

Title: Library Design, an overview of best practice in library architecture worldwide.

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Aim

The paper aims to provide inspiration to those Librarians with a general interest in Library architecture and design.

Furthermore, this comprehensive presentation will provide a guide to Librarians who may have a professional role in commissioning new build or refurbishment Library projects. The structured paper covers the following range of topics.

Methods

Following extensive research, Library Design contains examples of best practice in contemporary design from leading architects worldwide. Using realised projects, this visually stimulating presentation is illustrated throughout with high quality images extracted from our book "Library Design" published in five languages by teNeues in 2007. The section on ecologically sound design and construction is abstracted from "Eco-Urban Design" to be published by Springer Verlag in 2010.

Discussion

Good design should be an integral part of every library, no matter how grand or modest its scale. The ancient pairing of books and architecture has recently inspired a renaissance in library design. The paper features a selection of international projects ranging from the home library to award-winning public buildings.

The knowledge revolution and the need for life long learning poses new challenges for architects, designers and their clients. Furthermore, the demands of new information technologies have required changes to be made in the layout of public libraries.

The discussion on public libraries demonstrates how these challenges are being responded to. Dedicated interior design can provide a welcoming safe space inspiring visitors to engage in the activities within. These buildings contribute to the vitality and viability of the communities they serve. The impact of striking, almost sculptural façades has transformed and uplifted the image of the public library, which has resulted in a significant increase in architectural awards for this type of project.

The authors recognise that private libraries have taken on a greater importance in the 21st century with increasing numbers of people requiring a space within their homes where they can work, read, organise their busy lives or simply relax. This trend is further manifested with book loving clients requesting that their architects design a property with a library as a centrepiece; examples are included of how these needs are addressed.

Part 1: 21st Century Library Function

1.1 Social Dimension, Lifelong Learning, The Hybrid Library, Space Allocation and Storage.

Case Study:

City of Sydney, Customs House

Circular Quay, Sydney, Australia

www.cityofsydney.nsw.gov.au/customshouse/thelibrary

2005

Lacoste + Stevenson Architects

www.lacoste.stevenson.com.au

The ground floor design concept envisaged a new public living room for the City. This space houses international newspapers, magazines and paperbacks, internet connections and projected images. The quieter upper levels are reserved for more traditional library pursuits. An eclectic mix of furniture respects the heritage significance of the Customs House.

For images see Smith, KM and Flannery, JA. (2007, p52)

Case Study:

Seattle Central Library

Seattle, Washington State, USA

www.spl.org

2004

OMA|LMN – A Joint Venture

www.oma.nl

Enclosed by a multi-faceted structured glass façade and accessed via a vast communal “Living Room” entrance, this dramatic and sculptural building is an information store where all forms of media, both new and old, are given equal priority in a four tier Book Spiral. Stacked and overlapping platforms support the reading rooms and open areas.

For images see Smith, KM and Flannery, JA. (2007, p76)

Case Study:

The Morgan Library and Museum

New York, USA

www.morganlibrary.org

2006

Renzo Piano Building Workshop, Architects in collaboration with Beyer Blinder Belle (New York)

www.rpbw.com www.beyerblinderbelle.com

The library and museum is home to the financier JP Morgan's collection of rare Medieval and Renaissance literature and musical manuscripts. Underground expansion increased the space without compromising the historical neighbourhood's scale. A piazza facilitates circulation between the six different wings of the complex. The space is covered by a transparent roof.

For images see Smith, KM and Flannery, JA. (2007, p98)

Case Study:

