

Standards & norms for a ULB + VUB Library & Learning Centre

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The idea of a new L&LC for ULB and VUB

A new library building !
How to start ?

Basic ideas:

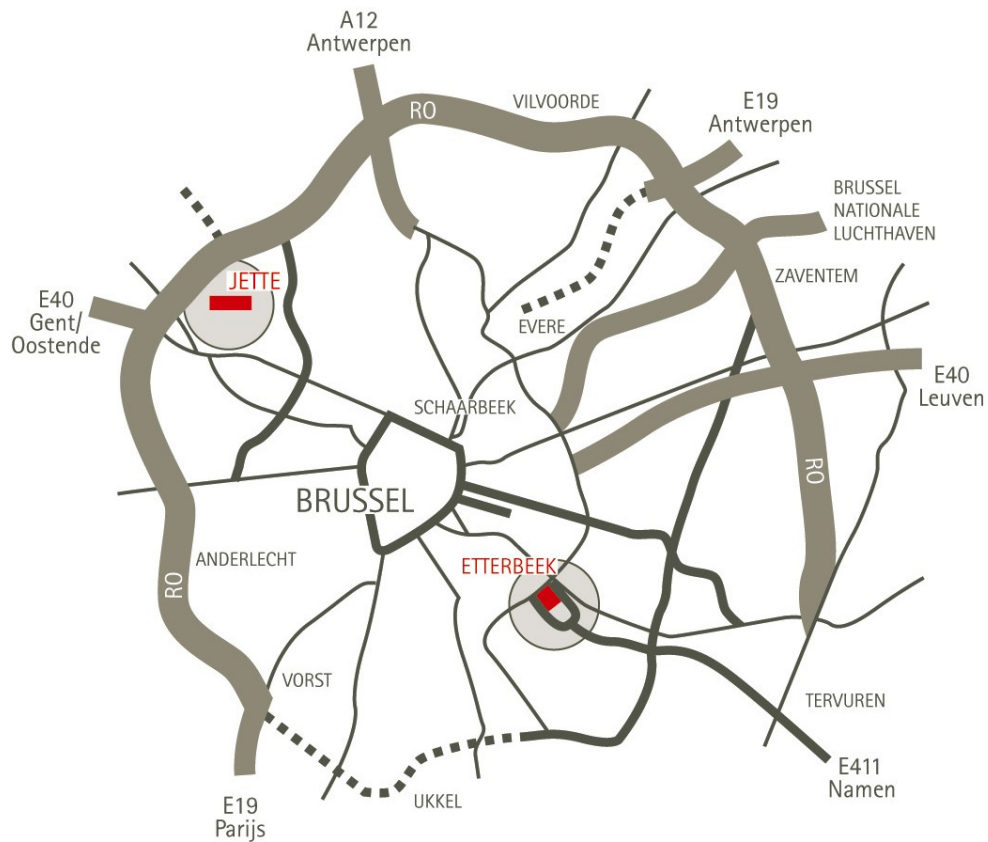
- ULB – Faculté des Sciences & Techniques
- VUB – 7 faculties

Not a library, but a library & learning centre (L&LC)

Even more than a standard L&LC

→ central information point for students

Campus de la Plaine & Campus Oefenplein



Boundary conditions

Certainties (more or less):

- 1 ULB faculty + 7 VUB faculties
- Library + Learning Centre + ...
- Building somewhere *on* the border ULB-VUB

For the remainder there were nothing but doubts and uncertainties:

- Dimensions?
- Cost?
- Budget?
- When?
- ...

Start with something

ULB had already calculated surfaces:

- Based on present number of students and personnel
- With some basic form of norm (e.g. m² per student)
- Taking into account the present collection and its evolution

Also VUB calculated the required surfaces
Both for the library, and the learning part

→ Excel !

First estimations

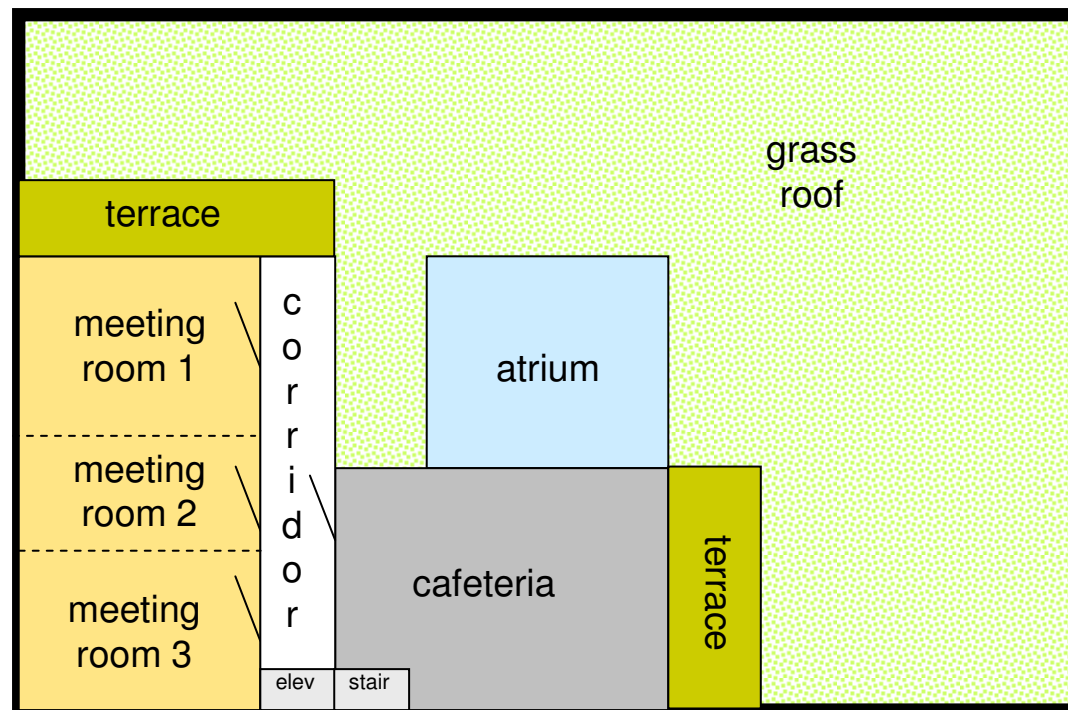
Totale oppervlakte:	9.000 m²	Gebouw: 35 x 46m = 1.610 m ²
		Atrium: 16 x 14 m = 224 m ²
Verdeling per verdieping:	niveau -2	1.610 m ²
	niveau -1	1.610 m ²
	gelijkvloers 0	met atrium 1.610 m ²
	niveau +1	met atrium 1.386 m ²
	niveau +2	met atrium 1.386 m ²
	niveau +3	met atrium 1.386 m ²
	Totaal	8988 m² (= afgerond 9.000 m ²)

