

University of
Luxembourg

WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY?
IS IT REALIZED IN BELVAL?

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WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY?

IS IT REALIZED IN BELVAL?

FIRST CONSIDERATIONS



CORKSCREW, SAW, BOTTLE OPENER, ...

- INDIVIDUAL TOOLS FOR ONE SINGLE PURPOSE
- PERFECTLY ADAPTED
- NOT FLEXIBLE IN USE WHEN NEEDS CHANGE



SWISS KNIFE

- COMBINED TOOL FOR EACH PURPOSE
- NOT PERFECTLY ADAPTED, COMPROMISE IN USE
- FLEXIBLE WHEN NEEDS CHANGE

WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY? IS IT REALIZED IN BELVAL? FIRST CONSIDERATIONS



INDIVIDUAL BOTTLE OPENER

- PERFECTLY ADAPTED TO THE NEEDS



SWISS KNIFE - BOTTLE OPENER

- USABLE, BUT COMPROMISE IN USE

WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY? IS IT REALIZED IN BELVAL? FIRST CONSIDERATIONS



INDIVIDUAL BOTTLE OPENER

- NOT FLEXIBLE WHEN NEEDS CHANGE



SWISS KNIFE - SAW

- USABLE, BUT COMPROMISE IN USE
- FLEXIBLE WHEN NEEDS CHANGE

WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY? IS IT REALIZED IN BELVAL? ANSWER DEPENDING ON BUILDING TYPES



NUCLEAR POWER STATION

- VERY SPECIFIC NEEDS
- PERFECT FULFILLMENT REQUIRED
- NO FLEXIBILITY REQUIRED

→ “**INDIVIDUAL TOOL**” APPROACH



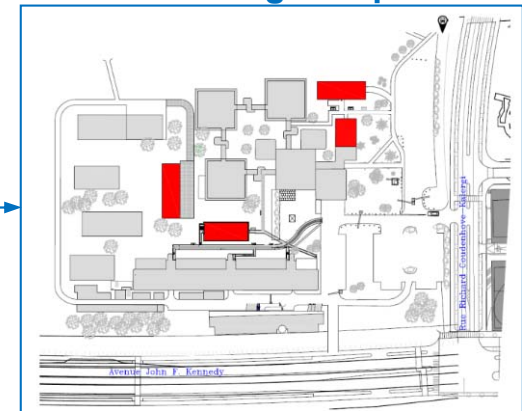
GARDEN'S HUT

- LARGE DEFINITION OF NEEDS
- HIGH FLEXIBILITY REQUIRED

→ “**SWISS KNIFE**” APPROACH

WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY? IS IT REALIZED IN BELVAL? UNIVERSITY SITES

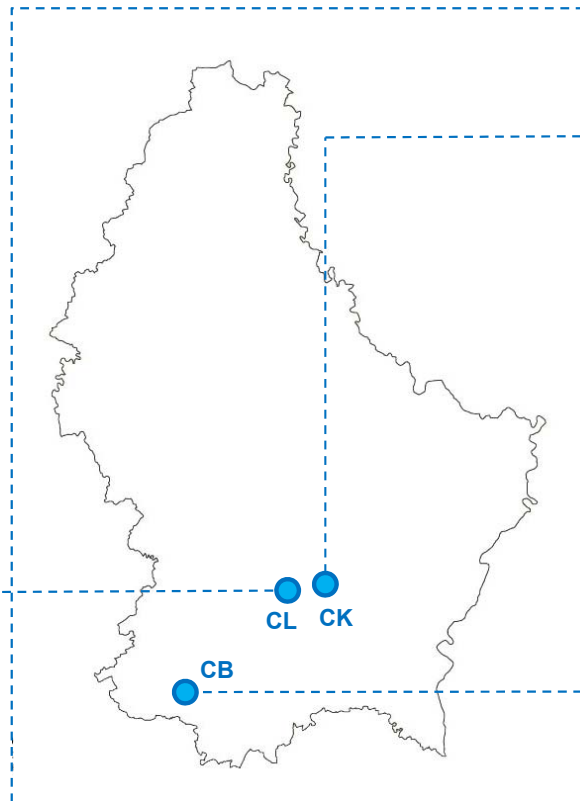
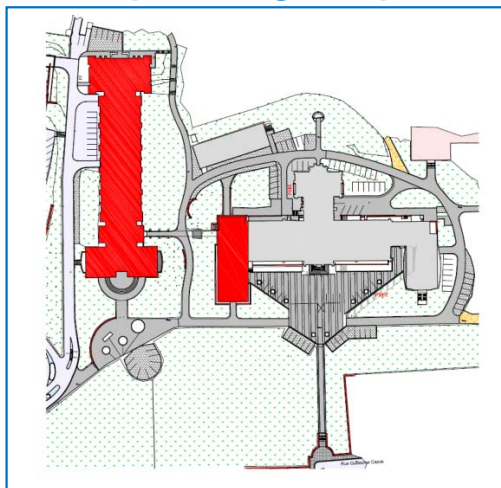
Kirchberg Campus



Belval Campus



Limpertsberg Campus



WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY? IS IT REALIZED IN BELVAL? SOME FACTS ABOUT THE UNIVERSITY OF LUXEMBOURG



FIGURES:

- **FOUNDED IN 2003** AS FIRST AND UNIQUE UNIVERSITY OF LUXEMBOURG
- **3 FACULTIES** (HUMAN SCIENCES, NATURAL SCIENCES, LAW AND FINANCE)
- **3 INTERDISCIPLINARY CENTERS** (BIOMEDICINE, IT-SECURITY, CONTEMPORARY HISTORY)
- **6,200 STUDENTS, 250 TEACHERS, 1,700 EMPLOYEES** (ACADEMIC + ADMINISTRATIVE STAFF)

CARACTERISTICS:

- **FACULTY STRUCTURE IN STABILISATION PHASE** (ADDITION OF RESEARCH UNITS AND CENTERS)
- **DYNAMIC GROWTH AND REDUCTION OF RESEARCH UNITS** (STUDENTS, ACADEMIC STAFF)
- **ROUTINE IN ADMINISTRATION STRUCTURE TO BE FOUND** (PROCESSES AND PROCEDURES)

WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY?

