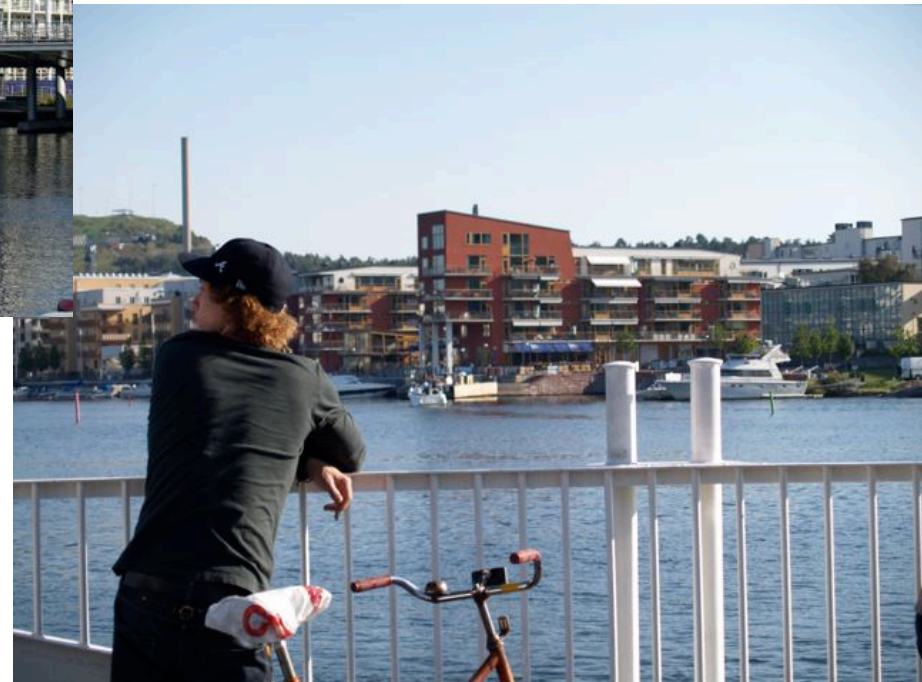


# Situations of Opportunity – Hammarby Sjöstad and Stockholm City's Process of Environmental Management



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# Planning and Design – tools for sustainable city development?



*Hammarby Sjöstad  
brownfield development*













# Was Hammarby Sjöstad...

*To what extent did planning and design influence the "environmental performance" and level of sustainability of Hammarby Sjöstad?*

- Hopelessly wide question for a researcher...
- Environmental performance was evaluated through the Environmental Load Profile (ELP; or MBP in Swedish)
- Assessment based on the project's environmental objectives
- Focus on the process, compare with the counterfactual

*Narrowing it down:*

- Focus on one stakeholder – the City's Project Team
- Sickla Udde
- The "chances taken - chances lost" of the process
- The Goal Conflicts
- The Policy Instruments
- The Situations of Opportunity

**...planned as sustainable city district?**

**...but first...**



**...some background comments...**

# Isn't it just the ability...

*Too much confusion about defining the concept of "Urban Sustainable Development"?*

- Brundtland etc
- Environmental, social, economic aspects
- Institutional, too
- Differing, conflicting, competing discourses

