

# New Aspects of Library Design

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The slides of this paper can be found at: [http://www.zhbluzern.ch/LIBER-LAG/PP\\_LAG\\_06/Wednesday/Hohmann\\_LibDesign-oA.pdf](http://www.zhbluzern.ch/LIBER-LAG/PP_LAG_06/Wednesday/Hohmann_LibDesign-oA.pdf)

## ABSTRACT

New planning principles are required to meet the changing needs of the users of the library of the future. The digital revolution has changed the appearance of today's libraries entirely. The majority of today's information resources are of a non-physical nature and accessing information is more varied and complex. The traditional role as asset keeper is one of many tasks today. The recently completed examples of Dresden and Göttingen State- and University Library, the Seattle Public Library and the Idea Stores in London, all of them highly popular and frequented, show current trends in library design.

What do they offer their visitors?

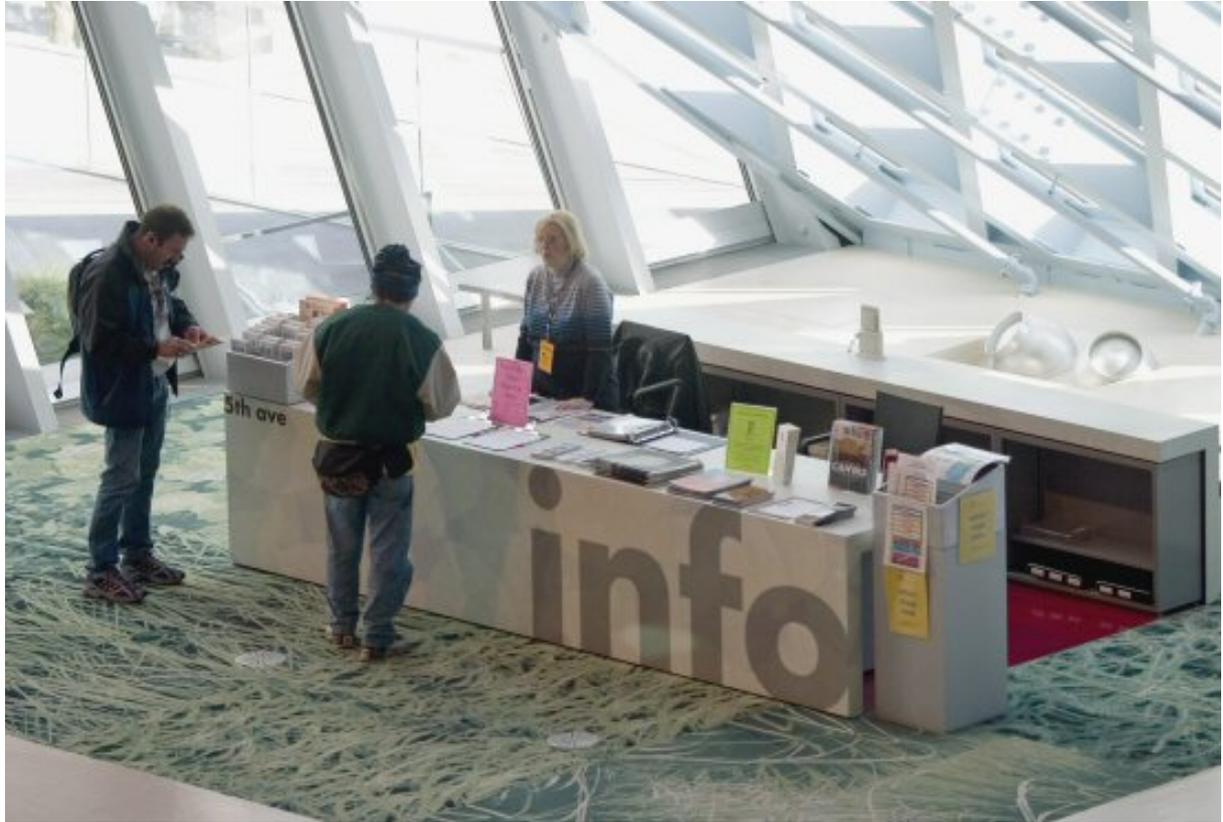
- access to information
- guidance (information skills)
- possibility for communication
- working environment
- inspiring atmosphere

Their design is based on the following main principles:

- Access to the library and its medias should be obvious and easy for everybody.
- There should be multifarious space for formal and informal communication between customers and staff.
- The interior should offer an attractive and comfortable environment for both customers and staff.
- The library building should adequately represent its institutional philosophy and aims.
- Its building design, structure and appliances should give consideration to sustainability.

