NTK

50°6'14.083"N, 14°23'26.365"E
Národní technická knihovna
National Technical Library

210 mm

National Technical Library

Martin Svoboda
Director of the National Technical Library
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Synopsis

210 mm

- History
- Project
  - Vision
  - Goals
  - Dates
  - Facts & Figures
  - Lessons learned
  - Pictures
- Conclusion

History

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- **1718** – Former military engineer **Willenberg** gets Imperial accreditation to teach „Ingenieurkunst“ and gets 300 florins to buy books, models and instruments
- **1831** – The founder of Royal Czech Estates School F. J. Gerstner charges later professor of fermentation chemistry and rector of the Polytechnic **K. J. N. Balling** with the concentration of books to an indexed, subject arranged collection – advent of the library
- **1869** – after the split of the school to the Czech and German ones, the Library remains a common one, financed from the Country budget
- **1935** – an up-to-date library is built for the Library of Technical Universities (Czech and German) in the eastern wing of Clementinum
- **1960** – Library separated from Technical Universities
- **1991** – back under aegis of Ministry of Education
- **2009** – back to Technical Universities to the Dejvice campus

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The past in Clementinum - 2008

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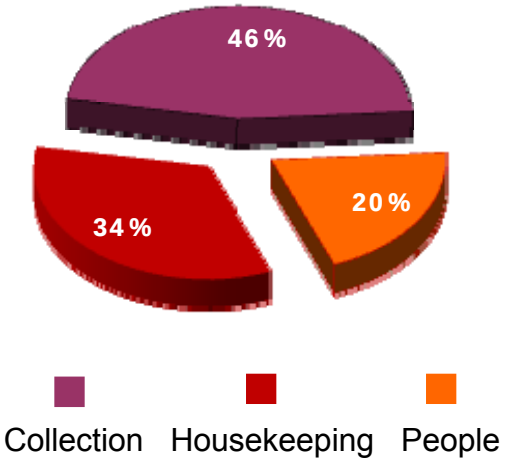
- financed by the Ministry of Education
- 2/3 of clients students of the CTU, ICT and other technical schools
- reading room, reference centre, computer study
- books, textbooks, standards, Czech law, ~1,2 mil. volumes + e-books
- subscription 1700 printed + 4000 e-journals
- opening hours Mon-Sat, 67 hrs/week
- projects:
  - e-resources for R&D
  - TECH portal
  - Virtual Polytechnic Library
  - National repository of GL
- budget 5.3 M € (2008)
  - out of it 2.2 M € collection development



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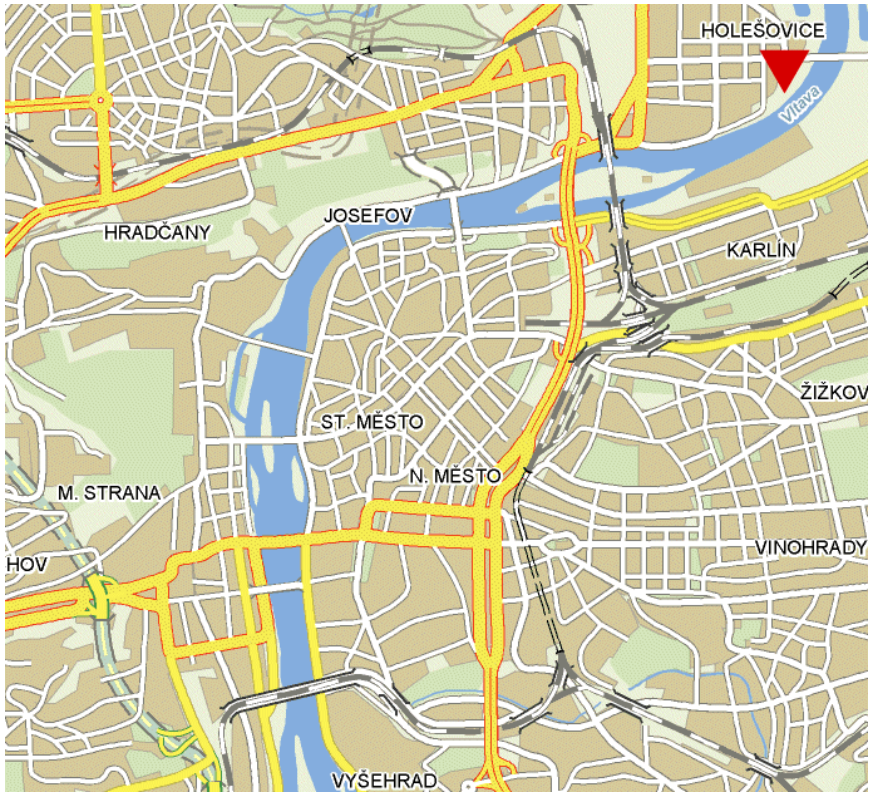
History of the project

210 mm

- 1963 Maniny
- 1974 head of Nusle bridge
- 1992 Rohanský isle
- 1995 Dejvice – Vítězné square
- 1999 heart of the Dejvice campus – Technická street



campus
library

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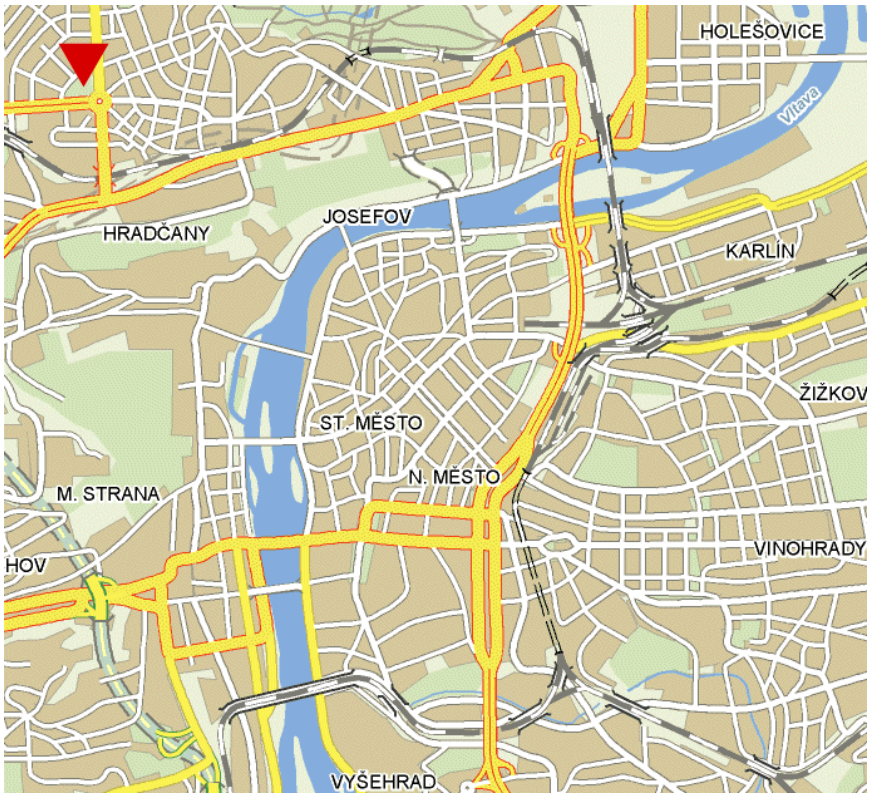