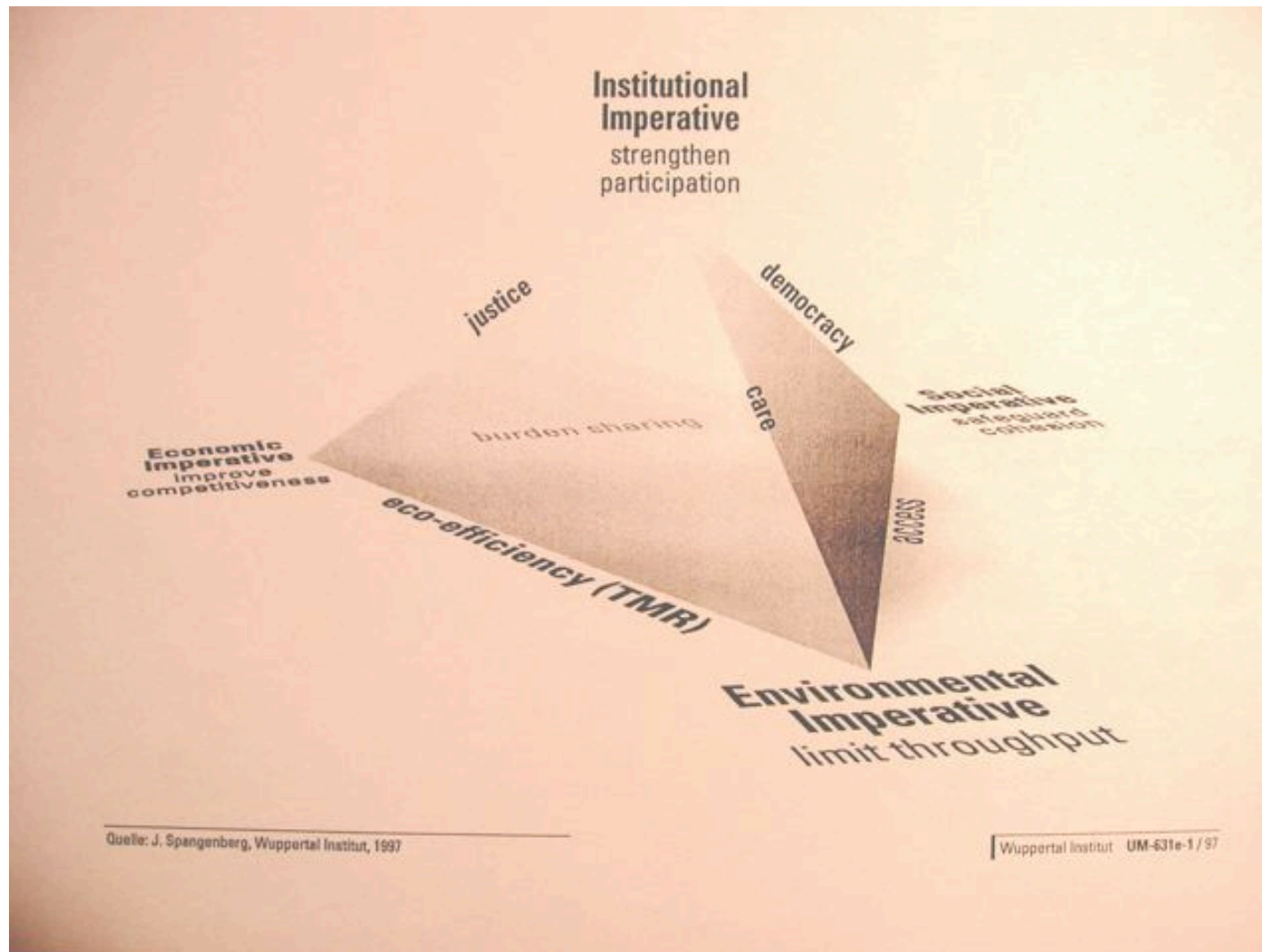
*Then stop using it as a concept*

- It could be just an ordinary word, meaning the ability to sustain
- Let the text, the context define what is to be sustained
- ...at least as a little mental exercise

**...to sustain something?**



# Sustainability is...



...four-dimensional?

