



**Working with focus groups as a Post-Occupancy Evaluation (POE) to support a relaunch of the library building of the German National Library of Science and Technology/University Library Hannover (TIB/UB)**

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Session:

*190 — Making the case for change through evaluation: post-occupancy evaluation of library buildings — Library Buildings and Equipment*

**Abstract:**

*The TIB/UB (German National Library of Science and Technology and University Library Hannover) intend to refurbish their public spaces. Thus an evaluation with focus groups started the design process to verify the actual occupancy of the reference and reading spaces and to define the requirements for learning spaces. The main aspects of this project of post-occupancy evaluation, the methodology and findings are given and, last but not least, a short discussion of the procedure.*

On the basis of its superb holdings, the **TIB**, which is the **German National Library of Science and Technology**, today ranks as one of the world's largest specialist libraries and one of the most efficient document suppliers in its subject areas. The **UB (University Library Hannover)** in its local distinction provides students, researchers and teaching staff from all faculties of the **Leibniz Universität Hannover** with literature and specialised information in printed and electronic form. One of the declared goals of the University is to continually improve the learning situation and possibilities for students such as by creating learning centres and looking for places inside the campus which could be remodelled for learning spaces. Due to this discussion of learning resource centres and information commons, a programme entitled "Lernraum-Konzept" (learning space concept) has been initiated in order to provide a framework for all kinds of institutions of the University such as faculties, central services information technology and the university library. The significant learning space within the university campus

is provided by the library. It offers the most comprehensive services for students and its sites are centrally located on the campus. The learning space concept is promoting the relaunch of the public spaces in the library buildings. The planning process should generally be accompanied by evaluation methods to develop the construction and renovation.

The presentation gives an overview of the 2011 evaluation of the main library building including aspects of methodology, development, findings and the way the results will be actually integrated into the final proposal and relaunch of the library building.



Figure 1: Front side of the main library © TIB/UB

## 1 The Main Library

The TIB/UB's main library building was originally constructed between 1961 and 1964 in order to serve as a library for science and technology subjects. The style of the building is typical of 1960's architecture with the classical tripartite division of the various areas, that are usage, administration and repository.

The steel and glass curtain wall facade allows a comparison with the facade constructions of Mies v.d.Rohes.

