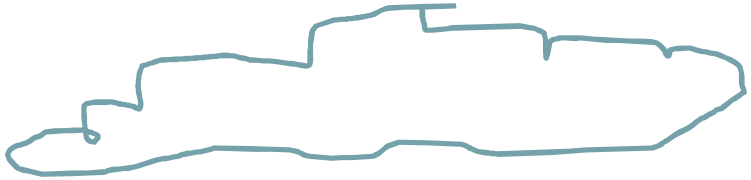
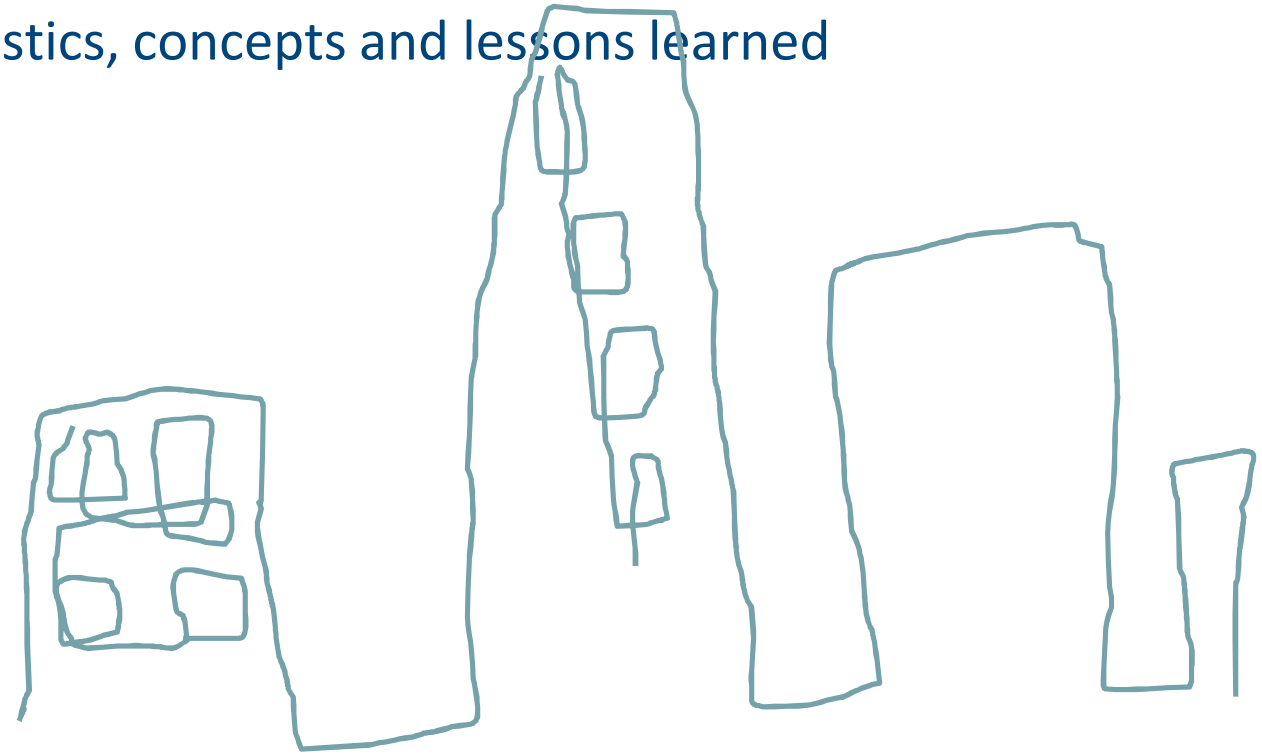


Centres promoting sustainable building and living: characteristics, concepts and lessons learned



Project background and context

Many projects addressing the challenge of creating the society and settlements necessary to meet the threat of climate changes by combining more resource preserving technologies with that of more sustainable everyday practices have been carried out.

One example is the planned climate-neutral settlement of Brøset in Trondheim, Norway.

A research project on how to support the future residents in adhering to the new “set of rules” found that there is a need for supporting both local residents and external actors if the (rather) ambitious set of goals of a carbon-neutral settlement will be met. A “green engine” that can help in choosing the right technologies, building types, materials, heating systems (or absence of such) etc. and – last but not least – helping residents to adjust to a new lifestyle would be needed.