# Environmental sustainability as an...

*Society must use nature sustainably...*

*...in order to sustain society*

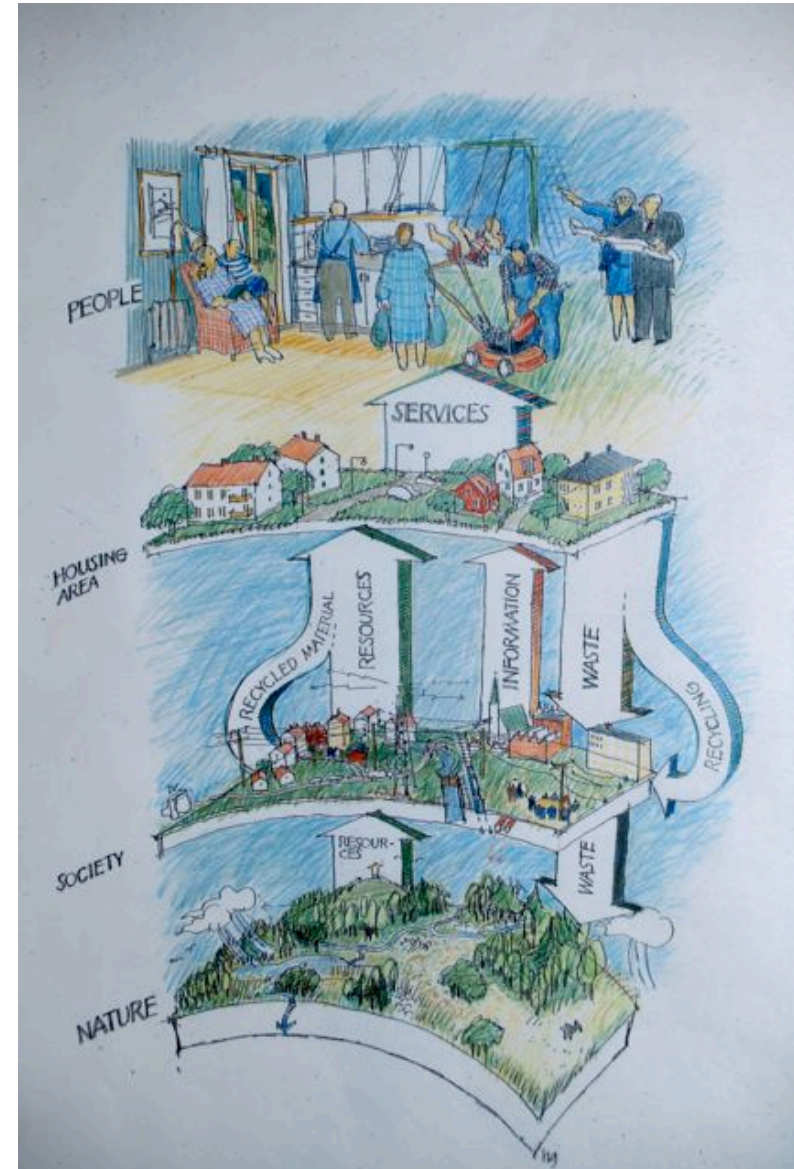
*Society is dependent on nature:*

- as resource base,
- as waste dump, and
- as transformer of waste to resources.

*...but not the other way around.*

**...asymmetric relationship.**

# Urban metabolism...



**...society's dependency on nature.**



# Products – four mill. of each...

## *The home, the flat*

- 200 000 kg
- 15-20 000 kWh/year
- Used 12 hours a day
- Lasts for 100 years



## *The personal computer*

- 20 kg
- 100 kWh/year
- Used 4-6 hours a day
- Lasts for 3 years



## *The private car*

- 1 000 kg
- 9-12 000 kWh/year
- Used 1/2-1 hours a day
- Lasts for 15 years



**...but very different.**

# **The Project Team's environmental management...**



**...of the development of Sickla Udde.**

# Environmental objectives...

*What can be influenced by planning and design, what by other stakeholders, in other parts of the building's life cycle?*

- Total energy supply 60 kWh/m<sup>2</sup> incl. max 20 kWh/m<sup>2</sup> electricity, all "green"; only renewable energy sources
- 80 % of commuting by public transport, walking or biking; 15 % of all local transport on renewables
- Waste to landfills reduced by 60 per cent; waste separation: Organics, textiles, harmful waste
- Water use reduced by 50 per cent; local treatment of storm water
- Use of virgin metals, gravel and sand reduced by 50 per cent
- All developed virgin land to be "recreated" within the area
- Outdoor noise below 40 dB(A) on one side of flats

**...who's the agent of change?**



# Stockholm City's environmental management and...

*What can be learned from the process?*

- Who: The Project Team as manager, innovator, demand shaper and purchaser.
- What: Environmental objectives, goal conflicts, policy instruments, opportunities-restrictions.
- How: Situations of Opportunity as projects, their goal conflicts and policy instruments.
- Where and when: Sickla Udde, spring -97 till Jan -03.
- Based on a Case Study.

**...the environmental objectives of  
Hammarby Sjöstad.**

# Environmental objectives in...

*What does the Team do to realize the objectives?*

- Land use.
- Soil decontamination.
- Technical supply: Energy, waste and water-sewage.
- Transport.
- Construction materials.
- Noise.
- Social, economic and institutional objectives?

**...the Team's perspective.**

# The City's Project Team and...

*What does the Team do to realize the objectives?*

- Objectives for developers, consultants, contractors (to developers and the City), LIP ...and the residents.
- Head, secretariat, environmental officer, independent economy.
- Offices: Planning, Roads and Real Estate, Environmental, Water-Waste-Energy.
- Power: Direct-indirect, Formal-informal.
- “Management by Objectives”. Learn, teach, decide.
- Project management, temporary organizations.

**...the management process.**



# The Project Team's...

*Political science: Internal, external and procedural goal conflicts.*

- Environmental vs. environmental?
- From energy objective to technical solution.
- Economy – multi-dimensional conflicts.
- Building design and “city image” – conflict in planning.
- Usage phase, usage value.
- Competition and law on public procurement.
- Consultations with developers, users.

