

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

Working group III:
Financial and decision mechanisms

Theme:
sustainable buildings on campuses



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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)



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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



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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



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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



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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



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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



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Environmental actions + funding

- ▶ inventory of environmental impact
- ▶ environmental management
- ▶ waste & energy management
- ▶ ecoconsumption
- ▶ information campaigns
- ▶ etc.



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Environmental actions + funding

Funding:

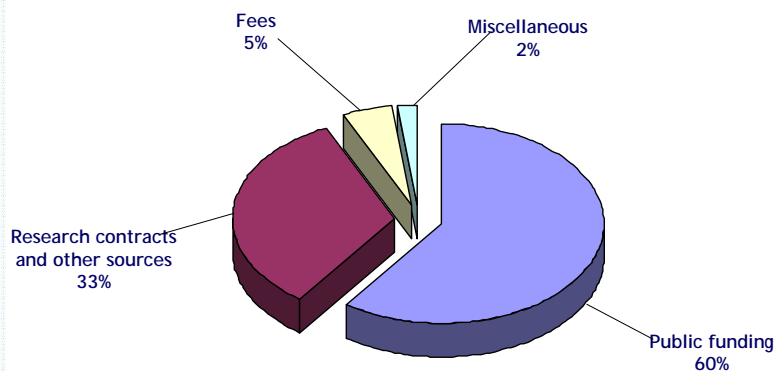
- ▶ annual budget for environmental actions
- ▶ public incentives (competitions, grants, env. laws)
- ▶ green accountancy: identify environmental and financial savings
- ▶ public/private partnerships



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Budget & financial instruments IN > funding (excluding buildings)



Annual budget: 226 000 000 €

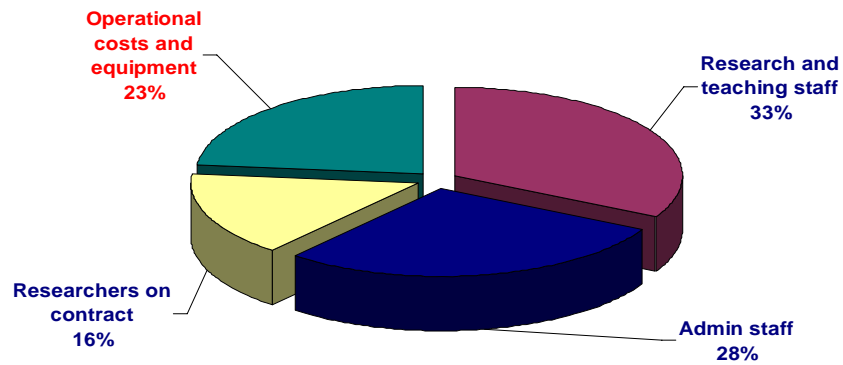


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Budget & financial instruments

OUT > costs (excluding buildings)



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Building and renovation projects Funding

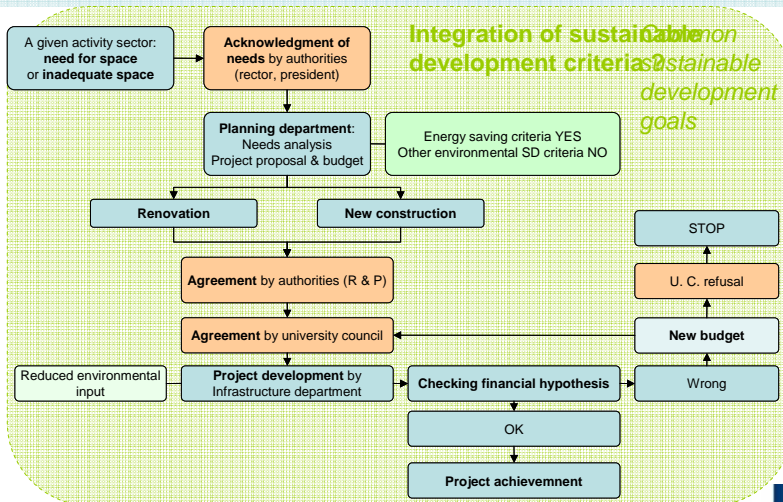
- 1. Public allocation** (Communauté française)
1.922.214 €/ year (indexed)
Renovation, small building projects
Teaching, research, admin
- 2. Exceptional public grant**
18.000.000 €
For big building investment
- 3. Real estate sale**
2007: 50.000.000 € (sale of land, campus de la Plaine)
Limited income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



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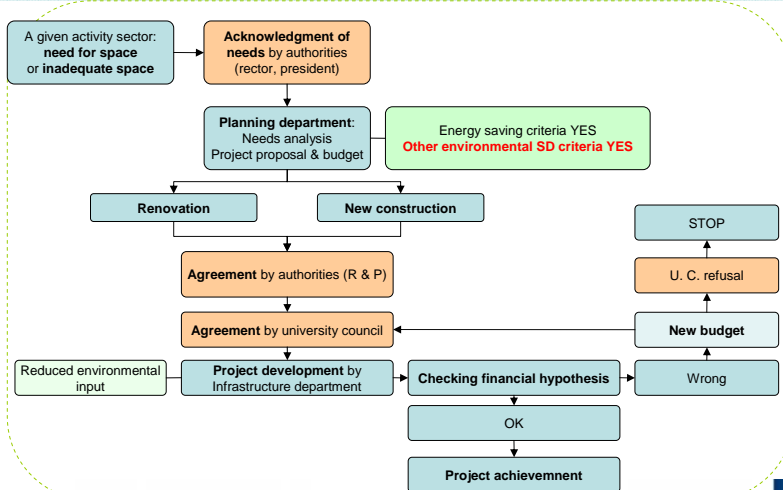
Building and renovation projects Financial and decision mechanism