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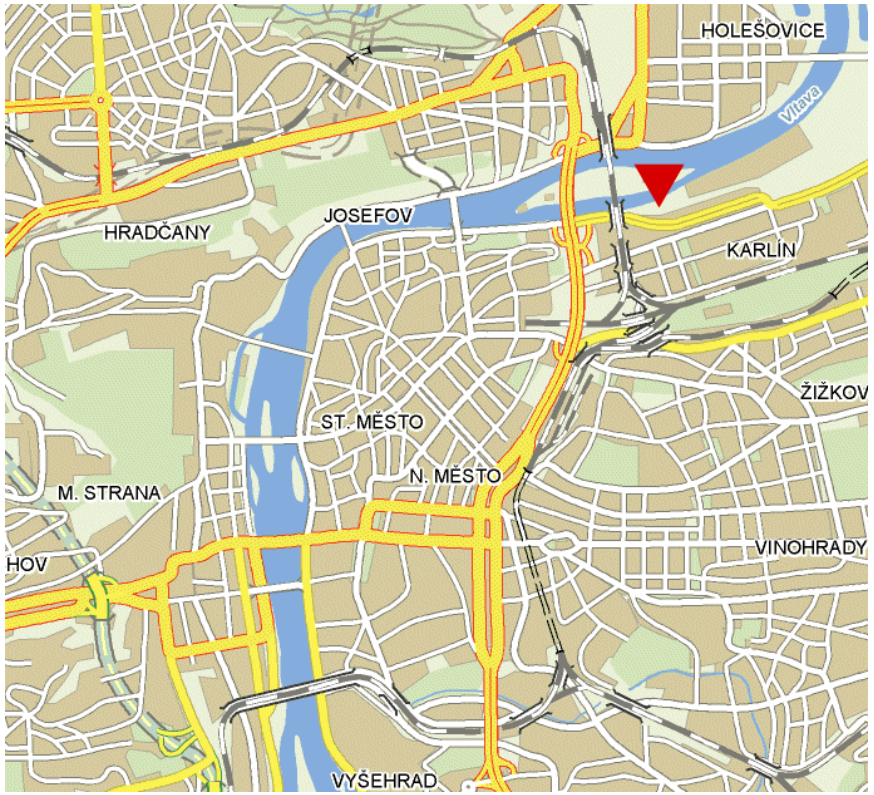

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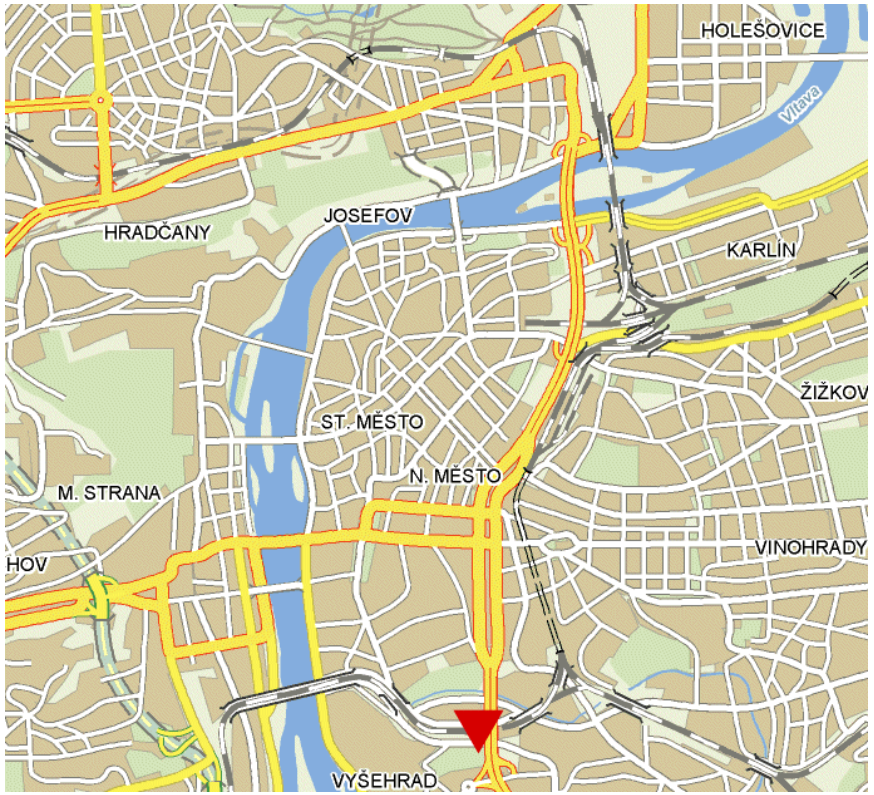

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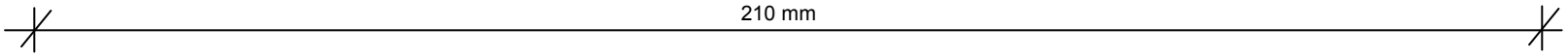
campus – Technická street

Vision of the new library



- transparent, permeable, understandable, flexible
- open, friendly, affable, inviting
- low energy and low operating costs house
- moderate use of hi-tech
- interior design – part of the overall building design
- architects: materialised textbook of contemporary architecture, civil engineering and technology