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IMPACT ON INFRASTRUCTURES

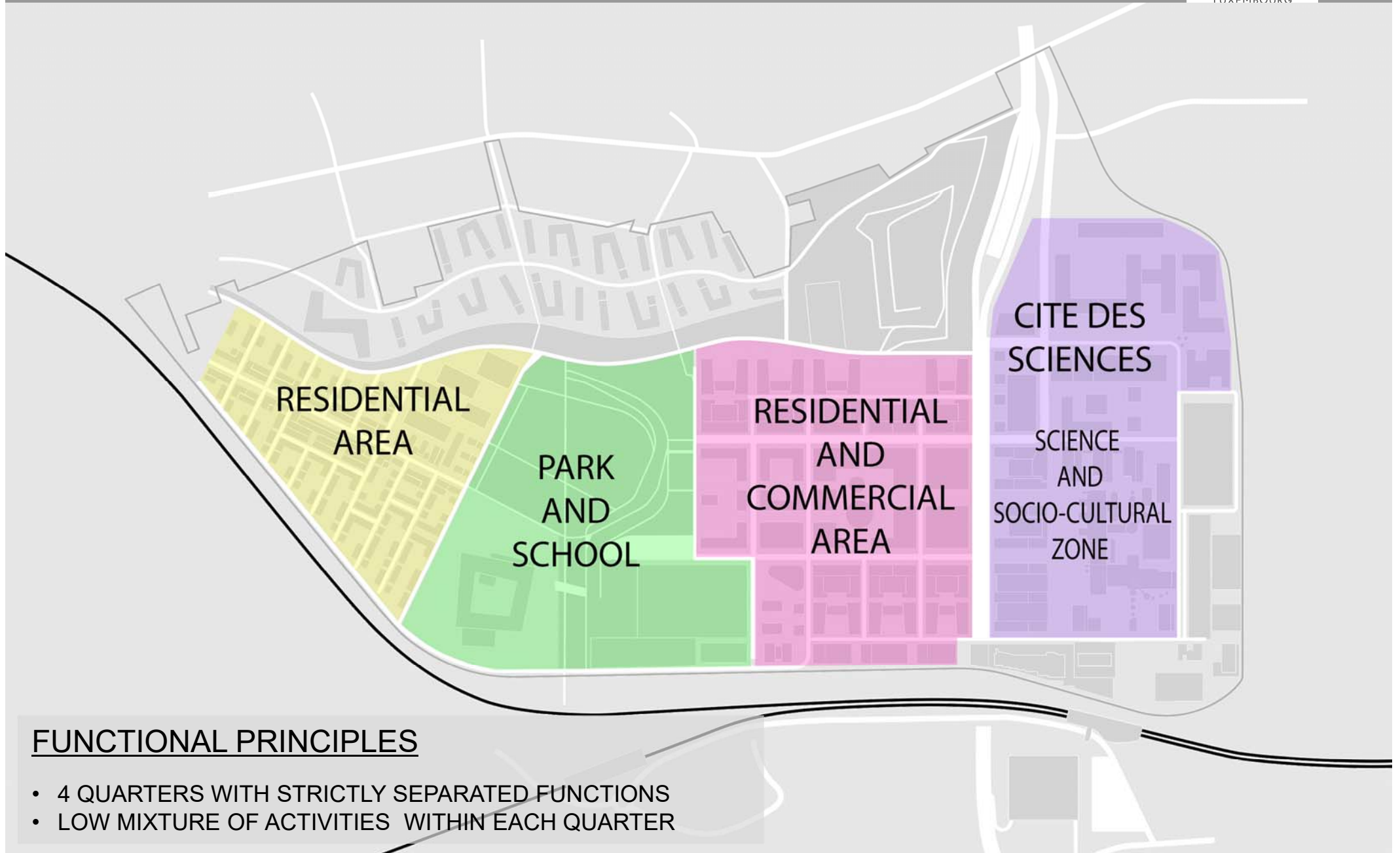
- HIGH FREQUENCY OF
CHANGING SPACE REQUIREMENTS
CHANGING FUNCTIONAL STRUCTURES BETWEEN UNITS
- **RESEARCH AND LEARNING** NEED SPECIALIZED SPACE WITH POSSIBILITY OF
INDIVIDUAL CONCENTRATED WORK
EXCHANGES WITH OTHERS (**WORKING GROUPS** AND **INFORMAL EXCHANGE**)
- EXPANDED NEED OF **INTERDISCIPLINARY COOPERATION** REQUIRING SPACE

→ 2 **FUNDAMENTAL REQUIREMENTS** ON INFRASTRUCTURES:

FLEXIBILITY (ADAPTATION TO CHANGING NEEDS)

COMMUNICATION AREAS (FORMAL AND INFORMAL MEETING ZONES)

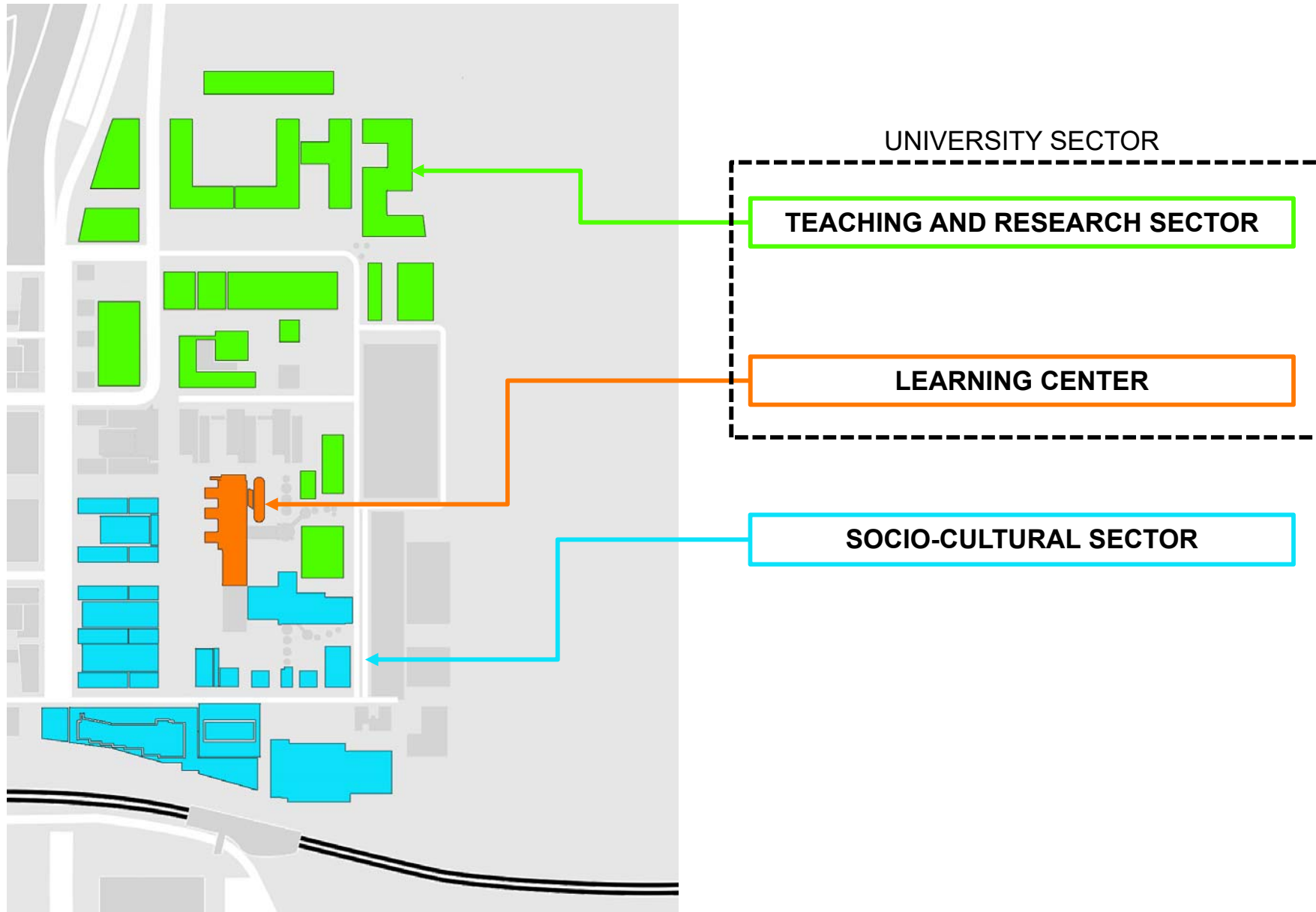
WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY? IS IT REALIZED IN BELVAL? MASTERPLAN BELVAL