Stand van zaken: huidige collecties volgens niveauperdeling

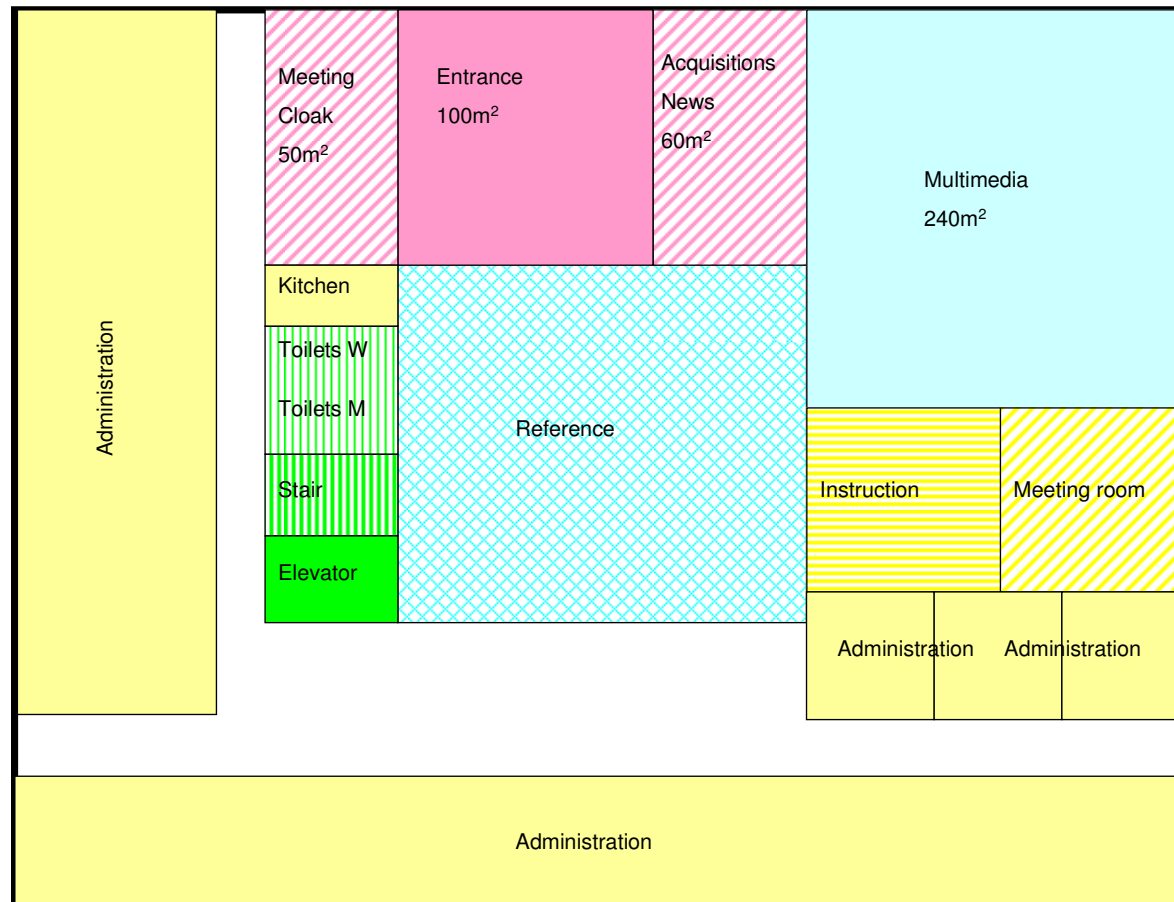
Niveau	Collecties	Boeken	Tijdschr.	Thesissen	Totaal	Waarvan nu in leeszaal CB:
Niveau 1:	Collecties WE & IR					
	WE	14,000	30,000	4,000	48,000	
	IR	8,000	7,000	5,000	20,000	1.420 lopende meters of 290 Rekmeters
	Globaal	22,000	37,000	9,000	68,000	Inhoud van 3 à 4 Modules!
	Gemiddelde jaarlijkse groei: 1.900 volumes ULB collectie: ?					Nu in magazijn: 2.000 lopende meters of 400 RM
Niveau 2:	Collecties LW & PE					
	LW	176,000	45,000	6,000	227,000	5.100 lopende meters of 850 RM boeken
	PE	18,000	9,000	3,000	30,000	770 lopende meters tijdschriften of 150 RM tijdschriften
	Globaal	194,000	54,000	9,000	257,000	Wiedoperatie naar magazijn: 30 à 50% Inhoud van 6 à 8 modules
	Gemiddelde jaarlijkse groei: 5.800 volumes					
Niveau 3:	Collecties RC & ESP					
	RC	32,000	33,000	4,000	69,000	Waarvan nu in leeszaal CB:
	ESP	45,000	22,000	5,000	72,000	2.480 lopende meters of 410 RM boeken
	Globaal	77,000	55,000	9,000	141,000	2.200 lopende meters of 440 RM tijdschr.
	Gemiddelde jaarlijkse groei: 3.700 volumes					Wiedoperatie naar magazijn 30 à 50% Inhoud van 5 à 7 modules