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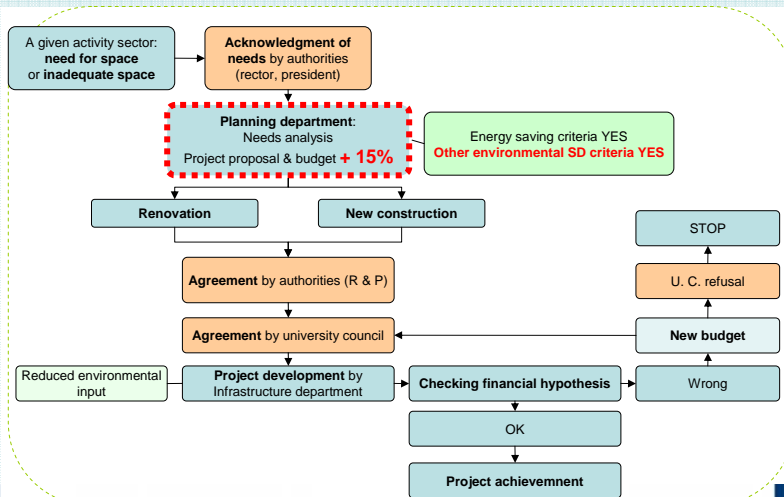
Integration of sustainable development criteria



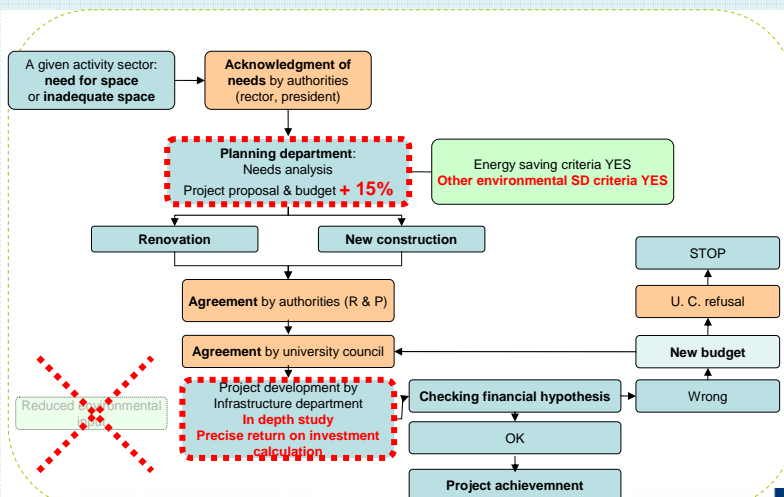
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Integration of sustainable development criteria



Integration of sustainable development criteria



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



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Steps towards sustainable building design: common SD goals

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



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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



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Steps towards sustainable building design: decision & financial processes

> **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)



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Steps towards sustainable building design: decision & financial processes

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



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Life in a sustainable building: obstacles

- Irregular space occupation
 - > overcome difficulties of interior climate and lighting optimization
- Appropriate user behaviour
 - > Information campaigns



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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)

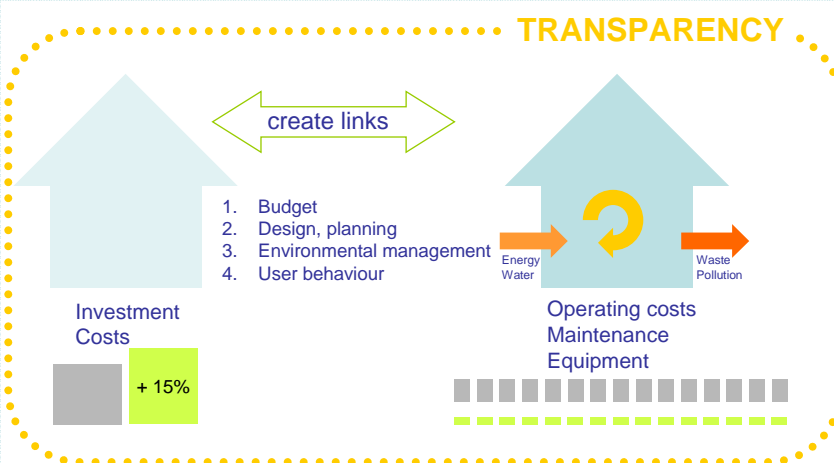
- > Environmental management system
- > Meters, indicators



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Sustainable building : from planning ... to reality



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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



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Hot water production by solar energy

Goals:

- Apply ULB environmental policy
- Improve environmental performance of older building
- Create a demonstration project



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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)



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Hot water production by solar energy

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 ?



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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)



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