ZAHA HADID ARCHITECTS:
[ref-lex]ical
WHAT WAS – WHAT HAPPENED – WHAT IS
ZAHA HADID ARCHITECTS: [ref-lex]ical
WHAT WAS – WHAT HAPPENED – WHAT IS

• LECTURE IN THE FOCUS OF TRANSFORMATION PROCESSES
ZAHA HADID ARCHITECTS:

[ref-lex]ical

WHAT WAS – WHAT HAPPENED – WHAT IS

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- PARAMETER THAT HAD IMPACT ON DESIGN, VOLUME AND FUNCTION
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Zaha Hadid Architects: [ref-lexical]
WHAT WAS – WHAT HAPPENED – WHAT IS

Introduction
• Reason for brief
• Design concept – initial idea
• Program distribution

Comparison
• From competition to completed building

Analysis
• What has changed on design and program
• What have been the drivers for the change respectively non-change

Conclusion
• What can be improved/affirmed to secure design continuity and quality processing
INTRODUCTION

Project data
Library and Learning Centre, Vienna

Vienna, Austria 2008 – 2013

Program: Library space with study zones, magazin spaces, administration, study services, atrium, festival hall, book shop, copy shop, cafetera

Client: Projektgesellschaft University of Economics, Vienna

Size/Area: 42000 m²
INTRODUCTION

Relocation Campus

Library and Learning Centre, Vienna
INTRODUCTION

New Campus at Prater
Library and Learning Centre, Vienna
INTRODUCTION

Masterplan

Library and Learning Centre, Vienna
INTRODUCTION
Volumes
Library and Learning Centre, Vienna
INTRODUCTION

Gap or seam
Library and Learning Centre, Vienna
INTRODUCTION

Program distribution

Library and Learning Centre, Vienna

BAUKÖRPER BIBLIOTHEK

BAUKÖRPER VERWALTUNG
INTRODUCTION

Cross section
Library and Learning Centre, Vienna
INTRODUCTION

Longitudinal section

Library and Learning Centre, Vienna
INTRODUCTION
Sectional model
Library and Learning Centre, Vienna
INTRODUCTION

Sectional model
Library and Learning Centre, Vienna
INTRODUCTION

3D floor plans
Library and Learning Centre, Vienna

LEVEL UG01
INTRODUCTION

3D floor plans
Library and Learning Centre, Vienna
INTRODUCTION

3D floor plans
Library and Learning Centre, Vienna

LEVEL EG01
INTRODUCTION
3D floor plans
Library and Learning Centre, Vienna
INTRODUCTION

3D floor plans
Library and Learning Centre, Vienna
INTRODUCTION

3D floor plans
Library and Learning Centre, Vienna

LEVEL OG02
INTRODUCTION

3D floor plans
Library and Learning Centre, Vienna
INTRODUCTION

3D floor plans
Library and Learning Centre, Vienna

LEVEL OG04
INTRODUCTION

3D floor plans

Library and Learning Centre, Vienna

LEVEL OG05

ZAHA HADID ARCHITECTS
INTRODUCTION

3D floor plans
Library and Learning Centre, Vienna
INTRODUCTION

Concept video
Library and Learning Centre, Vienna
Introduction
• Reason for brief
• Design concept – initial idea
• Program distribution

Comparison
• From competition to completed building

Analysis
• What has changed on design and program
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Conclusion
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ZAHA HADID ARCHITECTS: [ref-lex]ical
WHAT WAS – WHAT HAPPENED – WHAT IS
COMPARISON

Key aspects in line

Are there any major changes?
COMPARISON

Main View

Competition phase I
COMPARISON

Main View I

Competition phase II
COMPARISON

Main View I

Design Development
COMPARISON

Main View I
Completed building
COMPARISON

Main View II

Competition phase I
COMPARISON

Main View II
Design Development
COMPARISON

Main View II
Completed building
COMPARISON
RearView
Competition phase I
COMPARISON