## CHANGING ROLES OF TODAY'S LIBRARIES

The digital revolution has changed the appearance of today's libraries entirely. In the past books and mostly printed material *made up* the library, but today information is available in a variety of formats. The majority of information resources are now of a non-physical nature and accessing them is more varied and complex. All this makes using a library more complicated for the user and requires both the *latest* information technology and guidance.



*SPL Information Desk*

The traditional role as asset keeper is just one of many today. The library provides not only an environment for working and learning, but also one for people to meet and communicate.



*SPL Reference Area*

### **THE LIBRARY AS AN INFORMATION MARKET**

Libraries provide free access to all types of information in one place. Historically libraries have offered people a chance to explore other worlds through books. Today they don't necessarily have to own the items, but act as a gateway to information resources that might be stored all over the world.

"Library leaders want the library of the future to be a hybrid institution that contains both digital and book collections. And they assume that it will be the librarian navigator who will guide library users to the most useful sources, unlocking the knowledge and information contained in the vast annals of the information superhighway" (**Benton Foundation, 1996**)

As opposed to the internet libraries provide "quality information", information that is selected and therefore valuable. (**Infas, 2002**). Using electronic resources needs more personal guidance. The librarian as the "guide through the information jungle" (**Lang, 2001**) helps the user to find the information that is relevant. In an Information Society information literacy is a crucial skill, which the library provides and teaches.

### **THE LIBRARY AS A WORKING AND LIVING ENVIRONMENT**

A library should be an environment where people feel comfortable and varied activities can take place. People expect a place where they can study individually or in a group, check the library catalogue or their emails, get advice, attend a lesson or a cultural event and just meet others or relax. In the means of providing an environment for the different working and communication types zones based on the different levels of noise can be created. As some people spend their whole day in the library working, "soft services" become more important. Having a café, a shop or even a day nursery is already a reality in many new libraries.



### *IS London Café*

There are different images a library building can represent; therefore there is not The One solution for the design of a library building. Dresden and Göttingen State- and University Library (completed 2003 and 1993), the Seattle Public Library (2004) and the Idea Store in Whitechapel in London (2005), all of them highly popular, illustrate current trends in library design.

The most recent examples, the Seattle Public Library and the Idea Stores introduce a network of community centres for life-long-learning, cultural and educational events.

The following qualities make these libraries attractive to the visitor:

1. access to information
2. guidance and education
3. a comfortable (working) environment
4. possibility for communication and soft services
5. inspiring atmosphere

New planning principles are required to meet the changing needs of the users of the library of the future. Their design is based on the following main principles:

- Access to the library and its medias should be obvious and easy for everybody.
- There should be multifarious space for formal and informal communication between customers and staff.
- The interior should offer an attractive and comfortable environment for both customers and staff.
- The library building should adequately represent its institutional philosophy and aims.
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## ACCESS AND ORIENTATION

Access to the library, its facilities and media should be straightforward and easy for everybody.

The ideal location of a library is in the centre (of a campus or a city) or on necessary routes or interconnections. The entrance should be obvious and welcoming. The size of the entrance hall should be adequate for the number of visitors meeting there at peak times.

