Campus of the future
models and sustainable choices

Alexandra den Heijer, MSc PhD
Faculty of Architecture,
Delft University of Technology (TU Delft), Netherlands

CONTENT
1. Vision on managing the university campus (THEORY)
2. Trends that shape the campus of the future (PRACTICE)
3. Three future models for university & campus (STRATEGIES)

The campus is a key asset in “the Battle for Brains”
good facilities can attract talent
bad facilities can chase them away...

proposition (PhD defence)
Each university goal
can be frustrated by the physical campus

Universitetets campusområde kan
utgöra ett hinder för lärosätet att uppnå sina mål.

http://
www.managingtheuniversitycampus.nl
Managing the university campus

Managing the university campus involves:

- Strategic policy makers
- Financial controllers
- Users
- Functional
- Technical managers
- Physical

Campus management is about four different perspectives:

- Strategic
- Financial
- Functional
- Physical

Performance criteria university:

- Competitive advantage
- Profitability
- Productivity
- Sustainable development

"2 worst case scenarios":

1. Invest in campus → high capital costs → at cost of resources education & research
2. Neglect building maintenance → productivity loss → lower profitability → lower rank

Goal: find estate strategy that optimally contributes to all performance criteria.

Campus management is about four different perspectives:

- Strategic
- Financial
- Functional
- Physical

Universities in the Netherlands

- 240,000 students
- 24,000 academic staff
- 21,000 support staff

Source data: 2011

Source: Den Heijer 2011 – investment costs from 500 to 4500 euro / m2 gross floor area

http://www.managingtheuniversitycampus.nl
CONTENT

1. Vision on managing the university campus (THEORY)
2. Trends that shape the campus of the future (PRACTICE)
Campus of the future:
- transparency of processes:
  to support image of faculties
  and university

Campus of the future:
- lecture halls – only to share
(PHOTO: VU Amsterdam)

Campus of the future:
- transparency, shared facilities
(PHOTO: VU Amsterdam)

Campus of the future:
- creating the place to meet
(PHOTO: Library Tu Delft)
It takes a crisis – for instance a fire – to change the academic workplace

En ytterlighet, till exempel en brand, kan vara det enda sättet att förändra den akademiska arbetsplatsen.

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

sustainable = re-use

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

En innovativ och flexibel kunskapsmiljö kan ge nytt liv åt från början icke ändamålsenliga industrilandskap.

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

11th floor – 13.5 m² usable floor area / fte

http://www.managingtheuniversitycampus.nl
Changing the academic workplace

**strategic goals:**
- increase competitive advantage (image)
- stimulate collaboration between different user groups
- change culture

**functional goals:**
- higher productivity
- better match for user activities
- higher quality of the working environment
- higher occupancy rates

**financial goals:**
- reduce costs
- increase value

**physical goals:**
- reduce the footprint
- reduce CO₂ emission
- reduce risks

---

Office space

- no individual territory
- 12 m² usable per fte
  - became more after design process
- find the best workplace for every activity = “activity-related concept”
  a. SILENT ROOMS
  b. LIVING ROOMS
  c. MEETING ROOMS
  - formal / informal
  d. TEAM OFFICES

---

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)

---

Dutch references — new academic workplace

---

Storage

- including digital storage

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

**SOLUTION**
- “No share or not to be”
- books are UNIVERSITY property
- share digital resources

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
- EU: higher education budget crisis → to share or not to be
- is expanding from a workplace to the campus and the city
- increasingly paperless (paper determines territory...)
- from one assigned workplace to many meaningful workplaces or to finding the most comfortable workplace in every season
- trading quantity (per user) for quality of the working environment

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)

http://www.managingtheuniversitycampus.nl
proposition (PhD defence)
The campus of the future is a city
Framtidens campus är en stad.

FUNCTION MIX – campus of the future
“To share or not to be…”

“...model A: “Traditional university”
- traditional, classical university, academic rituals
- condition for opportunities: selection, exclusive, elite
- same m2
- same resources, healthy, safe workplace
- no facility sharing: exclusive use for university
- opportunity for more resources: higher tuition & alumni funding

CONTENT
1. Vision on managing the university campus (THEORY)
2. Trends that shape the campus of the future (PRACTICE)
3. Three future models for university & campus (STRATEGIES)
Campus of the future: model A – traditional university
- exclusiveness, elite & large
- can we still afford this?

Campus of the future: model A ‘reinvented’ – University College
small, broad,
Bachelor in English, selected talent

• more institutions thoroughly mixed
  with urban fabric continued infusing
  in the urban domain with all
  campus space types (academic,
  housing, leisure etc.)
• focus on university-industry-
  community collaboration
• same space demand, more facility
  sharing
• sharing resources
  → more quality
  for all stakeholders

Model B: “Network university”

Model C: “Virtual university”

- the physical campus is an inspiring
  meeting place: creative, stimulating
  and a focus on intellectual and social
  exchange
- virtual “back office”, vital very modern
  state-of-the art “front office” university
- m2: less (clicks replace part of the m2)
- same resources available for less m2
  → higher quality
The campus is a key asset in “the Battle for Brains”

for global competition in attracting talent
for productivity – quantity and quality of output
for profitability – most effective way to spend budget
for sustainable development – m² / user

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

for global competition in attracting talent
for productivity – quantity and quality of output
for profitability – most effective way to spend budget
for sustainable development – m² / user

CONCLUSIONS

1. THEORY
   - managing the campus is complex task
   - affects all university performance criteria

2. PRACTICE
   - trends are international
   - “to share or not to be”

3. MODELS
   - align university & campus strategy
   - combining traditional, network & virtual campus
   - Share information in European (EUA) network

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

http://www.managingtheuniversitycampus.nl