

Fachbeitrag

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The *Studium* – University Library and Student Union Building, a Learning Centre in Strasbourg

Das *Studium* – Universitätsbibliothek und Studentenhaus, ein Learning Center in Straßburg

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Abstract: This article presents the *Studium*, the new learning centre that opened in October 2022 at the University of Strasbourg. Both a library and a student centre, the building is surprisingly curved and open. The *Studium* offers the university community a wide range of services specifically designed to meet their needs.

Keywords: learning centre, university library, student house

Zusammenfassung: Dieser Artikel stellt das *Studium* vor, ein neues Learning Centre, das im Oktober 2022 an der Universität Straßburg eröffnet wurde. Das Gebäude, das gleichzeitig Bibliothek und Studierendenhaus ist, überrascht mit seinen Kurven und seiner Offenheit. Das *Studium* bietet der Universitätsgemeinschaft ein breites Spektrum an Dienstleistungen, das speziell auf die Bedürfnisse der Studierenden zugeschnitten ist.

Schlüsselwörter: Learning Centre, Universitätsbibliothek, Studierendenhaus

1 A Learning Centre in Strasbourg

The *Studium* project grew out of a desire of the University of Strasbourg to equip itself with a different sort of building, both a library and a student house building, in the vein of a Learning Centre. The project is part of the “Operation Campus,” a French fundraising campaign for campus modernisation. The project received strong political support, particularly from the university’s president, Michel Deneken, who gave it its name – *Studium* is Latin for “place of study”.

The project meets the classic criteria for defining a learning centre: a building showcasing an architectural concept and hosting a variety of resources and services that are also accessible online. More than just a library, it

is a third place, designed to foster sociability and sharing. The building’s spaces also meet the expectations for current ways of studying. Users require both formal and informal spaces. In addition to traditional reading rooms, they expect modular rooms with easy to move furniture as well as rooms dedicated to working in groups where silence is not required. It brings teaching closer to librarianship and enables dynamic and collaborative ways of working. This project aims to encourage the pooling of new ways of acquiring, exchanging and disseminating knowledge. By providing pedagogic, documentary, technical and comfort means to the students and academics, the learning centre creates connections between pedagogy, librarianship and new technologies to enable new ways of learning. At the entrance to these new generation libraries, we often find a dining area with periodicals and an auditorium, features designed as incentives for the public to cross the threshold of the *Studium*, where they will be able to enjoy a range of services grouped under the same roof.

Extending along the city’s main artery, used by several tramway lines, at the interface between the historic centre and the Esplanade Campus, the project marks the entrance to the campus from the city, being the first building visitors see. This exceptional urban situation, a given aspect of the project in addition to the brief itself, is a powerful signal in the cityscape, marking the presence of the university. From an urban point of view, the project has two faces: a largely transparent ground floor, inviting passers-by to enter the building, resting atop the main body of the building, with its sinuous forms expressing lightness and movement.

Beyond this image, the composition fulfils the requirements of the brief with regard to the spaces that comprise it. Thus, the transparent podium overlooking the public space offers a view of the ground floor, the lobby, the student house and the cafeteria. On the upper floors there are the rooms containing the stacks of the collections and reading rooms organised on two levels, where much attention is paid to details of comfort and fluidity – symbolised by the



Abb. 1: View of the *Studium* from one of the city's main boulevards (photo: C. Bourgeois)

curves. The architecture of the façade flows from the work on light control. The cantilevered floor blocks direct sunlight: large sub-breakers protect the glazed bays and filter natural light. Their orientation is based on the course of the sun in order to ensure that each space is protected from direct sunlight, whilst guaranteeing the required amount of natural light and views overlooking the city. The great kinetic veils give the project its constantly changing forms. Depending on the natural light, the location in the building, whether it is daytime, or night time, the building's appearance is transformed.

2 Architecture of the Building

The *Studium* is an emblematic project of the Campus Plan. As with all public buildings, the programme was the subject of a call for tenders and competitive bidding. In 2016, at the end of the various selection phases, the firm Architecture Jean-Pierre Lott was chosen. This Parisian company also built the Health Library of the University of Nantes and the Municipal Library of Vitrolles.

