Managing the university campus: the future estate strategy for higher education

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CONTENT / Propositions

1. Each university goal can be frustrated by the physical campus.
2. It takes a crisis – for example a fire – to change the academic workplace.
3. The innovative and flexible knowledge economy can bring new life to obsolete industrial heritage buildings.
4. The campus of the future is a city.

1. Elke universiteitsdoelstelling kan door de fysieke campus worden gefrustreerd.

“If you think education is expensive, try ignorance”

Derek Bok, former Harvard president

[I used this quote in the first sentence of my book]

my analogy: “If you think the campus is expensive, try neglecting it”

http://www.managingtheuniversitycampus.nl
2 worst case scenarios:

1. invest in campus → high capital costs → at cost of resources education & research
2. neglect backlog maintenance → productivity loss → lower profitability → lower rank

goal: find estate strategy that optimally contributes to all performance criteria

Every project or campus can be assessed from 4 perspectives

Managing the university campus

key performance indicators (for measuring added value)

source: Den Heijer 2011 – investment costs from 300 to 4000 euro / m² gross floor area

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Appendix I

Dutch university campuses

Erasmus University Rotterdam
Leiden University
Open University - distant learning
Radboud University Nijmegen
University of Groningen
Delft University of Technology
Eindhoven University of Technology
Maastricht University
University of Twente
Utrecht University
University of Amsterdam
Tilburg University
Vrije Universiteit Amsterdam
Wageningen University
EUR
LEI
OU
RU
RUG
TUD
TUE
UM
UT
UU
UvA
UvT
VU
WU

Universities in the Netherlands

14 universities in the Netherlands:
17 mn Dutch inhabitants
240,000 students
24,000 academic staff
21,000 support staff
+ 40 institutions for higher professional education ("hogescholen")
Source data: 2011

Problems internationally shared

Decreasing public funding
Aging campus (technically and functionally)
More than 50% of floor area is from 1960s and 1970s
Low occupancy and frequency rates
Sustainable campus → "greening the campus"
Increasing costs of campus
Expanding campus → city

Example: France

1. 84 universities
2. more autonomy for universities (LRU, 2007)
3. Opération Campus: 5 billion euro in 12 campuses
4. estimated 30% of all university buildings is in (very) bad condition
5. goal is to create ‘centres d’excellence’ to compete internationally
6. financial injection represents only 1% of annual resources
7. case Paris:
   - stimulate collaboration between 8 Paris universities
   - invest in student housing: add >12,000 units
   - use synergy university-city: ‘univer-city’
8. extra money for 9 more universities (260 million to share)

http://www.managingtheuniversitycampus.nl
2. It takes a crisis – for instance a fire – to change the academic workplace

Er is een crisis voor nodig – bijvoorbeeld een brand – om de academische werkplek te veranderen.

Movie “The unforgettable fire”

Emergency management
< 3 days after the fire
Aankondiging in Aula

Found a 'new' building within 10 days
sustainable
= re-use

ASSIGNMENT: relocate 3300 students and > 800 employees
DEADLINE: renovate 320,000 sqft < 6 months
+ new construction 40,000 sqft < next 6 months

http://www.managingtheuniversitycampus.nl
What we started with in June 2008...

Facts
- 150 participating companies
- 25 consultancy / architecture firms
- 350 construction workers on site
- 800 orders
- 15 km sprinkler / 5500 sprinklers
- 30,000 litres paint
- 220 km data cables
- 5200 wall outlets

Undergraduates < 4 months after fire
Project ready < 1 year

http://www.managingtheuniversitycampus.nl
3. The innovative and flexible knowledge economy can bring new life to obsolete industrial heritage buildings.

De innovatieve en flexibele kennis economie kan nieuw leven geven aan industrieel erfgoed.

Challenge the future
Delft University of Technology
42,000 m²

Cellular office space in old building – average occupancy rate 15%

11th floor – 13.5 m² usable floor area / fte

Design the building as a city
– reduce footprint (-15%), more shared / public space

http://www.managingtheuniversitycampus.nl

April 2, 2012 (AUDE, Loughborough)
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

Private → Public space
Contextual Concept: Connectivity and variety

Campus of the future:
- sustainable solutions
- CO₂ neutral campus
- less m², more quality
(photo: Wageningen)
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)
4. The campus of the future is a city

De campus van de toekomst is een stad

FUNCTION MIX – campus of the future

“To share or not to be...”

http://www.managingtheuniversitycampus.nl
New concepts for the place to study

- Workplace for students:
  - Brief: 5.6 m²
  - Realized: 4.0 m²
  - 2011: 4.3 m²
  - 283 tables, 1530 → 2260 chairs
  - 0.75 workplace / enrolled student
  - Occupancy rate > 40%

- m² is usable floor area (m² ufa)

Campus of the future:
- transparency, shared facilities

Lecture halls
- more shared use of large halls
- more small spaces locally
- flexible floor plan
- differentiation of quality, also used for seminars/conferences

Campus of the future: lecture halls – only to share

Campus of the future: intensive and flexible use of high quality facilities

http://www.managingtheuniversitycampus.nl
Library: quiet place to study

Educational facilities

Changing the academic office

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

Campus of the future:
- transparency of processes
  to support image of faculties and university

