International sustainable campus network
Zürich meeting 23-25/4/2008

Working group III:
Financial and decision mechanisms

Theme:
sustainable buildings on campuses

Université libre de Bruxelles
Environmental Coordination

September 2004
Birth of Environmental Coordination
Environmental management department
Trial period: 2 years

October 2006
Permanent internal funding
Integration of the department within the institutional organigram
department of health and safety at work (SIPP)
Environmental Coordination
Mission

- to introduce environmental management within the university
- to define a coherent environmental policy
- to coordinate environmental management activities
- to facilitate internal environmental communication
- to promote best environmental practice in all fields
- to provide environmental advice
- to undertake projects that improve ULB’s environmental performance
- to raise environmental awareness and promote eco-friendly behaviour
- to monitor the environmental performance
- to publish the results

Environmental Coordination
Vision

- constant improvement in environmental performance
- efficient environmental management system for all sites
- involving an ever-growing number of people in daily environmental management
- coherent, progressive and up-to-date environmental policy
Environmental Coordination

People involved

- environmental coordination team
- environmental coordination committee (reps. faculties & departments)
- students: intern traineeships, master’s dissertation projects
- ULB staff from all departments and faculties

Environmental policy

Part I:
Environmental policy statement

Part II:
Working documents covering 13 action fields
- global issues
- goals for ULB
- actions already taken by ULB
- future actions
Environmental policy

Action fields:
1. Clean environment
2. Well-being
3. Energy
4. Water
5. Waste
6. Air
7. Noise
8. Ground
9. Green spaces & biodiversity
10. Buildings & landscaping
11. Eco-consumption
12. Relationship with external suppliers
13. Mobility

Environmental actions + funding

- inventory of environmental impact
- environmental management
- waste & energy management
- ecoconsumption
- information campaigns
- etc.
Environmental actions + funding

Funding:
- annual budget for environmental actions
- public incentives (competitions, grants, env. laws)
- green accountancy: identify environmental and financial savings
- public/private partnerships

Budget & financial instruments
IN > funding (excluding buildings)

- Annual budget: 226 000 000 €
Budget & financial instruments
OUT > costs (excluding buildings)

- Operational costs and equipment: 23%
- Research and teaching staff: 33%
- Admin staff: 28%
- Researchers on contract: 16%

Building and renovation projects
Funding

1. Public allocation (Communauté française)
   1.922.214 € / year (indexed)
   Renovation, small building projects
   Teaching, research, admin
2. Exceptional public grant
   18.000.000 €
   For big building investment
3. Real estate sale
   2007: 50.000.000 € (sale of land, campus de la Plaine)
   Limited income
4. Private Donors
   Extraordinary, limited funding
Building and renovation projects
Financial and decision mechanism

- Planning department:
  - Needs analysis
  - Project proposal & budget

- Energy saving criteria: YES
- Other environmental SD criteria: NO

- Renovation
- New construction

- Agreement by authorities (R & P)
- Agreement by university council

- Project development by Infrastructure department

- Checking financial hypothesis
  - OK
  - Wrong

- New budget
- U. C. refusal

- Project achievement

Acknowledgment of needs by authorities (rector, president)

Integration of sustainable development criteria

- A given activity sector: need for space or inadequate space

- Acknowledgment of needs by authorities (sector, president)

- Planning department:
  - Needs analysis
  - Project proposal & budget

- Energy saving criteria: YES
- Other environmental SD criteria: YES

- Renovation
- New construction

- Agreement by authorities (R & P)
- Agreement by university council

- Project development by Infrastructure department

- Checking financial hypothesis
  - OK
  - Project achievement

Reduced environmental input

Integration of sustainable development criteria
Integration of sustainable development criteria

A given activity sector: need for space or inadequate space

Planning department:
- Needs analysis
- Project proposal & budget +15%

Acknowledgment of needs by authorities (rector, president)

Energy saving criteria YES
Other environmental SD criteria YES

Renovation
New construction

Agreement by authorities (R & P)
Agreement by university council

Project development by Infrastructure department

Checking financial hypothesis
- OK
- Wrong

Reduced environmental input

Project achievement

STOP

New budget

U. C. refusal

Integration of sustainable development criteria

A given activity sector: need for space or inadequate space

Planning department:
- Needs analysis
- Project proposal & budget +15%

Acknowledgment of needs by authorities (rector, president)

Energy saving criteria YES
Other environmental SD criteria YES

Renovation
New construction

Agreement by authorities (R & P)
Agreement by university council

Project development by Infrastructure department

Checking financial hypothesis
- OK
- Wrong

Reduced environmental input

Project achievement

STOP

New budget

U. C. refusal
Steps towards sustainable building design: common SD goals

**University - at all levels**

+ Need for common sustainable development values
  
  environmental values = ok, cf. environmental policy
  extend to sustainable development values

- Statement by rector & president
  need for stronger environmental and sustainable development commitment

**Infrastructure department**

+ Strong environmental commitment
+ High environmental quality assessment of each project*
+ Use of durable building materials and equipment
+ Environmental building guidelines for architectural agencies

  e.g. standard equipment: rain water collectors

* French methodology: Haute qualité environnementale®, PHPP2004
Steps towards sustainable building design: decision & financial processes

- Initial budget estimation has to consider costs of environmental/SD design and equipment
  > Identify future savings on operating costs and invest against them*
  > Public incentives
    (have to be adapted to university needs)

* ‘green accountancy’: investment budget directly connected to operating budget

> Partnerships with entrepreneurs, demonstration pilot projects
> Increase sponsorship (cultural obstacles?)
> “1/3 investor” (ULB or private investor, specialized in environmental, energy saving and renewable energy equipment)
Steps towards sustainable building design: decision & financial processes

- Return on investment needs to be determined precisely
  > pilot projects
  > learning by doing

Life in a sustainable building: obstacles

- Irregular space occupation
  > overcome difficulties of interior climate and lighting optimization

- Appropriate user behaviour
  > Information campaigns
Life in a sustainable building: obstacles

Preview sufficient budget for maintenance
> 10 -15% of building cost/year (depending on age)

Monitor input & output
(energy & water consumption, waste, pollution)
> Environmental management system
> Meters, indicators

Sustainable building: from planning ... to reality

TRANSPARENCY

create links

1. Budget
2. Design, planning
3. Environmental management
4. User behaviour

Investment Costs + 15%

Operating costs
Maintenance
Equipment

Energy Water
Waste Pollution
Hot water production by solar energy

Building F1:
Central building of ULB’s major campus in Brussels (Solbosch)
- 220 student rooms
- 2 restaurants
- Snack bars, shops
- Cultural spaces

Goals:
- Apply ULB environmental policy
- Improve environmental performance of older building
- Create a demonstration project
Hot water production by solar energy

Strategy
• Starting point:
  students and staff members suggest that F1 building could benefit from solar energy for hot water production

  (2 preliminary studies)

Further steps:
+ Feasibility study by external engineering agency
+ Internal decision process:
  Presentation of the project by environmental coordination
  (representing all departments involved)
> Agreement by university council?
Hot water production by solar energy

Financial mechanism:
Feasibility study
> financed by Ministry of Environment
  (Competition, criteria: motivation to realize the project, feasibility)

Project:
> annual budget for renovation
  (investment period seems to be short, needs to be determined precisely)