A green engine…

As Brøset is only one of many similar noteworthy projects that have shown how difficult it may be to go from theory into practice in building and living low-carbon emission lives, we have carried out a mapping of examples of such “green engines” with the intent of finding out more about the characteristics, common denominators, concepts and lessons that can be learned from these examples.

Hopefully, the results of this study are useful for anyone interested in promoting sustainable building and living as well as meeting international set goals of a transition to low-carbon societies…

The mapped examples

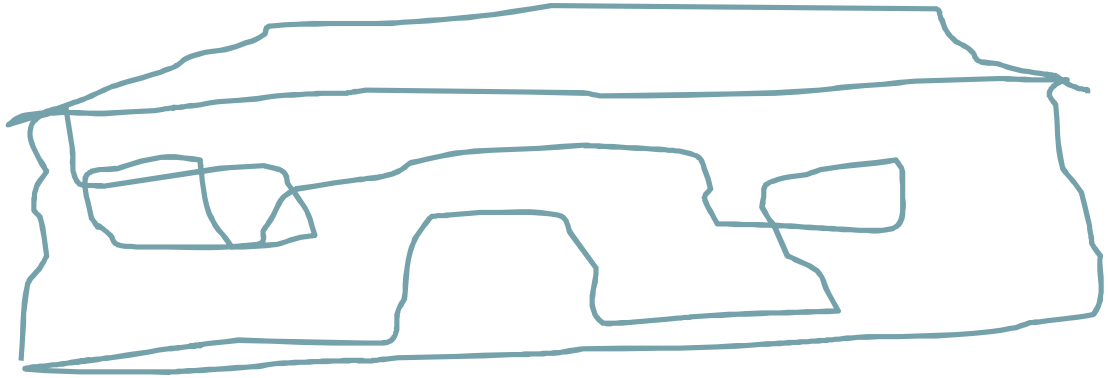
The included examples vary in form of organisation, localisation (urban or rural) as well as in size and activities involved.

14 Centres in study, 3 researchers

We have targeted both centres that are localised in or connected to a residential area and independent centres that have other audiences as a focus.

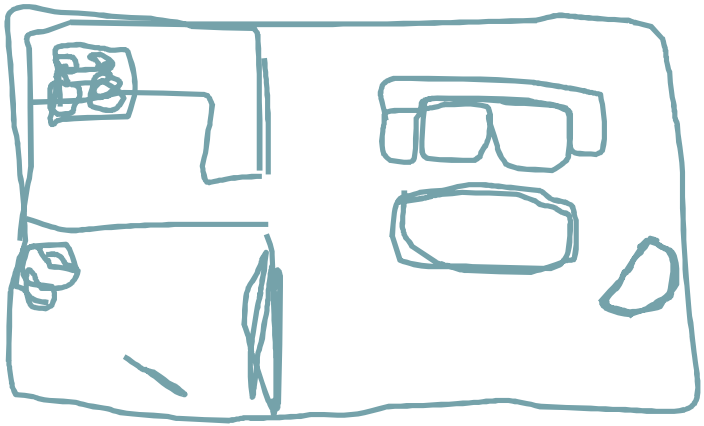
Definition

Climate centre is *“an organisation offering activities or information to promote sustainable lifestyles and/or technologies to the public that are founded at a particular location/ building”*



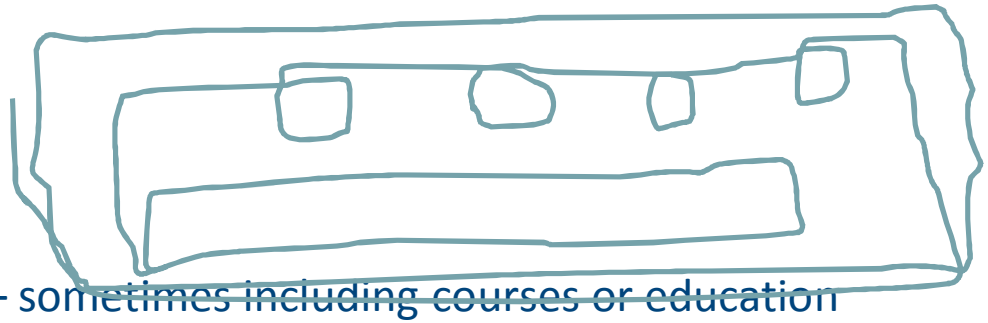
The centres have been classified as belonging to one of three types:

- Technology showrooms
- Full scale demonstration sites
- Research and policy centres



Technology showrooms - five cases

Could be compared to an old-fashioned market place or exhibition event with a particular theme, such as the ”farmers market” where each farmer has a stand offering his or her particular products to the public or sub-contractors.



