Managing a university campus
challenges, examples and strategic choices

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Faculty of Architecture and the Built Environment

Managing the university campus (2011)
The European Campus – heritage and challenges (2014)
Smart campus tools (2016)
Campus NL (2016)
Campuses, cities and innovation (2017)

About the books, other publications and this lecture:
www.managingtheuniversitycampus.nl

Campus Research Team (8 researchers at TU Delft)

What I am proud of

→ Book “Managing the university campus (2011)”
   (doctoral thesis) sold >1500 copies in >50 countries
→ Supervisory Board member 2009-2016 (2 full terms)
of DUWO Student Housing: >30,000 units
→ Having all Dutch universities as clients since 2000:
doing research for all executive boards
→ Leading a multinational campus research group in an
   international network of academics & professionals
→ Having been guest professor in Germany and
   being invited by university networks (UK etc.)
   and Ministries (Norway, Czech Republic etc.)
→ Being here, at Skolkovo

Campus of the future
challenges, examples and strategic choices

Part I
1. Today's campus
   problems, values and governance issues
2. Case “BK city”
   my own faculty of architecture building as a "living lab"
to test campus solutions, after a fire destroyed the old building
Case BK city: Faculty of Architecture, TU Delft
Building (1970) destroyed by fire in 2008
Faculty relocated in old building in 2009

Project team BK city (2008)
ASSIGNMENT: relocate > 3000 students and > 800 employees
DEADLINE: renovate 32,000 m² < 6 months
+ new construction 4,000 m² < next 6 months

Campus of the future
Trends, cases and choices to make

Part II
3. Campus trends
Innovations on campus
4. Strategic choices to make
Summarizing campus decisions for the future

1. Today’s campus
Strengths and weaknesses, opportunities and threats

Physical definition of “campus”

The “campus” is defined as the (collection of) buildings and land, used for university or university-related functions

Functional definition of “campus”

- Academic
  Classrooms, library, offices, laboratories, lecture halls, ...
- Residential
  Student housing, hotels, ...
- Related Business
  Start-ups, incubators, industry, ...
- Retail & Leisure
  Sports, restaurants, cafes, ...
- Infrastructure
Campus model A

The campus as a city – "new town development"

Campus model B

Network university → "UniverCity"

<table>
<thead>
<tr>
<th>Campus Weakness</th>
<th>Threat for the (financial) future</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than half of the university buildings is from 1960s-1970s, in bad technical &amp; functional state (and energy-inefficient).</td>
<td></td>
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<tr>
<td>→ In Europe 85 mln m² needs energy-efficient transformation</td>
<td></td>
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<tr>
<td>→ smart, sustainable strategies required</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Campus threat</th>
<th>Costs versus value</th>
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<tbody>
<tr>
<td>Campus costs about 8% to 16% of university budget – and rapidly increasing – affecting their financial sustainability.</td>
<td></td>
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<tr>
<td>→ Norway: 21% of university budget spent on campus (2017)</td>
<td></td>
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<tr>
<td>→ depends on % old buildings, % laboratories and space use</td>
<td></td>
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<tr>
<td>→ smart investment strategy required</td>
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</table>
The campus is a key asset in “the (global) Battle for Brains”

- for global competition in attracting talent
- for productivity – workplace for future student / faculty / staff
- for profitability – financial sustainability, resource-efficiency
- for sustainable development – footprint – m2 / user

“NOT Investing in the campus is NOT investing in education and research”

A campus in bad condition NEGATIVELY affects university goals, financial resources and user productivity and satisfaction

Harms the university’s reputation, less attractive to talent

Lower productivity of staff and students

Higher maintenance costs, lower value

Higher energy use, low quality buildings

Students and staff often prefer old, unique buildings with “character and soul”... and feel anonymous in brand new flexible buildings... they need an academic home

key performance indicators (KPIs) to measure added value: “effect on OUTPUT”

The campus is a key asset in “the (global) Battle for Brains”

good facilities can attract talent
bad facilities can chase them away...
Opportunity: using the city as campus

Study choice research shows: the quality of the city is equally important as the quality of the university!

Why study abroad?

Reasons (not) to go

<table>
<thead>
<tr>
<th>reasons to go</th>
<th>reasons not to go</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. academic reputation</td>
<td>1. academic reputation</td>
</tr>
<tr>
<td>- professors, programme,</td>
<td>- English language</td>
</tr>
<tr>
<td>teaching method, rankings</td>
<td>skills of staff,</td>
</tr>
<tr>
<td>24%</td>
<td>workload</td>
</tr>
<tr>
<td>2. country / city / culture</td>
<td>2. city / culture</td>
</tr>
<tr>
<td>- employability, learning</td>
<td>- lack of integration</td>
</tr>
<tr>
<td>the language, personal/</td>
<td></td>
</tr>
<tr>
<td>intercultural relations</td>
<td></td>
</tr>
<tr>
<td>18%</td>
<td>3. social life</td>
</tr>
<tr>
<td>4. university services</td>
<td>- lack of organised</td>
</tr>
<tr>
<td>17%</td>
<td>events</td>
</tr>
<tr>
<td>5. social life</td>
<td>4. university services</td>
</tr>
<tr>
<td>- quality of life, friends, love</td>
<td>10%</td>
</tr>
</tbody>
</table>

Top 10 - Why study abroad?