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

workplace for employees:
• 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)

Changing the academic workplace

• from private to more public space
• from office space to a multifunctional working environment
• from individual to shared - “to share or not to be…”
• is expanding from a workplace to the campus and the city
• trading quantity (per user) for quality of the working environment
• from one assigned workplace to many meaningful workplaces
  or to finding the most comfortable workplace in every season
• increasingly paperless (paper determines territory…)

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 storage
• lack of “storage management” – how often do we clean up
• culture change of “paperless office” (or “less paper office”)
• supply generates demand

SOLUTION
• “So-share or not to be”
• books are UNIVERSITY property
• share digital resources

Laboratories
Campus of the future: sharing laboratories and other expensive facilities

Conference rooms

RESIDENTIAL
- student housing - national
- student housing / international - ibor stay
- alumni housing / young potential / creative class
- faculty housing
- housing for support staff
- short stay apartments for visiting professors

RETAIL & LEISURE
- sport facilities
- book stores
- coffee bars
- student associations and societies / fraternities
- restaurants (lunch)
- restaurants (dinner)
- bars
- theaters
- jazz clubs
- cultural centre
- dry cleaning, day care centre, supermarkets

ACADEMIC FUNCTIONS • EDUCATION & RESEARCH
- student & faculty housing

Campus of the future, student & faculty housing

http://www.managingtheuniversitycampus.nl
Campus of the future: - creating the place to meet (photo: Delft)

Restaurants & bars
Public space, like in a city

Public space

• usable space in corridors for informal meetings and work

Business & Science campuses

RELATED BUSINESS
- Industrial parks, spin-offs
- Small enterprises (academic spin-offs)
- Start-ups / incubators
- Business activities in the city
- Business who combine learning/working
- “Innovation/innovation” / breeding places (artists)

INFRASTRUCTURE
- Parking space
- Transport to campus (buses)
- Accessibility by car
- Accessibility by public transport

Campus of the future: “univer-city”
(phones Groningen)

Campus of the future: univer-city
- building a knowledge city
- competitive advantage of city for university / university for city
- knowledge workers: economic growth

http://www.managingtheuniversitycampus.nl
campus is network of functions

region: Den Haag
Delft
Rotterdam
network of
campus functions

European 'Univer-cities' in the top 150 world-wide

“To share or not to be…”

http://
www.managingtheuniversitycampus.nl
Campus of the future:  
**model A – traditional university**  
exclusiveness, elite & large  
can we still afford this?

Campus of the future:  
**model B – network university**  
"campus is market place of knowledge"  
sharing the campus  
"univer-city" 

Campus of the future:  
**model C – virtual university**  
work where you want 

Campus of the future:  
**model D – University College**  
small, broad, Bachelor in English, selected talent

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<table>
<thead>
<tr>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
<th>Model D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional university (= reference)</td>
<td>Network university</td>
<td>Virtual university</td>
<td>University college</td>
</tr>
<tr>
<td>m²</td>
<td>same m²</td>
<td>much less m²</td>
<td>less m²</td>
</tr>
<tr>
<td>users</td>
<td>more users</td>
<td>more users</td>
<td>less users</td>
</tr>
<tr>
<td>euros</td>
<td>more euros available (from more users)</td>
<td>more euros available (for less m²)</td>
<td>more euros available (higher added value)</td>
</tr>
<tr>
<td>quality per m²</td>
<td>higher quality</td>
<td>higher quality</td>
<td>higher quality</td>
</tr>
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combining future campus models, adding to the university’s performance

- competitive advantage
- profit
- productivity
- sustainable development
### Managing the university campus → Managing the European campus

- putting campus (management) on the strategic agenda
- gathering data in European network
- use ‘crowd sourcing’ and ‘crowd funding’ (EU universities)
- to generate collective management information
- compare campus management models (campus ownership)
- result: publications / benchmarks / tools

→ supporting campus decisions of EUA members

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### Strategic choices, linked to stakeholders

<table>
<thead>
<tr>
<th>accommodate “exclusive” and “closed”</th>
<th>accommodate “shared” and “open”</th>
</tr>
</thead>
<tbody>
<tr>
<td>low % of resources spent on the campus</td>
<td>high % of resources spent on the campus</td>
</tr>
<tr>
<td>only public funding</td>
<td>allow private funding</td>
</tr>
<tr>
<td>low space use per student or employee</td>
<td>high space use per student or employee</td>
</tr>
<tr>
<td>focus on individual needs</td>
<td>focus on collective needs</td>
</tr>
<tr>
<td>accept % buildings in bad condition</td>
<td>all buildings at least reasonable condition</td>
</tr>
<tr>
<td>smaller(?) ecological footprint</td>
<td>larger(?) ecological footprint</td>
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### THEORIES & FRAMEWORKS

1. Convince policy makers of role campus in financial sustainability.

### AFTER OUR FIRE: BK CITY

2. Never waste a good crisis.

### NEW CONCEPTS TESTED

3. Use European heritage buildings as a competitive advantage.

### STRATEGIC CHOICES

4. Use European historical inner cities and collective qualities as a competitive advantage – to share or not to be

### SHARING KNOWLEDGE IN EUROPEAN NETWORKS

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### Movie “The making of BK city”

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

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