The making of BK city @TU Delft campus
Alexandra den Heijer

TU Delft 171 years!
History & Mission

- TU Delft was established in 1842 by King William I
- TU Delft is the oldest and largest University of Technology in the Netherlands

With its unique technological infrastructure, broad knowledge base, worldwide reputation and successful alumni, TU Delft is contributing significantly to the development of responsible solutions to urgent societal problems in the Netherlands and the rest of the world.

Universities in the Netherlands
TU Delft largest university of technology

- 13 NL universities
- 3 universities of technology: 3TU
- MoU with Leiden and Rotterdam
- Programmes in science, design and engineering

Strategic institutional agreements

- IDEA League
  - Tsinghua University Beijing (China)
  - Kyoto University (Japan)
  - Osaka University (Japan)
  - University of Tokyo (Japan)
  - Bandung Institute of Technology (Indonesia)
  - National University of Singapore (Singapore)
  - The Hong Kong Polytechnic University (Hong Kong)
  - KAIST (South Korea)

- BME - Budapest University of Technology and Economics (Hungary)
- NTNU – Norwegian University of Science and Technology (Norway)
- METU – Middle East Technical University (Turkey)
- Moscow State University (Russia)

Universities in the Netherlands
- 14 universities in the Netherlands
- 16 mln Dutch inhabitants
- 250,000 students
- 45,000 faculty/staff
- + 46 institutions for higher professional education ("hogescholen")

Source data: 2011

more information: http://managingtheuniversitycampus.nl
**Education**

An international community

- 20% of new students
- 60% of PhD researchers
- NL and international staff

**Science Port Holland - Technopolis**

An international science park and hot spot where high-tech knowledge and innovation can be exchanged, located in one of Europe’s most innovative regions.

**Activating “Campus-City” Delft**

1= housing; 2= BK-City; 3= hotel; 4= Mekelpark hotspots; 5= sports & culture

more information: http://managingtheuniversitycampus.nl
Fire destroyed Architecture building
May 13, 2008

more information: http://managingtheuniversitycampus.nl
more information: http://managingtheuniversitycampus.nl
Found a ‘new’ building within 10 days

sustainable = re-use

ASSIGNMENT: relocate 3,300 students and > 800 employees
DEADLINE: renovate 320,000 sqft < 6 months
+ new construction 40,000 sqft < next 6 months

Project group representing:
- policy makers
- board of executives
- dean
- controllers
- users
- architects that have known the faculty for years

1. professors and professionals
2. all parties have studied or worked at faculty
3. hands-on mentality

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Managing the university campus

Every project or campus can be assessed from 4 perspectives

Brief in m²
- space reduction – 25%
- more students expected
- Berlageweg was already too small for # students / staff
- need to change concepts
- demand for large public spaces “blokkenhal” & modeling studies, workshop space

- additional space demand:
- solution glasshouses
- many alternatives... by many different architects...

more information: http://managingtheuniversitycampus.nl
footprint
old → new

Berlageweg 42.000 m² bvo
Julianalaan 32.000 m² bvo
+ new glasshouses 4.000 m² bvo
= 36.000 m²

bvo = brutovloeroppervlak = gross floor area (gfa)
no = nuttig oppervlak = usable floor area (ufa)

GOALS ORGANISATION
1. Community building
2. More effective support of education, research & management
3. Creating the place to meet
4. Stimulate social interaction & intellectual interaction
5. Flexible use of facilities
6. Sustainable

Campus of the future:
- Sustainable solutions
- CO₂ neutral campus
- Less m², more quality

Campus of the future:
- Transparency, shared facilities

Campus of the future:
- Lecture halls – only to share

Campus of the future:
- Creating the place to meet

more information: http://managingtheuniversitycampus.nl
Campus of the future:
- more quality, less quantity
- new life for old buildings
- increase benefits / m² to cover high maintenance cost / m²
- users accept more defects of meaningful, historic buildings

Reducing m², but improving…
Quality of place (interior design)

Reducing m², but improving…
Quality of place (cultural heritage)

Reducing m², but improving…
Quality of life (campus & city)

more information: http://managingtheuniversitycampus.nl
Transition from old to new
less BVO (gfa), more NO (ufa)

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<tbody>
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<td>5,680</td>
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<td>Total (usable)</td>
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Transition from old to new
> 50% is studio or office space

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1. Studio space
- student back at the faculty
- 6 m² usable per workplace
- tables are assigned to groups of students per semester (no permanent territories)
- smart use of space (by smart scheduling)
New concepts for the place to study

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<th>Workplace for students:</th>
<th>Total workplace</th>
<th>Realized workplace</th>
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<td>• brief: 5.6 m²</td>
<td>• 2011: 4.3 m²</td>
<td>• realized: 4.0 m²</td>
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</table>
| • 283 tables, 1530 → 2260 chairs | 0.75 workplace / enrolled student | occupancy rate > 40%

m² is usable floor area (m² ufa)

Office space

- no individual territory
- 12 m² usable per fte → became more after design process
- activity related concept
  a. SILENT ROOMS
  b. LIVING ROOMS
  c. MEETING ROOMS
    - formal / informal
  d. TEAM OFFICES

students and academic staff sharing workspace → reducing the footprint, improving interaction

more information: http://managingtheuniversitycampus.nl
New concepts for the academic office

- Workplace for employees:
  - Brief: 12 m²
  - Realized: 14 m²
  - 2011: 11.2 m²
  - 470 desks
  - 0.86 workplace / fte
  - Occupancy rate 22% → 27%

  m² is usable floor area (m² ufa)


Storage

- Including digital storage

PROBLEMS:
- Accessibility individual archives for groups - sharing of books / material
- Same books / magazines / replaced on every individual shelf?
- Expensive m² in use for storage
- Lack of storage management
- How much do we share?
- Culture change of paperless office / "less paper office"
- Supply generates demand

SOLUTION:
- "To share or not to be"
- Books are UNIVERSITY property
- Digital resources
- Mr. & Mrs. Green

More facility sharing

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Total ( usable) | 24,160     | 24,820      | + 3% more usable space |

Dutch references – new academic workplace

3. Lecture halls

- More shared use of large halls
- More small spaces locally
- Flexible floor plan
- Differentiation of quality; also used for seminars / conferences

More information: http://managingtheuniversitycampus.nl
Campus of the future:
- intensive and flexible use of high quality facilities

Library: quiet place to study

4. Library

5. Educational facilities

more information: http://managingtheuniversitycampus.nl
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9. Public functions

Public space, like in a city

9. Public space

- usable space in corridors for informal meetings and work

10. Storage

- including digital storage

more information: http://managingtheuniversitycampus.nl
Activating “Campus-City” Delft
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Follow me on Twitter:
@alexandra_dh

More about case BK city & book
“Managing the university campus”;
http://managingtheuniversitycampus.nl

Questions / tour of BK City

more information: http://managingtheuniversitycampus.nl