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Project goals

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- Modern central common library serving universities, R&D and public in the technology and applied science area
  - national information infrastructure node for technology and related disciplines (e-resources licensing, national repository of grey literature, digitisation, EDD, ISSN centre, …)
  - R&D laboratory of network technologies for library and information services
  - transform the library back to universities
  - release space in Clementinum for the National Library

Project dates

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2000/07 – Gov't Resolution - Project NTL approved

2001/01 – Architectural contest - Projektil

2001/07 – Memorandum of Agreement ČVUT-STK-VŠCHT

2004/02 – Gov't Resolution - budget

2004/10 – project design started

2006/06 – permits acquired, contracor tender

2006/10 – the first dig

2008/12 – take-over

09/09/09 – opening of NTK to public

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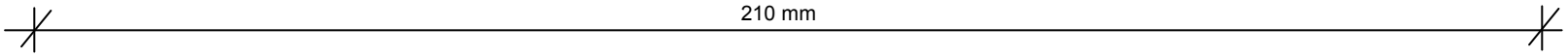
Library spaces, volumes



1 322 study seats, mostly w/ network access + WiFi ubiquitous

562 relaxation seats

29 individual study rooms (of it 2 for physically disabled and 2 multimedia study rooms suitable for visually impaired)

18 group study rooms for 8-10 people

4 computer study rooms (1*30, 3*50 seats)

1 night / complementary reading room

1 journals reading room, >2000 journals + 15000 e-journals

34 OPAC terminals + user PCs throughout the building

>350 000 volumes in open stacks arranged by LCC

+ ~ 150 e-textbooks

+ 1.2 million volumes capacity in closed stacks underground

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Other functions

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- social functions for the campus in the ground-floor:
  - conference hall 230 seats
  - exhibition hall 370+410 m^2 (90+50 seats)
  - café/restaurant 150 seats
  - municipal library branch Praha 6 (32 seats, 25 000 vol's)
  - university bookstore; IT store &accessories
- training centre with 30 seats in variable setup
- drink and snack machines on each storey
- baby changing boards
- ✚ first-aid room in the basement
- 300 parking places, 200 bike stands
- 900 000 clients/year

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Building

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11 740 m2	building plot area, out of it
5 000 m2	built-up area
172 258 m3	total building volume, out of it
118 411 m3	above ground
53 847 m3	under ground
38 661 m2	useful area of all storeys
9	storeys, of it 6 above ground, 3 under ground
6	elevators and 5 staircases throughout the whole building
2 352 MWh	expected annual energy consumption, out of it
1 258 MWh	heating
1 094 MWh	cooling

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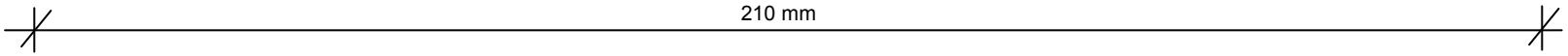
Construction



49 380 m3	of earth excavated
55 711 t	weight of load-bearing structure, of it
102 t	steel structures
38 t	steel roof of the atrium
51 628 t	concrete without armature
400 t	tendons
25 mi	pre-stressing channels
600 t	pre-fabricated stair wings
5 399 m2	outer shell – glass form-pieces
6 320 m2	outer shell – sheet glass

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Costs

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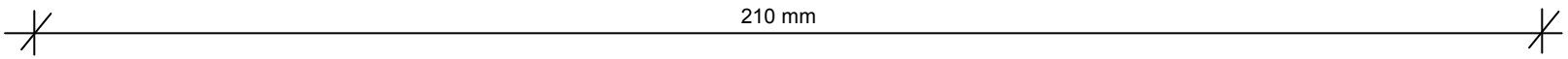
Overall project cost	85.17 mil EUR
out of it	
building – carcass	43.35 mil EUR
technologies except IT	19.83 mil EUR
IT	4.70 mil EUR
interior – mobiliary	4.65 mil EUR
project management	2.66 mil EUR
project documentation	2.80 mil EUR
engineering supervision	0.49 mil EUR
financial services	6.69 mil EUR

exchange rate as of Mar 2010

„Guiness book“ figures



190 km	light-current cabling
1,100,000	cable clips
256	acoustic motion detectors
117	cameras
46 km	heating/cooling piping in floor slabs
3 600 m2	floor heating in ground floor
21 670 m2	rubber flooring
4 125 m2	bituterazzo in the ground floor
2 600 m2	sound absorbing lining
20 km	pipes of high pressure extinguishing system
4 110	nozzles of high pressure extinguishing system
1346	automated combustion gas detectors
410 m	automatic smoke & heat screens