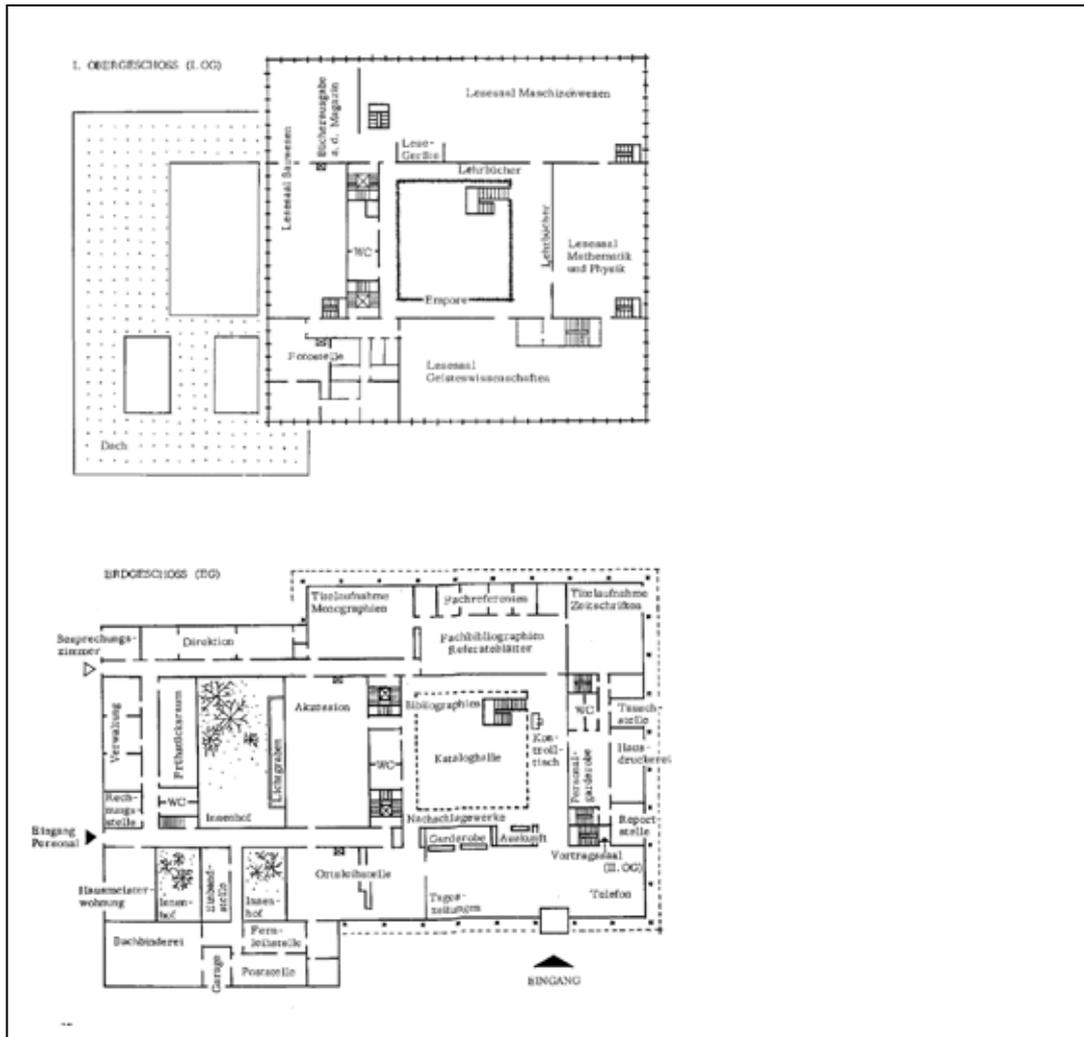


Figure 2: First Floor and Ground Floor (as planned in the first layout) © TIB/UB

The heterogeneous, often also small-scale spatial structures in the office and administration areas are in contrast to the open and flowing spaces in the public areas. A stringent building geometry – orthogonal grouping around an internal central hall – and the quality of the reduction of the materials and in the details are other defining features.



Figure 3: Reference space on the south side in the First Floor © TIB/UB

The majority of the public space design originates from that time and is used (as planned in the first layout) like this reference space on the south side. The restructuring and revisions of the public spaces are in response to the long-standing demands of the university leadership for a significant prioritisation of the learning space concept.



Figure 4: Group discussions I

The current awareness of the necessity of quality learning spaces has resulted in a plethora of possibilities, but what is really needed on site and

which priorities need to be set in view of the existing room structure and spatial resources?

## 2 Post-Occupancy Evaluations – Working with Focus Groups

The way to start and push ahead the “Lernraum” design process as a pre-project evaluation was to verify the public spaces and to obtain information on the way they are used and should be used. The aim was to evaluate the existing space in order to create an atmosphere for learning and living in the library for the future and to test various planning ideas and elements.

**Focus Group**

**What is a focus group?**  
In qualitative research, this is understood to be a moderated group discussion which is conducted in an informal atmosphere.

**How does it work?**  
Generally, a group discussion consists of 6-10 participants and a moderator. Participants should discuss a particular product or theme during the group discussion; this can be a product, but also a concept. The character of the discussion and the group dynamics can also uncover other or different issues than an individual interview or a survey.

**What is the objective?**  
The aim of the focus group is to learn more of the wishes, requirements and expectations of the participants.

We established a small team of colleagues working in the library services in order to analyse the actual situation and to define functional and non-functional requirements.