FUNCTIONAL PRINCIPLES

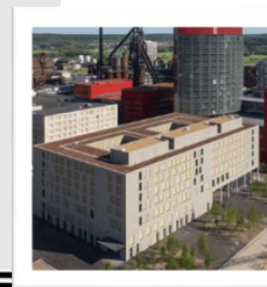
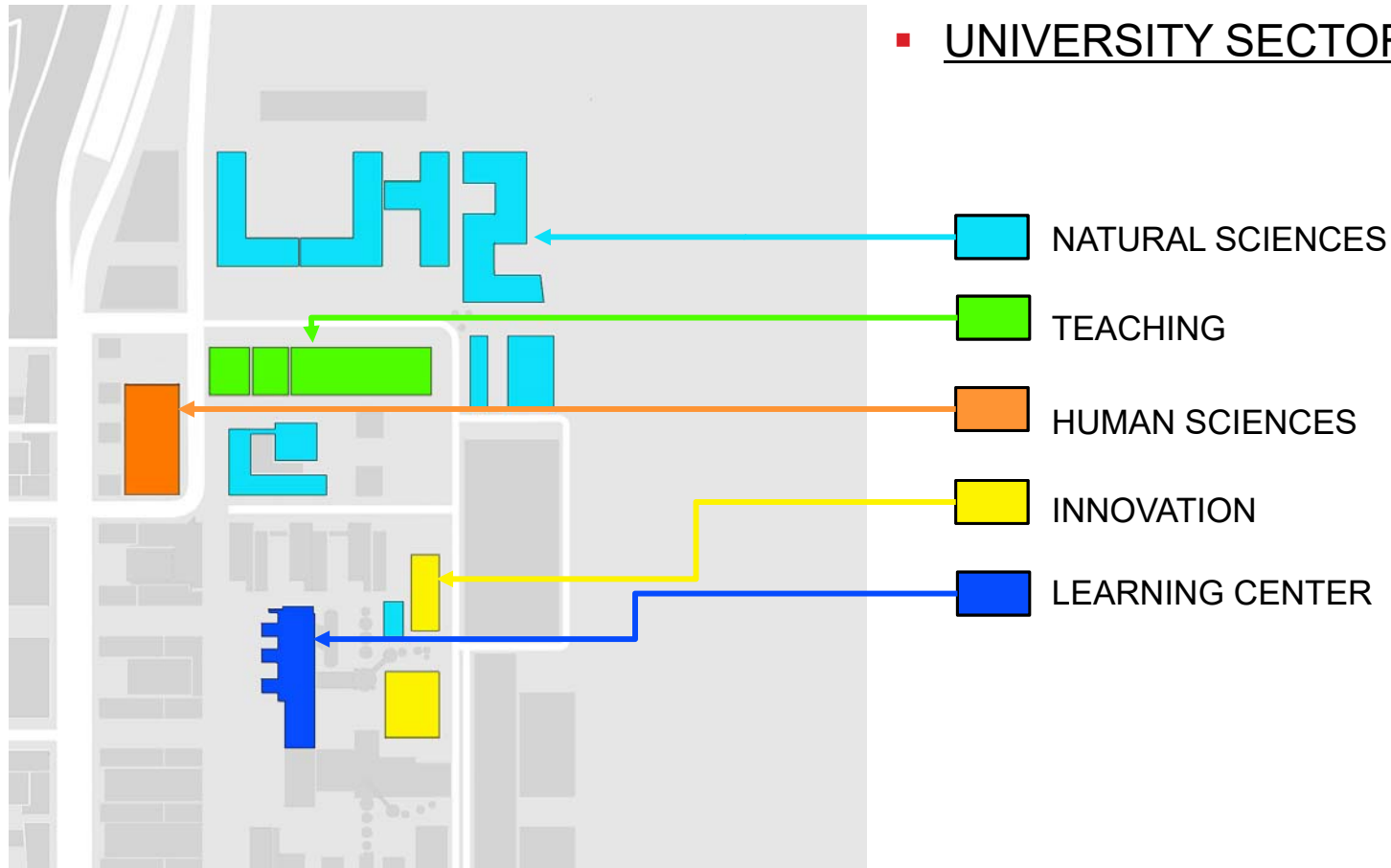
- 4 QUARTERS WITH STRICTLY SEPARATED FUNCTIONS
- LOW MIXTURE OF ACTIVITIES WITHIN EACH QUARTER

WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY? IS IT REALIZED IN BELVAL? 1 CITE DES SCIENCES - USE AREAS



WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY? IS IT REALIZED IN BELVAL? 2 CITE DES SCIENCES - FUNCTIONAL ORGANISATION

