



národní  
úložiště  
šedé  
literatury

## **National Technical Library – Library of Technical Universities**

Svoboda, Martin  
2009

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# NTK

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Národní technická knihovna  
National Technical Library

210 mm

# National Technical Library – Library of Technical Universities

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# Synopsis

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- History, the “before”
- 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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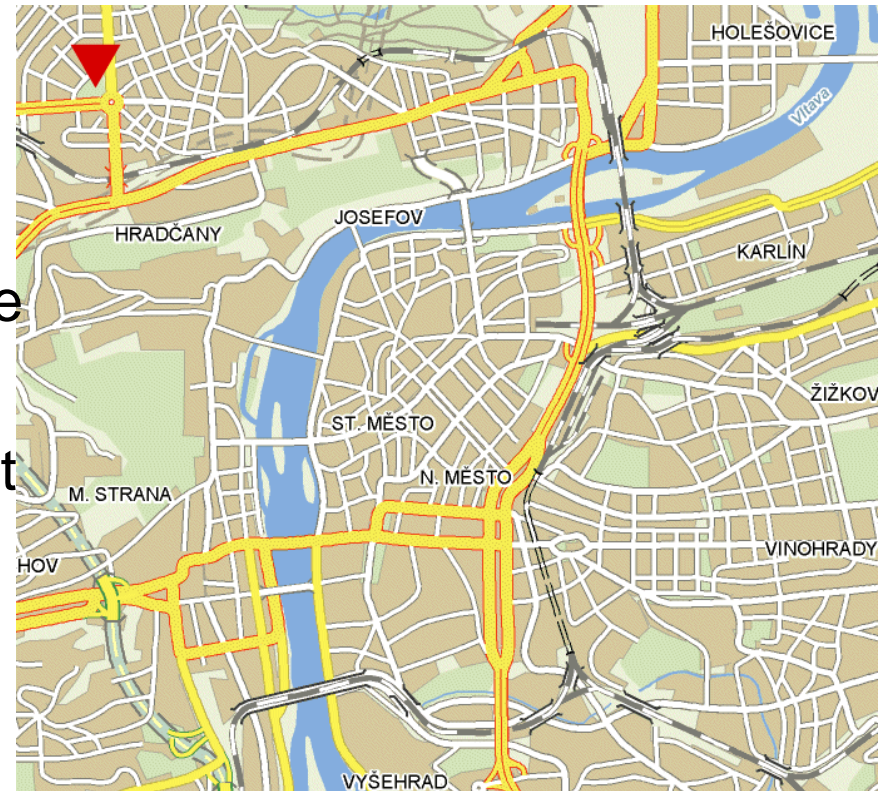


# History of the project

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

- campus
- library



# Vision of the new library

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- 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
- materialised textbook of contemporary architecture, civil engineering and technology

# 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, supplier tender
- 2006/10 – the first dig 
- 2008/12 – take-over
- 09/09/09 – opening of NTK to public

# Costs

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Overall project cost	76.17 mio £
<i>out of it</i>	
building – carcass	38.75 mio £
technologies except IT	17.73 mio £
IT	4.20 mio £
interior – mobiliary	4.16 mio £
project management	2.37 mio £
project documentation	2.50 mio £
engineering supervision	3.87 mio £
financial services	5.98 mio £

exchange rate as of 6 Sept 2009

# Library spaces, volumes

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- 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

# Other functions

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- social functions for the campus in the ground-floor:
  - conference hall 230 seats
  - exhibition hall 370+410 m<sup>2</sup> (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 @ 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

# Building

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**53 820 sq ft** building plot area, of it

44 280 sq ft built-up area

**6 083 234 cu ft** total building volume, of it

4 055 501 cu ft above ground

2 027 733 cu ft under ground

**416 143 sq ft** useful area of all storeys

9 storeys, of it 6 above ground, 3 under ground

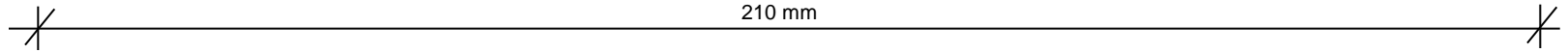
6 elevators and 5 staircases throughout the whole building

**8,025.36 Mbtu** expected annual energy consumption, of it

4,292.47 Mbtu heating

3,732.88 Mbtu cooling

# Construction



- 1 743 838 cu ft 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 sq ft outer shell – glass form-pieces
- 6 320 sq ft outer shell – sheet glass

# „Guinness book“ figures

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118 mi	light-current cabling
1,100,000	cable clips
1346	automated combustion gas detectors
256	acoustic motion detectors
117	cameras
28.6 mi	heating/cooling piping in floor slabs
38 750 sq ft	floor heating in ground floor
233 254 sq ft	rubber flooring
44 401 sq ft	bituterazzo in the ground floor
27 986 sq ft	sound absorbing lining
12.43 mi	pipes of high pressure extinguishing system
4 110	nozzles of high pressure extinguishing system
1 345 ft	automatic smoke & heat screens

# Lessons learned

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- **P**lot – fundamental, otherwise risky business
- **P**ecunia – not just the volume, the certainty is what counts
- **P**artnership – in-house, governing body, architects, designers, contractor, ...
- **P**erspective – design for the [unknown] future
- **P**hlexibility – both in project and in decisions



# People

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**Everything** described 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 tens and tens of people.