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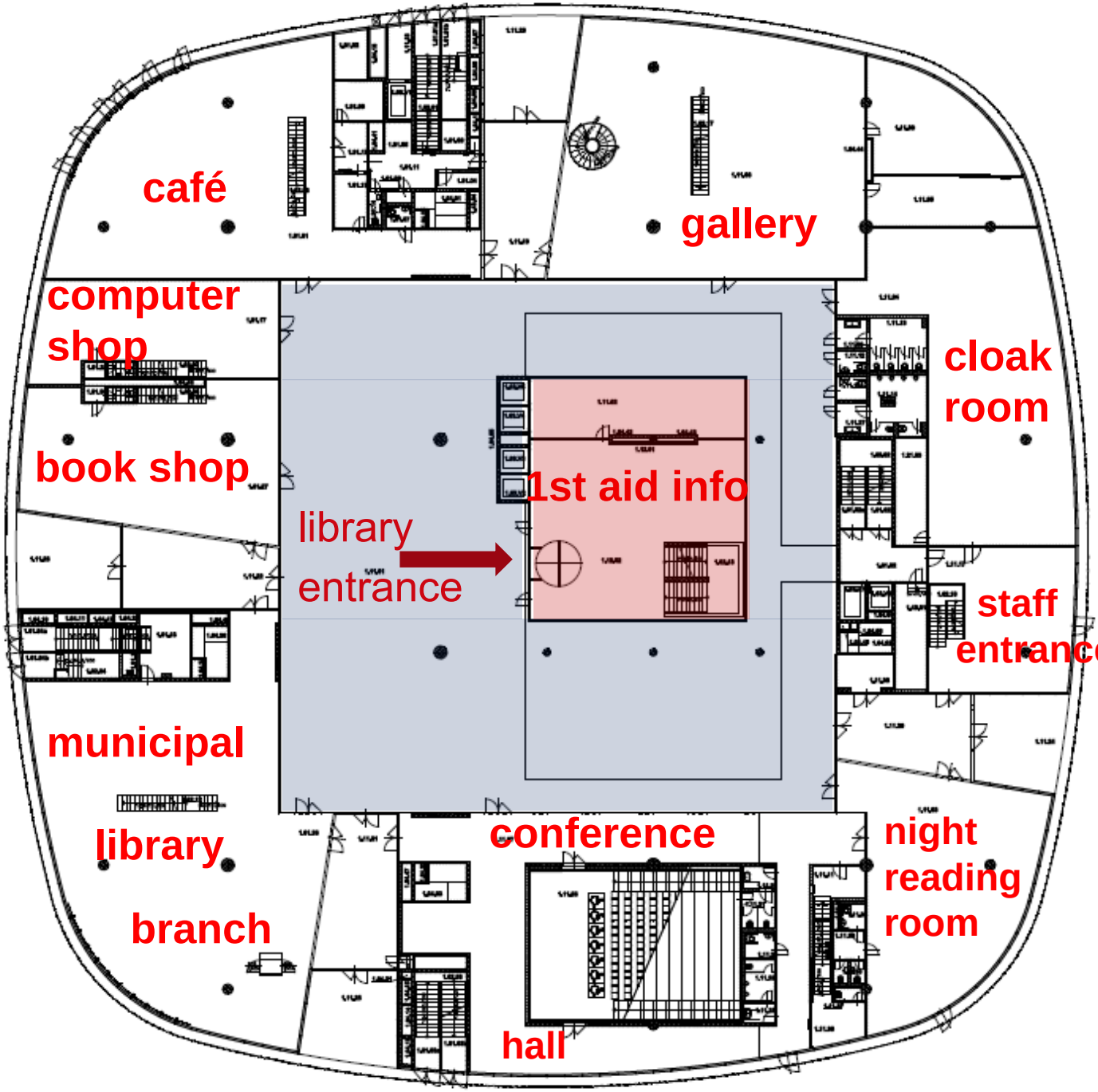
1

public area

- covered square
- exhibition hall
- conference hall
- night reading room
- public library branch
- book and computer accessories shops
- café



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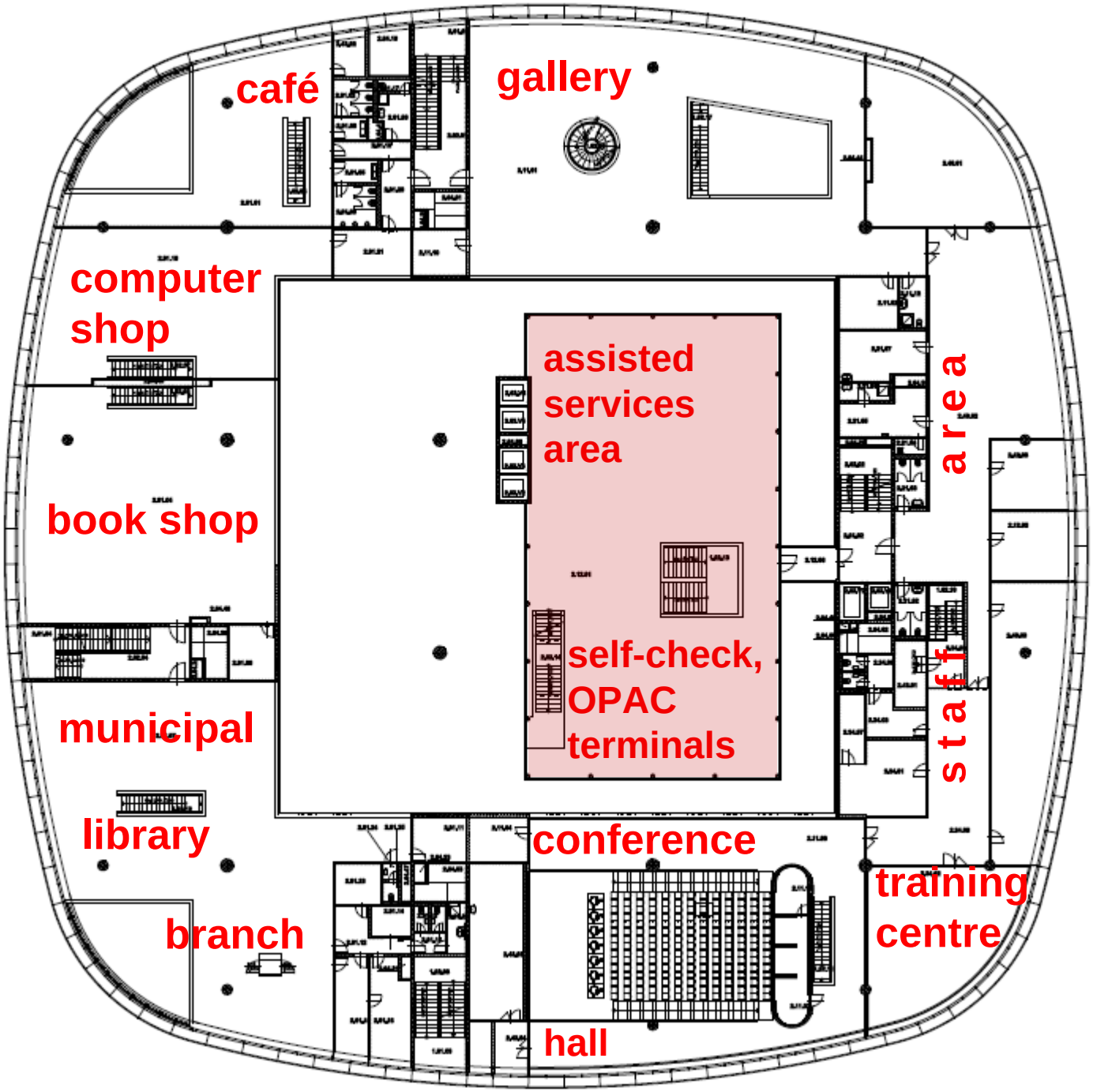
2



