

The Life Science Center Berlin (LSC) in the Discovery Castle in Berlin-Buch

Background

Berlin-Buch is today one of the most modern health locations in Europe. The health region has made a name for itself in molecular research, clinical research, maximum clinical healthcare and special healthcare, biotechnological development and the multifaceted training and advanced training which takes place here. With its basic and clinical research of international excellence and as the largest biotech park in the Berlin-Brandenburg Life Science Cluster, Campus Berlin-Buch is in an outstanding position.

For the value creation process Campus Berlin-Buch has the most complete offering at one location in the capital city region, providing structures interlinking research, hospitals and companies, interdisciplinary platforms and close proximity to patients. This is supplemented by the Academy of Health, which is Germany's largest educational institution for the health professions. Altogether more than 5000 employees work in the health field in Berlin-Buch. With the privatization and restructuring of the traditional Buch hospital landscape, maximum care and specialized care have received sustainable structures.

Exhibition

The creation of the Life Science Center Berlin (LSC) in the Discovery Castle in Berlin-Buch is an appropriate response of the knowledge society to new social challenges and profound demographic upheaval. Due to the rapid development in the life sciences, medicine and health care, every citizen and patient has a great need for information.

Thematically, the Life Science Center will present its exhibition concept in a combination that is unique in Germany for a science center. The exhibition will be divided into **three thematic areas – The Stages of Human Life, The Wonder of the Human Body and Health Research – Life Science and Future Medicine**. Visitors will be able to explore and experience more than 100 interactive stations and exhibits, do experiments in ten hands-on Discovery Labs and view 3D films in the dome movie theatre. For the three main target groups – families, school classes and seniors – the many fun-filled activities will make the Life Science Center an exciting place for learning.

The thematic area **The Stages of Human Life** will engage the visitor on the emotional level and leads him/her through exhibition spaces that represent the different stations in life: birth, development, diseases, old age.

The thematic area **The Wonder of the Human Body** will present the fascinating mechanisms of the body as a tour of discovery through the body, its organs and cells, up to the blueprint of life. A special visitor attraction, unique in Germany, will be a spectacular journey throughout the human body, on view as high-resolution 3D film in the Life Science Center's dome movie theatre. The audience will see the organs and cells from the perspective of a new active agent. Through the integration of movement platforms, sound

effects and interactive 3D elements the audience will have an unforgettable cinematic experience.

The thematic area **Health Research – Life Science and Future Medicine** will engage the visitor on the cognitive level. Issues and phenomena from the first two thematic areas will be taken up and placed in relationship to laboratory methods, insights, goals and possibilities of the life sciences and medicine. The focus here is on providing information, in-depth knowledge and personal advice presented in specifically defined knowledge and theme clusters such as diabetes, cancer, brain research/dementia, cardiovascular research/hypertension, breast and colon cancer, regenerative medicine, medical technology and research on active pharmaceutical ingredients and drug development. Here the far-reaching importance of applied research for everyday life shall be made understandable for every individual.

The Life Science Center views itself as a bridge between science, medicine and the general public. A predicted number of 270,000 visitors per year is considered to be realistic. This prognosis in our operational concept was confirmed in the expert report by Wenzel Consulting AG. The feasibility study of Petri & Tiemann, the operators of the *Universum* in Bremen, came to the same conclusion. Alone 90,000 pupils will experiment in the Life Science Center on weekdays in ten hands-on labs. For this reason, the Life Science Center will establish itself as the largest out-of-school learning venue in Germany for the life sciences and health education and thus will represent a significant visitor attraction.

Visitors

Overall for Germany, a tendency for increasing numbers of visitors to popular science events has been predicted (cf. Schneider/ Schupp 2005). Taking into consideration the location of the Life Science Center Berlin and the estimated average time of three hours to explore the exhibition, visits will probably take place within the scope of day outings. This means that families will probably visit the Life Science Center mainly on weekends. A population of 16 million lives within two hours' travel time of the Life Science Center - an area comprising 7 German states and including Berlin and Hamburg.

Science experiment offerings in out-of-school venues such as labs for young people and science centers have developed into an important component of the educational system in many of Germany's states. The themes of the Life Science Center are ideally compatible with the content and competence requirements of the current framework curricula for natural science and biology in Berlin. Moreover, the Life Science Center is particularly attractive for visits of school classes within the framework of subject-specific field trips on fixed school outing dates and special project days.