2.1 The Project Time

The *Studium* stands in place of the former Blaise Pascal science library. The project, launched in 2010, has undergone a long gestation period marked by several stages: the programming phase; an architectural competition (2015); structural work (2018/19); and then delivery and opening of the building (2022). The project was managed by the university's Property Management Department, which enabled the project to be monitored in close collaboration with the future users. This support was particularly valuable, as was the architect's attentiveness throughout the design and construction phases. The University's Library Service played a decisive and unifying role throughout the monitoring of this project, alongside the other services present in the building.

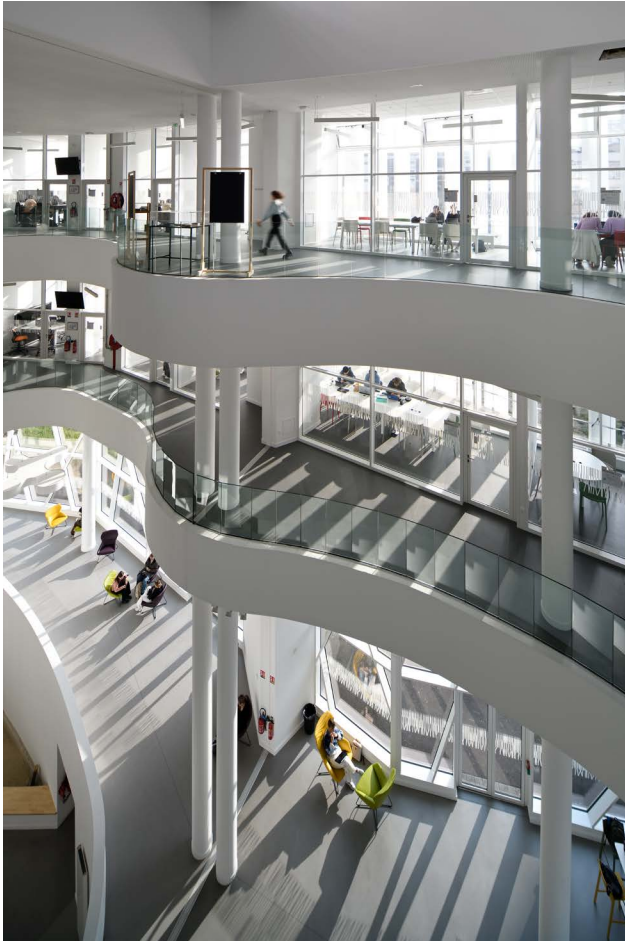


Abb. 2: Cross-section of the library lobby and group work rooms (photo: C. Bourgeois)

2.2 Light and Mobility

The design and organisation of spaces meets two essential requirements for a functioning library:

- Control of light and its quality in interior spaces;
- Ease of movement and the quality of mobility throughout the building.

With a span of 60 metres, the building is very wide. The architect opted for a central shaft to bring in light without having to resort to artificial lighting during the day.

Once inside, visitors find themselves in a vast atrium flooded with light from above, which serves to balance the natural light penetrating the façades and filtering into the reading rooms. This atrium provides a view over all the activities in the building. The atrium is characterised by the presence of a grand ramp and a bank of stairs and lifts that organise user flows throughout the building. The absence of corridors on the floors above ensures optimal diffusion of natural light and the grand ramp enhances the overarching concept of promenade and contemplation.

Although the external surfaces of the building are largely glazed, the collections are not exposed to direct sunlight thanks to the sunbreakers. These protect the collections from the harmful impact of UV rays and limit any excessive rise in temperature. The orientation of the sunbreakers was calculated according to the curve of the sun by a design office (OASIIS), which was commissioned to carry out an energy and environmental optimisation study.