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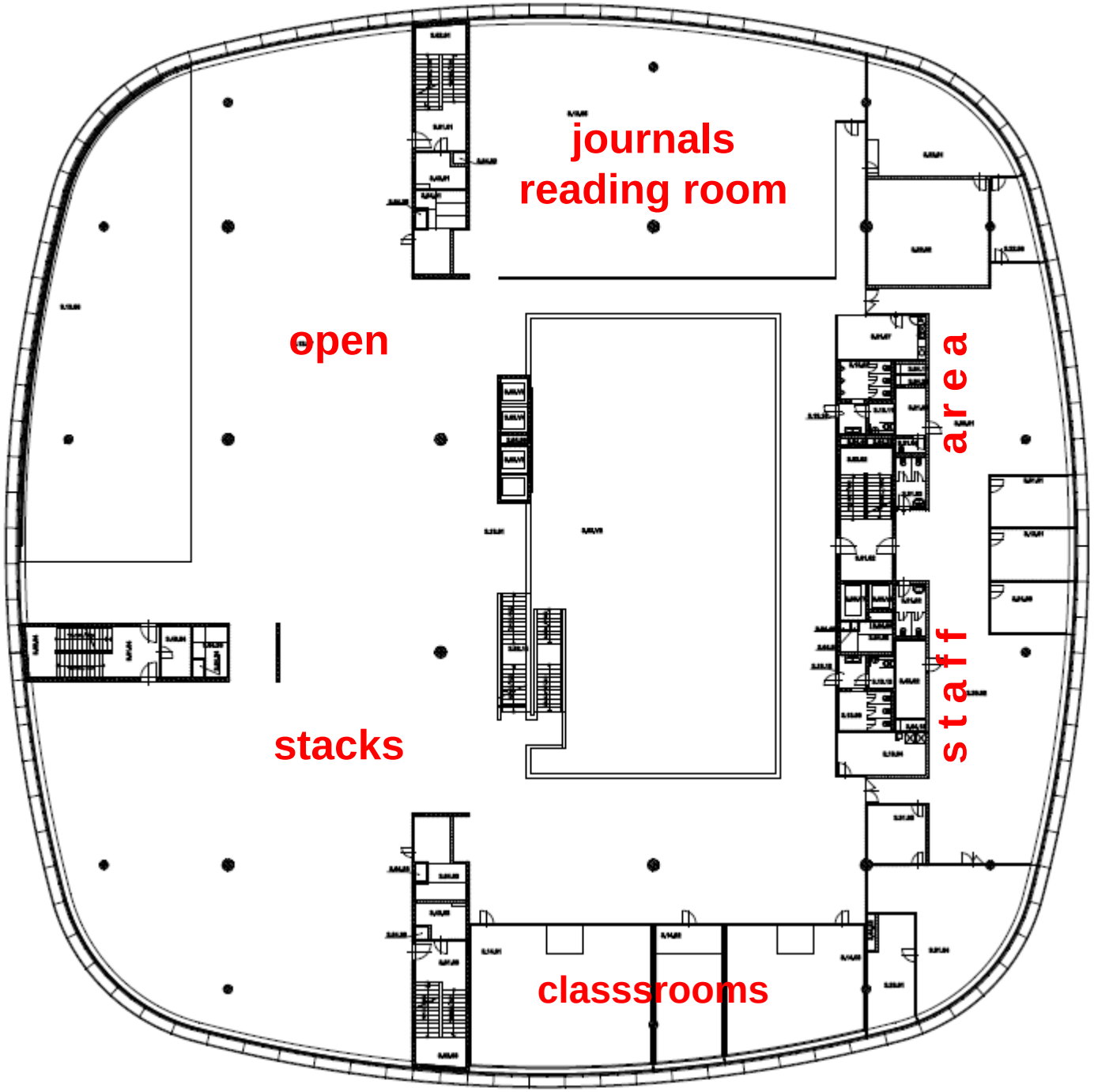

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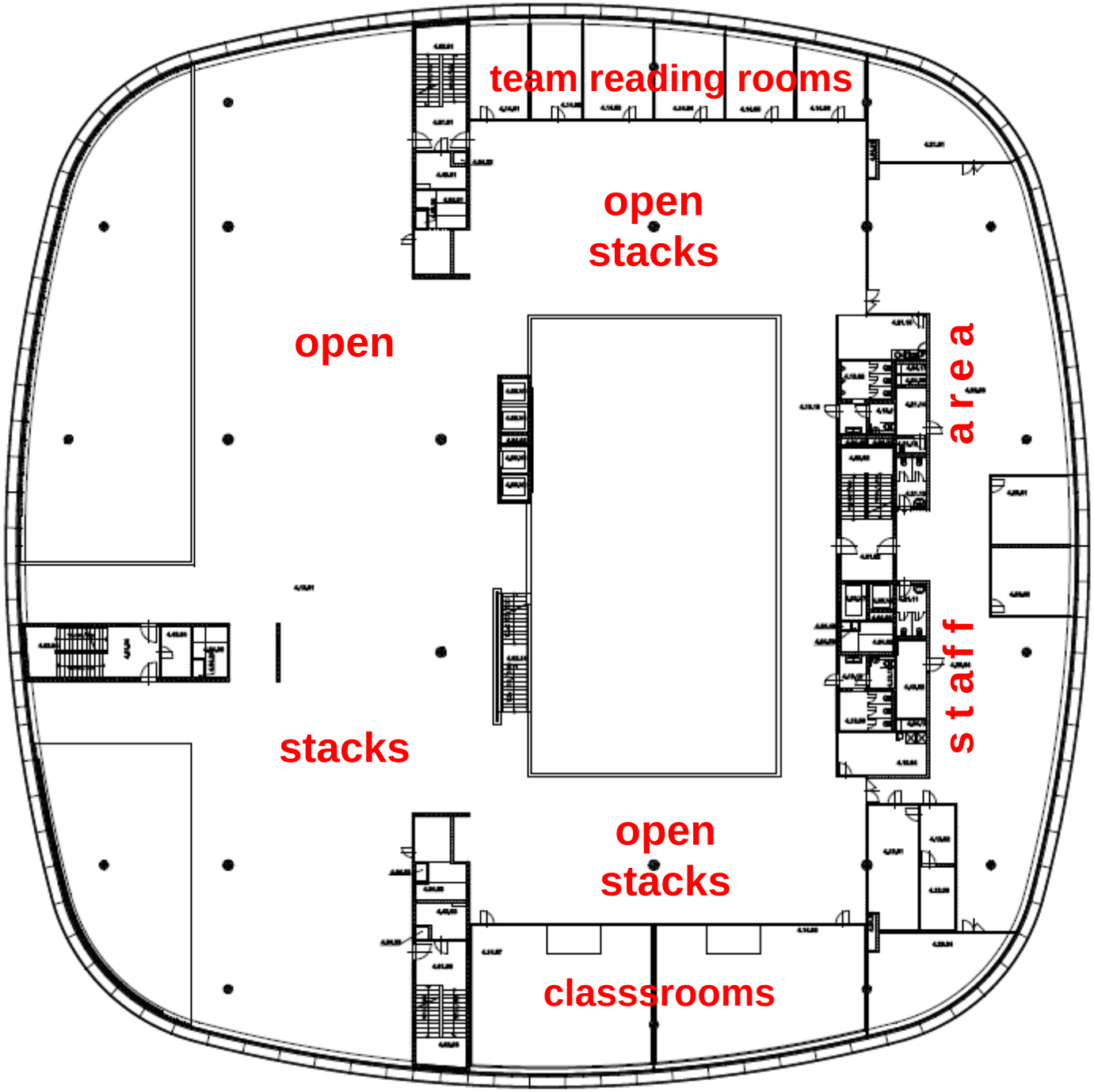
4