However:

- more or less permanent
- *an organisation running them*
- typically offer a professional network – sometimes including courses or education within particular fields – in addition to being open to the public.
- usually dependent on steady business- based incomes (consulting, guidance and education) and many are typically based on membership fees in addition to each member promoting his or her own particular products.
- may also have supplementary direct public funding or benefit from grants for the customers when investing in new efficient technologies etc.

Technology showroom

Bauinfozentrum BIZZZ Elztal (Freiburg): exhibitions

Technology showroom and knowledge network for regional small businesses in the sustainable building sector.

www.bizzz.de

Name and location	Description	Demonstrating products as part of systems, or separate	Main activities and characteristics	Funding and organisation (commercial and/or public funding)
Bauinfozentrum BIZZZ Elztal (Freiburg)	Technology showroom and knowledge network for regional small businesses in the sustainable building sector.	Separate from "exhibitors" in addition to the building itself, which is a passive house demonstration.	– Offering neutral information. – Function as a regional network and innovator for small firms. – A meeting place for people.	Private initiative by architect. An association of 54 regional small and medium-sized craft businesses, architects, banks and service providers. Partners pay rent and a flat fee.
Klimatcenter (Göteborg)	Technology showroom and forum for marketing and training of and for professionals and consumers.	Separate technologies are shown as part of full systems.	– Offering contractors and consumers (professionals) information. – Highlighting system interdependence.	A joint initiative with two businesses in the building industry and their contractors. Commercial with no public funding.
CeDuBo (Antwerpen region)	Partner based non- profit organisation with technology showroom and knowledge network activities.	Separate technologies are offered, often paired with public subsidies.	*For member organisations*: – Access to knowledge network, updates, news and technical training. *To the public:* – Open exhibitions, regular campaigns and events.	100 partner members (mandatory by law) pay annual fee. No permanent public funding or subsidies, but a strong main partner that ensures continuity.
ICDuBo (Rotterdam)	Entrepreneurial organisation operating a technological showroom and a market place for diverse stakeholders seeking solutions to sustainable housing.	Selected separate technologies are shown as parts of a system as well as separately by each entrepreneur (member organisation).	– Offering a mediating link between supply and demand in the sustainable building market. – Connects all parties involved in the sustainable building market, including customers.	A private initiative of an entrepreneur. Over 250 members exhibit their products and pay membership fees (Marketplace).
The Genesis centre (T aunton)	A regional, educational resource centre at Somerset College.	Separate technologies from different member businesses are promoted.	– Mediating role between public policy initiatives (funding et cetera), regional businesses and their products and services and the general public.	Regional member companies pay fees. The College and companies exchange knowledge (EU- funded).

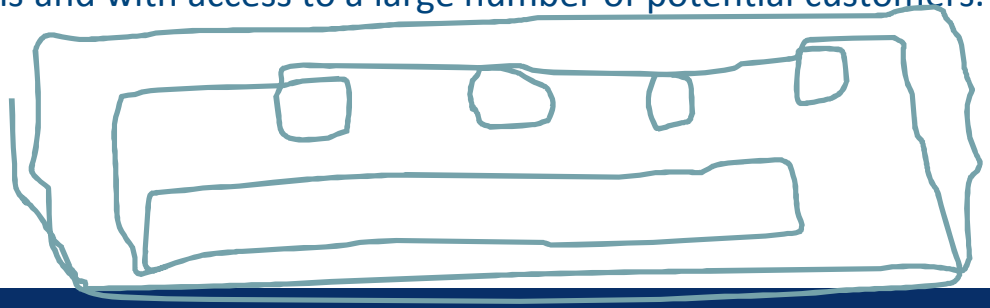
Main conclusions on Technology showrooms

- All give priority to professional networking and in building up their respective capabilities in addition to addressing the general public
- End-users as potential customers.
- provide smaller businesses with the chance to demonstrate their solutions and reach an audience.
- may function as a greenhouse in which smaller eco-technology businesses can grow larger.
- are at least partly dependent on a steady commercial income, but may well qualify for some public funding options
- not uncommonly the result of a single person or organisation's separate initiative.