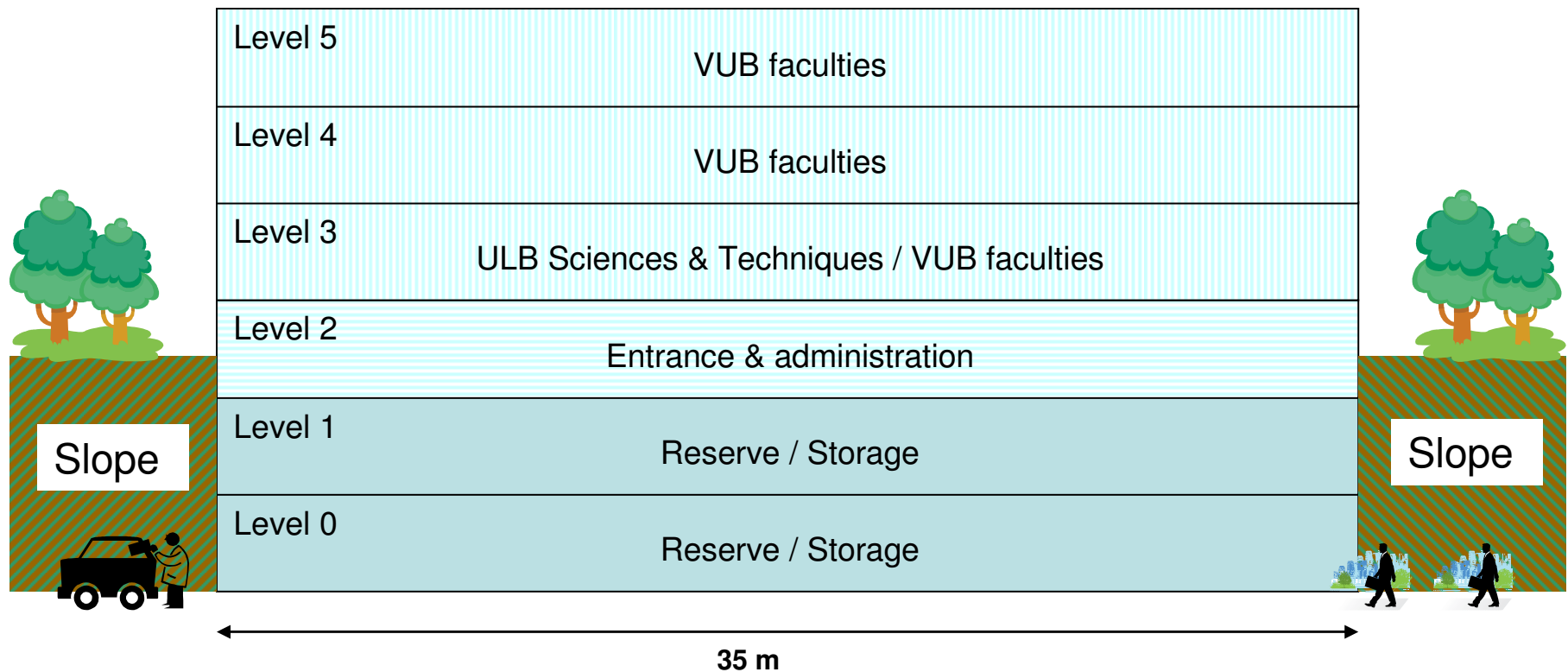
First sketches: Birds-eye view



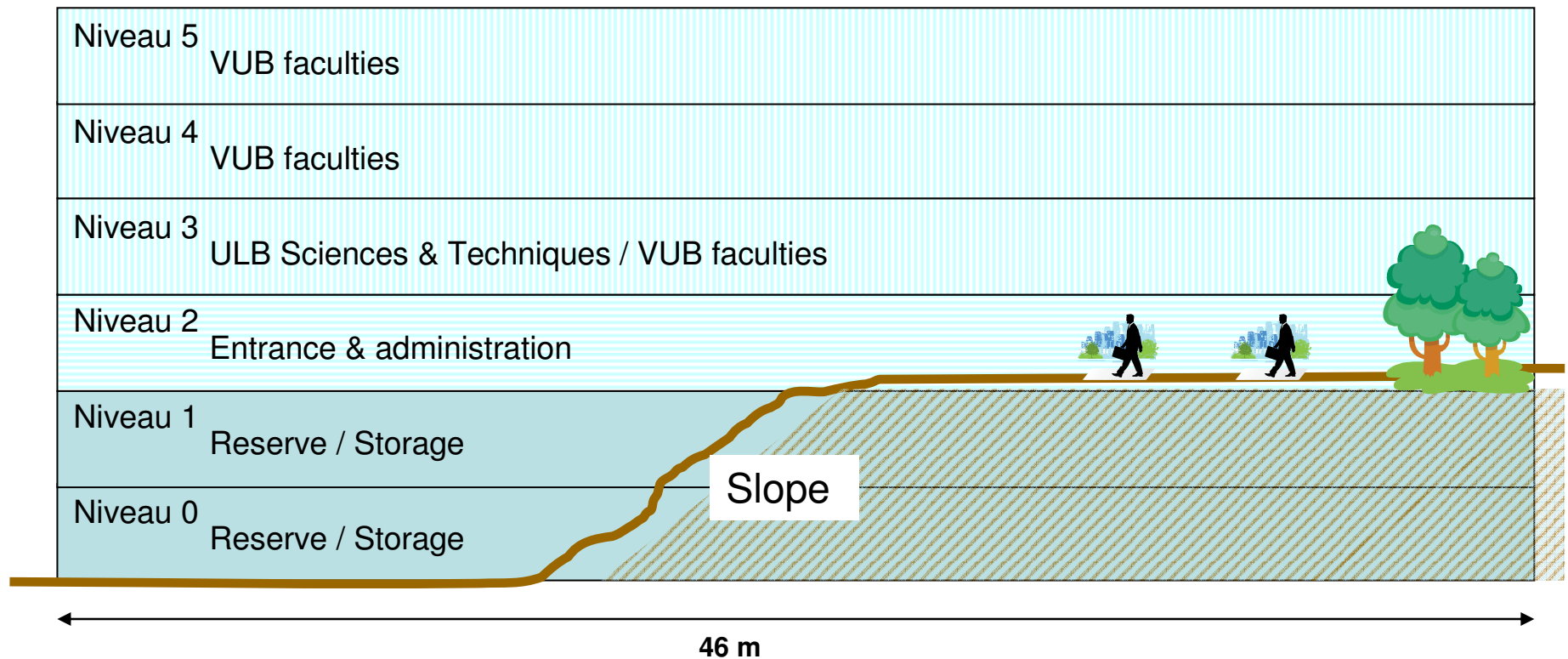