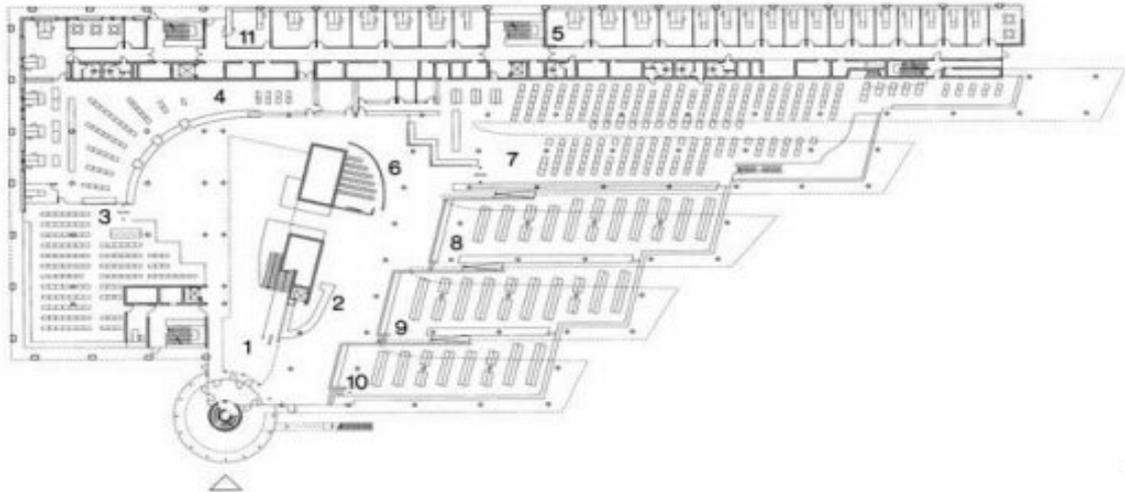
Inside the building it should ideally be self-explanatory. When a library exceeds a certain size it might become difficult to find your way around and to locate the varied media. Clear patterns of circulation, of architectural and spatial legibility, and the coherent and attractive signage are all means to help the first-time visitor to find whatever he is looking for (**Worpole, 2004**).

Design needs to take into account matters of time-management. The allocation of space and patterns of circulation should reflect the priorities of time-use and people frequency (**Worpole, 2004**). Highly frequented areas and short-term use activities like a meeting point and quick reference areas are close to the entrance, while less frequented areas such as individual reading and studying are further away from the entrance. Team working can take place in open areas or in study rooms of different sizes. Help desks in strategic places provide orientation points for the visitor.

## MULTIFARIOUS SPACE

The strict separation based on media types is obsolescent and the electronic services will be integrated in the library environment. The future library provides zones specific to subject and user working types. The use of wireless networks (LAN) provides access to electronic resources throughout a building, so users can make use of all types of medias in the same place.

Göttingen State and University library is situated on a direct link between university and town centre. The entrance is marked with a significant building element.

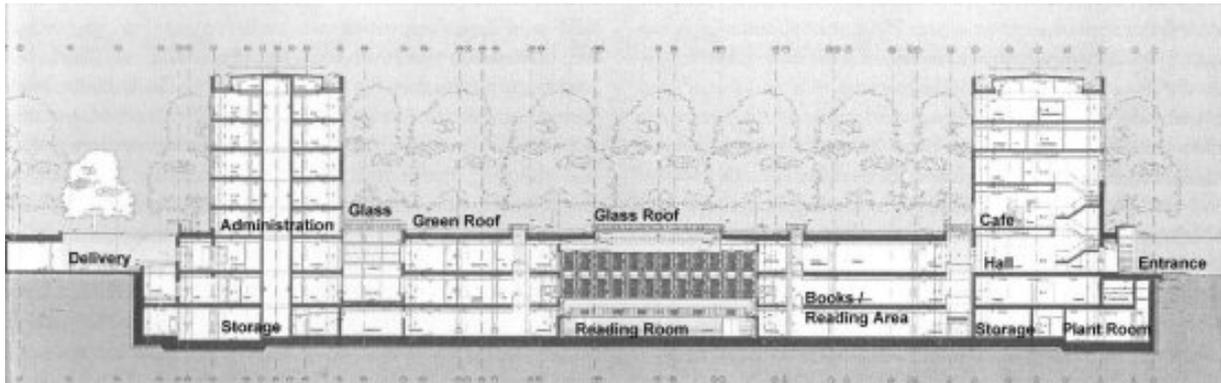


*SUB Floor plan*

Different functions are housed in different parts of the building and have a specific design. If we look at the building as a hand, the book stacks and administrative parts are situated in the outer edge of the palm and the reading areas are situated in the fingers, with views to the outside. A central circulation hall provides access to all these parts and the different levels.

Inside it provides a logical space sequence based on frequency of use. Public highly frequented areas are close-by the entrance, like the issue desk and the library catalogues. More specialised areas that are less frequented are situated in less accessible areas. The reading areas are organised as follows: Each of the fingers houses a certain subject, whereas the different media types are situated on different levels: The catalogues are on the ground floor, books on the first and journals on the second floor. This makes it possible to stay in one area when working on a certain subject, using different medias. Wireless LAN enables access to digital information resources throughout. An open plan design and a strong relationship to the outside supports orientation

In Dresden the layout of the building does not seem as obvious in the first instance.