Potential synergetic effects on its members.

The model is sensitive to the fluctuations on the market for more sustainable technologies, and it may therefore be an advantage to have the promotion of products as one of its many activities. Offering education, consultancy and cooperating with research and policy makers has been a common way to ensure continuity. Obviously, having accessing networks with a steady income from membership fees is an advantage.

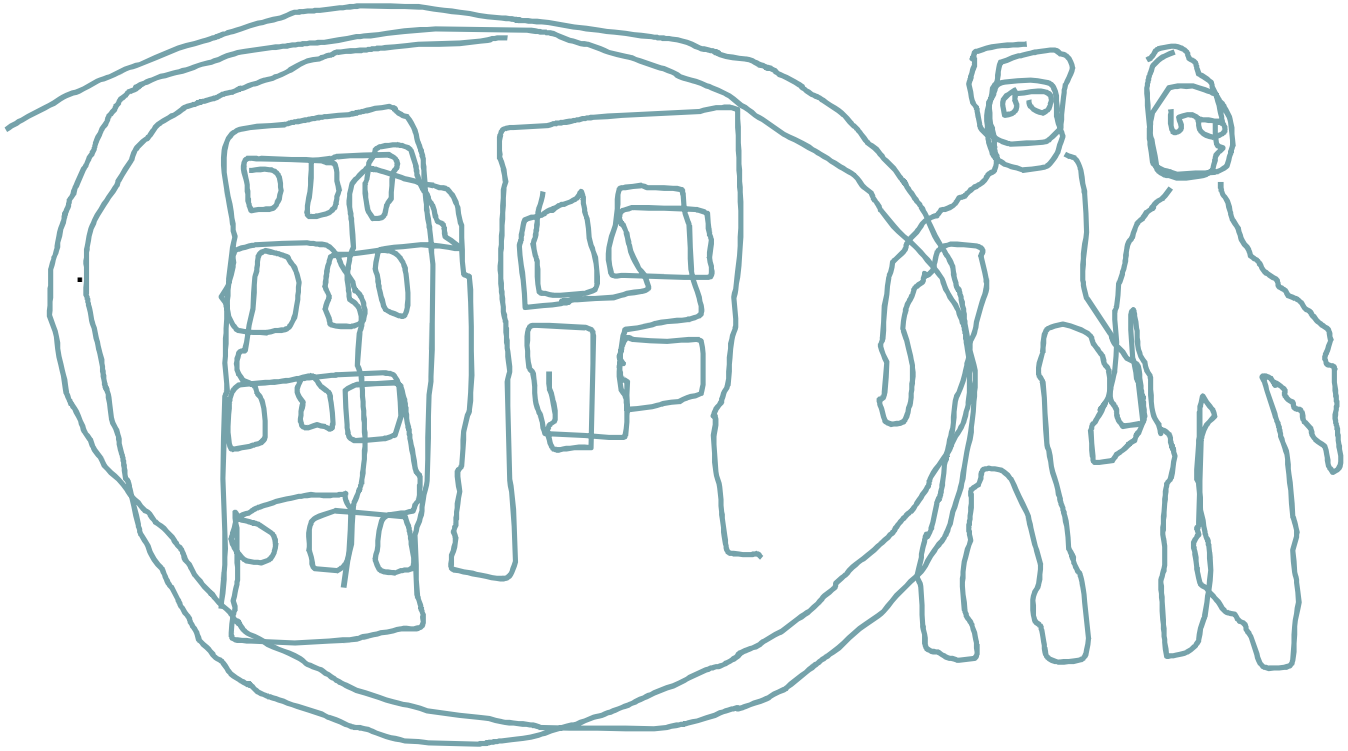
Usually located close to the member organisations and with access to a large number of potential customers.



