculation based on SLAs.

Last but not least, the program aimed to increase the satisfaction of the employees by enabling them to concentrate on their core tasks instead of having to deal with „trivial“ problems. This would then relieve the employees in Second Level Support.

> Project Data and Results

After requesting proposals and evaluating the market of suppliers, the USU Incident/Problem/Change Manager, running on the Valuation product platform, was chosen.

Based on the standards of the IT Infrastructure Library (ITIL), the USU application allows compliance with and the formalization of service standards (SLAs) including

procurement, support and maintenance. Other external project partners were HGConsulting and PSI. The duration of the entire project was 24 months. This included the preliminary survey, requirements specification, call for proposals and implementation.

Before performing a comprehensive user poll, the project team did two types of reviews in order to obtain initial feedback upon achieving its objectives:

- The director of IT questioned a sample of managers from clinical departments (chief physicians from the hospital and institute, directors of nursing) in structured management interviews.
- In additional telephone interviews, ward directors were polled.

The responses show that the IT department at Nuremberg Hospital is on the right track with the new services. The results of both surveys were congruent, positive responses.

The main points of the results obtained are as follows:

- The Service Desk is welcomed as the single point of contact (SPOC) for errors. Only a few users are still trying to report errors via secondary channels.
- User satisfaction increased significantly in the previously criticized items such as availability, prompt solution of trivial problems and direct „removal“ of error messages. This had a positive influence on the image of the IT department.
- By significantly reducing the number of calls in the 2nd level support groups, these employees were relieved of a major source of irritation. This has created a basis for efficient, effective work.

- Above all, the quality of key management figures such as the time it takes to resolve service requests, the frequency of certain problems, etc., improved.

For those in charge of the IT department and the Service Desk, the goal is to continue to improve what has already been achieved and to close up any remaining holes.

The starting points for this are:

- To increase the motivation and satisfaction of the employees placed on the ServiceDesk during the rolling process.
- To improve the defined category trees in order to recognize problems and their solutions quickly.

Modifications within the processes, functionalities and the services will of course be made based on the monthly reviews. For example, the services offered by IT at the initially defined service times were altered to fit the actual call behavior. The goal here is to guarantee availability of 80 percent within 30 seconds.

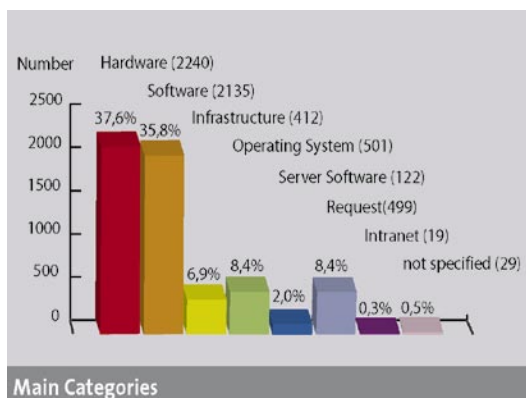


Figure 2, Main categories of reported errors

With regards to the defined main categories, the result of the registered tickets shows that the areas of hardware and software are the most heavily involved. One trend was a continuous increase in the main category of requests – service requests.

The largest challenges exist in the subsegment of workstations (PCs, printers, monitors) and in the area of implemented applications.

	% of HW-Tickets	% of All Tickets
Printer	46,9%	17,6%
PCs	39,4%	14,8%
Monitors	9,2%	3,4%

Application	% of SW-Tickets	% of All Tickets
SAP IS-H	33,2%	11,9%
SAP IS-H*Med	10,4%	3,7%
MS Office	12,0%	4,3%

The top 12 error messages confirm what other companies have also experienced – that the printer is the greatest source of problems. Based on detailed evaluations, studies are currently being done within problem management with the aim of significantly reducing the frequency of error reports regarding printers.

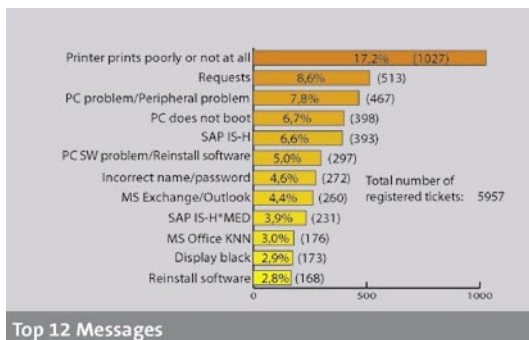


Figure 3, Top 12 Messages

> Conclusion and Forecast

The risks rated at the start of the project, such as availability, employee know-how, and adherence to the budget, were neutralized to the largest extent. The following risk types resulted in more problems than expected: deadline risks, social risks and technical risks. For this reason, the originally planned time for implementation was a little too optimistic and amounted to approximately 6 months due to customizing demands and the realization of interfaces. The social risks (possible resistance or lack of motivation on the part of those affected by the changes) were more pronounced than expected, despite counteractive measures. At the start

of pilot operation, the implemented software was not as widely accepted by the Service Desk employees as had been hoped. In the meantime, acceptance has risen to an acceptable level through the increased use of model tickets. Another positive step is expected from the implementation of a viable knowledge database.

The project team has planned the realization of four essential tasks over the course of the coming 12 months:

- Establishment of a knowledge database so that reported incidents can be solved more quickly
- Implementation of proactive problem management
- Integration of contract databases (hardware maintenance contracts, software maintenance contracts, inventory licenses)
- Definition of call categories, for which the person reporting should receive a response from Second Level Support according to scheduled deadlines

Overall, those responsible for Nuremberg Hospital, the director of IT Helmut Schlegel and Project Leader Ulrich Sander, see the project in a positive light: „It was worth it. A bit more difficult than expected due to employee motivation, and we are finding that there is still a lot to do, particularly on the organizational and documentation sides of things.“