Managing the university campus: future scenarios and current crises

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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.

Each university goal can be frustrated by the physical campus

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]
performance criteria university

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

Every project or campus can be assessed from 4 perspectives

CREM framework
Campus management is improved as real estate decisions are explained with more data = strategic, financial, functional and physical to policy makers, controllers, users and technical managers, referring to their key performance indicators.

Managing the university campus

http://www.managingtheuniversitycampus.nl
In the Netherlands, universities face several challenges:

- **Increasing user satisfaction**
- **Improving quality of place**
- **Supporting user activities**

These challenges are part of the broader context of sustainable development and profitability. The university campus in 2011 highlighted the following issues:

- Decreasing public funding
- Ageing campus (technically and functionally)
- More than 50% of floor area from the 1960s and 1970s
- Expanding campus

Key performance indicators for measuring added value include:

- **University rankings**
- **Patents and citations**
- **Diplomas**

These indicators help in assessing the performance of universities in various aspects:

- **Profitability**
- **Productivity**
- **Sustainable development**

Problems internationally shared include:

- Decreasing public funding
- Ageing campus (technically and functionally)
- More than 50% of floor area from the 1960s and 1970s

It takes a crisis – for instance a fire – to change the academic workplace.
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

1. professors & professionals
2. all parties have studied or worked at faculty

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

The innovative and flexible knowledge economy can bring new life to obsolete industrial heritage buildings.

De innovatieve en flexibele kenniseconomie 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

32.000 m²

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

http://www.managingtheuniversitycampus.nl
Private → Public space
Contextual Concept: Connectivity and variety

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

Dutch references – new academic workplace

[Bar chart showing net usable floor area per workstation]

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

(photo: Wageningen)
Campus of the future: - lecture halls – only to share
(photo: TU Delft)

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

Campus of the future: - transparency, shared facilities
(photo: TU Delft)

Campus of the future: - creating the place to meet
(photo: Library Tu Delft)

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


http://www.managingtheuniversitycampus.nl
the academic workplace
place → building → city

one territorial office workplace → many non-territorial places

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

The campus of the future is a city
De campus van de toekomst is een stad

http://www.managingtheuniversitycampus.nl
FUNCTION MIX – campus of the future

ACADEMIC: EDUCATION & RESEARCH

RETAIL & LEISURE

RELATED BUSINESS

RESIDENTIAL

INFRASTRUCTURE

ORGANISATIONAL LEVELS / potential partners for shared use, management and/or ownership

global
continental
national
regional
local
university
faculty
department
section
individual

PHYSICAL SCALES / resources to accommodate the required campus functions

ACADEMIC FUNCTIONS • EDUCATION & RESEARCH

RESIDENTIAL FUNCTIONS

RETAIL & LEISURE FUNCTIONS

RELATED BUSINESS FUNCTIONS

INFRASTRUCTURE FUNCTIONS

2011: “To share or not to be…”

images: DUWO

http://www.managingtheuniversitycampus.nl
1. Studio space

- student back at the faculty
- 6 m² usable per workplace
  → became less after decision process
- tables are assigned to groups of students per semester (no permanent territory)
- smart use of space (by smart scheduling)

http://www.managingtheuniversitycampus.nl
Reducing the footprint (1)

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


m² is usable floor area (m² ufa)

2. 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

Reducing the footprint (2)

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)
3. Lecture halls
- more shared use of large halls
- more small spaces locally

4. Library

5. Educational facilities

6. Laboratories

7. Conference rooms

http://www.managingtheuniversitycampus.nl
Public space, like in a city

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

9. Public space

- usable space in corridors for informal meetings and work

PRIMARY FACTS

<table>
<thead>
<tr>
<th>ORGANISATION</th>
<th>BUILDING</th>
<th>BUILDING-2011</th>
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<tbody>
<tr>
<td>1400 BSc students</td>
<td>700 BSc studio desks</td>
<td>2260</td>
</tr>
<tr>
<td>1675 MSc students</td>
<td>830 MSc studio desks</td>
<td>400</td>
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<tr>
<td>450 FTE staff</td>
<td>470 DESKS</td>
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<tr>
<td>800 employees</td>
<td>350 AVAILABLE EXTRA SEATS</td>
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<td>170 0,0 fte</td>
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<tr>
<td>270 PARKING PLACES</td>
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<td>less</td>
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<td>44 MEETING ROOMS</td>
<td>5 LECTURE HALLS</td>
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<tr>
<td>1 LIBRARY</td>
<td>1 RESTAURANT</td>
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</tr>
<tr>
<td>3 BARS</td>
<td></td>
<td></td>
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<tr>
<td>AND MUCH MORE</td>
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BK City Slim

Managing the university campus

Transform BK City to an energy / CO₂ neutral building
Reduce footprint: more users / m²

http://www.managingtheuniversitycampus.nl
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
- increasingly paperless (paper determines territory…)
- from one assigned workplace to many meaningful workplaces
  or to finding the most comfortable workplace in every season

THEORIES & FRAMEWORKS
1. Convince policy makers of role campus in financial sustainability.
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