Full scale demonstration sites

Four cases

- typically localized in or connected to a residential area with an explicit ambition of promoting low-carbon or environmentally sustainable lifestyles and/or technologies.



GlashusEtt, Hammarby Sjöstad, Stockholm,
www.stockholmvatten.se/glashusett

A Symbol for the neighbourhood and its eco-profile, but also for Stockholm

”Even people who are not in the field of environment or building for sustainability will spontaneously ask to be taken to GlashusEtt”. (Karlsson 2013)

Created by the City of Malmö as a direct consequence of the challenge related the deep economic crisis of the 90s

”Nature is present through the whole district as a result of conscious planning with the aim of efficiently using the space available and promoting biodiversity.

Västra hamnen, Malmö,www.malmo.se

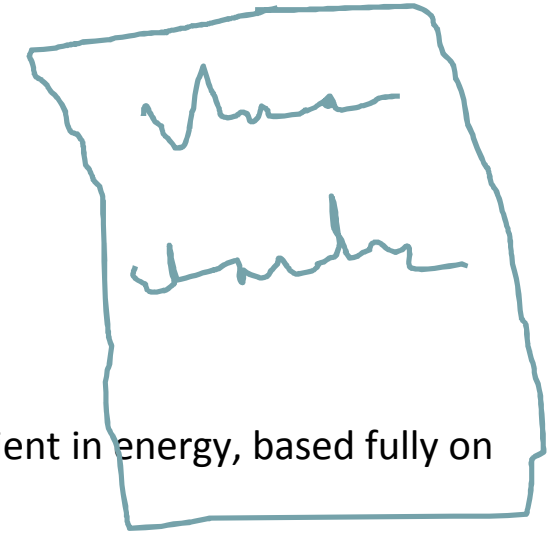
Full Scale Demonstration Site The Samsø Energy Academy, Samsø (EA), www.energiakademiet.dk

”we had to either go all in or *watch our island slowly transfer into a ghost society”*

Fully self-sufficient in energy, based entirely on renewables

”When weather is bad, and it is windy, you will actually see many people smiling…”

Samsø Full Scale Demonstration Site



It is a great achievement to have an island become fully self-sufficient in energy, based fully on renewables.

It also managed to turn what is normally a difficult process – introducing wind mill parks as a rather prominent part of the landscape – into a symbol of the successful transformation of an island in rural decline.

Samsø is now a prosperous community with numerous local business initiatives (in energy and other fields of business), and involved citizens that also work as a marketing window for renewable energy solutions.

They work on local and global level (cooperations)

Name and location	Description	Demonstrating products as part of systems, or separate	Main activities and characteristics	Funding and organisation (commercial and/or public funding)
GlashusEtt, Hammarby Sjöstad, Stockholm	Public centre for environmental information and communication and a full scale demo site for the eco-profiled neighborhood.	– Demonstrates a number of environmentally friendly technologies in the building (models), including a model of the whole area.	– Providing advice to the public on how to conserve resources. – Informing residents on how to conserve resources in context. – Meeting point for residents, – A marketing arena for the City of Stockholm.	Fully publicly funded by the Stockholm Municipality as part of the City of Stockholm administration.
Turning Torso (TT) and the Western Harbour, Malmö	Full scale neighbourhood demo site for innovative eco- friendly solutions at multiple levels.	– Exhibition of the neighbourhood and its technologies inside the TT. – Shows a full scale model as the neighbourhood itself including its residents demonstrates a fully functional system.	– Functions as a full scale eco-systems showroom for Malmö city and its transition to a green region. The resindents are part of the exhibition. – Largely functions as a marketing arena Malmö.	Jointly funded by the City of Malmö and the local builders.
Energiakademiet, Samsø, Denmark	Full scale demo site with the ambition of making Samsø (island) fully self-sufficient in energy based fully on renewables.	– The whole island demonstrates a full scale system including separate technologies on display inside the centre and in use.	– Functions as a full scale eco-system. – Visible energy production technologies accentuates the Samsø identity as a living lab.	Member stakeholders owned. Rising from an economic crisis. Partly state financed and partly by project work. Deeply integrated with the Samsø community.
The BedZed project, Sutton - UK	Full scale demo site for sustainable building and living.	– Functions as a test-site for demonstrating cutting-edge building technology, energy systems and green lifestyle. – Some technologies failed.	– An early inspirational project that has been acknowledged from National and International environments.	Membership fees funded The organisation "BioRegional" handles the visitors and organises the activities.