1. See the world
2. Education
3. Take in a new culture
4. Improve language skills
5. Career opportunities
6. Find new interests
7. Make lifelong friends
8. Personal development
9. Graduate school condition
10. Life experience

http://www.internationalstudent.com/study-abroad/guide/ten-benefits-to-studying-abroad

Campuses, Cities & Innovation

✓ Where (technology) campuses are located, innovation takes place
✓ Positive effect of presence (top-ranked) universities on economic growth, demographic profile and social-cultural facilities of cities and regions

“Proximity important for innovation”

Technology campuses in reality

More info: campus research team publications, fania curvelo magdaniel – see http://managingthecampus.nl
Investing in the campus is investing in education and research. A campus in good condition POSITIVELY affects university goals, financial resources and user productivity and satisfaction. Supports the university’s reputation and attractiveness. Higher productivity of staff and students. Higher value, lower energy costs. High quality buildings, lower ecological footprint.

Different ownership / governance models

<table>
<thead>
<tr>
<th>Country</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>APPA/SCUP: professional management support</td>
</tr>
<tr>
<td>Germany</td>
<td>campus management organisation (per state)</td>
</tr>
<tr>
<td>Netherlands</td>
<td>directors of estate organised in AUDE</td>
</tr>
</tbody>
</table>

Campus ownership opportunities and threats

Opportunities:
- autonomy to decide
- costs and benefits closely connected
- more cost-consciousness
- more support for culture change
- land value: relation with local parties
- chance to have a campus portfolio strategy (manage a ‘city’)  

Threats:
- backlog maintenance
- much higher capital costs
- poor technical state can frustrate university goals
- organization not prepared for new management tasks
- lack of centralised management information

2. Case BK city

Fire in 2008 destroyed the old building, new building as living lab. Movie 1 – "The unforgettable fire"

- relocate >3000 students
- > 800 staff members in < 6 months
- use the opportunity of a crisis:
  implement radical changes
- irony: ultimate case study for research
Architects suggested: “make a new icon”
We said: “no, let us give new life to an old icon....”

Found a ‘new’ building within 10 days after the fire

sustainable = re-use

Students in building < 4 months after fire
Employees in building < 6 months
Project ready < 1 year

Phase 1 - EAST: 16.000 m² gfa
in use September 2008

Phase 2 - WEST: 16.000 m² gfa
in use November 2008

Phase 3 – GLASS HOUSES: 4.000 m² gfa
new in use May 2009

LESSONS
#1
Design the building as a city – keep the best places public, intensify use: density of people

LESSONS
#2
Reduce m² - trade quantity for quality of space

Design the building as a city

important are:
- density of people
- acknowledge # visitors
- keep best places public
- orientation, logical floorplan
- sense of place: heritage
- branding: showroom, legacy
42,000 m²

32,000 m² = -25%

Creating a place to meet was most important after the fire...

New building has more public space to share

LESSONS

#3
Invest in visible quality – "window dressing" / "distractions"

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

LESSONS

#4
Embrace academic history – use heritage for branding

LESSONS

#5
Avoid individual territory ("no names on the door")

Old building: “Cellular office symbolic for cellular research”

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

Dutch references – new academic workplace

 mt usable floor area / workplace

source: various utilization studies
Reducing the footprint

- brief: 12 m²
- realized: 14 m²
- 2011: 11.2 m²
- 470 → 396 desks
- 0.86 workplace / fte
- occupancy rate 22% → 27%

m² is usable floor area (m² ufa)


10. Storage

¬ including digital storage

¬ PROBLEMS
  - accessibility individual archives for groups
  - sharing of books / material
  - same books / magazines / reports on every shelf: waste of resources?
  - expensive m² in use for static archives
  - lack of "storage management" – how often do we clean?
  - culture change of ‘paperless office’ (or ‘less paper office’)
  - supply generates demand

Library: quiet place to study

LESSONS

#6

Implement flexible concepts – mixed use – but avoid standardization and “open plan”

Stimulate social interaction & intellectual interaction

... at our Faculty of Architecture & the Built Environment...
LESSONS

#7
Make it feel like home – “home away from home”

LESSONS

#8
Allow students + staff to decorate their working environment
Personalizing their space helps to make (international) students feel at home in university buildings.

LESSONS

#9
Make it a showroom with the best products of students + staff

Tallinn University of Technology / Tallinna Tehnikakool (TTÜ), 2014

LESSONS

#10
Make sure people can see each other work for security, community building, serendipity → innovation
Campus of the future:
- transparency of processes to inspire and learn from each other

Food + coffee, tea and other drinks are important at the workplace

Movie 2 – “The making of BK city”

online version see:
http://managingtheuniversitycampus.nl/case-bk-city

DISCUSSION / BREAK

Campus of the future
challenges, examples and strategic choices

Part II
3. Campus trends
   innovative solutions and smart strategies
4. Strategic choices to make
   summarizing campus decisions for the future
De universiteit zit weer stampvol

"Student ondersko digitalising steeds vaker op de campus"

"Student redisovers campus as favourite place to study"

Why “campus favorite study place”? 