Rear View
Design Development
COMPARISON

Rear View
Completed building
COMPARISON

Interior View

Competition phase II
COMPARISON

Interior View
Completed building

ZAHA HADID ARCHITECTS
COMPARISON
Geometrie
Outline preliminary design

Grundriss Optimierungsphase
COMPARISON

Geometrie
Outline design development

REDUKTION VON 40° AUF 35°
REDUKTION DER GESCHOSSHÖHE AB OG01 UM JEWEILS 26CM

Stand VE
reduzierte Geometrie
NEIGUNG UM 5° REDUZIERT

REDUKTION VON 45° AUF 35°
REDUKTION DER GESCHOSSHÖHE AB OG01 UM JEWEILS 26CM

Stand WBW
reduzierte Geometrie
STAND WETTBEWERB

STAND VORENTWURF
NEIGUNG UM 5° REDUZIERT / GESCHOSSHÖHEN AB OG01 UM JEWEILS 26CM REDUZIERT
STAND WETTBEWERB
COMPARISON

Geometrie
Outline design development
## Rahmenterminplan Neubau WU

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Introduction
- Reason for brief
- Design concept – initial idea
- Program distribution

Comparison
- From competition to completed building

Analysis
- What has changed on design and program
- What have been the drivers for the change respectively non-change

Conclusion
- What can be improved/affirmed to secure design continuity and quality processing
ANALYSIS

Key aspects in line

Are there any major changes?
ANALYSIS

Reasons
Why this continuity?

SITE OPERATION
• Efficient working site supervision
• Intensive artistic site supervision
• Atmosphere to achieve “something Special” on site with all involved

BRIEF
• Well elaborated brief
• Well analysed program
• “Value” of building
• Willingness to stick to the brief within the further process

CONTROLLING
• Good Set-Up of all involved groups within the planning process
• Strong focus on all cost/time and design issues
• Ability to process fast decisions

PLANNING
• Well matching design to program distribution
• Quality in planning
• Good working relations to external consultants and the general planner team
ANALYSIS

Brief
Broad description of the assignment

SPATIAL AND FUNCTIONAL PROGRAMME
(RFP 2008)

Specific Part
“Plot LLC”

07-2008

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Unless explicitly authorized by the Project Management Team, this document is for exclusive internal use of the “New WU” project at Wirtschaftsuniversität Wien (Vienna University of Economics and Business, WU).
3 Functions of the Library and Learning Center (LLC) at a Glance

The LLC building forms the very heart of the University. Being the largest building on the new Campus, it assumes a landmark function for the WU. In addition to the actual lecture rooms, it houses all those functions which are most frequently used by the students.

The following diagram provides an overview of the LLC’s functions:

- The “Aula” is the Great University Hall and forms the core of the Library and Learning Center. Serving as the public interface of functional groups, it not only serves as a hub and place of orientation within the building but is also for public events.
- In the entrance area leading to the Library, the Computer Centre (Zentrum für Informationsdienste, ZID) and the Library operate a joint information and support desk including book/media loans services (“Info center”).
- The Language Lab and the IT training rooms are special teaching facilities closely linked to the Learning Center.
- The external services such as a cafeteria, a bookshop and copy shop are closely linked to the Library and Learning Center area.
ANALYSIS

Brief
Vision and design approach

5 LIBRARY AND LEARNING CENTER

5.1 The Modern University Library

As a provider of information, the Library forms an integral part of the Wirtschaftsuniversität Wien. The WU Library is Austria’s largest business studies library. Besides its basic function of delivering a service to students and researchers, the Library is to assume a strong image-building role for the WU.

Despite the advancement of virtual libraries and digital learning environments, there is evidence of the continued importance of paper media as a source of knowledge. Instead of a reduction in the numbers of books in printed form, we are witnessing a supplementary role for the digital medium to its analogue counterpart. Both hard and soft carriers of information have their specific advantages, which are selected depending on the respective purpose.

Accordingly, the new WU building will not lead to a reduction in the size of the Library, but to an expansion and improvement of both its analogue and digital resources.

In view of the developments expected in print and new media, the Library rooms must be designed with the requisite flexibility in mind.

By linking the Library with other functions in support of research and learning, the Library is to become the WU’s “hub of information and communication” both physically and virtually.

5.2 The Learning Center as a Vision

Besides requiring adaptation of the teaching system, learning in a university context is undergoing changes that require transformation and enhancement of learning environments for students. New technologies and the need for autonomous study (versus lecture-type “chalk-and-tick” teaching) require strong improvements in virtual learning environments (e.g. LEARN@WU), at the same time, however, collaboration in teams, shared social interaction and peer learning are increasingly becoming the core themes of university life today.