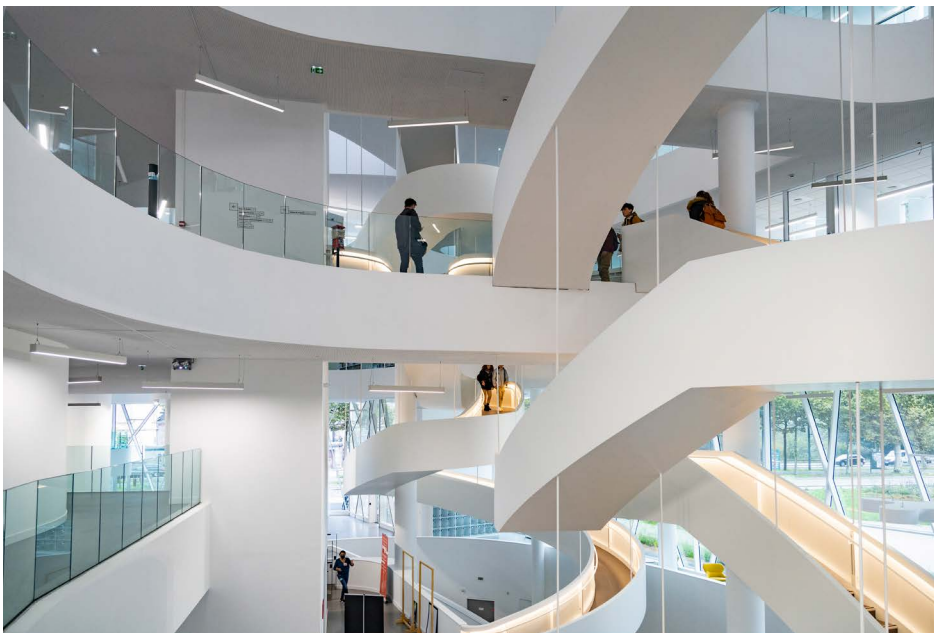


Abb. 3: Pedestrian ramp and staircase to the library: an architectural tangle (photo: SBU)



Abb. 4: A striking view of the pedestrian ramp from the lobby (photo: C. Bourgeois)

2.3 A High-performance Bioclimatic Approach

The project involves ambitious goals aimed at controlling the consumption of utilities, ensuring user comfort and the quality of ambiances (thermal, visual, etc.). With these aims in mind, the architect implemented, from the initial sketch, a bioclimatic design approach. It involved developing an architectural position favouring passive solutions consistent with the thermal loads to which the building is subject. The strategy chosen consists of a sequential treatment of the three major factors contributing to the building's overall energy performance by:

- seeking energy savings: building morphology, bioclimatic layout, performance of the skin, reduction of needs (lighting, ventilation, hot water, etc.), passive solutions, etc.;
- seeking energy efficiencies: choice of high-performance systems, high yields, functioning as closely as possible to needs (servo system), easy upkeep, durability, consumption monitoring and detection of malfunctions;
- using renewable energy: analysis of solutions with regard to the project's consumption profiles and the site's potential (heat pump using the water table).

2.4 Compactness and Thermal Zoning

Great care has been given to the definition of the project's size and the details of the skin's composition in order to



Abb. 5: La Bulle, the Bubble, a relaxing reading space in the library (photo: C. Bourgeois)



Abb. 6: The *Studium* is open extended hours, evenings and weekends (photo: C. Bourgeois)

obtain a building that meets functional and energy savings requirements. The building's morphology is organised around an atrium that floods the heart of the building with natural light. The result of this approach is a very compact structure. The premises are organised around this monumental lobby and thus have no need to be positioned on the façade for natural light, which greatly reduces energy loss through the skin. Thus, the compactness index is the ratio of $Ap_d/Shon$ (Ap_d : Aire des Parois Déperditives/project's area of energy losing skin, $Shon$: Surface Hors Œuvre Nette/adjusted gross floor area) and is very high-performing as it is measured at 0.9. A feature related to the topography of the site is that the building has a half-buried level: the lower ground floor, which houses the building's logistical and technical areas. This arrangement provides beneficial climate conditions (reduced heat from sunlight, inertia of the ground, etc.), which makes it possible to reduce the need for heating and air-conditioning of areas requiring a controlled thermal ambiance (stacks, heritage collections, archival storage).