First sketches: “Map” of ground level



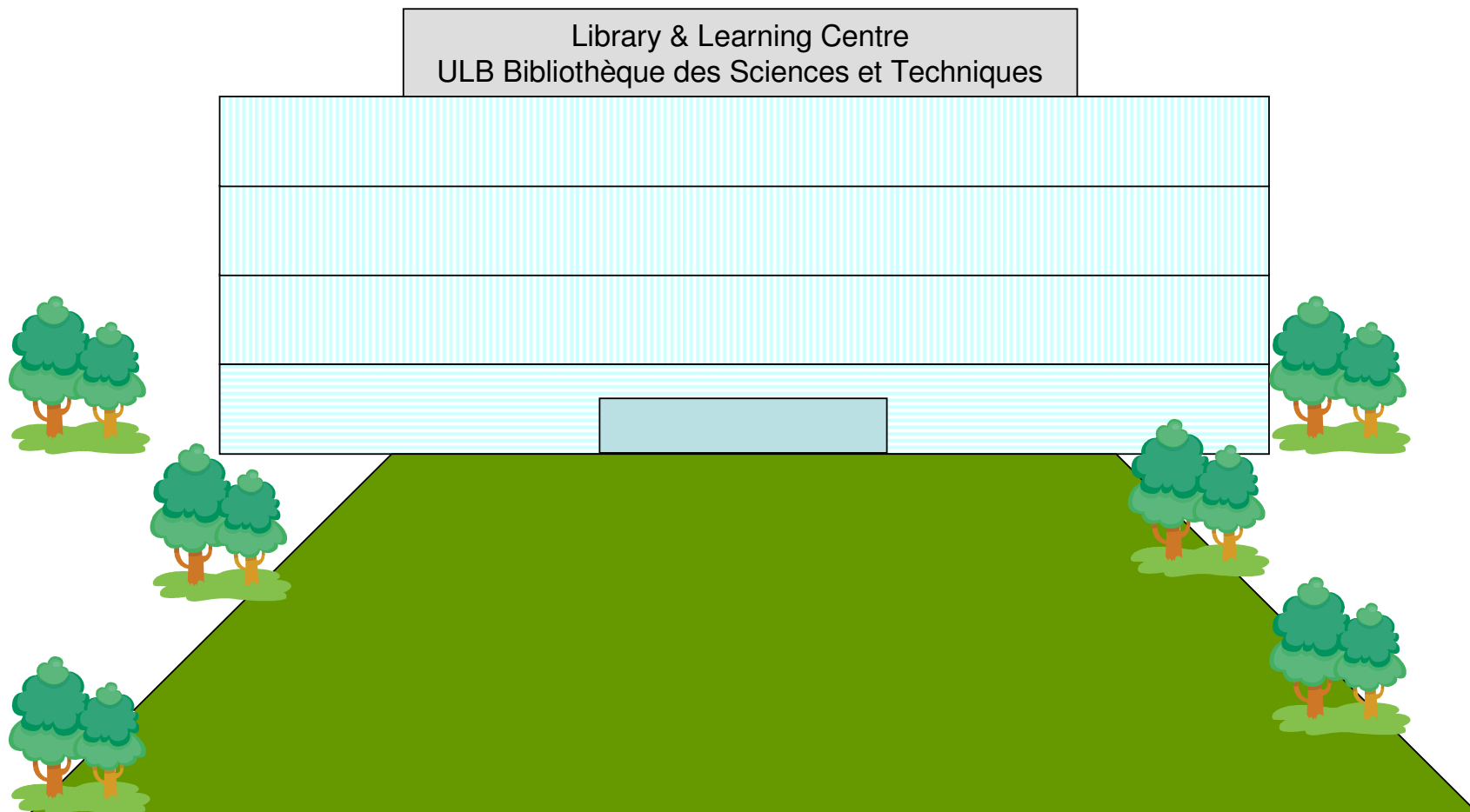
First sketches: Front view (from VUB-side)