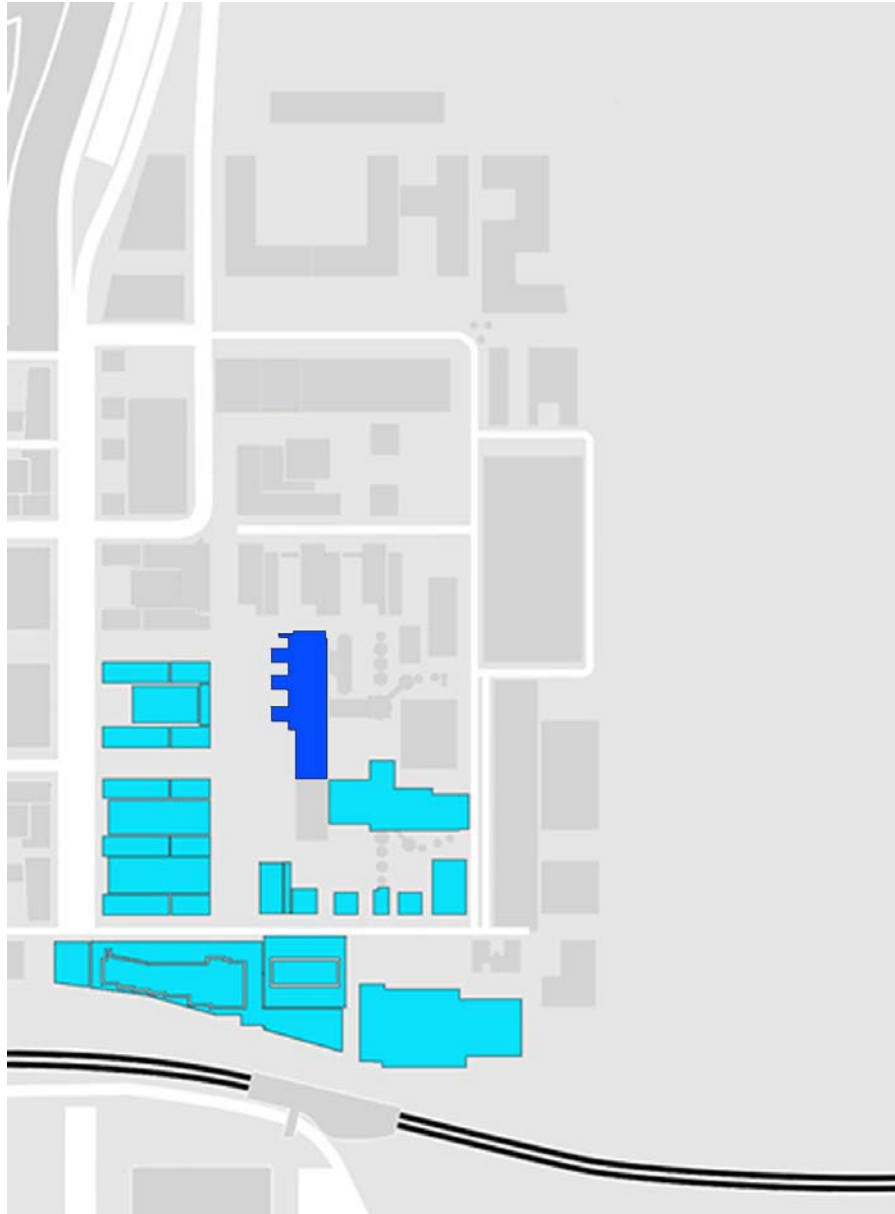
UNIVERSITY SECTOR



WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY ?

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2 CITE DES SCIENCES - FUNCTIONAL ORGANISATION



LEARNING CENTER

- BINDING FUNCTION BETWEEN SCIENCES AND PUBLIC

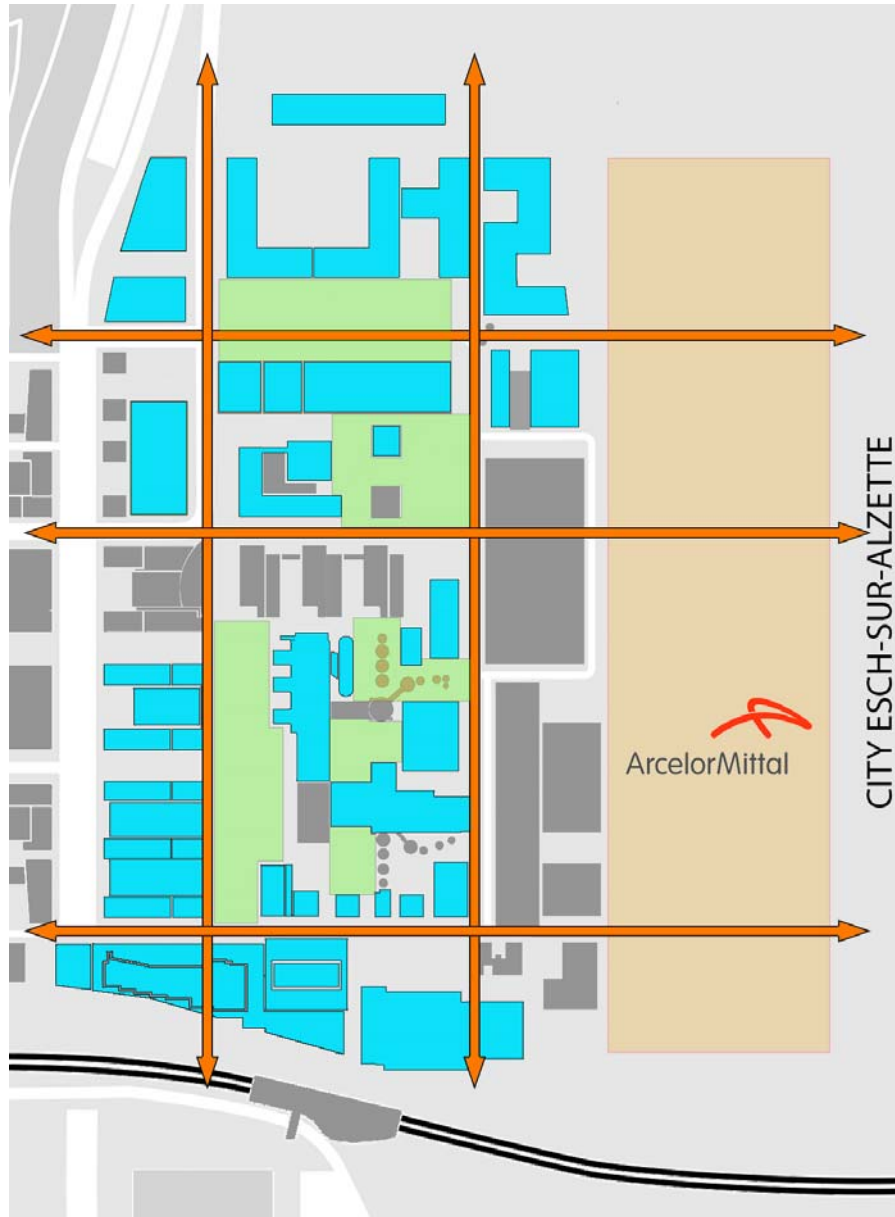
SOCIO-CULTURAL SECTOR

- CONCERT HALL
- SHOWROOMS
- COMMERCIAL AREAS
- APARTMENTS

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4 URBANISM CONCEPT



■ URBAN STRUCTURE WITH HIGH DENSITY

FLOOR AREA RATIO = MAX 10

(PROPERTY AREA x 10 = FLOOR AREA)