Richard Avedon Foundation - photographs

New York City, USA

www.richardavedon.com

2005

lubrano ciavarra design llc

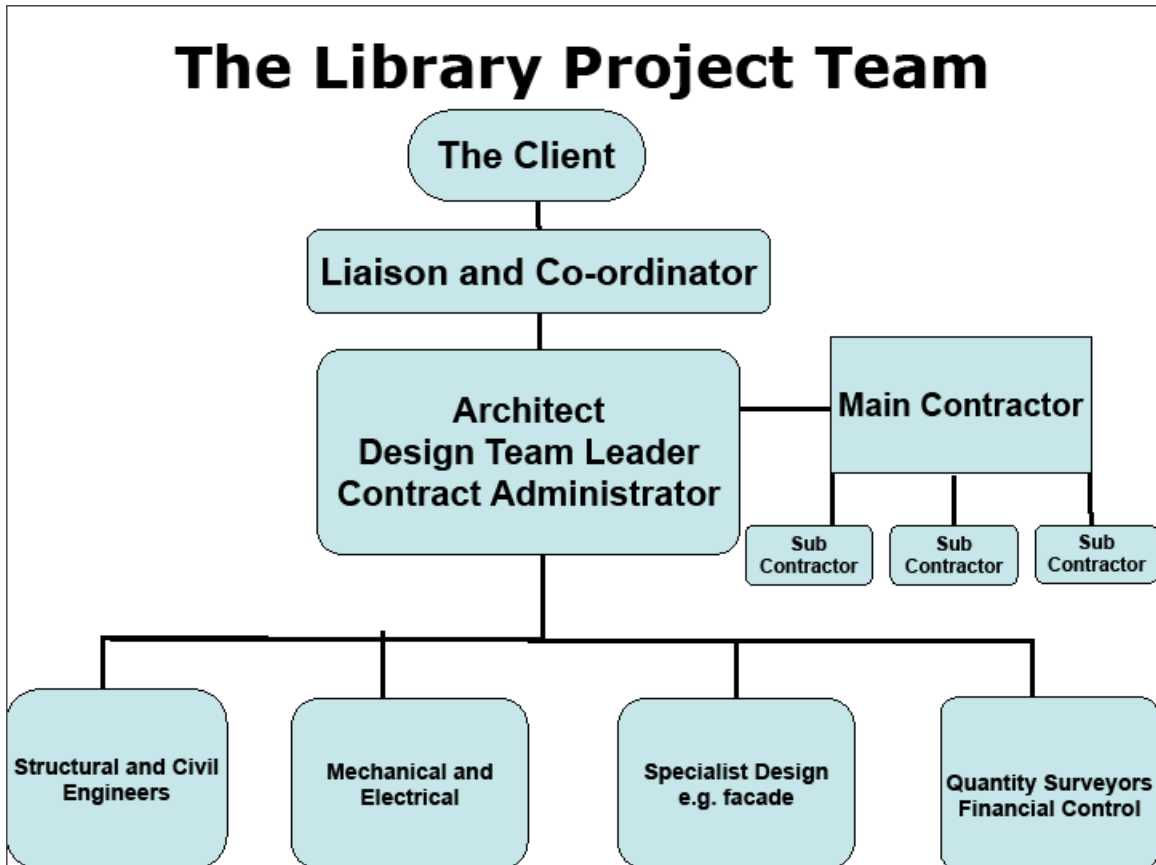
www.lcnyc.com

Located in the office tower of the Museum of Modern Art, the key feature of the interior of this library is a grid wall housing boxes of the photographer's negatives and prints. The surrounding small gallery, workstations and conference room are finished in ethereal shades of photographic black, white and grey.

For images see Smith, KM and Flannery, JA. (2007, p64)

Part 2: The Modern Library Project

2.1 The Project Team, Site Selection and Urban Planning



The diagram above shows the inter-relationships in a traditional project team, with clear lines of reporting and responsibilities.

Warranties are provided for each element of the design. Additionally, the main contractor will provide warranties for the integrity of the completed building.

Legally binding construction contracts are signed by the relevant parties.

Site selection and urban planning:

- Consideration of adequate transport links
- The capacity for a project to regenerate an area
- The use of brown field sites
- Conversions and change of use e.g. Sydney Customs House Library
- The ability to serve the community

Case Study:

The Grande Bibliothèque du Québec
Quebec, Montreal, Canada

www.banq.qc.ca

2005

Patkau Architects Inc

www.patkau.ca

The glass and copper building envelope, opaque in some places, diaphanous in others, houses the collection Québécoise, the general public library of Montreal City and a variety of public spaces. A promenade rises from the library entrance to circumnavigate the general library through a series of reading rooms. Views of the city unfold as the route ascends.

For images see Smith, KM and Flannery, JA. (2007, p82)

Part 3: Aspects of Design*3.1 Ecologically Sound Design and Construction*

Working with nature for energy efficiency.

Strategies include:

Orientation of the building dependant upon:

- Solar study
- Climate study
- Natural ventilation
- Facade design / solar gain / shading.

Case Study:

Library of the School of Art

Brunswick, Germany

www.hbk-bs.de

2002

KSP Engel und Zimmermann Architekten

www.ksp-architekten.de

To showcase the new college library the architects resourcefully salvaged the glass cube of the Mexican pavilion from the Hanover EXPO by Legorreta + Legorreta. The newly designed colourful four-story library tower is housed within the glass cube. The tower is twisted relative to the outer shell forming narrow gaps between the two structures.

For images see Smith, KM and Flannery, JA. (2007, p48)

3.2 Materials Selection:

- Locally sourced to reduce transportation
- High recycled / recyclable content
- Use of fly ash in concrete mix to reduce cement manufacturing
- Timber from sustainable sources
- Paints, adhesives and finishes, low or zero volatile organic compounds.