Seniors – a group that is rapidly increasing in numbers due to the demographic development of society – is very open to information and offerings on the topic of health advice and has a regular and comparatively high income. The Life Science Center shall focus on meeting the needs of this important target group with special offerings of health education, advice and events on medical themes. Focusing on seniors will ensure that volume of visits is continuous and equally distributed on weekdays – especially afternoons – and on weekends.

Realization in the “Forest House” in Berlin-Buch

The so-called “Forest House” with the surrounding premises was the first large-scale project realized by Ludwig Hoffmann in Buch. The hospital complex for lung patients, embedded in an extensive, park-like landscape was built from 1901 to 1905. The fact that it is set apart from the other buildings, its representative architecture and the surrounding park landscape give the “Forest House” a castle-like appearance – hence the name **Discovery Castle**.

The realization of the three theme areas shall be as follows:

The 1st theme area **The Stages of Human Life** shall begin in the rear middle tract after the entrance with the ticket counters, cloak room, shop etc. and shall occupy the ground floor of the left wing and parts of the middle tract.

The adjacent 2nd theme area – the **Wonder of the Human Body** – will be realized by hands-on labs, lab islands, a state-of-the-art interactive 3D dome screen movie theatre as annex and interactive exhibits. Moreover, the park-like outdoor space offers excellent opportunities for the planned walk-in outdoor exhibits as adventure playground for children with the theme “the human body“.

The 3rd theme area with the focus **Health Research – Life Science and Future Medicine** will be arranged on the second floor with different topics such as Cardiovascular System- Lungs, Nerves & Brain, and Medical Technology. With its many interactive stations and staffed dialogue islands, the theme area at the same time shall offer a platform for presentations of innovations and products of research institutes, clinics and companies.

Investment planning and sponsoring

The total investment for the Life Science Center will amount to approximately 27.4 million EUR pre-tax. The cost for the renovation of the building is estimated to be about 22 million EUR. The application submitted to the borough office for funds distributed through the Joint Action Programme for the Improvement of Regional Economic Structures shall be for 20 million EUR. The own contribution of 2 million EUR to the funds of the Joint Action Programme for the Improvement of Regional Economic Structures has already been promised in a letter of intent. The moveable part of the exhibition not eligible for funds amounts to an investment volume of around 5 million EUR and is likewise assured to a great extent by already existing letters of intent (private and public-sector).

Decisive steps have already been successfully undertaken in winning important partners. The amount promised in letters of intent currently amounts to 5,250,000 EUR. The Eckert Venture Capital and Early Phase Financing Company will support the Life Science Center with 2,000,000 EUR, the Technology Foundation Berlin with 100,000 EUR, institutions and companies in Buch with 1,500,000 EUR. The Federal Ministry of Education and Research (BMBF) is willing to allocate a total of 3 million EUR – as for the Odysseum Cologne – for the exhibition including the dome screen on the basis of a respective project proposal; corresponding letters of intent exist for this as well.

Discussions are being carried out with further possible sponsors (Bernau Heart Center, Bayer Schering Pharma AG, the Schering Foundation, Sanofi-Aventis AG, the Helmholtz Association, EDU-Toys)

Operation

For the operation of the Life Science Center, our operational concept was analyzed and confirmed by Wenzel Consulting AG. A total number of 270,000 visitors is considered probable. The estimated amount of funding to cover ongoing operations, including personnel costs, marketing, operating expenses, repair of the exhibits and building, even the renewal of the exhibits to make them more attractive after 5-7 years etc. is considered to be secured for the above-mentioned number of visitors.

Since the already existing learning labs of Campus Berlin-Buch shall be incorporated into the Life Science Center, the operation shall be managed by a company that will manage the learning labs equally successfully as they have been run until now. Such a company was founded on July 2, 2008 as non-profit company (ZELL-Zentrum für erlebnisorientiertes Lernen in den Lebenswissenschaften) [English translation: CELL – Center for Experience-Oriented Learning in the Life Sciences]; the founding partners are Helios Kliniken GmbH, Akademie der Gesundheit [Academy of Health] and the Eckert Wagniskapital- und Frühphasenfinanzierung GmbH [Eckert Venture Capital and Early-Phase Financing Company] (the last mentioned is also the sponsor of an own contribution of 2 million EUR to the Joint Action Programme for the Improvement of Regional Economic Structures.