**...main goal conflicts.**

# The Project Team's...

*Political science: The Whip, the Carrot, the Sermon.*

- Hulth grants, LIP-money. Land prices, investments. “Normal” rents.
- Design manual, “success criteria”, pictorial visions, minutes.
- Procurement, competition programmes.
- Detailed regulatory plans.
- Development contracts.
- “Environmental Load Profile”.
- Publicity, public attention.



**...recurrent policy instruments.**

# The Project Team's...

*Our findings: Situations of Opportunity, prehistory, formative moment and outcome.*

- Negotiations - development contracts.
- Detailed comprehensive planning - Sickla Udde.
- Procurement, construction contracts.
- External events – olympics, new political majority, moisture – mould.
- Environmental inspections and rounds, revision.
- Competition – land allotment, best new building, car pool.
- The “Hammarby model”.

*...related to political science's “Windows of Opportunity”, “Formative Moments” etc.*

**...Situations of Opportunity.**

# Detailed regulatory planning...

*The planning process as Situation of Opportunity*

- Municipal monopoly according to Swedish law.
- Prehistory: Architectural competition.
- Prehistory: Comprehensive plan.
- One detailed plan for the whole of Sickla Udde.
- Design programme.
- Inertia from well-established routines.



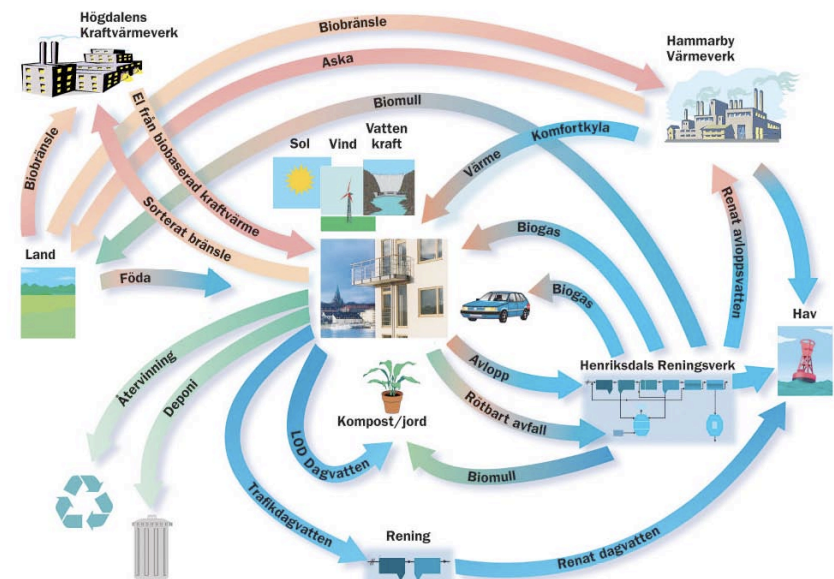
**...power but also inertia.**



# The Hammarby Model...

*More sustainable than the “ordinary” infrastructure of the City?*

- Developed in co-operation between representatives from a number of the City’s infrasystem offices and companies.
- Coordinated by a member of the Project Team.
- Development started before the Environmental Objectives were passed in the City Parliament.
- “Co-ordinates systems for energy, water-sewage, waste etc”
- But what is different from the ordinary infrasystems?
- ...mainly the separation of organic waste...



**...unique infrasystem integration?**

# Ten development contracts...

*“Roads and Real Estate” and developer sign contract.*

- Standard form – powerful instrument, indicates practice.
- Preliminary land allotment. Negotiations, discussions. Follow up, certificate.
- Co-ordinated with land sales or land lease – but not on Sickla Udde.
- Unclear on environmental objectives, no obstacles in standard form.
- Always occurring, large sums at land sales.
- Improvements in negotiations and contracts in later stages.

**...on Sickla Udde.**

# Moisture and mould problems...

*Skanska's on-site problems influenced all.*

- April 2000 – “ordinary” on-site negligence.
- Documented by the Project Team.
- Warnings to “profitable” Site Manager.
- January 2001, in the news: Decontaminate, rebuild!
- Crisis group, new site manager, expert groups.
- Developers to Head of Team: “A one-off!”
- Now, everyone builds “under covering”.

**...in spite of management systems.**

# Situations of Opportunity...

*Overarching conclusions on the environmental management of Sickla Udde:*

- “Chances lost” – routinized situations with formal power, but burdened by prehistory.
- “Chances taken” –situations outside the ordinary, less of formal power.
- “Chances created” –situations outside the ordinary, created by the Team, less of formal power.
- Little of learning outside those directly involved – with the exception of the Mould Scandal.



**...fruitful units of analysis.**