Sustainable construction in the Alps: More than just buildings …

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Wolfgang Pfefferkorn

Overview

1. Background
2. The various dimensions of construction
3. The roles of Alpine cities
4. The Vorarlberg example
5. Other good practice
6. What Alpine cities can do TODAY

CIPRA projects: ALPSTAR, cc.alps, MountEE, climalp

1. Background

- Global warming, Alpine area highly concerned
- Need for reduction of GHG
- Private households: 30% of energy use
- Construction sector: big responsibility AND big potentials: CO2 reduction, green jobs ...
- Policy framework: EU, national: net zero energy buildings! -> need for action!
- Responsibility of Alpine cities: 60% of Alpine inhabitants, critical mass of knowledge, expertise -> potential and responsibility for their surrounding valleys and villages ... who, if not you!?

2. The various dimensions of construction

- New buildings, renovation
- Different types of buildings: private, public, industrial, mono- or multifunctional ...
- A process with several steps: planning, procurement, construction, maintainance, evaluation
- A complex group of actors: builders, architects, craftsmen, energy experts, banks, municipality
- Functional links to other topics: mobility, local services ...

- This system is changing ... you can be part of it!

3. The roles of Alpine cities

- Builder / renovator of your own buildings
- Local building authority
- Local authority for zoning and land use planning –> decisions on density, land use mix
- Responsible bodies for local and regional development questions: mobility, public services
- Economic player: which strategies? which enterprises, clusters do you want to attract?
- Role model and change agent: awareness raising among local population and key actors

4. Learn from the most advanced: the Vorarberg example

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History:

- 1989: energy saving in buildings
- 2000: social and ecological aspects integrated
- 2004: ecological housing subsidies
- 2008: building pass –> amount of subsidies
- 2008-today: roll out, mainstreaming on market

4. Learn from the most advanced: the Vorarberg example

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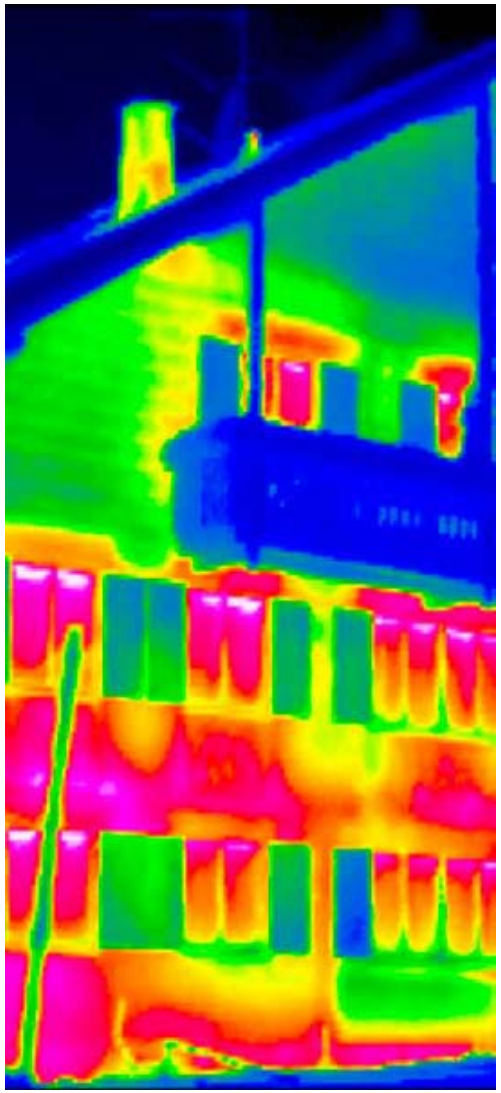
Today:

- 5 levels of subsidies, focus on renovation
- 17 energy consultancy offices in all valleys
- e5-programme: 29 municipalities
- 1.800 projects completed
- Energy autonomy until 2050: integrated concept with 101 measures for our grand-children