Case Study:

San Antonio Central Library

San Antonio, Texas, USA

www.sanantonio.gov/library/central

1995

Legorreta Arquitectos

legorreta@lmasl.com.mx

San Antonio's Library facility has been designed with an appreciation for the elements of architecture, art and technology. The exterior is a visual wonderland of shapes, angles and openings that create interplay of light and shadows, both inside and outside the building. The library's 240,000 sq. ft has a capacity for up to 750,000 books. For images see Smith, KM and Flannery, JA. (2007, p68)

3.3 Further Considerations:

- Maximising daylight to reduce supplementary lighting costs.
- Intelligent building management systems to maximise efficiency of M. and E. systems.
- Rain water harvesting and re-use.
- Water saving plumbing and fittings.
- On-site electricity generating e.g. photovoltaic cells, wind turbines, geothermal pumps.
- Solar thermal panels for pre-heating of hot water.

Case Study:

Cesar Chavez Library

Phoenix, USA

2007

Line and Space

www.lineandspace.com

The roof design is one of the most important environmental design features of the library. Projecting well beyond the building's facade, the overhanging roof reduces energy consumption by insulating, shading and consequently, cooling. Another major design consideration deals with the catchment and utilisation of the

precious rainwater, which falls only sporadically in the desert city. Again, the roof design is fundamental to the strategy. 37,000 sq. ft. of roofing is sloped to a central channel. This channel is capable of coping with storm quantities without costly overflow, allowing the rainwater to run off to a splash basin constructed at ground level.

For images see Flannery, JA. and Smith, KM. (publication date to be announced)

3.4 Furniture and Interiors:

- Purchase or lease
- Fit for purpose
- Sturdy and durable
- Projected life span
- Economies of scale at purchase point
- Guarantees and warranties

Case Study:

Furnishing of a Cyber Lounge

Contemporary Art Museum: Rufin Tamayo, Mexico City

2001

bgp arquitectura

www.bgp.com.mx

The re-opening of the museum was enhanced by the transformation of the sculptural patio into the cyber lounge, a space for viewing new media art. This space also showcases the site and task specific designs of Mexican furniture designer Bernardo Gomez-Pimienta which was fabricated by bgp + Loredana Dall'Amico.

For images see Smith, KM and Flannery, JA. (2007, p112)

Case Study:

Rustic Canyon Residence

Pacific Palisades, California, USA

2001

Griffin Enright Architects

www.griffinenrightarchitects.com

The library of this 21st century of this Californian private residence combines the essential elements of day lighting and feature fireplace in one spectacular, fully glazed elevation. Bookshelves constructed from birch veneer fin ply, fully line the remaining walls. The warmth and comfort of the room is further enhanced by the Santos Mahogany flooring.

For images see Smith, KM and Flannery, JA. (2007, p28)

4. The Private Library

4.1 Function, Client, Study Environment

Case Study:

The Library of Mr. and Mrs. Steve Fossett

Carmel, California, USA

2004

The Wiseman Group

www.wisemangroup.com

The Wiseman Group extensively remodelled this 1970s ocean front house. The client's love of Asian antiquities, contemporary art and anything with a slight Art Deco undercurrent allowed this very liveable aesthetic to evolve. Designed to house a collection of rare books, the library belongs to a world famous record holder and adventurer.

For images see Smith, KM and Flannery, JA. (2007, p14)

Scholar's Library

New York State, USA

2004

Peter L. Gluck+ Partners, Architects

www.gluckpartners.com

This unique structure, located in a mountainous, wooded region of New York State is specially designed to meet the needs of an academic. The collection of 8,000 mainly Japanese books is stored in the protected lower level. The upper level is a light filled, glass walled study edged with a fire slate desk.

For images see Smith, KM and Flannery, JA. (2007, p18)

Part 5: The Developing World - Building Libraries for the Future

5.1 Room to Read

An appreciation of the basic aspirations of children's reading requirements for sustained social development is embodied by the *Room to Read* project.

Ten years ago, Room to Read began its work with a simple desire to bring books to the children of Nepal. Today, they are a global organization working in nine countries across Asia and Africa that helps millions of children in the developing world gain access to quality educational opportunities.

Room to Read has built an effective, entrepreneurial and passionate global team, a strong and diverse donor base and a foundation of scalable programming.

Their current programmes include:

- Reading Room program which provides libraries to children so they can read and to explore.
- Local Language Publishing program which allows children to read books in their mother tongue.

- The School Room program which gives children a safe place to learn (building new structures, replacing dilapidated schools, or expanding school buildings to alleviate overcrowding).
 - The Girls' Education program which enables girls to enroll in and stay in school.
- They are a results-driven organisation and since its inception, Room to Read has impacted the lives of more than four million children by:
- Establishing nearly 9,200 libraries
 - Publishing 433 original local language children's titles in 21 different languages, representing the distribution of more than 4.1 million books

For more information about *Room to Read* see:

<http://www.roomtoread.org/>

For images see

<http://www.roomtoread.org/admin/view.image?id=757>

<http://www.roomtoread.org/admin/view.image?id=761>

References

Flannery, JA and Smith, KM. *Eco-Urban Design*, Dordrecht: Springer; (publication date to be announced)

Smith, KM and Flannery, JA. *Library Design*, Kempen: teNeues; 2007