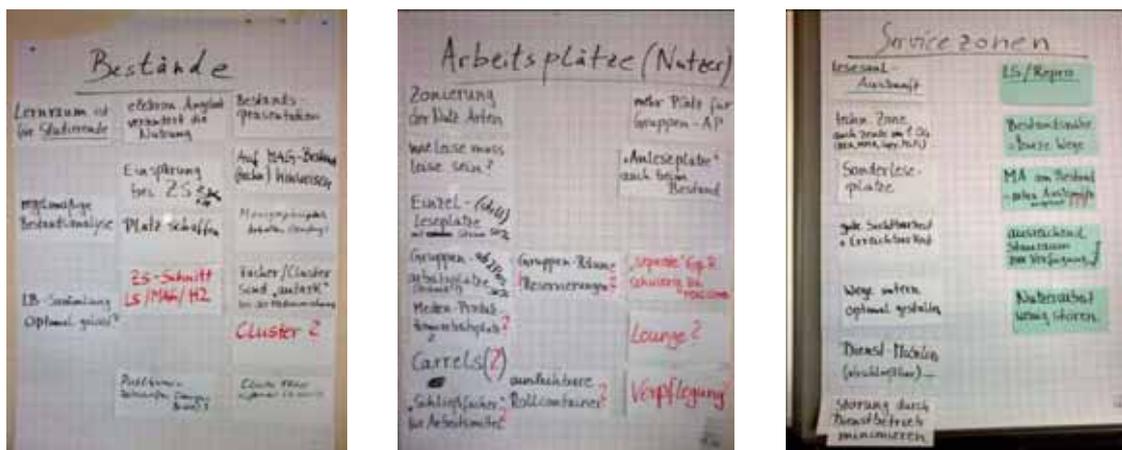


Figure 5: Results of the brainstorming © TIB/UB

The entire assessment was conducted with an external company from the market and communication research field. Recruitment of the participants, the concept, moderation and analysis of the panel discussions was implemented by the contracted company.

A discussion guide with directions was developed together with the market research company.

**The questionnaire has three main topics:**

#### **A Reference Collection**

An important aim is to gain more space for work stations by reducing the space needed for the inventory listings. To achieve this, a prioritisation of the most important printed editions of the journal inventory, which are not available electronically, is to be implemented.

Further questions in respect of the hitherto clustering of the inventory (is it comprehensible and does it correspond to current terminology) and the type of presentation...



#### **B Services and Reference Desks**

Another question is about the size and organisation of the service zones:

What advice is expected, frequency of use – should there be an additional service zone besides the central one which is planned for the ground floor.

#### **C Reading and Learning Requirements**

The range of work stations should be as differentiated as possible and should support different learning situations, not just in respect of furnishings and equipment, but also atmospherically.

The evaluation of the available work space options and the desired requirements with regards to size, furnishing and equipment, organisation and zoning are to be discussed, as well as prioritisation in terms of space resources:

- Individual work stations, simple and with technical support
- Group work stations - spaces
- Scanning, printing, copying
- Reading as a leisure activity or as a pause for concentration
- Lounge character
- Parent-child area
- Carrel



The assessment's target group were natural science and technology students from the Leibniz Universität Hannover (in accordance with the range of subjects offered on the site). There were two focus groups, with 9 or 10 representatives from the respective target group, which were quoted by faculty. Recruitment was by means of posters displayed in the relevant faculties.

**Composition of the discussion panel:**

**Group 1**

9 students studying courses from the following faculties

<b>Architecture and Landscape</b>	3 participants
<b>Civil Engineering and Geodetic Science</b>	3 participants
<b>Natural Sciences</b>	3 participants

(5 x semester 1-4; 4 x semester 5-9)

**Group 2**

10 students studying courses from the following faculties

<b>Mathematics, Physics and Chemistry</b>	4 participants
<b>Electrical Engineering</b>	4 participants
<b>Mechanical Engineering</b>	2 participants

(4 x semester 1-4; 6 x semester 5-9)

The group discussions took place in the market research company's test studio. For both rounds of discussions, a time period of two hours was available. The focus groups were recorded using audio-visual equipment and the moderator was provided by the contracted market research company. Various methods were used, such as direct interviews, small group work and brainstorming, as well as active design using flipcharts. There was a pleasant and lively atmosphere which was complemented by refreshments.

### **3 Findings**

The transcript of the discussion, taken from audio recordings and the analysis and interpretation of the group discussion results, was taken after the survey had been conducted by the contracted market research company and was then presented in the form of an assessment report about two weeks later. For this presentation, I am restricting myself to the important aspects which are particularly relevant to the construction issues:



Figure 6: Group discussions II

## Current Usage of the TIB/UB

At the beginning of the discussion, both groups determined the current usage of the TIB/UB.

