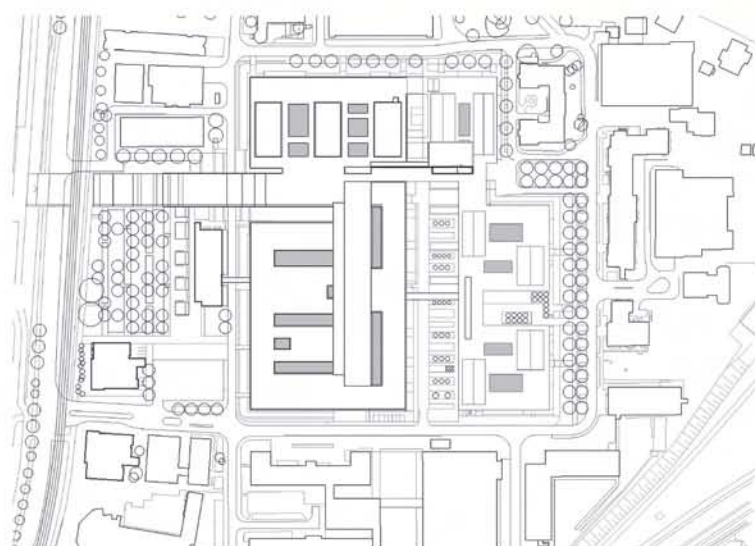


# HEALING ARCHITECTURE IN EXISTING BUILDINGS— GOETHE UNIVERSITY HOSPITAL, FRANKFURT

## 治愈建筑改造

### ——法兰克福大学医院

撰文 Nickl & Partner Architekten



总平面图

如今在医疗建筑行业领域，那些能够提升医护人员工作环境满意度，增进病人或访客幸福感的优秀建筑设计越来越多了。医院业主及管理者们也意识到，一个以病人感受为导向的、对员工友善的环境是治愈建筑的基本要素，这对医院的经营与效益都有所助益。因此，医院建筑设计可以视作各种社会元素交汇的舞台，包括社会、文化、政治、医药、空间、结构以及经济收益、商业运营。

然而，我们所面临的挑战是如何将治愈建筑付诸实现。当我们提到“实践运用”，一般是指在已有建筑上的运用。在世界上许多国家的医疗建筑项目中，新建建筑的比例非常有限，大部分是扩建、改造、转化或整修。同时，我们也意识到必须将治愈建筑概念与现有的医疗建筑相结合，这些建筑多为20世纪50~70年代所建，这段时期是战后德国医疗建筑大兴建的时期。

这些早期医疗建筑在过去并没有得到很好的维护。由于负责规划与投资支持的政府有关部门和医院自身经营者的财务状况等因素，产生许多不协调且缺乏规划的扩建，从而导致医院建筑杂乱无章。这使得日后还在考虑中的可持续医院建筑结构及技术改造变得难上加难。要完成这项艰巨的任务必须着眼于长期的战略规划，这需要业主和建造方的同时参与和支持。