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

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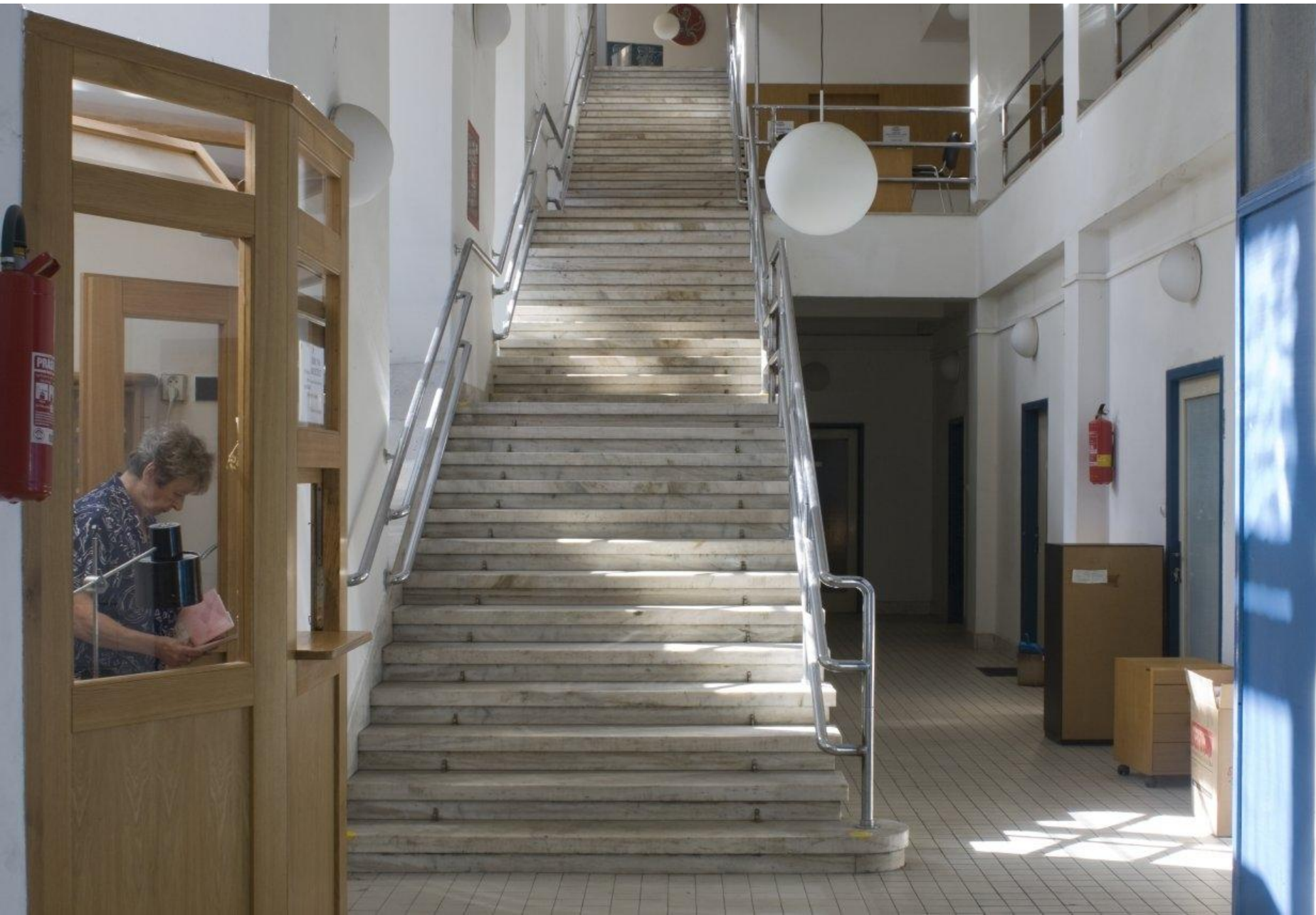
# Some pictures

