

*from:*

*Concepts*  
*in Architecture*

*to:*

*German Health*  
*Economics*

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Published by Christine Nickl-Weller  
for the Department of  
Hospital and Healthcare  
Building Design  
Technical University Berlin  
[www.healthcare-tub.com](http://www.healthcare-tub.com)

Edition by Álvaro Valera Sosa  
Design by Katja Thorwarth  
Printed and bound by Solid Earth, Berlin  
Print Run: 150

# Foreword Message

## ***Healing Architecture as a Central Concept of Foreign Trade in Health Care Services***

This report on Healing Architecture provides the very first systematic record of the market opportunities available to Germany's health economy thanks to the current innovations and networking taking place in the field of health-promoting architecture. Products and services 'Made in Germany' are known for their quality and sustained reliability. However, particularly in the Arab region and in other promising markets, system solutions are required. In this context, Healing Architecture stands for high-quality health care edifices whose architecture meets the needs of users and supports the healing process while integrating and promoting the latest findings of international Health Design research. By making use of decades of scientifically-based experience in the planning and execution of built health care environments, it has been possible to not only optimise treatment procedures but also to actively support the healing process, avoid accidents and create a healing atmosphere.

The German health economy is one of the most reliable engines of the German economy. With a share in exports of ten per cent, the health economy, with its diverse market segments, is highly successful on the international stage. Not only is Germany one of the leaders in medical technology and pharmaceuticals; small and innovative branches are also gain-

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ing significance. The approach espoused by Healing Architecture illustrates, for the first time, Germany's enormous innovation and growth potential at the interface where architecture meets the implementation of health research. The German health economy is also able to offer optimal results by providing complete system solutions and exporting health care infrastructure. From the architectural planning to the equipping of health services buildings with medical technology, German firms are very well-positioned to fulfil the task.

I am delighted with the initiative shown by the Berlin Technical University in publishing this report to breathe life into these ideas at the practical level as well.

The report before you, which was funded by the Federal Ministry of Health within the framework of the 'Health Economy Export Initiative' and drawn up by the Berlin Technical University, furnishes vital ideas for further co-operation. I ask all protagonists to continue to contribute actively to this process.

With best regards,

Thomas Ilka

*State Secretary at the  
Federal Ministry of Health*

# Letter of Acknowledgements

On behalf of the Department of Hospital and Healthcare Building Design at Technische Universität Berlin, I am gratefully pleased to hand to the German Federal Ministry of Health the report on healing architecture as a keynote in foreign health economics titled, “From Concepts in Architecture to German Health Economics”, in the occasion of our fourth symposium, Healthcare of the Future.

This study would have not been possible without the promotion of the Federal Ministry of Health through the European and International Health Policy Division led by Assistant Secretary Ortwin Schulte, based on the belief that Germany can and must include its own hospital development approach in the international market to ensure quality and economic interests.

A major part of the study has been achieved through the input given by the *expert conference*, which took place in November 2011 at the German Federal Ministry of Health in Berlin. To all the experts and participants who contributed to the success of this event, my gratefulness for the inspiring posts and discussion, particularly to, Prof. em. Dr. Eckart Rütter and Prof. Dr. Frank Christ, in high appreciation for their support expressed.

For its successful organization, I want to personally thank Tanja Eichenauer, Technische Universität Berlin and Secretary

*Letter of Acknowledgements*

Dr. Pompe responsible of the Department of Protocol, International Visitors Center, Domestic and Foreign Agencies Connections and Language Service.

Furthermore, I would like to thank all the employees of the department of who one way or another extended their valuable assistance in the preparation and completion of this study, especially Stefanie Matthys, for the initiative and significant contribution in the design and responsibilities of the overall project, as well, Álvaro Valera Sosa from BSPH-Charité for the management and content of the report.

I also thank our doctoral student and holder of the scholarship, Agnieszka Kaleta, for the literature research which has been of great use in this study.

Christine Nickl-Weller

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and Healthcare Building Design  
at Technical University Berlin*

# Executive Summary

The impact of environmental factors has been carefully reviewed since early environmental psychology with the premise to minimize the negative effects of stress. Environmental research, mainly from the USA has shaped our current understanding of healing architecture and evidence-based design. These concepts have successfully reached the international scene through accreditation and certification mechanisms which are presenting numerous healthcare business cases. It took nearly 20 years for environmental research to take a leap into clinical research, nearly 10 more to reach policy and additional 10 to present business cases in health economics.

Evidence-based design and healing architecture have improved considerably in reaching an effective and efficient model in healthcare infrastructure. Global experiences show consistent developments in 3 main research areas: experimental interventions, evaluation tools, and systematic reviews. Anyhow, these areas are still a true challenge in healing architecture research; they face a scientific approach drastically different to research based merely on experience which architects practice with and are familiar to.

Conclusive findings and results related to the built environment and its effects have been gathered in systematic reviews. However, a major limitation stems from the fact that most publications come from non-European countries, mainly the

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USA, Canada, Australia and (in a lesser extent) the United Kingdom. Similarly, in the international market, hospital developers have to deal with American standards as they seek for accreditation to increase their competitiveness. This fact implies a multivariable translation problem for countries which develop or adopt policies based on foreign reviews and features. Not the case for Germany, where guidelines and standards for healing architecture and/or EBD still await to be formulated. Healthcare managers first need to understand the connection of healing architecture with their economic theory and furthermore, architects prepare to understand where medicine is heading as physicians to communicate what is needed.

Internationally it has been proved how systematic research, as in science, helps to formulate the standards for healing environments that will eventually lead to accreditation. The Deutsche Gesellschaft für Nachhaltiges Bauen e.V. (DGNB - The German Sustainable Building Council) is currently developing a certification profile called *Neubau Krankenhäuser* that will integrate aspects of healing environment. The development status of this certification mechanism is not available as unknown are the products, methods and applications to be offered.

For healing architecture to reach German policy and be considered a factor in foreign health economics, evidence to indicate cost-benefit ratios in hospital-planning, has to be provided. For this purpose a clear agenda must be conceived on how to develop and implement proper study methods, rigorous evaluation tools, and systematic research likewise leading countries in this matter have successfully achieved. All initiatives and actions towards the creation of this agenda have to be taken within an interdisciplinary and inter-institutional approach.

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