The WU Learning Center provides the infrastructure for new forms of studying. It should assume a central role in student life. The WU Learning Center is characterised by the following aspects:

Students are provided the space required to study alone or in teams, to work out content or exchange information and experience.

- The Learning Center is the student’s “office”. Students go to this place every day to undertake the day-to-day business of their education programme.
- It is flexible enough to cater for most diverse learning styles. Consequently, services include single stand-alone desks and lively learning lounges. 24-hour operation for night workers, as well as cafes/soft spots for “hungry learners”.
- Besides offering a variety of desks for learning and working, the Learning Center provides facilities for undertaking research, producing publications and communicating. This means that the University must not only provide space but also technologies (e.g. Internet, copy and print services, presentation media) in addition to information (especially in relation to the Library).
- Students are not left alone in the Learning Center, but receive core function support from tutors.
- Functionally, the Learning Center is closely linked to other key facilities for students, including Study Services, the Library, and IT services.
- The Learning Center opens the door to the University for students, while at the same time it forms the heart. Consequently, its architectural design is friendly, clear-cut and functional – it invites one to stay, provides motivation to study and supports interaction with peers.

5.3 Design Approaches to the Library and Learning Center

The Library and the Learning Center are interlinked functional units, together, they form the intellectual and physical core of the University.

In terms of space, the new concept is reflected in the Central University Library, which combines the Library, Special Business Library and Learning Center services as a cross-cutting function.

In addition, the Central University Library operates specialist libraries for business law, foreign-language business communication as well as social sciences: these subsidiary libraries will be located in close proximity to the pertinent Departments.

5.4 Central University Library and Learning Center Zones

Basically the Central Library and the Learning Center are structured into three zones, similar to the Departments and Services:

- Public zone: unit area with free access
- Semi-public zone: controlled access for students and non-WU members (authorisation required)
- Non-public zone: authorised access only

Moreover, the University Library and Learning Center zones must be structured into units that can be made accessible 24-7.

Access to all semi-public areas must be provided to all WU staff on a 24-7 basis. The specialised Business Library (“Spezialbibliothek Wirtschaft”) in particular should be accessible to Department staff as directly as possible.

Separate goods entrances must be provided for deliveries.

5.5 Central University Library

The central University Library comprises the following elements:
ANALYSIS

Brief

Spacial and functional programme
ANALYSIS

Reasons
Why this continuity?

SITE OPERATION
• Efficient-working site supervision
• Intensive artistic site supervision
• Atmosphere to achieve “something Special” on site with all involved

BRIEF
• Well elaborated brief
• Well analysed program
• “Value” of building
• Willingness to stick to the brief within the further process

CONTROLLING
• Good Set-Up of all involved groups within the planning process
• Strong focus on all cost/time and design issues
• Ability to process fast decisions

PLANNING
• Well matching design to program distribution
• Quality in planning
• Profound planning deepness and detailing
ANALYSIS

Planning
Program distribution and building figure
Competition I
- 10 competitors
- design to brief
- 2 month design period

Competition II
- reduction to 5 competitors
- continue to design to brief
- implementation of jury comments
- 2 month design period

Cost Evaluation
- render the exact costs
- organisation contract
- set-up planner teams
- 1 – 2 month period

Schematic Design
- Program check
- Area check
- Implementation of client feedback on program
- Implementation of consultant planning
- Enrolment design in deeper level
- 4 month period

Concretize phase
- Cost evaluation
- Design evaluation
- Area evaluation
- 2 month

Design Development
- Program check
- Area check
- Implementation of client feedback on program
- Implementation of consultant planning
- Enrolment design in deeper level
- 5 month period

Planning application and Lead Details
- Approval drawing
- Detail drawings
- Construction documents
- Definition of geometry for construction drawings

Construction Documents
- Support of General planner with drawing information

Building site
- Artistic site supervision
- Checking of contractors drawings
- 2 ZHA staff full time on building site for 3 years