LIBER LAG, Madrid, '

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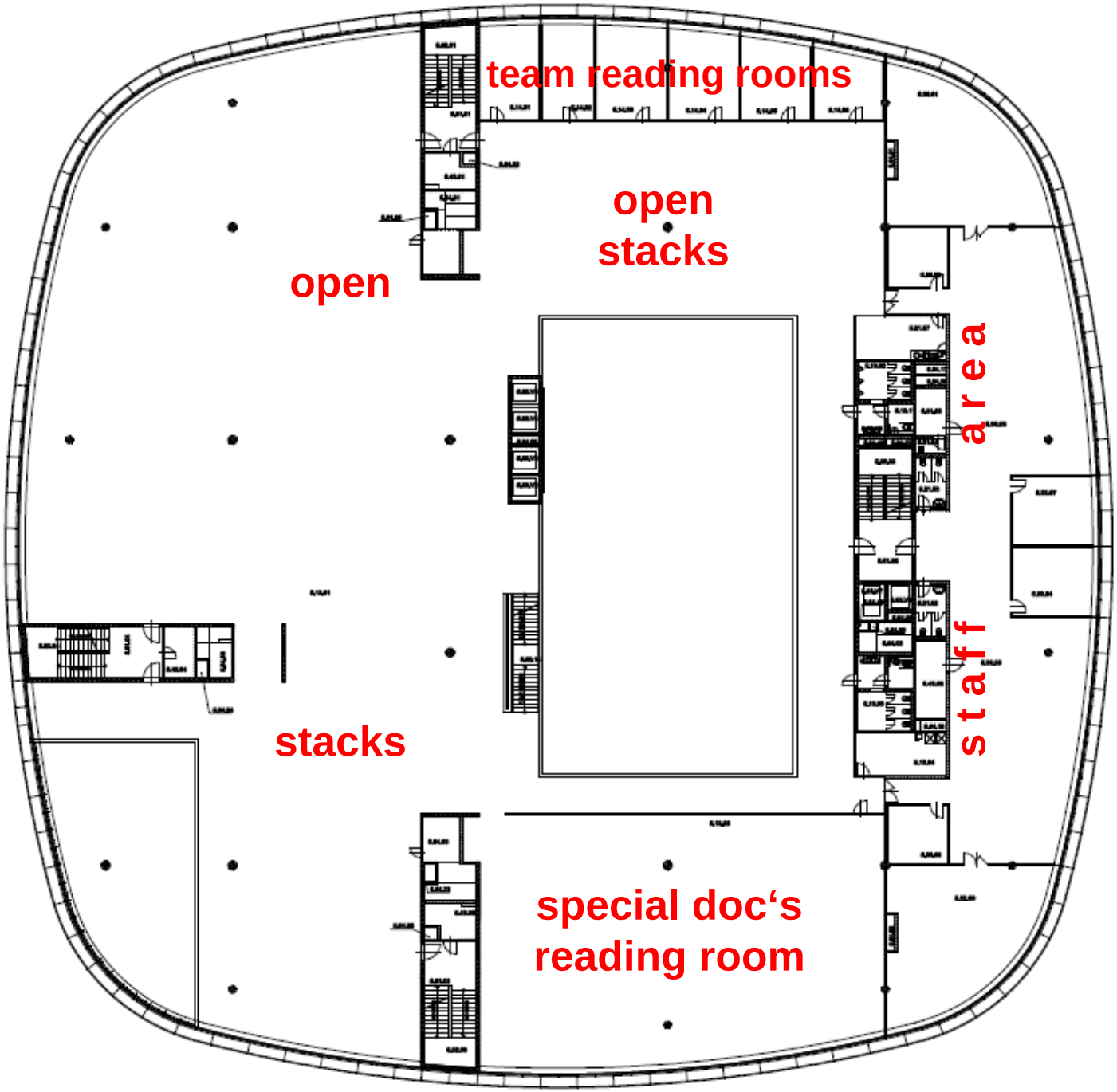
5