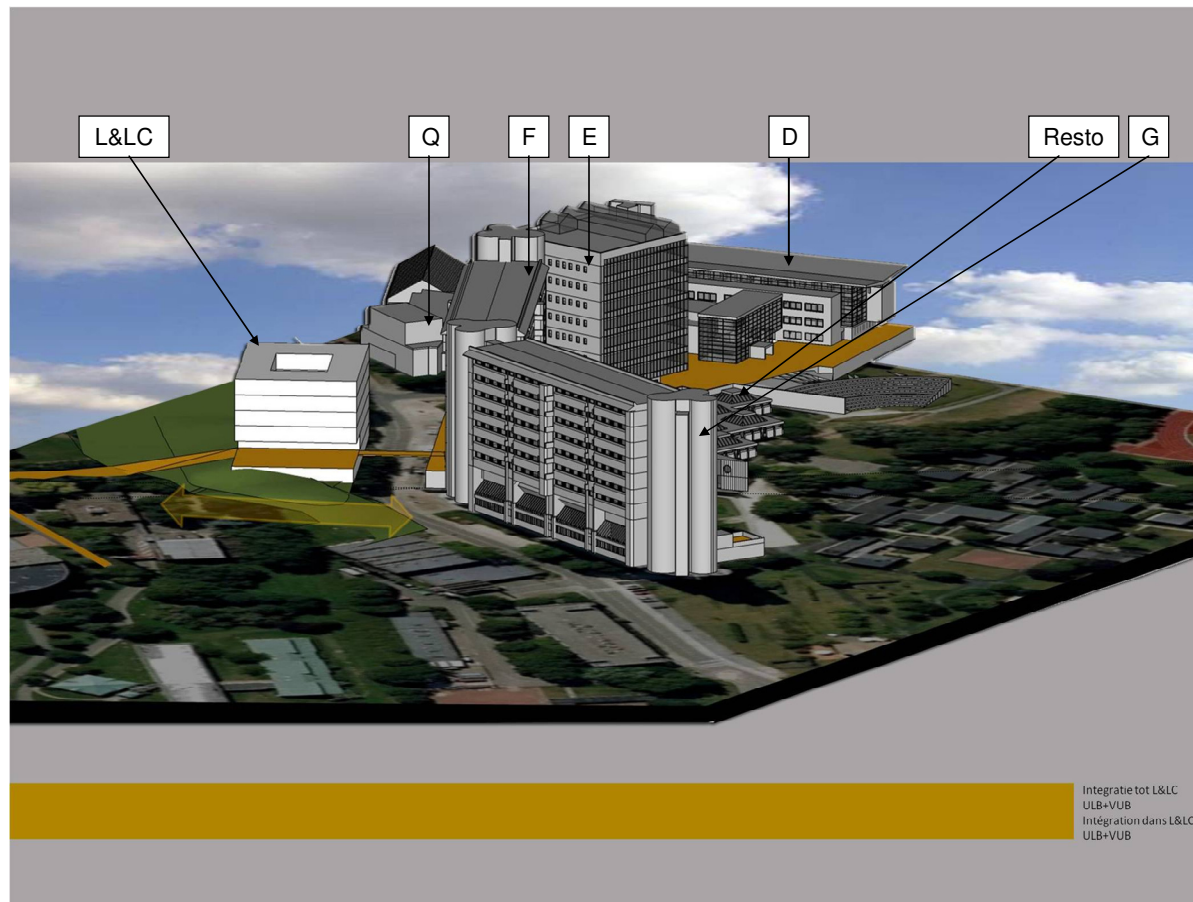
First sketches: Side view



First sketches: Front view (from ULB-side)



First sketches: 3D



Standards & norms for library construction

Standards & norms exist for the design of university libraries, e.g.:

- ACRL-norms
- SCONUL-norms

“design” =

- number of items in collection,
- surfaces,
- personnel

Can these norms & standards be used for a medium-sized / large Belgian library?

See the formulas and computations on the following slides

Numbers, numbers, numbers ...