2.5 Natural Light/Energy Loss Balance

The effort to achieve a balance between the access to natural light and the reduction of thermal loss is key in this type of building. In fact, lighting is, along with heating, one of the most important consumers of energy. Given the building's compactness, we designed a system of light wells ensuring that natural light penetrates into the heart of the building. The façades, glazed to their full height, ensure that the building's spaces are flooded with natural light. The natural light entering through the façades is filtered through exterior sun guards that ensure against glare and protect against overheating in summer. The building's light wells and compact morphology are a particularly high-performing compromise between the reduction of energy loss and access to natural light.

2.6 Inertia and Summer Comfort

The building's bioclimatic design is also aimed at guaranteeing optimal comfort in summer. With this in mind, and with regard to the morphological choices taken for this building,



Abb. 7: The library offers a studios working environment (photo: C. Bourgeois)



Abb. 8: The vertical strips help to maintain the building's thermal environment and light levels (photo: C. Bourgeois)

the architect sought to ensure the building's high level of thermal inertia. To achieve this, inside the heated volume:

- The floors and beams are made of raw concrete.
- Thermal inertia smooths out the peaks in temperature that can be caused by uncontrolled heat sources such as direct summer sunlight, heavy human traffic on the site, etc.

Paired with a strategy of natural night-time ventilation or of free cooling, the building's inertia is used to “store cool night air” and favour comfortable conditions during the day, and in particular in the morning, without using active cooling machinery.

2.7 Solar Protection

For the East and West façades, the architect opted for sun protection composed of fixed, oriented vertical strips. There was a search for the sun protection best adapted to the building's architecture and to its free-form façade, with the analysis of sun protections carried out sector by sector, taking into account the variable width of the slab overhang, in order to find the optimal orientation of the strips ensuring openness to the exterior (visual comfort) whilst also protecting the façade from the sun. In winter, sunlight reaches the façade and is captured to heat the building; in summer, sunlight is blocked on the exterior to avoid overheating in the building and user discomfort.

2.8 Acoustics

The architect commissioned a firm specialising in acoustics to work on the project, in order to optimise noise circulation and absorption. This was a real challenge in such an open space.

Here are just a few of the solutions we have chosen:

- installation of perforated acoustic ceilings;
- laying soundproof flooring (lino) in the library;
- acoustic baffles over the circulation areas and the cafeteria;
- acoustic wood on the walls of the In Quarto events room;
- creation of partitioned areas for working aloud (group work rooms, meeting rooms);
- purchase of acoustics furniture.

The architect has also moved the reading tables away from the very open atrium and the access ramps, and placed them alongside the bay windows. On the whole, these measures are proving effective, even though the building's very open design makes it necessary to control the various sources of noise.

3 The Service Offer

3.1 A Building at the Service of the University Community

A knowledge forum, a place to live, learn, research and teach, the *Studium* serves the university in its missions, and its users in their success. It is an architectural concept that radically departs from the square buildings and the linear

windows of the 1960s seen on campus: curves and transparency, vertical brise soleils, harmonious white colours and a location at the campus entrance as a showcase for the student services, as well as the library department, one of the three components of student life.

The building includes:

- A pluridisciplinary university library and the offices of the library department
- The students services department
- The University of Strasbourg Press
- The scientific and technical information training regional unit
- The printing house of the inner logistics department.

3.2 An Open, Unifying Space for the Whole Campus

One of the first objectives was to make the *Studium* a lively place around which to unite the campus, and to position it as a central place of university life, where events are held (at the start of the new academic year with the back-to-school programme and throughout the year) for students, student associations and staff, but also to unite the services for students through a coherent programme of events and to put in place a season of cultural and scientific events and documentary promotion. With this in mind, the *Studium* is a space that offers areas for breaks and relaxation (snacks, food and drinks dispensers, press area, comfortable furniture, etc.), complementing the facilities available on campus.

The building is largely open throughout the academic year: from 8 a.m. on weekdays until 11 p.m., and most weekends during the academic year. It is also open during the holidays and when students are preparing for their university exams.