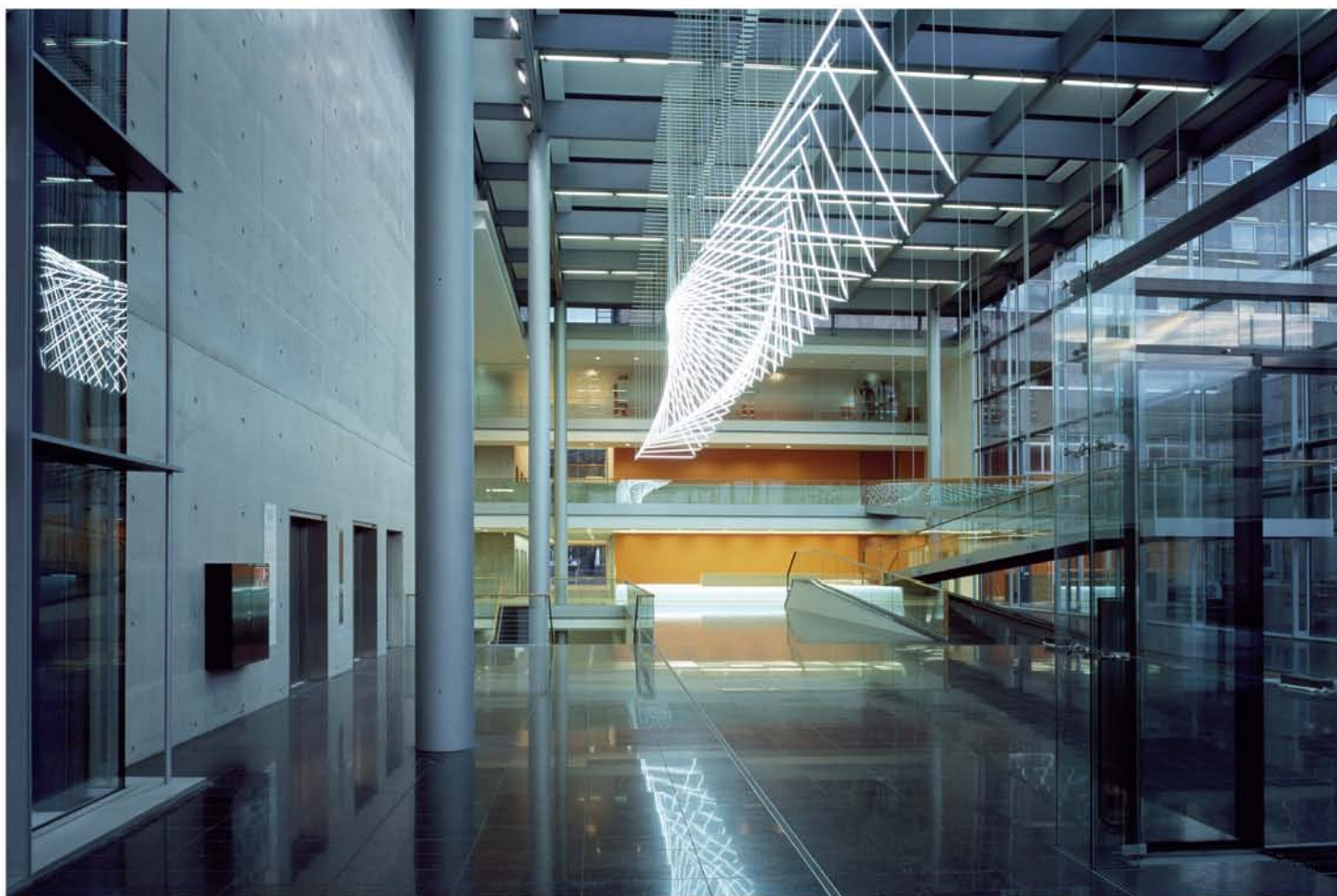
20世纪50~70年代的医院设施建造受到激进的功能主义意识形态的主导，结构工程和医学技术的革新使医院建筑朝紧凑、高层的方向发展。尽管遭到第二次世界大战的中断，现代主义的自由风格仍在基本的几何组合形式上产生新的突破。医院的规模伴随许多昂贵医疗器械的投入而成倍增长。典型的20世纪60年代的医院是这个

The realization that a well-designed building can improve staff satisfaction and increases the well-being of patients and visitors has become widespread in hospital construction. Fortunately, operators and owners have also realized that a patient-oriented and staff-friendly environment, summarized in the expression Healing Architecture, benefits the enterprise in business and economic terms. The design of a hospital can, therefore, be regarded as an interface where a wide range of issues intersect: socio-cultural, political, medical, structural-spatial and, not least, economic and business aspects.