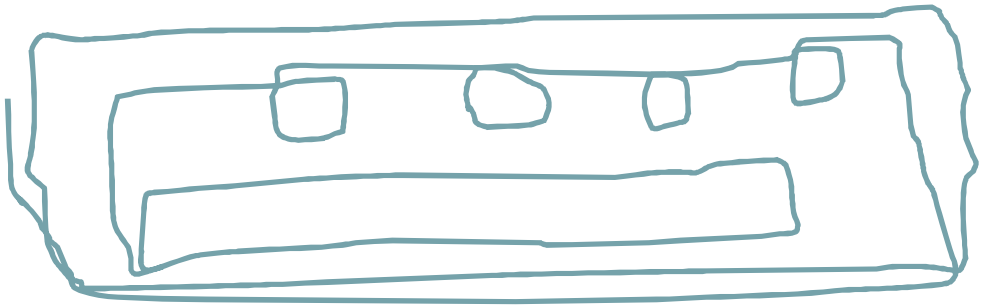
Research and policy centres - five cases

Cooperate with research partners

May have many and powerful allies.

Typically well and safely funded.

May be influential.



Research and Policy Centre:

Danish Architecture Centre (DAC), Copenhagen

www.dac.dk

Denmark's national centre for the development and dissemination of knowledge on architecture, building and urban development.

- Architecture, building design and urban development
- Stated ambition to influence National policy development.
- a broad portfolio and addresses both private individuals and professionals.
- Long-term funding through Realdania and the national government, relies on extra funding for projects.

Lots of media coverage

Name and location	Description	Demonstrating products as part of systems, or separate	Main activities and characteristics	Funding and organisation (commercial and/or public funding)
The Passive House Platform (PHP)	Non-profit research and policy institute promoting highly energy sufficient buildings.	Promoting buildings and materials with high insulation capacities.	– Promoting buildings and materials with high insulation capacities.	– Non-profit research and policy institute – Dependent on project based funding.
VIBE	Non-profit research and policy centre promoting bio-ecological living, natural construction and sustainable urbanism.	No exhibition at site, but participates in other exhibitions.	– Promoting bio- ecological living. – Consulting.	– 1,000 paying members. – Dependent on project based funding.
Dansk Arkitecture Centre (DAC), Kobenhagen	National centre for development and dissemination of knowledge about architecture, building, urban development and related policies.	Vast variety, partly project based and partly run as a meeting point with exhibitions, book store, café etc.	– Promoting architecture and influencing policy making. – Project based research and consultancy.	– Autonomous, commerce-promoting fund with an economic basis in partnership.
Kamp C	Provincial government centre for sustainable building and living with a demonstration site, eco-business zone, technology showroom and a large range of activities.	Demonstration site for technologies and lifestyles.	– Dissemination of good practice and exchange of experience. – Lectures and public meetings.	– Government funded.
The Sustainablity Centre	Research and education centre, focus on hands- on, low-tech, holistic approach to sustainability.	Focuses on Low tech hands on solutions and technologies.	– Public courses. – Rents out yurts to visitors. – Permaculture is demonstrated.	– Run by the Earthworks Trust as a social enterprise charity

Conclusions

All the centres generally have some form of ideological orientation. However, it may be more difficult to maintain these normative goals if the long- term economic sustainability is not in place.

The combination of core funding and project-based income is thus a frequent strategy that seems to work for a majority of the centres.

Forming alliances with the local community and/or public organisations or policy makers is clearly an advantage, and it seems to be a success factor to focus on broader perspectives rather than promoting a particular technology or concept.

Access to full scale demonstration sites is an advantage in relation to marketing purposes.

Involving local residents is a success criteria emphasised by most of the centres. Therefore, developing ways for the local community invest in the centre and/ or its projects seem to be a promising strategy. May well be born out of a crisis…

In general, it would appear that a strategy of maximising whichever resources are available is a winning concept. Success comes in many shapes and it seems that the ability to utilise available resources, financially, geographically and socially is the most important lesson to take home for centres that want to promote sustainable building and living.

Thanks for your attention!

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