This analysis also served as an entry point into the usage discussion.

### For which reasons do students visit the library?

Obtaining literature	43 %
Reading + working	44 %
Researching and printing	11 %
Other	2 %

Today, the TIB/UB is used by both participating groups to more or less the same extent, that are for obtaining literature and reading and/or working:

- **“Group work”** lies notably ahead of **“reading”** or **“working alone”**.
- **Frequency of visits** is dependent upon the amount of work, “more frequently before exams”.
- **Duration of the stay** is mainly dependent upon the reason for the visit:  
 “If just want to borrow a book, then I go in and straight out again”; “If I am working in a group, then I can be there for 3-5 hours”.  
**The more complex the task at hand, the longer the visit.**
- **Literature** is generally specifically searched for by the participants: Some participants search for suitable literature online at home and

- then just come to the library to either take a look at, or borrow, a book.
- A “**random**” use of literature is **rarely** reported. People can be encouraged to browse, but not as a rule.
- **Text books** are used **most frequently**, **electronic journals and books** are primarily used by students of electrical engineering, mathematics, chemistry and mechanical engineering. **Printed journals**, however, seem to attract **little attention**.

## Reference Collection



- **Predominantly current journals** are used. If older editions are used, then this is mostly for a more targeted search for articles.
- The focus was on a possible **restriction in the number of journals** in the reference collection to those of the previous year - this would be welcomed.
- The space gained through this restriction could be used for **more work stations**, with **group work spaces** being given priority.
- A **special presentation** of the journals is **not necessary**; “it is not a department store”, neither is a **separate presentation of new acquisitions** needed.
- The participants could envisage there being a “**special journal area**” where visitors could be inspired by other subject areas.
- The **bundling of several subjects into clusters** is generally positively evaluated (“positive for orientation”). From the participants’ point of view, the subjects fit logically and thematically together...

## Services and Reference Desks



The type of service usage changes during the course of studies in line with knowledge and experiences.

One service zone per floor is judged to be sufficient.

## Furnishing & Equipment, Arrangement and Atmosphere of the Work Stations



- There is a **great need for suitable work stations**. The TIB/UB makes regular use of these for work and study, both for those working alone or in groups.
- Further requirements of the “**desired**” **individual work stations** are not only a “**quiet position**”, a “**view of the surrounding greenery**” and “**few people nearby**”, but also a “**socket**”, a “**lamp**” and a “**comfortable chair**” at a “**good-sized table**”. In order to avoid distractions from fellow students, individual work stations should **not be arranged opposite one another**, but should all face in the same direction.
- “**Peace and quiet**” is an **outstanding feature** in the evaluation of individual work stations.
- The availability of a **WLAN** is mostly **known** and is used especially by students of mathematics, chemistry, physics and electrical engineering.
- **Group work stations** are used **about as intensively as individual work stations**.
- **A work group** generally consists of **4-6 students**, in exceptional cases up to 8 students.
- The situation in the group work spaces is described as being “**problematic**” by the students: too little space and insufficient equipment.
- The participants could envisage having additional equipment such as “**SmartBoards**”, “**whiteboards**” and PCs for quick searches... however, the participants are aware of the **issues connected with the care and maintenance of such equipment**.
- The number and equipment of the PC work stations is generally described as being “**sufficient**”, but all the computers should offer the **same performance and functionalities**.

In order to not reduce the discussion about the work stations to solely focussing on furnishing and equipment, but to also assess the atmosphere and spatial surroundings, the participants were shown a series of photos which served as examples of particular work situations and atmospheres.

## Individual Work Stations

The following photos of **individual work stations** were under discussion:



1 "Seating arrangement, reading room"



2 "Double tables"



3 "Sitting opposite"



4 "Open space"



5 "Cosy alcove"



6 "Individual work stations in a passage"

After the compilation of the first spontaneous reactions, the images of the intended ideas were introduced, such as the work situation with opposite seating arrangements or an individual work station in a passage or ...