Apologies:

- Far too many numbers on the following slides
- But, this subset give an impression of the struggle with numbers required for this project

By the way, in what follows, for the Vrije Universiteit Brussel I use the following equation:

$$UL = CL + ML$$

(UL = University Library, CL = Central Library, ML = Medical Library)



ACRL-norm

Formula A – collections

Basic collection	85,000	volumes
Per FTE academic personnel	100	volumes/FTE
Per FTE student	15	volumes/FTE
Per BA-field	350	volumes/field
Per MA-field	6,000	volumes/field
Per PhD-field	25,000	volumes/field

Quotation / Ranking	
A	90-100%
B	75-89%
C	60-74%
D	50-59%



ACRL-norm

Formula B – librarians

For each 500 FTE-students (or fraction thereof) up to 10,000	1 librarian
For each 1,000 FTE-students (or fraction thereof) above 10.000	1 librarian
For each 100,000 volumes (or fraction thereof)	1 librarian
For each 5,000 volumes (or fraction thereof) added or removed	1 librarian

This is valid for basic services, with opening hours 9-17h.
Not included are (among other):

- Opening hours before 9h and after 17h
- Maintenance and development of library management system
- Information booth
- Bibliographic instruction
- Collection development
- Collection maintenance
- Administration electronic services (databases, web page, ...)
- Efforts for information literacy and lifelong learning

ACRL-norm

Formula C – spatial needs

a. Spatial needs for users Per 5 students 1 work place of 25 to 35 square feet	= 2.3 to 3.2 m ²	
b. Spatial needs for literature Up to 150,000 volumes: 0.10 square foot/volume From 150,000 to 300.000 volumes: 0.09 square foot/volume From 300,000 tot 600,000 volumes: 0.08 square foot/volume More than 600,000 volumes: 0.07 square foot/volume	0.009290 0.008361 0.007432 0.006503	m ² per volume m ² per volume m ² per volume m ² per volume
c. Spatial needs for personnel These spaces comprise offices for staff members and employees, working space for cataloguing, files and specific equipment. The space for personnel must be estimated at 1/8 of the space calculated under a and b.		

Application of ACRL-norms

Formula A – collections

Application to a fictive library, very much resembling the VUB library

Section	Central Lib.	Medical Lib.	CL-total	ML-total	UL-total
Basic collection	1	1	85,000	85,000	170,000
Number of FTE AP	731	150	73,060	15,003	88,063
Number of FTE students	9,346	1,272	140,190	19,080	159,270
Number of BA-fields	25	3	8,750	1,050	9,800
Number of MA-fields	83	20	498,000	120,000	618,000
Number of PhD-fields	29	7	725,000	175,000	900,000
Total number of volumes ACRL			1,530.000	415,133	1,945,133

The present collection is much smaller: 450,000 volumes in the CL and 120,000 in the ML of the Vrije Universiteit Brussel

Is this a first indication that the ACRL-norm is too ambitious?

Application of ACRL-norms Formula B – librarians (1/2)

Based on Formula A

Section	CL	ML	UL
For each 500 FTE-students (or fraction thereof) up to 10,000	19	3	22
For each 1,000 FTE-students (or fraction thereof) above 10,000			0
For each 100,000 volumes (or fraction thereof)	16	5	21
For each 5.000 volumes (or fraction thereof) added or removed	9	2	11
Total number of librarians (basic services, 9-17h)	44	10	54

For additional services (besides the basic services used in the table) we need at least an additional 14 FTE librarians.

This brings us to 68 FTE librarians (now just over 30 FTE librarians).

Application of ACRL-norms Formula B – librarians (2/2)

Based on the real number of volumes

Section	CL	ML	UL
For each 500 FTE-students (or fraction thereof) up to 10,000	19	3	22
For each 1,000 FTE-students (or fraction thereof) above 10,000			0
For each 100,000 volumes (or fraction thereof)	5	2	7
For each 5.000 volumes (or fraction thereof) added or removed	3	1	4
Total number of librarians (basic services, 9-17h)	27	6	33

With the present, too small and to slowly growing collection, we could work with 20 FTE less.

In total we would then need 47 FTE librarians to offer the necessary services.

Application of ACRL-norms

Formula C – spatial needs users

Per 5 students 1 work place of 25 tot 35 square feet

→ with 9,346 students the Central Library should have:
4,300 to 5,980 m² for work places

→ with 1,272 students the Medical Library should have:
585 to 815 m² for work places



Application of ACRL-norms

Formula C – spatial needs collections

Spatial needs for collections (collection calculated with ACRL-formula)

	CL	ML
First 150,000 volumes	1,394 m ²	1,394 m ²
Volumes 150,000-300,000	1,254 m ²	1,254 m ²
Volumes 300,000-600,000	2,230 m ²	856 m ²
Above 600,000 volumes	7,999 m ²	
Total	12,876 m ²	3,503 m ²

Spatial needs for collections (collection calculated with actual number of items)

	CL	ML
First 150,000 volumes	1,394 m ²	1,115 m ²
Volumes 150,000-300,000	1,254 m ²	
Volumes 300,000-600,000	1,115 m ²	
Above 600,000 volumes		
Total	3,763 m ²	1,115 m ²

Application of ACRL-norms

Formula C – spatial needs personnel

Spatial needs for personnel (collection calculated with ACRL-formula)