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MORNI TELEFONI









Jan 2007



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# PAMĚTNÍ LISTINA

PŘÍ PŘÍLEŽITOSTI SLAVENOSTNÍHO  
POKLEPU NA STAŘÍ  
NÁRODNÍ TECHNICKÉ KNHOVNY  
V PRAZE A DEJVICÍCH

V tomto svazku se sešla všechna let-  
ní díla, která byla v roce 1977  
vydána v rámci projektu "177 let  
národní knihovny".  
Všechny díla jsou v tomto svazku  
přesně podle abecedního pořadí  
a podle druhu díla.  
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## SLUŽBY STÁTNÍ TECHNICKÉ KNHOVNY REFERENČNÍ STŘEDISKO

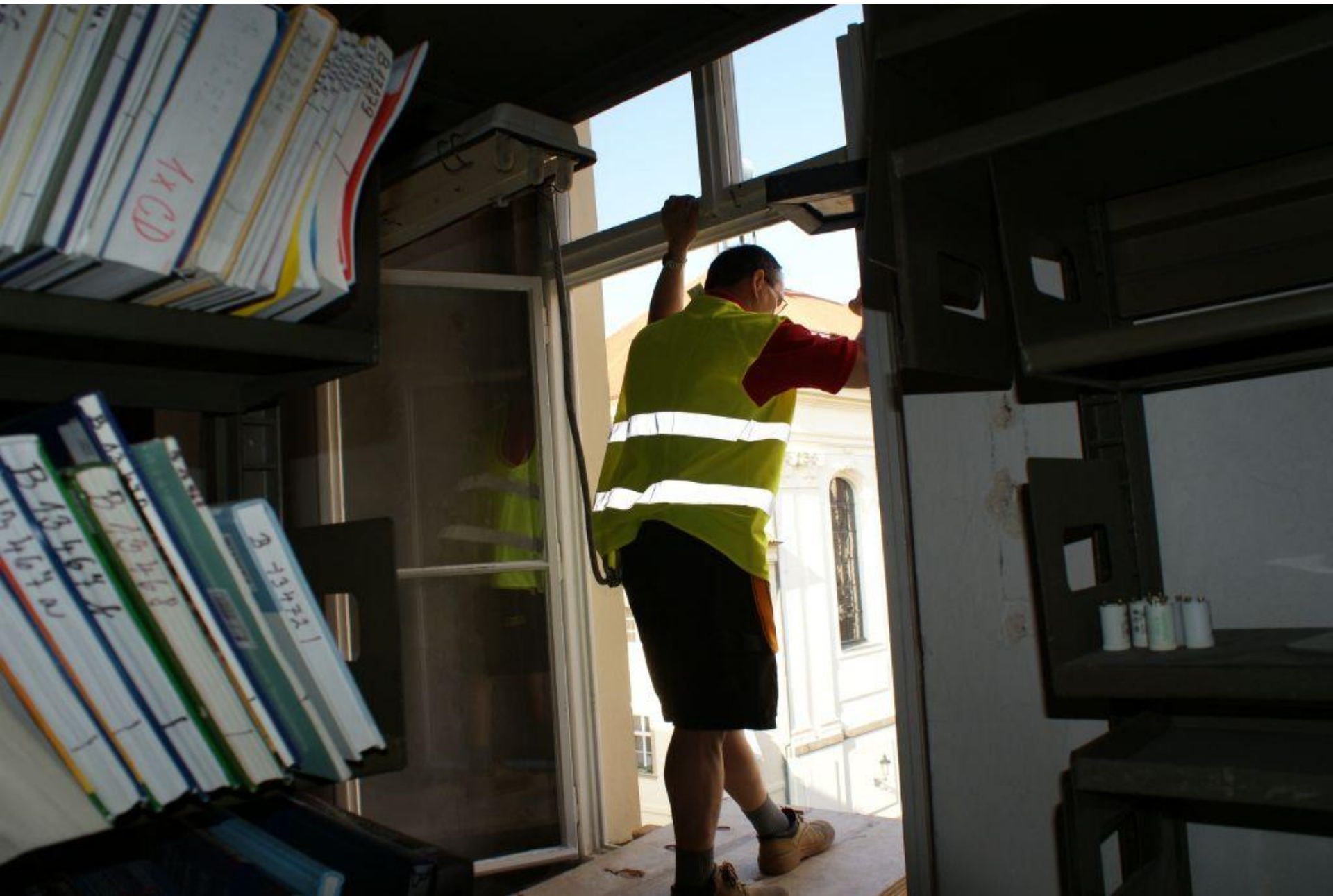
- konzultační služby
- řešení služby
- přístup k elektro-  
nickým zdrojům
- předání studijní-  
normy, zákony

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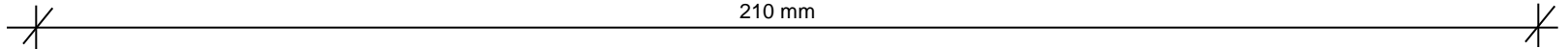
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Thank you for your attention  
Martin Svoboda  
martin.svoboda@techlib.cz

# Sir Tim Berners-Lee

# for Nobel prize !