The selection quickly focused on these two variants whose associated attributes or characteristics are:

- Double-table variations – sitting opposite is perceived as being a disadvantage, it "makes it difficult to concentrate", as does the arrangement of tables in rows of more than two tables.
- Zoning by bookcases, equipped with electrification and table lamps.
- Places impress due to their "peace", people are seated behind each other – an arrangement which is considered to be necessary for concentration.
- The variant on the right is seen as being "cosy", but "rather dark"; the variant on the left is "bright", lots of daylight, "cooler". Which option is preferred seems to be very subjective and dependent upon the "type of learner".

## Technical Work Stations

The following photos of **technical work stations** were presented:



1 "Sitting opposite"



2 "Copying"



3 "Standing work stations"



4 "Microfilm/microfiche"



5 "Double monitors"

The participants were able to formulate their requirements of technical work stations very quickly and clearly:

- They must be functional and should be well-equipped with a high-performance PC.
- Sitting opposite is not a problem here.
- Standing places for short searches could be useful.
- Microfilm and microfiche are not used by the participants and this medium was actually not known.
- Work stations with dual screens are not absolutely necessary.
- Copiers should get an "island solution" with individual rooms or spaces for copying, scanning and printing.

## Group Work

The following **group work options** were put forward:



1 „Open space: passage, additional lounge“



2 "Zoning: flexible"



3 "Equipment: SmartBoard"

The requirements of the group work stations are less clear:

- Decisive criteria are flexible use and "communicative surroundings" for quick discussions with fellow students.

- The idea of having a space as shown in variant 2, with partitions which would allow flexible zoning for individual groups, was met with great interest - the danger of “chair-shuffling” was not seen as being an issue, as occupation would always be for longer periods.
- In comparison to this, firmly-installed group spaces would offer the advantage of permanent technical equipment – should there be sufficient space, both variants would be welcomed.
- Partitions are seen as being important as they offer spatial separation and could also be used as pin boards.
- The SmartBoard was requested for the subject areas of mathematics, chemistry, electrical engineering and mechanical engineering.

## Reading as a Leisure Activity

The following photos of reading spaces were presented:



1 “Open group area, flexible”



2 “Flexible arrangements”



3 Small group, open passage area”



4 “Small group, open area”



5 “Open individual spaces”



6 “Shielded individual spaces”

Areas for “relaxed reading” would be welcomed by the participants, whereby the second group emphasised that this is a “luxury”. From the presented suggestions, no single one proved to be a general favourite:

- The participants said that variant 3 seemed “very relaxed”, the furniture attractive and offering flexible usage.
- Variant 1 could be viable as a place to take a break and “draw new strength”.
- Variant 4 is a good combination. Lightly shielded individual seats which can be grouped together.

## Parent-Child Areas

The following photos of **parent-child areas** were under discussion:



1 „Area for several parents with their children“



2 „Individual area for parents with children“

Most of the participants felt that a parent-child area could be useful. There was no clear preference in favour of the concept as a group study room or as an individual work space.

## Carrel

The following example of a **carrel** was shown:



The idea of being able to rent a carrel for a particular period of time was welcomed; about half of the participants in each group would spontaneously take advantage of this offer.

In general, fixtures and fittings in the carrel should be quite sparse as “less fixtures and fittings present less of a distraction...”

As nearly all the students work on their own laptops, the technical equipment can be minimal – desirable would be additional equipment such as a printer, scanner or PC on request.