"push factors"
- Distractions at home:
  - room mates
  - social life, hobbies
  - Netflix
- More pressure on students:
  - higher tuition fees
  - stricter deadlines, rules
  - risk of burn-out

"pull factors"
- Quality of campus:
  - better facilities, network, ICT applications
- Other students:
  - more group work
  - group pressure to study
  - friendship and love (!)

Campus NL – “many more users on same m2”

- More and more (20-25%) unregistered users and visitors
- Preferences international students: quality of life is important
- Research (funding) has become more unpredictable (<2 year contracts)
- More temporary staff
- Functional demands change rapidly (labs, ICT, legislation)
**Campus models A-B-C as basis**

- **A** = traditional - exclusive & territorial
- **B** = network - interactive & shared
- **C** = virtual - place independent & individual

**Campus NL – “solid, fluid, gas”**

- **A** = traditional - exclusive & territorial
- **B** = network - interactive & shared
- **C** = virtual - place independent & individual

**Campus strategies in 10 themes**

1. Rethinking the academic workplace
2. Creating flexible learning environments with more study places
3. Investing in state-of-the-art laboratories
4. Replace or renovate old faculty buildings as home base
5. Enrich campus with non-academic functions
6. Give new life to old buildings, including heritage buildings
7. Extend opening hours: evenings, weekends, summer school
8. Use circulation space – inside and outside – more effectively
9. Implement "smart tools" for campus navigation
10. Stimulate sustainable behaviour and test innovative technology.

**Campus NL – theme 1 "rethinking the academic workplace"**

Finding the right combination between:

- (A) Individual workplaces
- (B) Workplaces to share
- (C) Working from home or anywhere else

**Professor is interviewed by the BBC at his workplace at home – which has some “distractions”**

Movie 3 – link to BBC website


**Campus NL – theme 1 "rethinking the academic workplace"**

Finding the right combination between:

- (A) Individual workplaces → 12-20 m² usable space → > 20% of resources to campus
- (B) Workplaces to share → 7-12 m² → 10%
- (C) Working from home or anywhere else → < 5%
From 15% m² assigned for education to 33% m² for educational activities - including study places in libraries, restaurants, coffee bars, meeting rooms, offices.


**Campus NL – theme 3 “new faculty buildings”**

- When universities become larger, the need for smaller communities increases.
- Large faculty buildings can have low market values, because of their size, function mix and campus location.

Examples: Nijmegen, Rotterdam, UvA Amsterdam, Delft (2016).

**Campus NL – theme 4 “finding partners to invest in labs”**

Investing in innovative research – more often in partnerships and shared use.

Examples: Healthy Ageing Campus Groningen, O|2 (VU/UvA), Differ (TU/e).

**Campus NL – theme 5 “adding more non-academic functions”**

- Van sports facilities to incubators for start-ups, from student housing to foodtrucks.
- Examples: Rotterdam, Eindhoven.

**Campus NL – theme 6 “new life for old buildings”**

More than half of the university buildings (in m²) dates from the 1950s, 60s, 70s with a substantial amount of heritage buildings.

Examples: Transformatie Tapijnkazerne & other inner-city projects.

**Campus NL – theme 7 “expanding opening hours”**

For study (groups), not for contact hours with staff. Some libraries are open until 2am in exam periods.
**Campus NL – theme 8** “more functional circulation space”

Inside and outside – for activities, but also to showcase “the best of education and research”

**Campus NL – theme 9** “smart tools”

Preventing “booked, unused space”
Measuring “real campus use” with sensors (Bluetooth, cameras, WiFi / Eduroam etc.)
Design navigation apps for the campus

**Campus NL – theme 10** “sustainable campus”

Sustainable technology, but more importantly: sustainable behaviour (more awareness among students and staff)

4. Strategic **choices** to make

Summarizing campus decisions for the future

**Campus NL – combination** “solid, fluid, gas”

A = traditional - exclusive & territorial -
B = network - interactive & shared -
C = virtual - place independent & individual -

Which % combination (1) do you have and (2) do you want to have?

Campus strategy responsibility entire university
“PREFERRED MODEL”

Network university → “UniverCity”

- combination of heritage, refurbished and new
- intensively used, encouraging innovation by social & intellectual interaction
- sustainable, energy-efficient
- low footprint: more quality than quantity
- shared space, less territorial ("less A, more B")
  - city = campus

Campus strategies in 10 themes: A – B – C

1. Rethinking the academic workplace
2. Creating flexible learning environments with more study places
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Campus strategy is about “balancing value and costs”

Every campus decision affects university goals, financial resources, and user productivity and satisfaction

2006: “good luck campus manager”
2016: collective responsibility

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DISCUSSION