*SLUB Section*

As the reading areas are completely underground there is no view to the outside. But the Reading Room as a three-story volume in the middle of the building provides a central landmark, which helps the visitor to identify his location. Generally open plan design and visual connections between different areas improve orientation *give a greater line of sight*, but requires noise management.

“Libraries need to provide better signage, better displays and better presentation of the stock. The institutional feel of the library needs to be removed.” (Graham Fisher in: **Worpole, 2004, p.12**)



*SPL Book Spiral*

The products and services on offer should suitably displayed, taking into consideration people with visual impairment. The numbers on the floor in the Book Spiral in the Seattle Public Library represent the Dewey Classification system. The direction signs for Whitechapel Idea Store show visually and tactile the different parts of the library. Both illustrate examples for an accessible, clever and contemporary approach for signage systems. A striking design and the use of colours make these two buildings not only “easy to read” but also very attractive.

## **COMFORT**

A comfortable and attractive interior supports concentration and motivation of users and staff.

To create a comfortable environment different human senses are to be addressed:

## **Climate**

Climate conditions comprise temperature, humidity, airflow and thermal radiation. In a library climate conditions are a compromise between the ideal conditions for books and people working. Printed material slowly deteriorates when the temperatures vary, humidity is too high and there is too much direct sun. This is why the book stack is ideally situated underground, where temperature conditions are consistent.

Working areas have similar thermal requirements to offices. Different surveys show that people are more comfortable in buildings with mechanical ventilation, where they are able to regulate heating or open windows and therefore feel that they have more control over their environment. The heating and ventilation system should be regulated centrally for the book store and the study areas, whereas in study rooms or offices temperature and fresh air could be adjustable individually.

Guidelines can be found e.g. in the DIN-Fachbericht 13 (**DIN, 1998**).

## **Acoustics**

Many users find a high level of noise disturbing, especially in academic libraries. When offering areas for communication it is also essential that there is enough space where the user can study individually in a quiet environment. Two factors influence the acoustics: the geometric shape of the space and the surfaces. When using an open plan layout sound absorbing surfaces are crucial to reduce noise.

Acoustic engineers can design a concept that suits the different activities in the building.

Both Dresden and Göttingen library provide different zones for different levels of noise. Noise management in Göttingen is dealt with by zoning areas dependent on length of stay: short-stay, but highly frequented areas like the Circulation desk, Internet-Cafe and Central Information are situated near the central circulation Hall.



*SUB Entrance Hall*

The adjacent areas provide a slightly higher noise level for activities like temporary group working and scanning and browsing information resources. Facilities for longer stay and individual working are situated at the far end of the building.

In Dresden the noise level is quite high on the ground floor with a meeting point for visitors, the circulation desk and central information. It should then *decrease gradually down* to the reading areas and the central reading room.



*SLUB Reading Room*

However, the reading room at Dresden is almost completely finished with hard surfaces such as *parquet* and wooden lining to the walls and a glass ceiling. Above the information desks there are suspended sound absorbing ceilings.

**Visual: Light, Colours and Material**

Differentiated **lighting** improves orientation, highlights and creates atmosphere. Daylight varies in brightness and colour constantly. It is crucial for the building's atmosphere.



*SLUB Working Desk*

The view to the outside is a welcome alternative to studying, enables a relationship to the outside world, shows time of day and weather and improves orientation within the building. However it has to be complemented with artificial lighting, which should be a combination of uniform and individual spot lights. Integrated lighting for book shelves and working desks similar to those in Dresden make furnishing flexible and provide light where it is needed. Generally working on computer screens should be possible throughout the study and working area. There are different design

features to prevent glare, e.g. avoiding direct sunlight with non-transparent glass, the use of blinds and indirect artificial lighting.

**Colours** improve orientation and enhance inspiring atmosphere. Colours can change the appearance of rooms and have a psychological effect on the visitor.



*IS Corridor*

Red and yellow colours are generally associated with warmth and proximity, whereas blue and green colours represent cold and distance, especially when brighter. Strong colours in circulation areas hugely improve orientation in the Whitechapel Idea Store.