Throughout these opening hours, the *Studium* offers a wide range of practical services for users:

- photocopying, printing and scanning on public multi-function copiers;
- printing of master's theses and communication materials from the printing house;
- buying books from the University Press;
- borrowing computer equipment for a day;
- depositing belongings in closed lockers;
- Getting a meal in the "Mensae" cafeteria.



Abb. 9: The group work rooms are a great success (photo: C. Bourgeois)

3.3 Documentation and Services for Teaching and Research

Two floors of the *Studium* are occupied by a large multi-disciplinary library, which offers spaces adapted to the needs and learning practices of the entire university community: almost 500 seated work places with electrical sockets, 26 group work rooms with a variety of furnishings that can be booked and connected, offices for doctoral students in the humanities, as well as modular, soundproof furniture: armchairs, sofas, acoustic booths, etc.

The library offers its readers multidisciplinary, updated and promoted collections at teaching and research level: 70 000 documents in open access in the humanities, arts, sciences and technology; these holdings are supplemented by 8.5 linear kilometres of collections stored in the stacks. Documents can be borrowed independently via automatic loan machines, and returned via an automatic return machine located at the entrance to the building. The library's central location allows it to promote its collections by organising exhibitions and events in the events area, including meetings with researchers and authors, as well as partnerships with the university and the city.

The *Studium* offers a range of services for teacher-researchers and doctoral students:

- publication in university press collections and journals;
- training in scientific and technical information;
- support in publishing work in open access and depositing publications in the open archive, managing research data;
- ordering documents through the interlibrary loan service;
- printing a thesis or research poster at the printing house.

Training in cross-disciplinary skills is one of the issues addressed by the *Studium*, where teachers can book modular classrooms and training rooms, many of which are equipped with IT – fixed computers and mobile classrooms – for teaching experimentation and direct links with the documentation on site. In the spirit of a learning centre, the *Studium* fosters cooperation between teaching and documentation, in particular by including scientific and technical information courses in the curriculum and active teaching projects based on the use of documentation.

3.4 A Student House

The *Studium* is designed as a one-stop shop, with a common reception area for all *Studium* services, linked to the various specific reception areas, to make it easier for users to find their way around the building and around the campus. At the start of the new academic year, the *Studium* is the place where new students and foreign students are welcomed, in conjunction with the relevant university departments. The reception service has been designed to meet the criteria set for public services: regular surveys and evaluations, ongoing training for staff and dissemination of information. The building's signage has been designed to be easy to read and understand, and is complemented by dynamic screens providing information on events and available services.

The Student Services department, located in the building, offers support to student associations: advice, grants, loan of equipment, help in organising events. Specific premises (offices and meeting rooms) are available to student associations on request.

The *Studium* is also accessible to students with disabilities, who can request special assistance from the Student Services department. Adapted areas, such as a treatment room, have been designed for disabled students, who can also borrow equipment adapted to their needs.

4 A Structure-building Project for the Library Service

4.1 Reorganisation of the Library Service

For the Library service, this high structure-building project has made it possible to bring together the reconfigured collections and teams of four libraries to create a single large library with multidisciplinary collections. More broadly, it is part of a movement to bring libraries together. At the time of the merger of Strasbourg's three universities in 2009, the service had more than 30 integrated libraries, a legacy in particular of the German university model of institute libraries. Following the opening of *Studium*, the network now comprises 21 libraries, making it easier to manage them and to develop new missions (user training, mediation, services for researchers, etc.), thanks to the maintenance of staffing levels by the University presidency. Each consolidation is also an opportunity to offer new services and, as soon as possible, to increase the library's opening hours. The *Studium* brings together the holdings of the former science library, the psychology library (now closed), the Portique

library (library of literature, performing arts and sports science, whose premises will house a Slavic and Oriental Languages library at the start of the 2023 academic year, a project being run by the Library Service in conjunction with the Faculty of Languages) and the humanities holdings of the L'Alinéa library (now the law library, after the Law Faculty library collections were brought together). These operations followed one another during the first half of 2022, in a domino effect.

This project involved a major overhaul of the collections: weeding, deduplication, re-listing according to a quotation plan shared by the libraries concerned and re-equipping the 70 000 or so books in the open-access area. Over a period of five years, some 30 colleagues took part in this work, with the aim of providing a coherent open-access offering tailored to the needs of users.