■ 5 + X STOREY BUILDINGS ALTERNATING WITH

■ SQUARES OF DIFFERENT SIZE

ARRANGEMENT INSPIRED BY GROWN URBAN
EXAMPLES

■ VISUAL AXES OF LIAISON

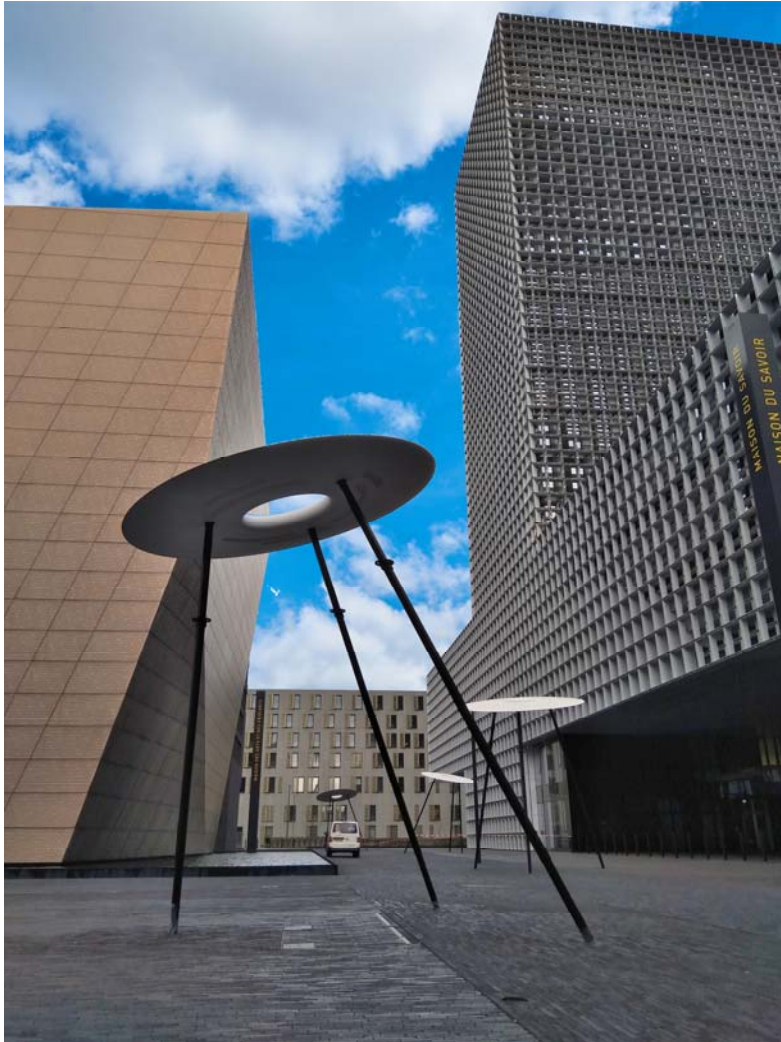
■ CONNECTING AND VISUAL AXES DIVIDING THE SITE IN
BOTH DIRECTIONS

■ PRESERVING THE POSSIBILITY OF LATER CONNECTION
TO THE CITY OF ESCH (BLOCKED TODAY BY ACTIVITY OF
ARCELOR MITTAL)

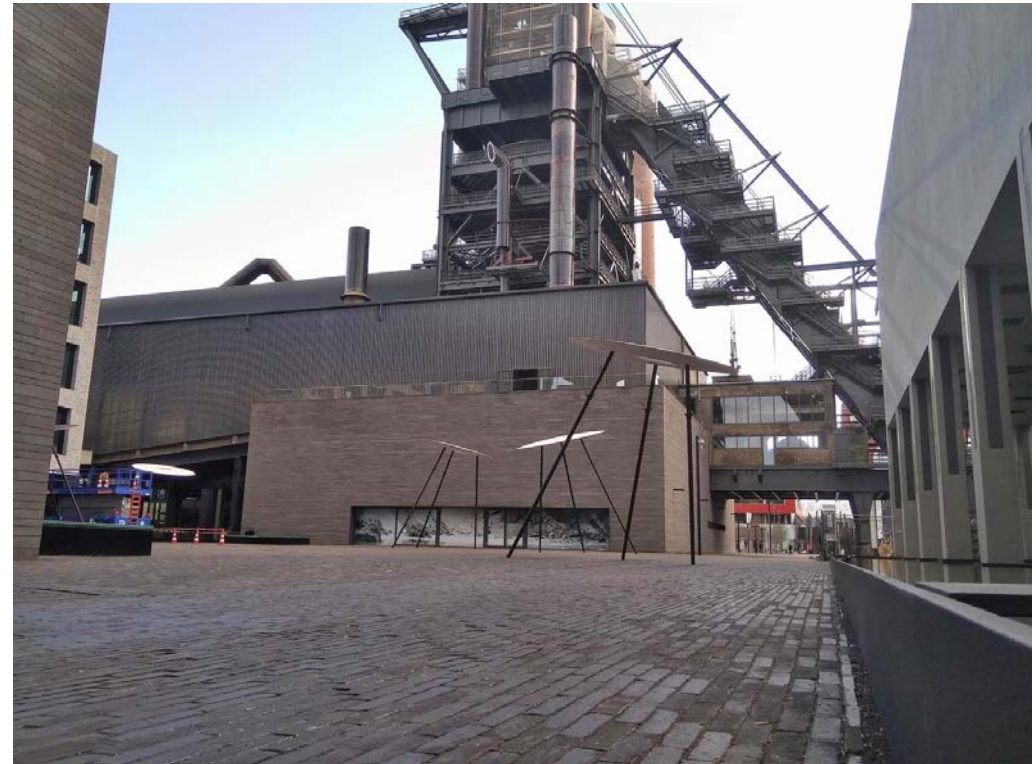
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4 URBANISM CONCEPT



- DENSITY BETWEEN BUILDINGS

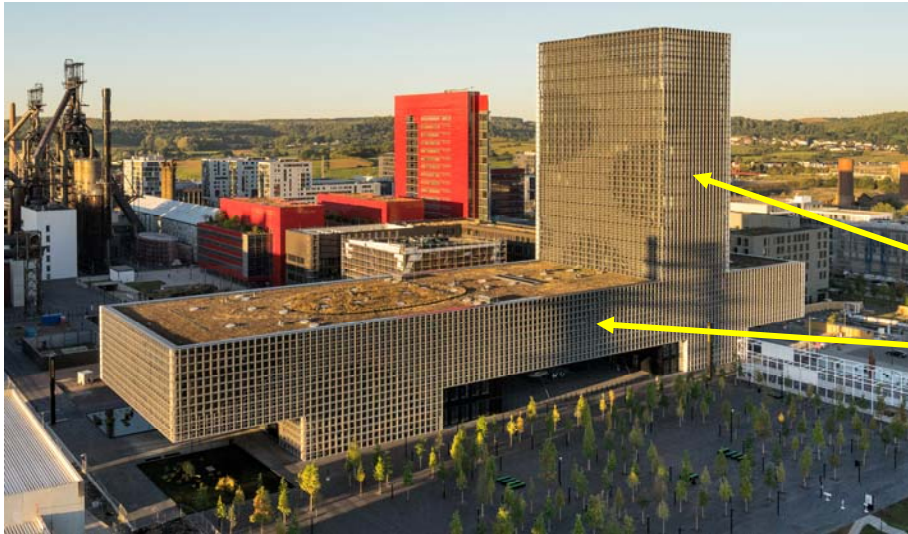


- SQUARES INSPIRED BY GROWN URBAN STRUCTURES AND IRON FOUNDRIES

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THE BUILDINGS: 1. MAISON DU SAVOIR – MSA CENTRAL ADMINISTRATION AND LECTURE BUILDING



ARCHITECT: Baumschläger Eberle

OUTSIDE APPEARANCE

CROSS STRUCTURE:

- CENTRAL ADMINISTRATION (VERTICAL PILAR)
- CENTRAL LECTURE ROOMS (HORIZONTAL BAR)

