

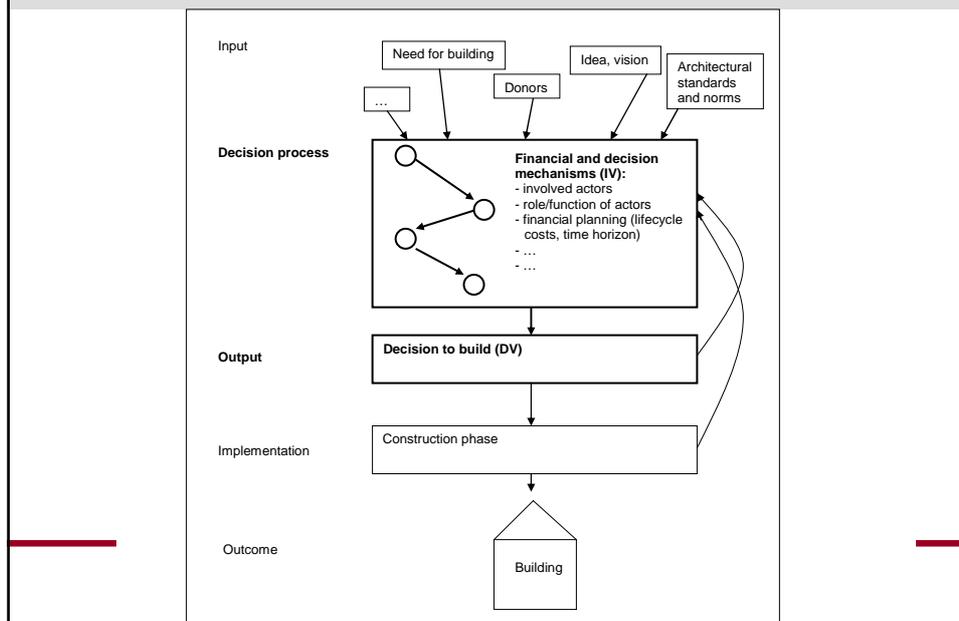
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Financial and Decision Mechanisms for Sustainable Building on Campuses

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Which Financial and Decision Making Mechanisms Facilitate Sustainable Building on Campuses?



Case Studies

Method: 6 brief, exploratory case studies

Case Selection:

	Example of un-sustainable building project	Example of sustainable building project
University of Oregon	Miller Theatre Building (Case Study I)	Lillis Business Complex (Case Study II)
ETH Zurich	Center for Chemistry (Case Study III)	Student Housing Science City (Case Study IV)
University of Zurich	Center for Dentistry (Case Study V)	Main Building (Case Study VI)

→ Selection bias (geographical, public-private)

Case Study III: Center for Chemistry (HCI)

Function and construction:

- Center for chemistry related research and teaching
- Five Laboratory wings
- Center for Nuclear Magnetic Resonance
- Clean-room center for micro-and nanotechnology

Sustainability:

- + Excellent laboratory infrastructure
- + Solar energy unit on roof
- Difficult and costly operation of building
- Not sustainable from a social point of view

Case Study HCI: Decision Process

- Planning process began 1980ies
- Federal Agency for Buildings responsible for construction (changed since)
- ETH made specification, Federal Agency was responsible for actual project: architectural contest and construction
- Focus on excellent research infrastructure, operational aspects irrelevant
- Strong opposition against project from public
- Long delay between planning and moving in

Case Study HCI: Key Insights

Hindering Factors

Decision making process:

- The designated occupant (ETH) was hardly involved in the decision making or projecting process.
- Fairly long delay between original projecting and final construction hindered taking into account of newest expertise.

Financial mechanisms:

- Investment and operational costs covered by different institutions.

Facilitating Factors within Decision Making Process

1. (Future) occupants are involved in decision and construction process and expect benefits to flow from sustainable design.
2. Decision process takes place solely within university.
3. Key players within decision process are personally committed to sustainability.
4. Explicit sustainability goal (law, university internal requirement, requirement of donor) is present.
5. Decision process is not a political process (i.e. politicians are not involved in process, no public vote).
6. Cultural awareness and concern over Climate Change translates to some perceived pressure to satisfy public opinion.

Facilitating Financial Mechanisms

7. Organizations covering operational and maintenance costs are strongly involved in decision process.
8. Organizations covering operational and maintenance costs are strongly involved in construction process (sometimes “small” decisions during construction can have significant impact).
9. Investment and operational costs are covered by same organization.
10. Explicit financial incentives for energy saving (as long as organization benefiting from incentive is involved in decision making process).