## 4 Actual Planning Situation

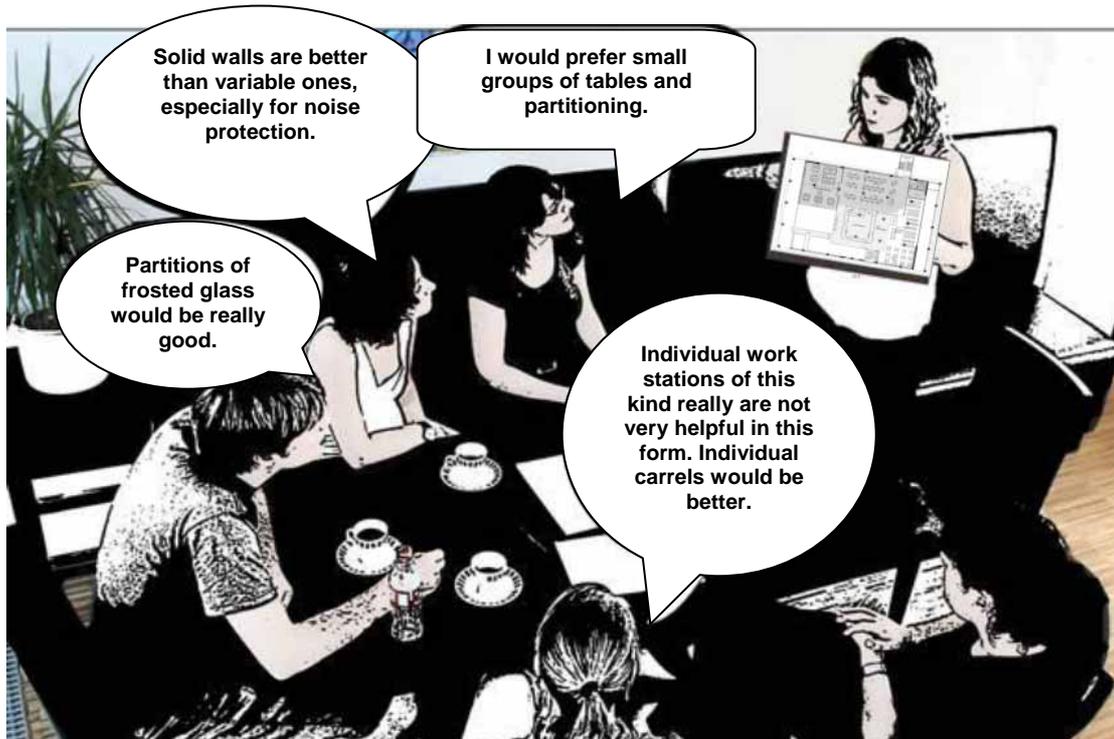


Figure 7: Group discussions III

During the discussions, it became clear at many points that the library, with its work and study areas, is sought out to provide a place where it is possible to carry out effective work and to concentrate. Good acoustics is seen as one of the most important prerequisites for an optimal work and learning environment.

### Attention should be paid to:

**Zoning** – an important theme for all spaces, quiet and noisy.

#### **Individual Work Stations**

Arranged behind each other, not opposite, differentiated offer (niche, atmosphere), fitted with a socket and table lamp.

#### **Group**

Increase in numbers

Size 4-6,

Quality before quantity, hence partitioning for group areas,

Fitting of sockets, connection to an interactive whiteboard.

#### **Places - leisure activity**

Tranquillity, time for oneself – not intended for a group.