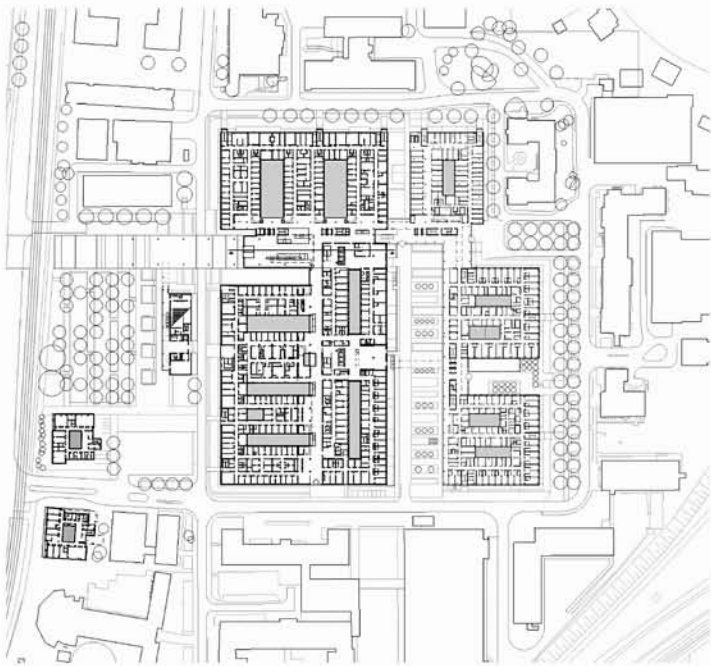
However, the challenge that we face is the question of how Healing Architecture can be implemented in practice and, when one says "in practice", that often means existing buildings. In many countries around the world, only a limited percentage of all healthcare construction projects consist of new buildings. The majority involve expansion, modernization, conversion or renovation. We find ourselves compelled to integrate our current concept of Healing Architecture into an inventory that is primarily characterized by buildings from the 1950s to 1970s; a period in which a hospital building boom took place in post-war Germany.

This legacy was not always carefully maintained in the past. Uncoordinated expansion projects and aimless patchwork planning depending on the financial situation of the operator and authorities responsible for planning and investment support led to literal trashing of hospital sites. This makes further sustainable structural and technical development of the buildings in question more difficult. It is a task that can only be resolved on the basis of long-term strategic planning with the participation of all stakeholders from both the operational and construction sides.

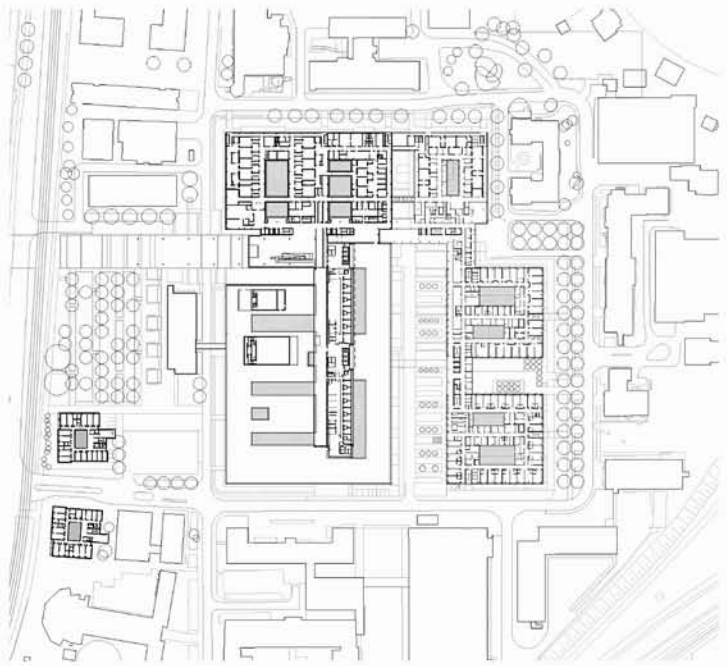
The hospital facilities of the 1950s to 1970s arose from the ideology of a radical functionalism. Structural engineering and medical technology innovations made development of the hospital into a compact, upward reaching building possible. The stylistic freedom of modernism, interrupted by the Second World War, broke new ground in compositions of basic