4. Learn from the most advanced: the Vorarberg example

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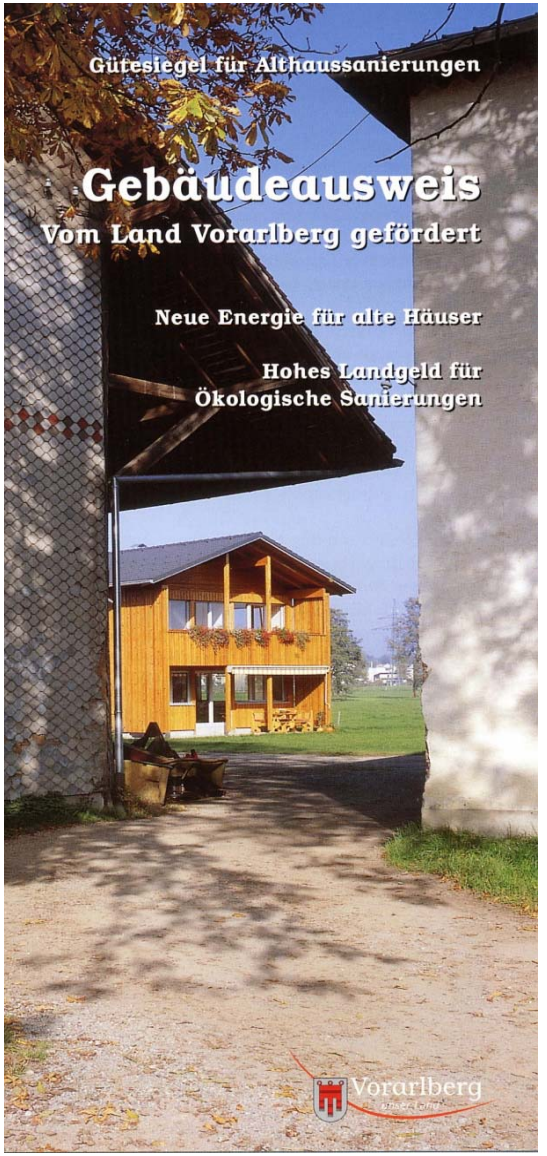
Three core elements:

- Building pass
- Baubook
- Service package

The building pass

- Evaluation catalogue (excel)
- Benchmark for energetic and ecological quality of buildings
- Subsidies in Vbg. depend on points (1.000 max.):
- Quality of process and planning: 225
- Energy and supply: 500
- Health and comfort: 125
- Material and construction: 125



Ecological aspects

5 topics, 10 criteria, 50 ecological measures, max. 300 ecopoints from overall 1.000 points

Planning Location	Comfort and functionality	A	xx% - x of 14
	Surface and ground demand		xx% - x of 14
Energy	Heating requirement	B	xx% - xx of 100
Building services	Energy sources	C	xx% - x of 32
	Heating supply, warm water		xx% - x of 55
	Water and electrical energy		xx% - x of 20
Material selection	Ecological assessment	D	xx% - x of 38
	Eco-index 3		xx% - x of 22
	Durability and maintenance		xx% - x of 20
Interior space	Emission-free	E	xx% - x of 12
	Ecological building quality		**xx% - xxx of 327**

The baubook – tools for environmental product selection

- Online information hub for energy efficient and green building (www.baubook.info)
- For manufacturers and retailers
- For developers and local authorities
- For planners, consultants and craftsmen

- Product catalogue, product eco-declaration
- Support and models for procurement process and building monitoring
- Regional specifications of subsidies in Austrian regions

Consultancy service package: 5 modules

M1	Preliminary planning: definition of aims, supervision in competition
M2	Optimisation of planning: tendering, moni-toring of offers
M3	Realisation: information for craftsmen, product declaration, product control
M4	Control of success: building site control, measurements
M5	*New: Maintaining of building and energy evaluation*

What we can learn from
The Vorarlberg example

- It needs time ... but learning regions can speed up!
- Preparation and procurement processes play a crucial role -> for public authorities!
- The technical knowledge is there, it has to be transferred: excursions, study tours ...
- Need for training and education for craftsmen
- Need for suitable framework conditions: standards, subsidies, incentives
- It is a business! Creates jobs and regional value added chains
- It is a question of attitude and culture

5. Other types of good practice

- Casa clima (It), Minergie standard (CH)
- Cubature bonus (Bolzano)
- Energy efficiency law Liechtenstein (FL)
- School refurbishment in Sonthofen (D)
- Passive house kindergarden in Gornja Radgona (SI)
- Climate plan of Grenoble conurbation (F)

Good practice databases:

- http://alpstar-project.eu/best-practice-plateform/best-practice-database/
- http://www.mountee.eu/good-practice/
- http://www.cipra.org/en/climate-projects/cc.alps/good-practice/

What Alpine cities can do TODAY

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- Renovate or make new own buildings in an energy efficient and sustainable way: focus on renovation!
- Learn from others: make study tours, talk to other cities, mayors -> offer your own experiences
- Don´t try alone: join networks and projects
- Show that you are role models, take the lead!
- Act as change agents: Convince your citizens, and stakeholders, create an open and inno-vative atmosphere

What Alpine cities can do TODAY

CIPRA LIVING IN THE ALPS

- Set up a platform of actors of the building chain in your city, in your region
- Start change processes, make citizens participate, make use professional support
- Promote education and training, technical schools, training centers
- Attract enterprises and craftsmen in the field of energy efficiency and the whole building chain

What Alpine cities can do TODAY

- Stop urban sprawl, promote dense settlements!
- Promote sustainable transport: bus, tramway, foot, bicycle); hinder individual car traffic!

Illustration 9 :

Consommation annuelle d'énergie par les ménages.

Source : VCÖ (2005) : Fokus Energieeffizienz im Verkehr. Wien

What Alpine cities can do TODAY

- Support public services in order to reduce travel distance
- Work out integrated energy and CO2 reduction strategies
- Prepare for the post fossil era!
- Shift budget to sustainable development issues

People are ready …

… and there is no reason to wait!

Thank you for your attention