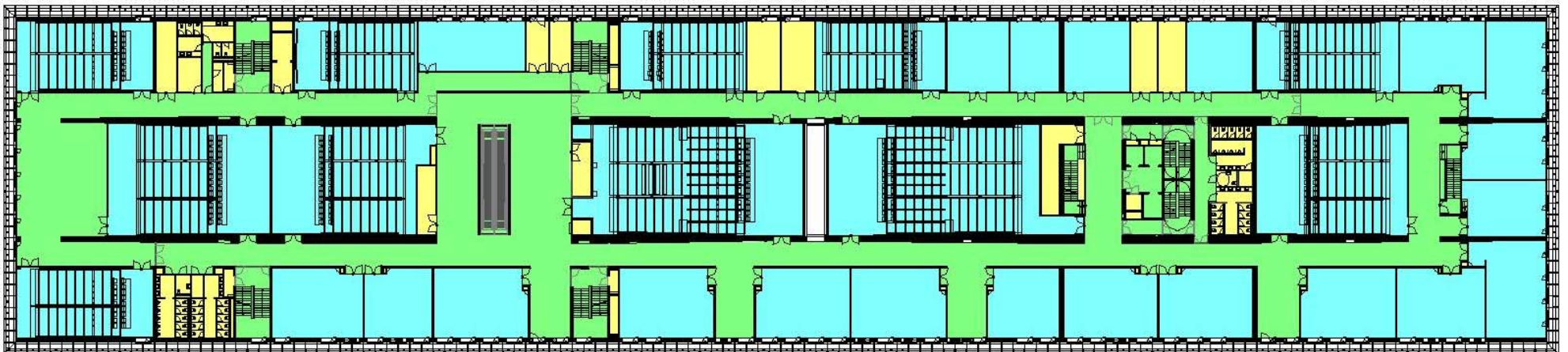
BOTH VISUALLY LINKED BY METAL COAT
ATTITUDE OF DEFENDING

INNER STRUCTURE

HORIZONTAL BAR:

- RIGOROUSLY ORGANIZED TEACHING MACHINE

- WINDOWSLESS CORE HOUSE WITH AUDITORIUMS
- VERY LONG ACCESS CORRIDORS WIDENED BY SMALL NICHES



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THE BUILDINGS: 2. MAISON DU NOMBRE - MNO

THEMATIC BUILDING THEORETIC NATURAL SCIENCES



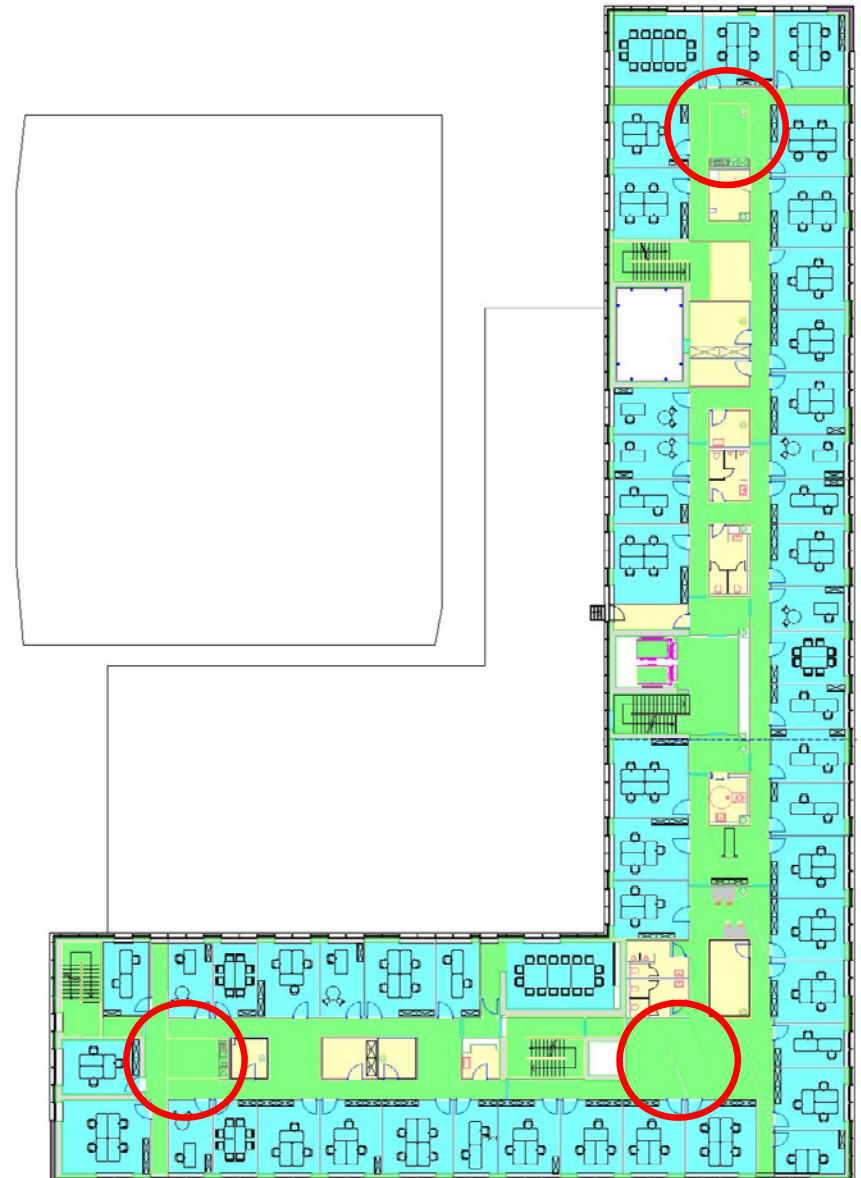
ARCHITECT: Witry-Witry

OUTSIDE APPEARANCE

- COMPACT DESIGN IN SIMPLE GEOMETRIES
- CLASSICAL ADMINISTRATION ARCHITECTURE

INNER STRUCTURE

- CLASSIC LAYOUT OF CELL OFFICES
- FEW AND SMALL COMMUNITY SPACES
- HIGH OCCUPANCY PRESSURE
- LIMITED RESERVE FOR DYNAMIC GROWTH



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THE BUILDINGS: 3. AILE NORD AILE SUD