Analysis
Planning
LLC specific planning and building phases
ANALYSIS
Planning
Description of complex geometry
ANALYSIS
Planning
Description of complex geometry
ANALYSIS
Planning
Detailing fair face concrete
ANALYSIS
Planning
Detailing fair face concrete
ANALYSIS
Planning
Profund detail level already in design stages
ANALYSIS
Planning
Profund detail level already in design stages
ANALYSIS
Planning
Profund detail level already in design stages
ANALYSIS
Planning
Profound detail level already in design stages
ANALYSIS
Planning
Modell 1:100 for client, consultant and contractors
ANALYSIS
Planning
Procedure and challenges development fair face concrete
ANALYSIS
Planning
Procedure and challenges development fair face concrete
ANALYSIS
Planning
Procedure and challenges development fair face concrete

Spezifika Rohbau

Geometry

inclinations

inwards

outwards

horizontal

vertical

Round shapes

Inlays

Outlays

ductility

Round shapes

Different inclinations

Round shapes

Modelling edges

Fair face concrete

Plank formwork

Plate formwork
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## Abrechnungsauflistung Baumeister LLC exemplarisch

### Positionen LV LLC Baumeister

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### Gebäude Allgemein

| Kerne | Decken innerhalb Kerne | Decken außerhalb Kerne | Festsaal groß | Decken Festsaal groß | Wände + Stützen Festsaal | Wände + Stützen | CAFE | Treppe | Decke | Treppen | Rampen | FLUBA | FORMT. | STAKO |
|-------|------------------------|------------------------|---------------|----------------------|--------------------------|------------------|-----|-------|-------|--------|--------|--------|--------|-------|-------|
| X     | X                      | X                      | X             | X                    | X                       | X                | X   | X     | X     | X      | X      | X      | X      | X     |

### Spezielle Räume

- **Showtr. Q 2 x 3**: X
- **Rampen**: X, X, X
- **Fluchtwege Bauwerke**: X
- **Formteile**: X

### Spezielle Bauteile

- **Stahlkonstruktion**: X

---

Abrechnungsmatrix.xls - 07.07.2010

Vasko + Partner

Zaha Hadid Architects

74
<table>
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<tr>
<th>Positionen LV LLC Baumeister</th>
<th>GEBÄUDE ALLGEMEIN</th>
<th>SPEZIELLE RÄUME</th>
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ANALYSIS

Reasons

Why this continuity?

SITE OPERATION

• Efficient-working site supervision
• Intensive artistic site supervision
• Atmosphere to achieve “something Special” on site with all involved

BRIEF

• Well elaborated brief
• Well analysed program
• “Value” of building
• Willingness to stick to the brief within the further process

CONTROLLING

• Good Set-Up of all involved groups within the planning process
• Strong focus on all cost/time and design issues
• Ability to process fast decisions

PLANNING

• Well matching design to program distribution
• Quality in planning
• Profund planning deepness and detailing
ANALYSIS

Controlling

Organigramm involved boards/planner/controller
ANALYSIS

Reasons
Why this continuity?

BRIEF
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ANALYSIS

Site operation

Checking of contractors drawings
ANALYSIS

Site operation

Checking of contractors drawings
ANALYSIS

Site operation

e.g. expert in fair face concrete team
ANALYSIS

Site operation

e.g. mock-up inspection
Introduction
- Reason for brief
- Design concept – initial idea
- Program distribution

Comparison
- From competition to completed building

Analysis
- What has changed on design and program
- What have been the drivers for the changement respectively non-changement

Conclusion
- What can be improved/affirmed to secure design continuity and quality processing
CONCLUSION

Key issues for different parties involved

To carry through the best competition design to the best possible build project

User / Client

- Roll-out brief/program
- Roll-out project set-up
- Fast decision making
- Minimize interferences from each possible side
- Sense for design issues

Planner / Architect

- Create a strong vision that matches with the expectations of the client
- Bring the best effort to transport the design within each planning phase (Complete, meaningful and all-embracing documents)
- Try to stick to the design guideline as well as to find compromises with each party involved
- Accompany each planning state and phase as well as the building site

Project Management / Site Management

- Strong focus on cost tracing and time adherence
- Make out problems before they occur
- Mediate between disputing parties – find compromises
- Keep things running

Contractor

- Contractor should identify with the project (extraordinary project)
- Communication with contractor on a friendly authoritative basis
- Contractor should be accompanied throughout the whole building process
- Do not give contractor options to raise a claim
ZAHA HADID ARCHITECTS:
[ref-lex]ical
WHAT WAS – WHAT HAPPENED – WHAT IS

IMAGES BUILD PROJECT
MANY THANKS
FOR YOUR ATTENTION!