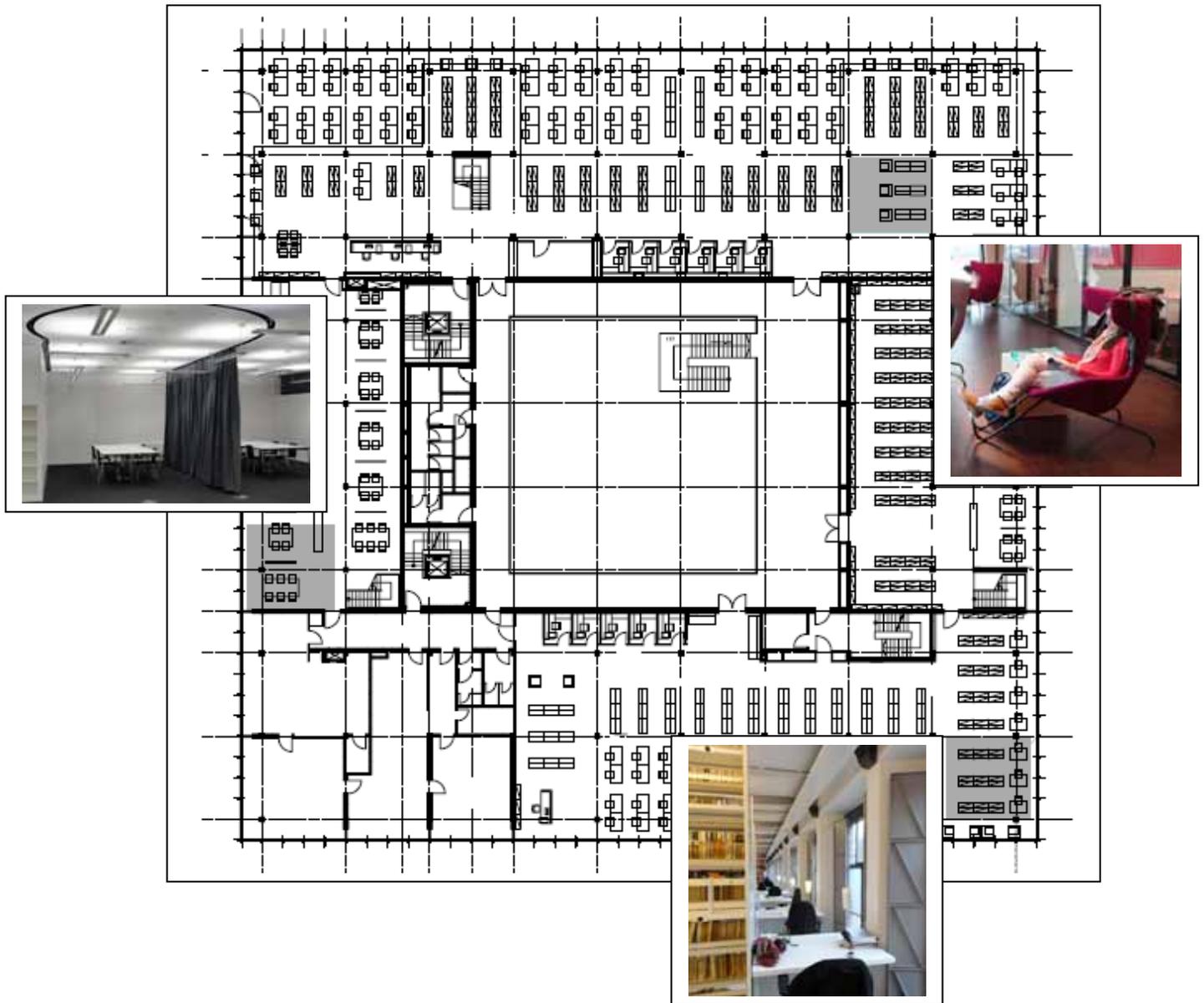


Figure 8: Layout of the First Floor with examples of work situations and atmospheres as intended for the relaunch © layout Römeth Architekten, photos A. Franzkowiak

The actual design plan with the arrangement of space and details of usage has been influenced by the results of this evaluation. The first construction stage will start this summer.

## 5 Conclusions

A prerequisite for the implementation of the described evaluation is an analysis and description of the actual situation in the existing range of services and spaces, as well as the defining of the requirements.

Even just the development of possible ideas and/or scenarios is important in order to determine the problems and questions. There must be a basis for discussion, a concept, which can be discussed.

It was possible to follow the discussions live and it became clear to us that an independent evaluation by trained professionals is an important factor for successful implementation. Moderation by individuals not connected with the library creates the necessary distance for the discussion and strict adherence to the discussion guidelines.

What has the work carried out with this 'working with focus groups' tool achieved within the scope of a 'Post-Occupancy Evaluation':

- Realisation in a short time, with a rather low budget in this case.
- The results offer the opportunity to bring forward good arguments in planning and financing committees, therefore the independence, which has just been described, is also an important aspect.
- Safety in the planning process, but also respect!  
"Snapshot": the results support the forming of opinions and making of decisions, particularly in the setting of priorities with limited space resources. As this is a qualitative method, the assessment cannot be classified as representative. It is helpful to also consider quantitative analysis such as usage numbers.
- With accompanying communication, this tool can be an important factor in public relations issues, too, and should make the collective discussions and finding of solutions with the users of the learning spaces (with the goal of creating quality working environments in the university and its facilities) more attractive through identification.

#### **Acknowledgements**

Pages 9 and 10, photos as examples, © P. Runge

Pages 6 and 11-14, photos as examples, <http://www.dini.de/ag/lernraeume/>

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