Colours and colour combinations can be very stylish. Generally the use of colours should be a combination of harmony and contrast, to aid orientation and inspire (**Daniels, 1998**).

**Materials** support the design concept in all examples. They address the visual but also the tactile sense where people can touch them directly. High quality materials and finishes give a positive image and last longer. The choice of finishes has an enormous impact on cleaning and maintenance which are important factors in a building's lifetime costs.

## COMMUNICATION

While we are all using more and more Information Technology in our everyday life, the library provides the opportunity for visitors to meet and discuss and "process" knowledge.

The architecture of Whitechapel and Seattle Public library in particular encourages communication, formal and informal, between customers and staff in many ways.

In the entrance hall of Dresden Library a central information desk offers help for general enquiries. Information points widespread on all levels assist for more detailed enquiries.

In Seattle a wireless communication system provides a completely different approach to user service. Although information desks still exist, reference librarians tend not to work on a fixed place but browse through the reference areas. They wear wireless communication sets and can be called for help from several points in the library.



### *SPL Communication*

A certain number of well equipped group study rooms of different sizes are essential. They can be used for student team work, as well as for sessions on information skills for different user groups or for staff development.

Always considering the noise level informal group working can take place in open areas or designated rooms. In Göttingen desks on castors near the Information Desk can be arranged for temporary group work.

Good communication between staff creates a social environment and has a positive impact on the service in general.

As the library becomes a second home “soft services” become more important. Most of the new libraries offer them for the convenience of their users. A lounge area like the one outside the reading room in Dresden offers a change from the working desk in a relaxed atmosphere.

Social spaces like the cafe at Whitechapel encourage users to relax and discuss. Furthermore, "soft services" are an effective marketing tool to attract the public. Whitechapel's café on the top floor with its fantastic view of street life attracts many newcomers to join the Idea Store.



*IS Café*

Good communication between staff creates a social environment and therefore positively influences the service to customers. Göttingen Library provides flexible working spaces that enable team work, meeting rooms, pleasant staff rooms and additional informal space for communication.

## SUSTAINABILITY

Growing environmental concerns in recent decades have caused the call for sustainability of buildings. Sustainable design needs to achieve the saving of energy and resources in the production and maintenance of a building. Running costs for energy and maintenance of a public building (based on an economic life-cycle of 50-100 years) are much higher than the actual procurement costs (**Bundesamt, 2001**).

Passive aspects meant to save energy and resources are for example the geometry and shape of the building, the insulation and the use of energy saving appliances. Active aspects comprise the use of solar panels, photovoltaics or any other technology to produce energy (**Daniels, 1998**).

The building envelope, the construction type, the materials and the technical appliances, all have an impact on the building's sustainability. The development of energy concepts requires assistance of specialized engineers. Their appointment in an early work stage of the design process helps in achieving the best results.

The following list gives an overview of current costs for a public building per year and square meter in Germany (**Bundesamt, 2001**):

|   |           |
|---|-----------|
| Electricity for air conditioning and lighting | 15 -40 €  |
| Cleaning                                      | 15 - 35 € |
| Maintenance of appliances                     | 5 - 35 €  |
| Maintenance of the building                   | 5 - 15 €  |
| Heating                                       | 5 - 15 €  |

To summarise the ranking: Electricity for air conditioning and artificial lighting covers 28% of the overall costs, cleaning covers 25 %, the maintenance of appliances 25%, the maintenance of the building 10% and heating surprisingly only covers another 10%. The wide range for the individual items stands for the fact that costs can be reduced considerably.

All the examples given demonstrate that libraries can master its revolutionary change from asset keeper to information provider and processor. The libraries' inspiring architecture expresses the old institutions new identity and safeguards its unchangingly good reputation - through change.

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## Abbreviations:

|         |   |
|---------|---|
| SLUB    | Sächsische Landesbibliothek. Staats- und Universitätsbibliothek Dresden |
| SUB     | Staats- und Universitätsbibliothek Göttingen                            |
| SPL     | Seattle Public Library  |
| IS      | Whitechapel Idea Store  |
| GA      | Gerber Architekten  |
| SLUB/DF | Henrik Ahlers at Deutsches Fotoarchiv, SLUB Dresden                     |
| OO      | Ortner & Ortner Baukunst  |
| AA/TS   | Timothy Soar at Adjace Architects                                       |
| TH      | Tina Hohmann  |

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