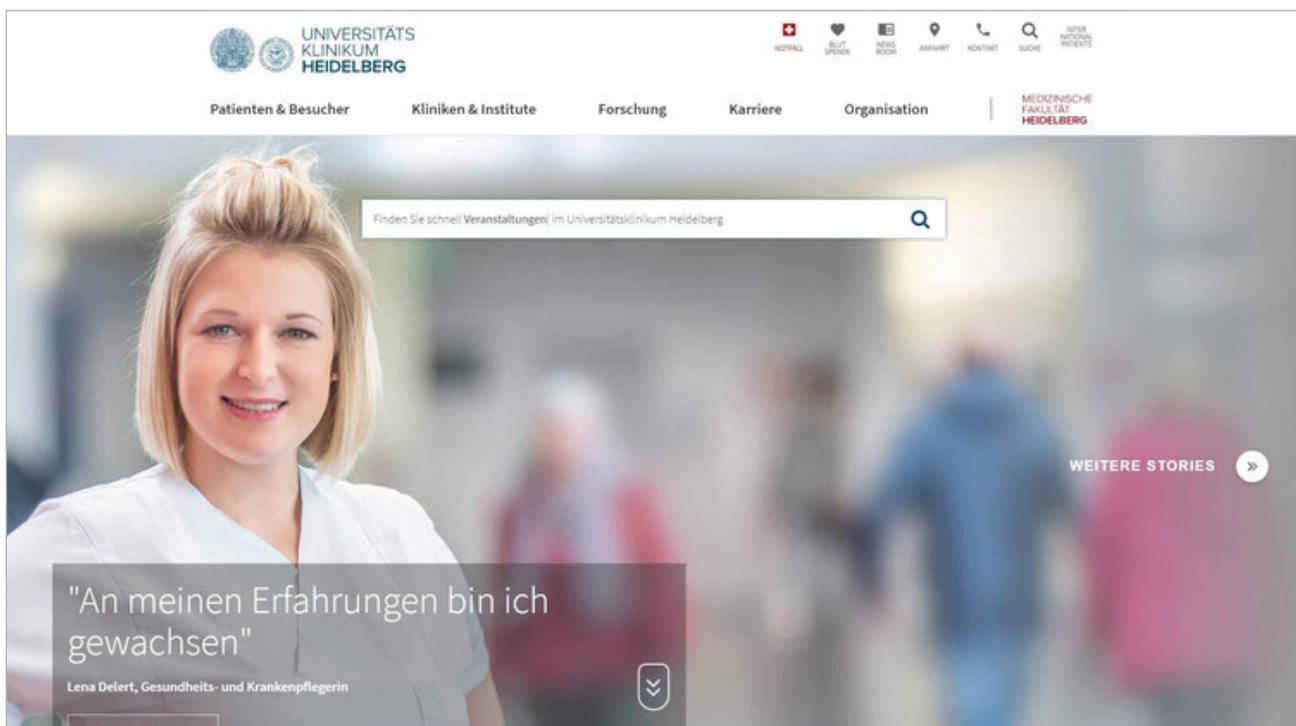# Heidelberg University Hospital—managing information at scale

Patients seeking directions to their wards, world-class academics exchanging research findings, job-seekers applying for their next career break—these are just some of the people who visit one of Heidelberg University Hospital's many websites every day. They quickly find what they want thanks to the centralized information management system b13 built.

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Heidelberg University Hospital is a large medical facility in southern Germany that treated well over one million patients in 2018. It employs 13,700 people in approximately 50 departments, ranging from research institutes and clinics to the university itself.

As well as large, the organization is complex. "We have many doctors, and they often work across disciplines, sometimes in as many as six clinics," says Kai Rudolph, the Webmaster responsible for the hospital's many websites. "Previously, there was a database entry for them in each of these clinics, so if their details changed, we'd have to change it several times."

Add to this the research publications, institutes, addresses for various wards, opening hours, disease descriptions, therapies, and more, and you can see how challenging it is to keep Heidelberg University Hospital's information organized and up-to-date.

> ❝ We met several agencies, and chose b13. From the beginning, the chemistry between us was right, and they answered our questions in detail. We were certain that they were capable of taking on a project for an organization as large and complex as our own. ❞
>
> — Kai Rudolph

The relaunch

The old websites ran on an outdated and unsupported version of TYPO3. A relaunch was due, so Kai and his colleagues set about designing a new concept, then went looking for the agency best suited to their needs.

"We met several agencies, and chose b13. From the beginning, the chemistry between us was right, and they answered our questions in detail. We were certain that they were capable of taking on a project for an organization as large and complex as our own," Kai recalls.

The concept

The concept called for three major features:

- Powerful search
- Responsive design, to cater for increasing numbers of mobile visitors
- Structured data storage to avoid re-entering the same data in several places
- The relaunch brought structure to data from 50,000 pages, which b13 imported with a script. While many pages had to be adjusted manually, the automated import saved months of work.

Editors can now work in a single interface, with no need to log in to various backends. One edit is all it takes to update content, such as a doctor's CV, everywhere. This saves staff time, and prevents contradictory or outdated information. "The website is considerably more up-to-date as a result," Kai adds.

Not only do all existing websites run on a single install, but it is also easier to add further websites. A further boon of the new structure is that, in future, the data repository can be accessed by other applications.

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>
> — Desi Lochner

Powerful search with Apache Solr

b13 implemented an intuitive search function using Apache Solr. This powerful search engine lets visitors find information faster and makes traversing the navigation menus unnecessary.

"While all the information is stored centrally, the scope of the search is limited to the site the user is on, so it shows them only information that is relevant to them," Desi Lochner, b13 Project Lead, explains.

Without structuring the data effectively, it would not have been possible to implement the search.

Improved staff productivity, user experience, and future-proofing

The relaunch improved usability for all the users of all the websites, including patients, who often need to access information via their smartphones. More efficient editing processes enable a small team to serve a huge organization, and the solid structured data foundation will accommodate future requirements. New websites can be added easily while staying organized.

A computer scientist by training, Kai appreciates how b13 has put the ongoing development process on a stable footing: "Now we use Git for version control and have standardized practices such as code commenting. In future, we hope to do quick fixes internally, while b13 will apply updates and carry out extension development."

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>
> — Kai Rudolph

Kai Rudolph and his team stand by their decision to entrust b13 with their website relaunch: "We're in constant contact with b13, in person and through our shared ticketing system. They are solution-focussed, and their TYPO3 core developers help us find solutions faster. We've grown together and the chemistry still works well, so I definitely recommend b13 for development and TYPO3 work."

Likewise, we at b13 are proud of our work for Heidelberg University Hospital, and their ringing endorsement of what we have achieved together.