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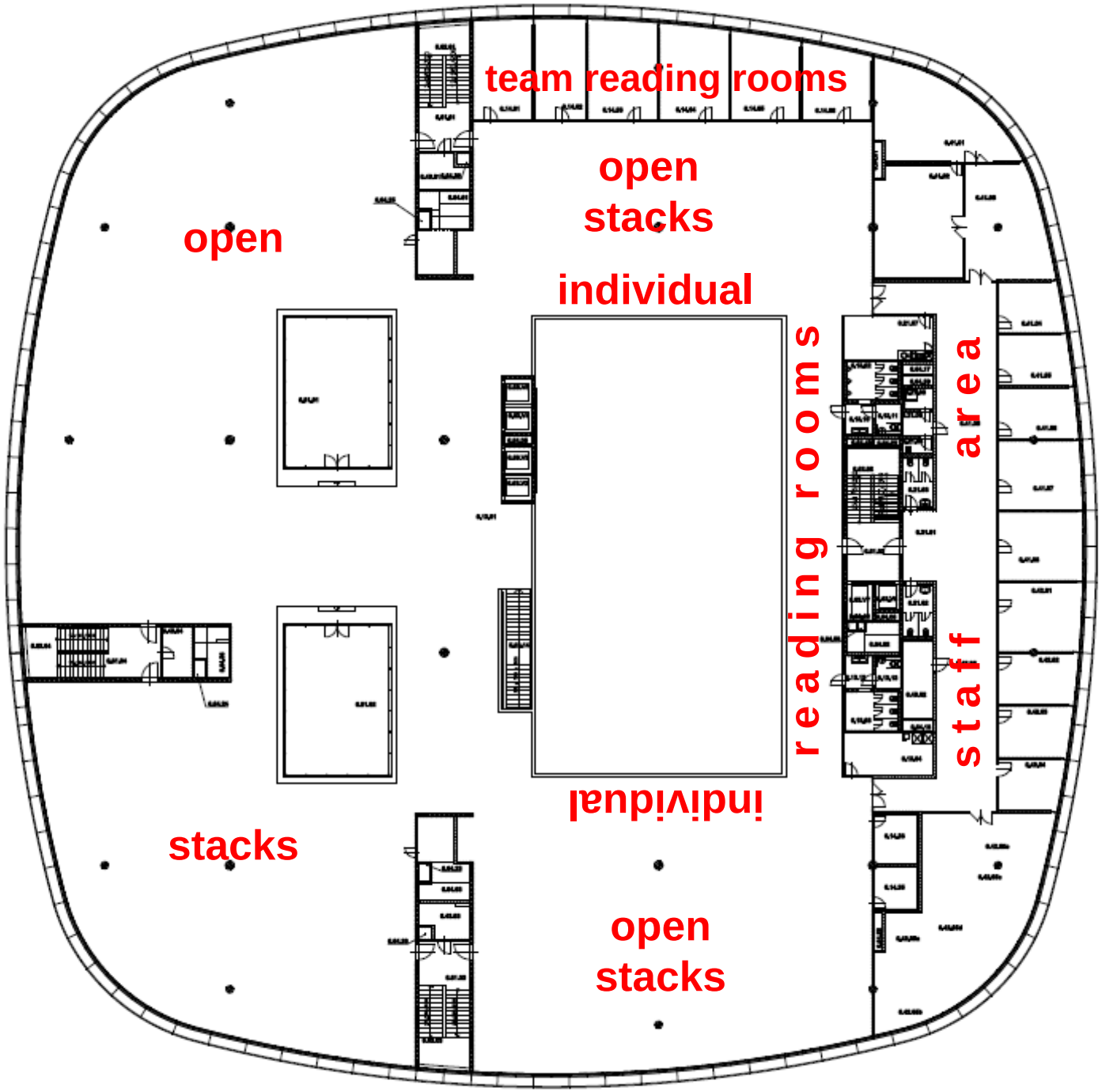
6



LIBER LAG, Madrid,

Lessons learned

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- Plot – fundamental, otherwise risky business
- Pecunia – not just the volume, the certainty is what counts
- Partnership – in-house, governing body, architects, designers, contractor, …
- Perspective – design for the [unknown] future
- Phlexibility – both in project and in decisions

People

210 mm

Everything told above, that is the idea, the design and a construction of the new building, in parallel with the working “old library” shaping up for the reincarnation in the new environment; this all starting with authors of the initial idea, through archeologists, architects, artists, assemblymen, building team, businessmen, designers, developers, draughtsman, economists, gate-keepers, IT people, lawyers, librarians, managers, organisers, suppliers, quantity & quality surveyors, trustees, etc. is a result of a collaboration of dozens of people.

I would like to thank all who endeavoured to accomplish this Gesamtkunstwerk.

In stead of a conclusion

210 mm

We are social creatures and we need to be considered members of a broader group; that gives us power and strengthens our feeling of gregariousness. A society built exclusively on virtual on-line communities cannot end up but virtualized and dissubstantiated. Libraries – beside other institutions – correspond to our inner human need of community in the foggy expanses of cyberspace.

Lukez, Paul. Whither://multi-media.(cyber).libraries? In: Library Builders. London : A.D. Academy Editions, 1997.