入口大厅



首层平面图



三层平面图

时期的主流建筑形式，大都是在较宽的建筑底座裙房上竖立高层病房楼，被形象地称作“麦芬蛋糕上的火柴盒”。

如果你听过1946年英国卫生部长说的话，或许就能够理解导致这种建筑模式的原因。他说“宁愿在高效的、利他主义的大医院存活，也不要再在充满同情心的小医院死去”。当时，大规模、高效率的环境与人道低效的环境形成了鲜明对照，并得到肯定的评价。人们依靠着医学、科技和功能主义的巨大力量，但社会心理学方面却被忽视了。周围环境的重要性、建筑配套的绿化景观、自然日照对于病人和医护人员的影响等都受到质疑。如今，我们可利用的神经学中关于环境对人类感知影响的研究越来越多——空间会影响人们的幸福感，以前这仅仅是猜测，现在则有了科学依据。

因此，关怀个人利益的当代社会不愿意将人类福祉仅仅依靠于医疗护理技术。自从建筑师与医生们意识到环境心理学的影响和作用，就将医院的规模、效率与温暖的治愈环境相互结合成为双方的共同目标，并力图证明这种结合将有助于治愈，这也是循证设计的目标。

法兰克福大学医院改造项目竞赛开始的时候正值世纪之交，两代人不同的社会文化背景导致的观点差异是我们在设计竞赛中所要面对的难题。该大学医院的中心大楼是一栋典型的“麦芬蛋糕上的火柴盒”式建筑。这栋建于1970年前后的大楼当时作为校园新增的中心大楼以塔楼的形式坐落于Theodor Stern码头。医院的护理及治疗区域安置在大楼宽大的底座中，病房则安排在高层部分。到了20世纪90年代，尽管大学校园坐落于景色宜人的美因河畔，医院也有着一流的医疗水平，但依然阻止不了日趋退化的结构形式和其对建筑美感的破坏。原有的大楼已经无法满足现代医疗器械与建筑标准。现代的医疗程序需要新的部门及功能合并，因而需要对原有建筑进行改造与扩建。于是，在把医院转化成公共法律机构的同时，一场关于旧楼改建的设计竞赛就此展开。改建的主要任务之一是通过适当的医院建筑形象来传达法兰克福大学医院在整个社区中的医疗作用。

geometric forms. The size of hospitals grew in parallel to the installation of expensive medical technology equipment. The dominant type of this period, the ideal 1960s hospital, was the “matchbox on a muffin” model that arranged nursing wards in a high-rise slab above a wider plinth building.

The attitude that gave rise to these buildings may become comprehensible if one looks more closely at the words of the then British minister of health in 1946. He “would rather be kept alive in the efficient altruism of a large hospital than die in a smaller hospital’s outpouring of warm sympathy.” Here, size and efficiency are diametrically contrasted with a humane, but inefficient, environment and evaluated positively. People counted on the power of medicine, technology and functionalism. However, psychosocial aspects were neglected. The importance of the surrounding space, integration of green areas into building complexes and the impact of daylight on patients and staff were questioned. Today we can fall back on the increasingly detailed findings of neurosciences about human perception of surrounding space. Spatial impact on well-being, which could previously only be guessed at, now appears to have a scientific basis.

Consequently, our individualistic society declines to make human well-being dependent solely upon proper medical care. Since the findings of environmental psychology entered the thinking of architects and doctors, there has been an attempt to link size and efficiency with a healing environment – and prove this symbiosis to be health-promoting, which is the objective of evidence-based design.

We were faced with this disparity, which arose from the different socio-cultural viewpoints of two different generations, at the beginning of the competition for the university hospital in Frankfurt at the turn of the century. The university hospital’s central building is a classic representative of this “matchbox on a muffin” type. It was built about 1970 as an addition and new centre for the campus, which was originally erected on the Theodor Stern Quay in pavilion style, and contained wards in a high rise slab that sits on a broad care and treatment plinth. The campus lies in a prominent position on the banks of river Main, which could not prevent the hospital experiencing a loss of image at the end of the 1990s due to structural aging and inefficiency, despite top medical performance. The existing building no longer met modern requirements for medical technology equipment and structural standards. Changed work procedures required new departments, the merger of functions and, thus, renovation and building extensions. Consequently, parallel to the transformation of the hospital into a public law institution, a competition for the re-organisation and revitalisation of the building inventory was announced, a major component of which was the task of communicating the university hospital’s reputation for medical performance to the community through an appropriate corporate identity.