	CL	ML
Section users	537 m ² - 748 m ²	73 m ² - 102 m ²
Section collection	1,610 m ²	438 m ²
Total	2,147 m ² - 2,357 m ²	511 m ² - 540 m ²

Spatial needs for personnel (collection calculated with actual number of items)

	CL	ML
Section users	537 m ² - 748 m ²	73 m ² - 102 m ²
Section collection	470 m ²	139 m ²
Total	1,007 m ² - 1,218 m ²	212 m ² - 241 m ²

Spatial needs ACRL vs. L&LC (VUB-CL only)

	minimum	maximum	L&LC-estimate
Spatial needs users	4,300 m ²	5,980 m ²	
Spatial needs collections	3,763 m ²	12,876 m ²	
Spatial needs personnel	1,007 m ²	2,357 m ²	
Total spatial needs	9,070 m ²	21,213 m ²	8,988 m ²

SCONUL-norm: net spatial needs

Net spatial needs based on FTE students:

- 1.25 m²/FTE students
- plus 0.2 m²/FTE students within 10 years
- plus space for special collections
- plus space for special needs

Spatial needs for library administration

→ included (as 20%) in net spatial needs

Spatial needs for working places (consultation of collection):

→ included (as 2.39 m²/reading place in net spatial needs)

+ (but) more space for some disciplines (e.g. law students, with 7 m²/reading place)

Total spatial needs:

Add 25% for non-library spaces (toilets, stairs, ...)

SCONUL-norm: Extensions for “new” technologies

Number of pc's per FTE students:

- 1 pc/FTE student

Space for reading places becomes bigger than 2.39 m²/reading place:

- between 2.5 and 4 m²/reading place
(and still 7 m²/reading place for law students)

This brings the net spatial need, based on FTE students, to:

- 1.25 to 1.55 m²/FTE students
- 2 m² for law students

Application of SCONUL-norms to the present VUB-libraries

Net spatial needs (SCONUL)

	Now	10-year growth	Total
All students in CL except law	10,448 m ²	1,532 m ²	11,980 m ²
All law students in CL	3,410 m ²	375 m ²	3,785 m ²
Total CL			15,765 m ²

Total spatial needs

→ 15.765 m² + 25% = 19.706 m²

In other words:

- Similar to ACRL-results
- Seems to be over-estimated
- How realistic, and how "reliable" are these results?

Another confrontation of international norms with reality

University of Antwerp (UAntwerpen) constructed a new library:

- At the occasion of the merger of three universities in Antwerp
- In existing (old) buildings

Norms based on several international norms & standards:

- ACRL, SCONUL, German & French norms
- UA-norms

Result:

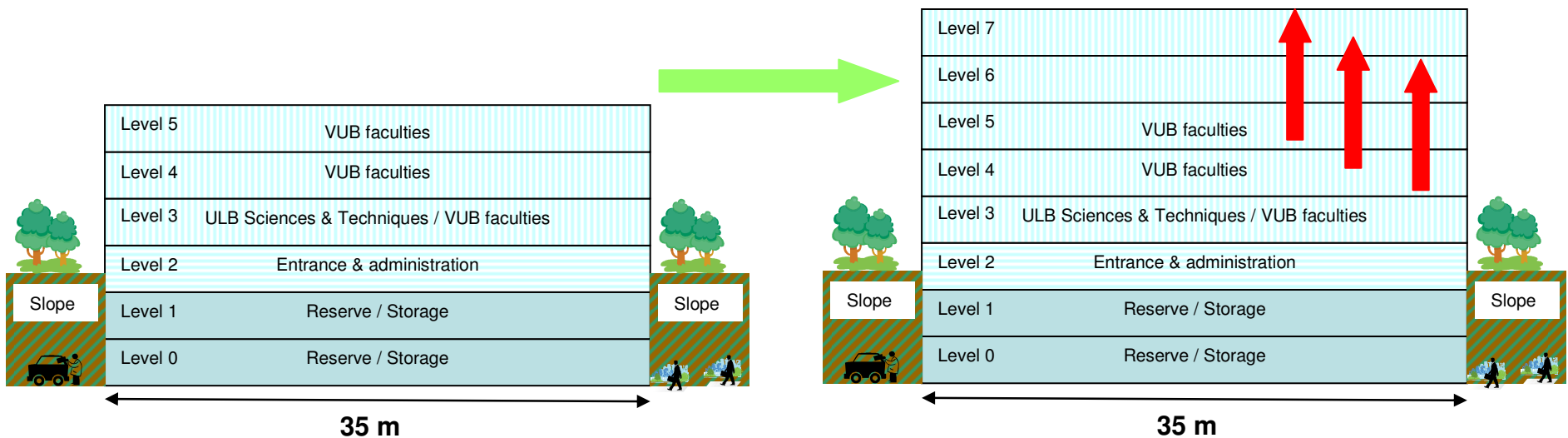
- Huge spatial needs
- *Panic* when applied to L&LC

But, finally:

- Realisation of calculated seats was only 45%
- Realisation of calculated surfaces was only 33%

Remains the big question: do we need more floors?

Daring to go for more ...