At the same time, from 2018 onwards, the library service carried out an internal reorganisation of its teams, open to all, as a result of which 65 staff members – out of 162 – changed post. At *Studium*, this has resulted in the creation of a team of 20 staff, supplemented by around ten part-time students. They are responsible for the smooth running of the library, which spans 3 000 m² over two bright and airy floors, offering readers almost 650 seats, while bringing together four libraries has also meant that extended opening hours can be offered from the outset.

4.2 The 1 % Artistic

The obligation to decorate public buildings, more commonly called “1% artistic” is a specific procedure for ordering works of art from artists. It requires public building owners to reserve 1% of the cost of their buildings when they order or purchase one or more works of art specially designed for the building in question.

The work selected for the *Studium* was proposed by the German artist Martin Bruno Schmid. These are gold bookmarks, a minimalist work of art that blends in with the curves of the building. Shimmering golden ribbons hang in irregular distribution from the ceilings of the building. Each object is a unique handcrafted piece, made of 14-carat gold. With a quiet and self-contained presence throughout the building, only the shorter end of the gold ribbon peers out of the circular opening in the ceiling; the longer part of the work disappears into the diffuse grey of the drilled-out opening in the ceiling, where it refers to the empty space of the unwritten book. The work plays on the undersides of the ceiling architecture and uses them as a virtual repository of unwritten books.



Abb. 10: The very open architecture allows you to see the In Quarto room on the ground floor and the shelves in the library (photo: C. Bourgeois)

5 Opening to the Public

5.1 A Common Operating Challenge

One of the great successes of the project is that it has brought together several of the university's departments around the common objective of the *Studium*. During the course of the project, colleagues from the five university departments located at the *Studium* worked closely together to offer future users of the building a common range of services.

To prepare for the operation and deployment of these services, several working groups – on subjects such as reception, events, logistics and security – were set up during the project period, enabling colleagues to learn to work together and, in particular, to gradually understand the problems of each department. On the other hand, the fact that two of the departments (Libraries and University Life) were awarded a quality of welcome label before the start of the project meant that we could start from a shared vision of the quality of reception.

The success of the project lies in the fruitful relationship that has developed between the various stakeholders

over time and throughout the project, and which continues today with daily exchanges. And what better way to forge links than with an integration day? A few weeks before the opening, the hundred or so staff working at the *Studium* were able to meet each other in a relaxed and convivial way during a day that included a presentation of the departments, a buffet, a group photo and a treasure hunt. This was enough to sow the seeds of a smooth-running operation, of which the building's main reception area, shared between three departments (the library department, the student service department and the inner logistics department), and designed as a one-stop shop, may be the symbol: the introduction of training and shared tools ensured that this key services for users, in a building at the entrance to the campus, ran smoothly.

5.2 A Successful Opening

The building was opened to the public on Monday 3 October 2022. From the very first days after opening, the building was very busy, with almost 6 000 visitors a day in the first week. Visitor numbers then stabilised at around 3 000 a

day over the course of the academic year. Installing comfortable furniture to encourage informal learning was an integral part of the programme: as you wander around the building, you'll notice that the armchairs, sofas and acoustic alcoves are a big hit with students. Generally speaking, users quickly adopted the spaces and furniture, as well as the library's extended opening hours.

Ten months after opening, *Studium* has met with success, with a large number of visitors and colleagues from different professions working together on a daily basis, united by the university community they serve and the emblematic building they share.

The *Studium*

Architect: Jean-Pierre Lott Architecture

Project owner: University of Strasbourg

All trades: Serue

BET HEQ: Oasiis

Acoustics: Acoustb

Key Building Figures

10 850 m² on 7 levels

1180 seats throughout the building

9 classrooms/training rooms

100 staff working in the building

Key Library Figures

A team of 20 agents

3 000 m² on two floors

70 000 documents in open access and 8 km in shops

650 seats, including almost 500 seated work places

26 rooms for group work (4 to 10 places per room)

94 hours of opening time per week (including around 20 Sundays a year)

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