外部庭院

我们于2001年赢得这个竞赛，方案获胜的关键是在整体建筑设计概念中考虑了两个简单的基本元素：采光与朝向。我们为46ha的校园设计了新的大楼结构，并且建立了长远的规划目标。改造方案将摒除原有建筑不合理的结构划分，整改医院运营上的不便之处，将原本散乱的各个部门整合集中。

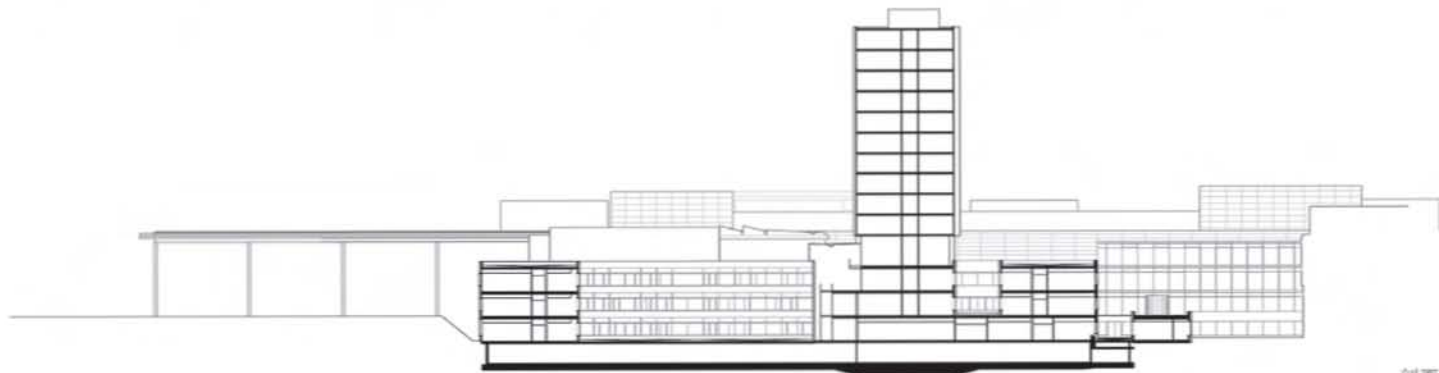
在我们的现代化改造方案中，主要设计思路是不去改变这栋校园中心大楼原有的简单几何造型，保持原有建筑的形式语言。我们在屋顶和表皮增添了支点和天蓬，这些新增的元素将校园打造成为一片城市公共区域，面向美因河畔开放。深深外悬的天蓬作为主要走廊的延伸，犹如张开的臂膀欢迎着前来的病人、访客、员工和学生。

室外新建的设施也是该城市改造项目的一部分，将医院与旁边的公共河岸区域连结起来。项目的新焦点被设计建立：在东南角，

We won this competition in 2001 by adding two very simple but fundamental components to the overall concept: light and orientation. Clear structures were created for the 46-hectare campus and long-term perspectives for future development were established. The reorganization would eliminate operational and structural shortcomings and centralize scattered departments.

In doing so, our main overall concept for the campus' central building did not question the architectural stylistic device – the simple geometric forms – of the modern movement. In fact, this formal language was continued. We added point and canopy to slab and surface and these are now the elements that form the campus and organize it as an urban space open to the banks of the Main. The deep overhanging canopy as an extension of the overall organizing main corridor is the grand welcoming gesture that invites patients, visitors, staff and students to enter.

The outside facilities are part of this urban development intention to fully network the hospital grounds and public riverbank zone. New focal points



剖面图