Sustainable and ecological L&LC construction

Ecological (green) building is more:

- Benefit for people should be as large as possible
- Environmental impact should be as small as possible

Interest in sustainable libraries (and learning centres) increases

→ see the new IFLA working group “Environmental Sustainability and Libraries Special Interest Group”

→ sustainable (and green) approach of library operation, with as goals:

- Effects of climate change on libraries
- Application of environment-friendly practices
- Proposal of environmental recommendations to the profession
- Increasing and promoting documentary resources and library services connected to sustainability
- Increasing awareness of librarians themselves about environmental concerns

See: <http://www.ifla.org/en/about-environmental-sustainability-and-libraries>

LEED, BREEAM and Belgium (1/3)

LEED = Leadership in Energy and Environmental Design (USA)

- LEED 2009 for *New Construction and Major Renovations* is a rating system with scores for several items:
 - Sustainable Sites (26 possible points), Water Efficiency (10 points), Energy and Atmosphere (35 points), Materials and Resources (14 points), Indoor Environmental Quality (15 points), Innovation in Design (6 points), Regional Priority (4 points)
- Scores (on the 100 base points and 10 additional points):
 - Certified 40–49 points, Silver 50–59 points, Gold 60–79 points, Platinum 80 points and above

Website: <http://www.usgbc.org/LEED/>

LEED, BREEAM and Belgium (2/3)

Comparable British evaluation system:
BREEAM (= Building Research Establishment Environmental Assessment Method for buildings)

- environmental assessment method and rating system for buildings,
- 200,000 buildings (world-wide) with certified BREEAM assessment ratings
- 9 UK libraries obtained a BREEAM-rating (May 2012)
- launched in 1990

Rating system is comparable with LEED, but with slightly different distribution of the points

Also seen in Belgium as a reference rating system

Website: <http://www.breeam.org/>

LEED, BREEAM and Belgium (3/3)

BREEAM increases its international presence:

→ Recently (2012) BREEAM awards to buildings in France and Belgium

Maybe, up to now, we have been too much interested in the economic advantage of ecologic building & construction

Evaluations used in Belgium (up to now):

- K-value (global isolation value of a building)
- E-level (energetic value of a building)

In Flanders there is also the Passive House Projection Package (PHPP), a calculation package that allows to make simulations, based on several European norms.

→ The Public Library of Sint-Niklaas might become the first the first (real) green library in Flanders, constructed as a passive house

It is not the task of the librarian to apply LEED, BREEAM or other ratings, but it is the task of the librarian to make them apply by designers and architects

And now?

Reverse engineering of UA-norms:

- Derive norms from the realised library and learning centre in Antwerp,
- Apply these "new" norms to the ULB-VUB L&LC

Discussion regarding present learning centre at VUB

Speak with consultants (and stress application of "environmental ratings")

Visit other Libraries and L&LC's and learn from them

Develop specifications, European tender (competition formula?)

Template for library visits

Identificatie bibliotheek

Naam bibliotheek
Overkoepelende organisatie
Adres Bibliotheek
Telefoon
E-mail
Website
Directeur

Doelpubliek

Aantal ingeschreven gebruikers
Aantal studenten
Aantal academische personeelsleden
Aantal extern ingeschreven gebruikers

Personeel [VTE]

Totaal aantal medewerkers
Aantal wetenschappelijke medewerkers
Aantal administratieve medewerkers
Aantal medewerkers in front-office
Aantal medewerkers in back-office

Budgetten [€]

Totaal jaarlijks budget voor informatiebronnen
Jaarlijks budget voor aangroei gedrukte collectie
Jaarlijks budget voor elektronische informatiebronnen

Bouwproject

Datum conceptualisering project
Periode realisering van het project [datum-datum]
Datum inhuldiging
Datum opening
Architect(en)
Aannemer(s)

Oppervlakten [m²]

Totale oppervlakte bibliotheek
Bruikbare oppervlakte
Oppervlakte publiek toegankelijke ruimten
Oppervlakte leesalen

• • •

Identification library

Name of the library
Organisation
Address
Phone
E-mail
Website
Director

Target public

Number of registered users
Number of students
Number of academic staff
Number of registered external users

Staff [FTE]

Total number of employees
Number of academic staff
Number of administrative staff
Number of employees in front office
Number of employees in back office

Budgets [€]

Total annual budget for information resources
Annual budget allocated to increase of the print collection
Annual budget allocated to electronic information resources

Construction project

Conceptualisation of project
Realisation of the project
Inauguration
Opening
Architect(s)
Contractor(s)

Surfaces [m²]

Total surface of library
Useful surface
Surface of publicly accessible spaces
Surface of reading rooms

Identification Bibliothèque

Nom de la bibliothèque
Organisation
Adresse
Téléphone
E-mail
Site web
Directeur

Public cible

Nombre d'utilisateurs enregistrés
Nombre d'étudiants
Nombre du personnel académique
Nombre d'utilisateurs externes enregistrés

Personnel [ETP]

Nombre total des employés
Nombre de personnel académique
Nombre de membres du personnel administratif
Nombre d'employés en front office
Nombre d'employés en back office

Budgets [€]

Budget total annuel affecté aux ressources d'information
Budget annuel affecté à l'augmentation de la collection imprimée
Budget annuel affecté aux ressources électroniques d'information

Projet de construction

Conceptualisation du projet
Réalisation du projet
Inauguration
Ouverture
Architecte(s)
Entrepreneur(s)

Superficies [m²]

Superficie totale de la bibliothèque
Surface utilisable
Superficie des espaces accessibles au public
Superficie des salles de lecture



Last slide ...

Questions ?

Remarks ?

Suggestions ?

Now, or later:

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