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Some pictures

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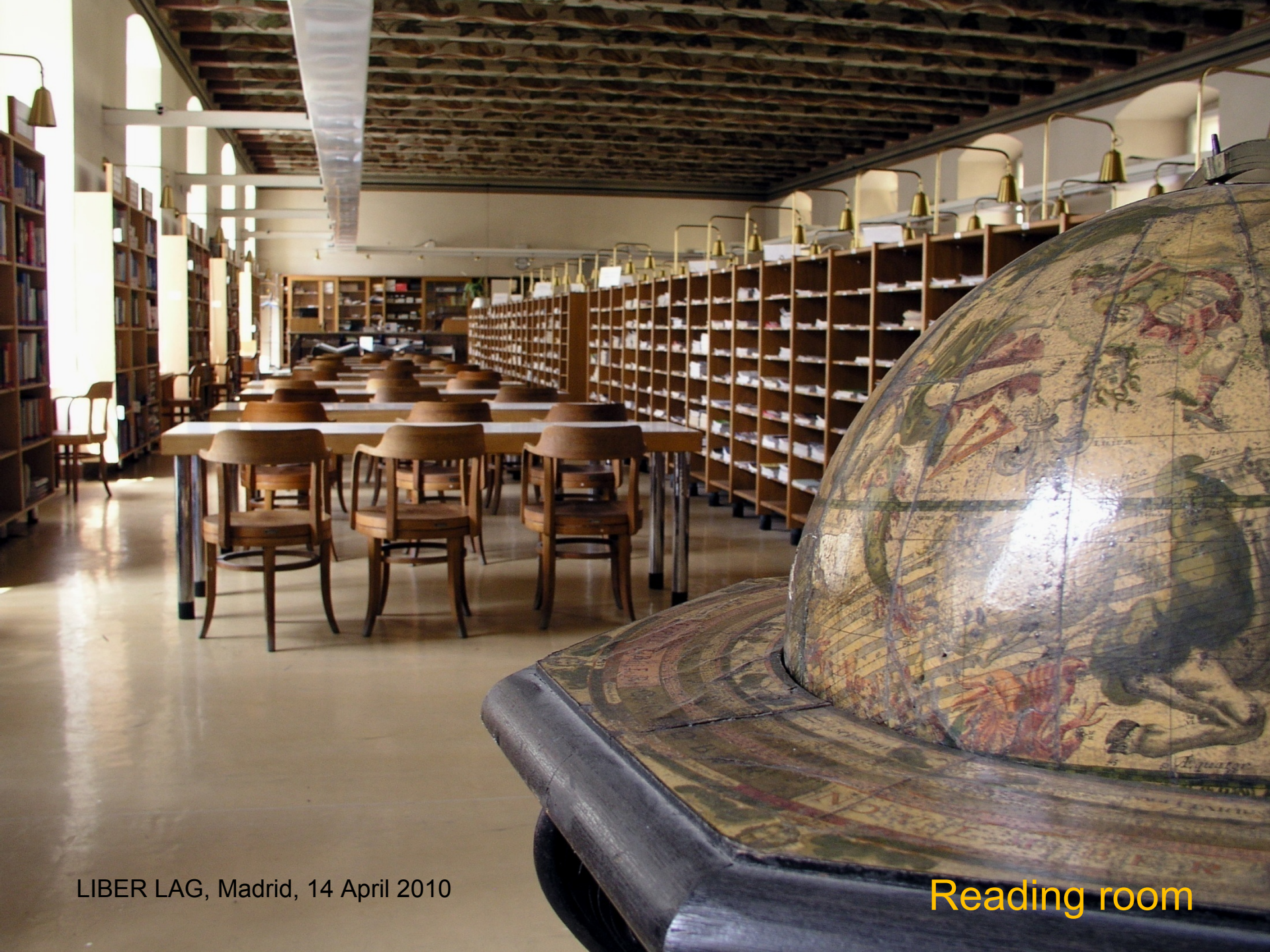
LIBER LAG, Madrid, 14 April 2010

Check-in check-out counter



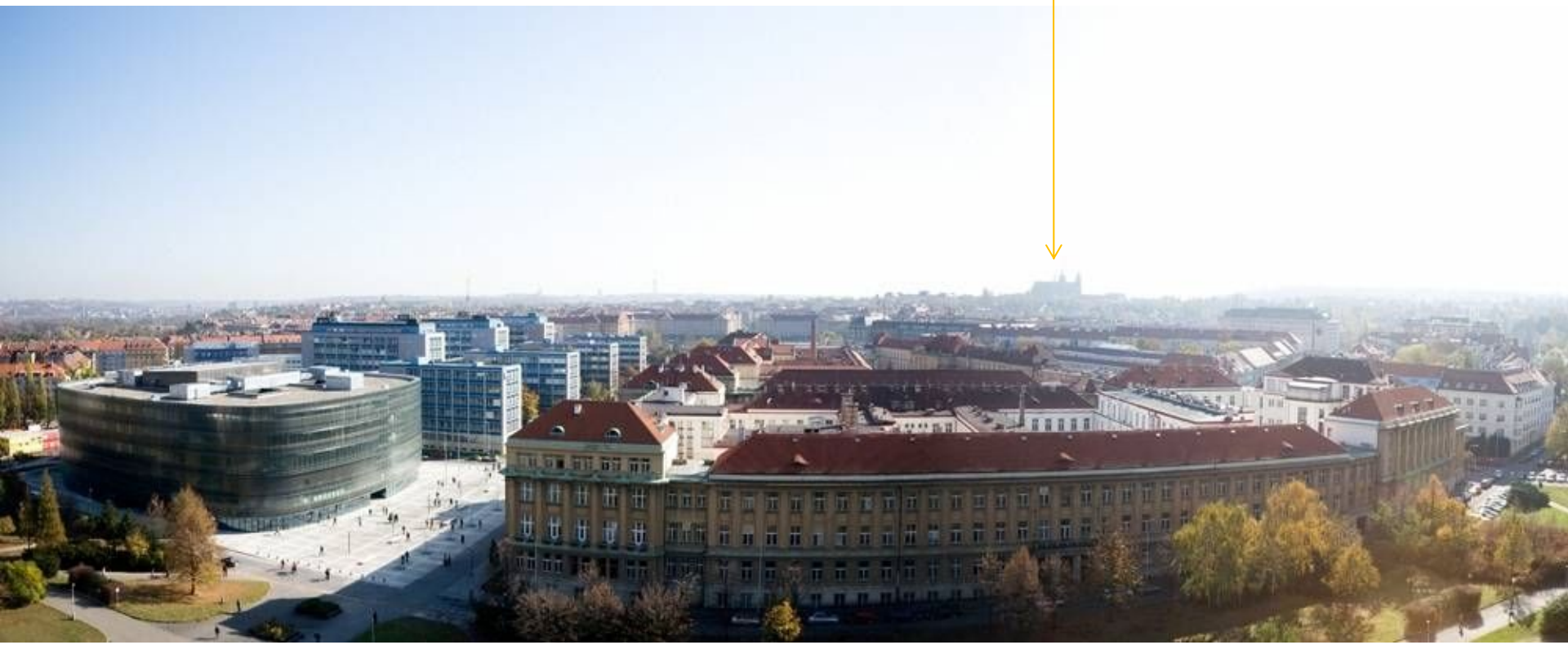
LIBER LAG, Madrid, 14 April 2010

Reading room

archeologists
Excavation started

LIBER LAG, Madrid, 14 April 2010

Prague castle



Panoramatic view

Moving from Clementinum

263 m
NTK 3

NTK 2

toalety

Main atrium

3C
3C
3C
3C

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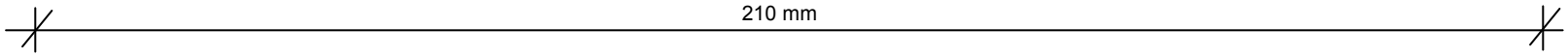
4D

IQ 185
16

Cabling is not hidden



Thank you for your attention

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Sir Tim Berners-Lee

for Nobel prize !