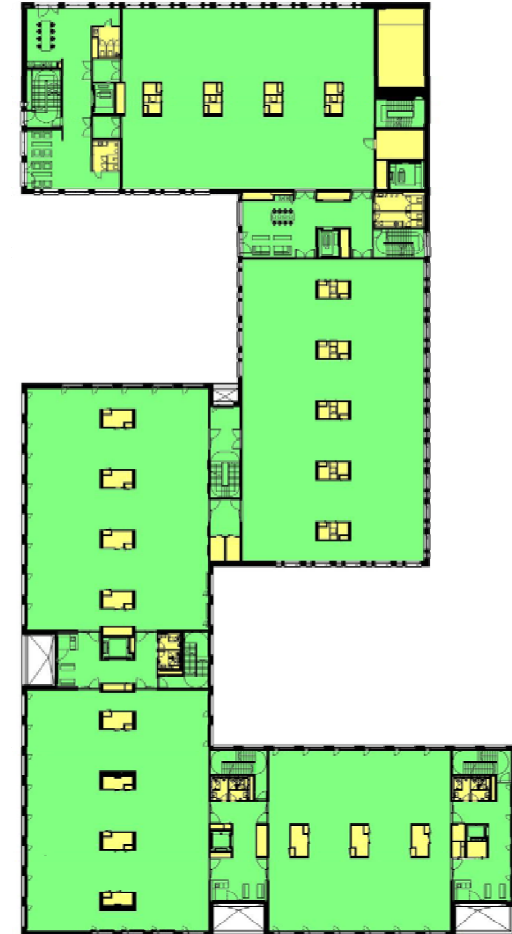
THEMATIC BUILDING PRACTICAL NATURAL SCIENCES



ARCHITECT: Behles & Jochimsen / ww+ architektur +

OUTSIDE APPEARANCE

- COMPACT DESIGN IN SIMPLE GEOMETRIES
- CLASSICAL ADMINISTRATION ARCHITECTURE



INNER STRUCTURE

- FLEXIBLE PLATFORMS WITH PRECONFIGURED INSTALLATION SHAFTS

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THE BUILDINGS: 4. LEARNING CENTER



ARCHITECT: Hermann & Valentini

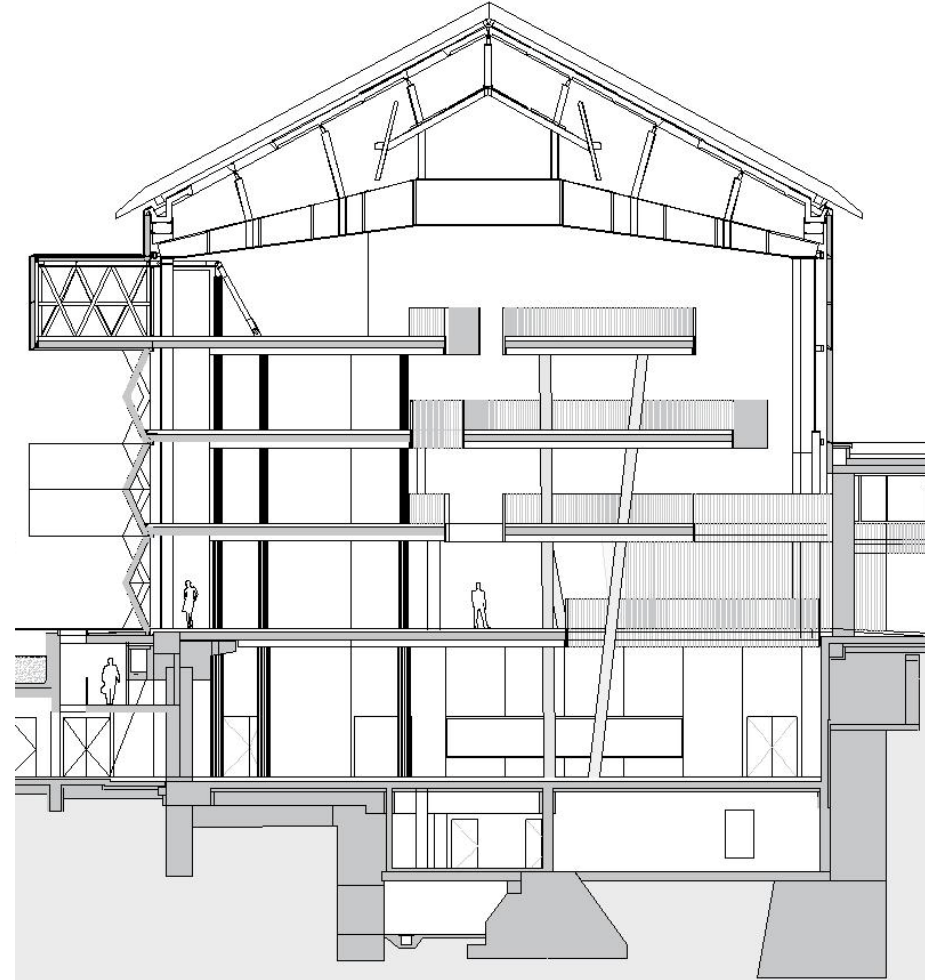
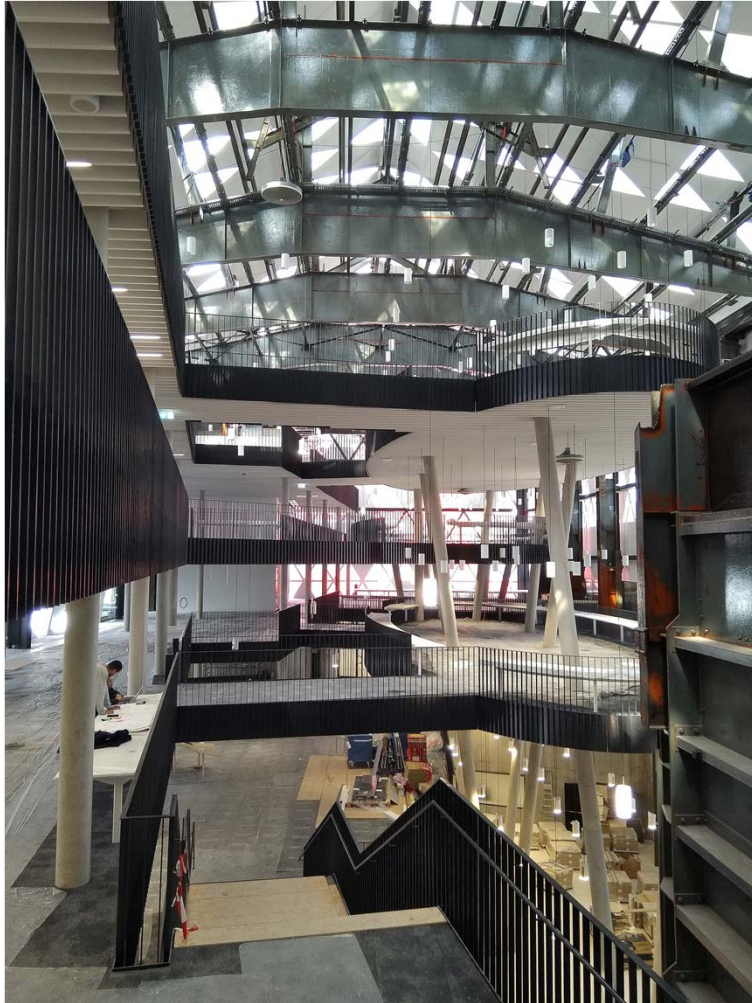
OUTSIDE APPEARANCE:

- SELF CENTERED, CLOSED BLOCK
- NO INVITING GESTURE

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THE BUILDINGS: 4. LEARNING CENTER



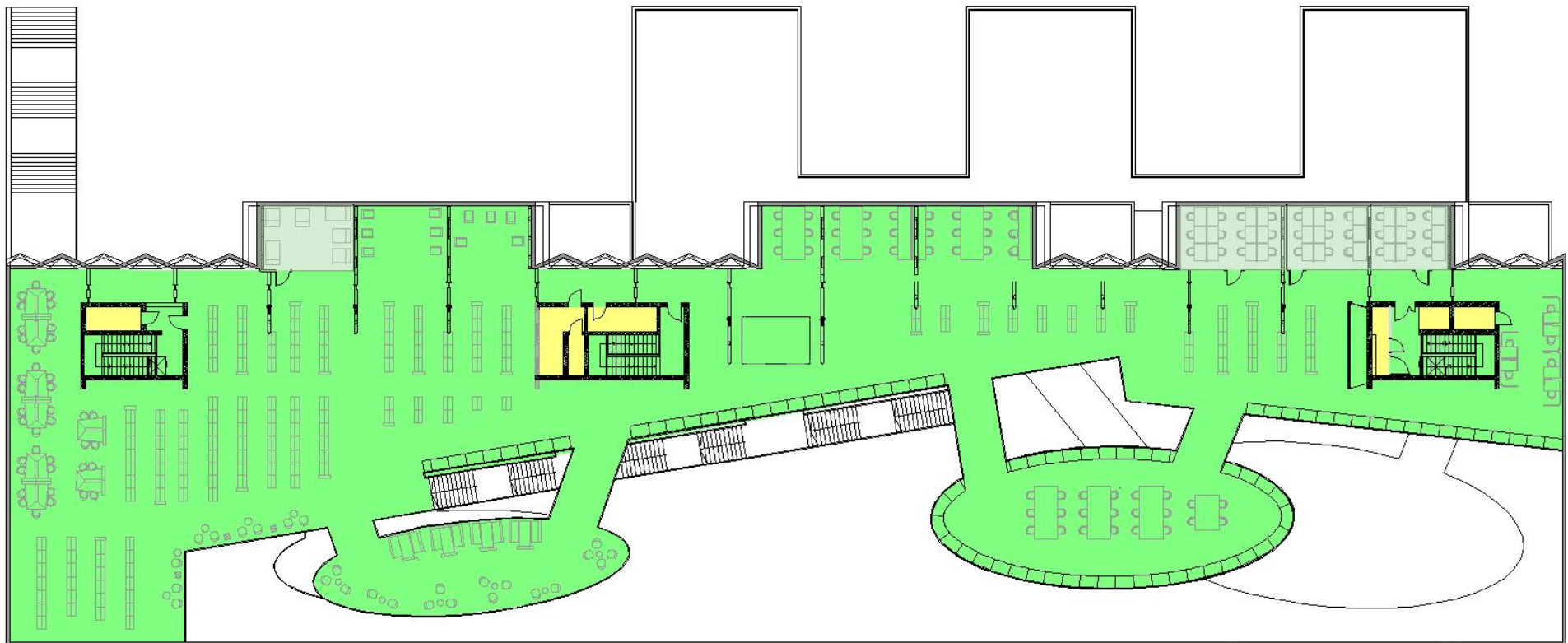
INNER STRUCTURE

- GENEROUS NEUTRAL SHELL RECEIVING THE MULTIPLE FUNCTIONS
- VARIATION OF LEVELS LINKED BY OPEN AIR VOLUMES

WHICH ARCHITECTURE IS REQUIRED BY A YOUNG UNIVERSITY ?

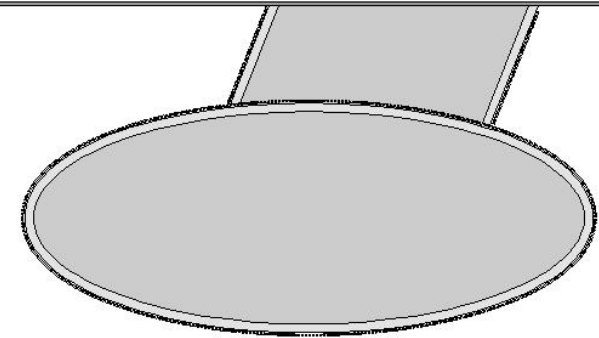
IS IT REALIZED IN BELVAL?

THE BUILDINGS: 4. LEARNING CENTER



INNER STRUCTURE

- LARGE OPEN SPACE REDUCING DEFINITIVE INSTALLATIONS
- MAXIMUM OF FLEXIBILITY IN FUTURE USE



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MY PERSONAL CONCLUSION

NO:

- MASTERPLAN, URBAN CONCEPT AND BUILDING PROJECTS **TOO MUCH PREDEFINED**
→ **NO FLEXIBILITY** TO ADAPT DEVELOPMENT ACCORDING TO **EXPERIENCES OF USERS**
- STRICT **SEPARATION OF FUNCTIONS** IN 4 QUARTERS (MASTERPLAN) DOES NOT FOSTER INSPIRING MIXTURE OF ACTIVITIES
- SOME THEMATIC BUILDINGS WITH TRADITIONAL CELL-STRUCTURE **TOO SMALL**, NOT ENOUGH **COMMUNITY AREAS** → **DO NOT FAVOR INTERDISCIPLINARY EXCHANGE**
(SUCH AS THEORETICAL SCIENCES - *MAISON DU NOMBRE*)

YES:

- PLANNED VERY THOROUGHLY IN ALL SCALES - FROM THE **MASTERPLAN** TO THE **SMALLEST DETAIL**
- HIGH **CONCEPT STANDARDS** AND **REALISATION QUALITY** OF SITE AND BUILDINGS
- SOME BUILDINGS CONCEIVED AS **NEUTRAL PLATFORMS** ENABLING LATER ADJUSTMENTS
(SUCH AS PRACTICAL NATURAL SCIENCES – *AILE NORD-AILE SUD, LEARNING CENTER*)
- MORE INFLUENCE OF UNIVERSITY IN THE FUTURE PROJECTS

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MY PERSONAL CONCLUSION



ON BALANCE:

- **INDIVIDUAL TOOL OR SWISS KNIFE?**

THE CITE DES SCIENCES HAS REALIZED **BOTH CONCEPT STRATEGIES.**

THE LEARNING CENTER AND SOME LABORATORY BUILDINGS STAND AS LARGE SHELLS
PROMISSING **A HIGH FLEXIBILITY OF USERS.**

OTHER THEMATIC BUILDINGS NEED **ADAPTATION TO MIDDLE AND LONG TERM NEEDS.**

- THE ATTITUDE OF BELVAL-BUILDINGS IS **SELF CENTERED, NOT TRANSPARENT.**
THE SITE **DOES NOT FOSTER INSPIRING DYNAMIC COMMUNICATION** BETWEEN RESEARCH DISCIPLINES.
- EXPERIENCES OF SOME YEARS NEEDED TO EVALUATE THE **REAL POTENTIAL OF THE SITE** IN TERMS OF **FLEXIBILITY AND DEVELOPMENT.**

THANK YOU FOR YOUR ATTENTION!