
An overall approach for energy efficiency measures in a housing cooperative

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2014-06-12



This is Riksbyggen

Cooperative enterprise founded in 1940 as a result of a major need for good-quality housing and job shortage among construction workers

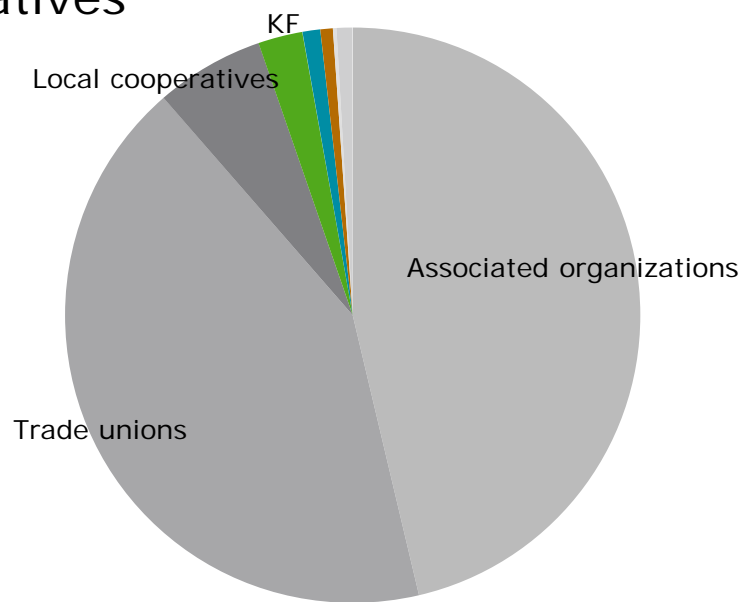
The community developer who promotes sustainable living environments through cooperative housing



Shared ownership

Riksbyggen's cooperative owners fall into three categories:

- Associated organizations
- National organizations
- Local cooperatives



**Associated organizations
46.3%**

Trade unions 42.3%

Local cooperatives 6.1%

KF 2.5%

Den Goda Staden 1.0%

Folksam 0.7%

Swedbank 0.2%

Others 0.9%

Riksbyggen in figures

- Turnover: EUR 575 million (2013)
- 2 300 employees
- Manages 2 600 housing cooperatives (about 170 000 apartments)
- Manages 16 000 rented apartments



Housing Market in Sweden

- About 2,5 million apartment blocks
- About 1 million tenant owner´s flat
- 10 times more tenant owner´s flat since 1990
- About 10 000-30 000 new apartments per year

Need for renovation

- "The Million Homes Programme"
- 25 % of the apartment blocks built during 1961-1970
- Not very energy efficient

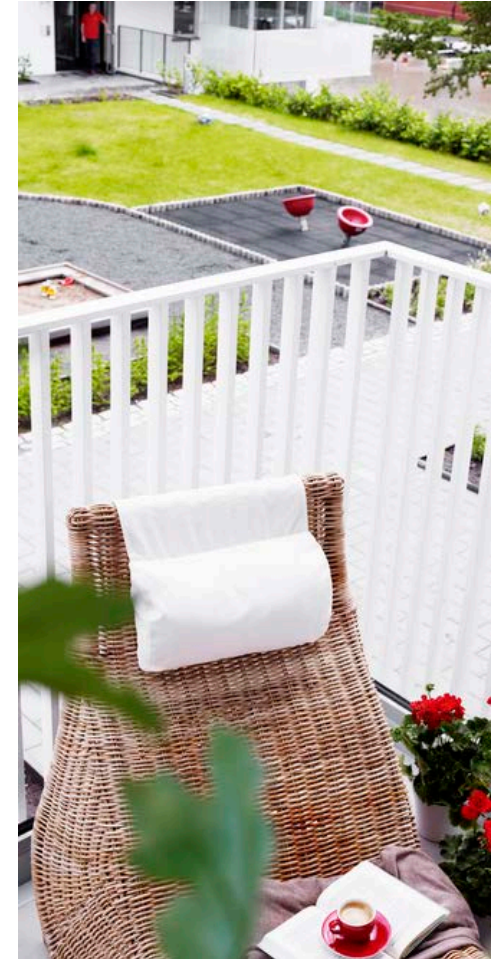


What is a tenant owner´s association?

- A housing cooperative
- An organization that owns and manages an apartment block or a group of houses
- Independent legal entity
- Residents are members of the association
- The association owns the house and the property
- The members have occupancy rights to their apartments for an unlimited time

The maintenance responsibility

- Shared responsibility
- Tenant-owner´s inside of the apartment
- The tenant owner´s association the rest of the house and the property



The general meeting vs the Board

- The general meeting is the highest decision-making authority. Elects the Board.
- The general meeting makes all the “big” decisions, for example; decisions about essential changes and conversion of the house, changes of the bylaws, liquidation of the tenant owner´s association etc.
- The board is competent to make all the decisions that is not a matter for the general meeting.



Vote at the general meeting

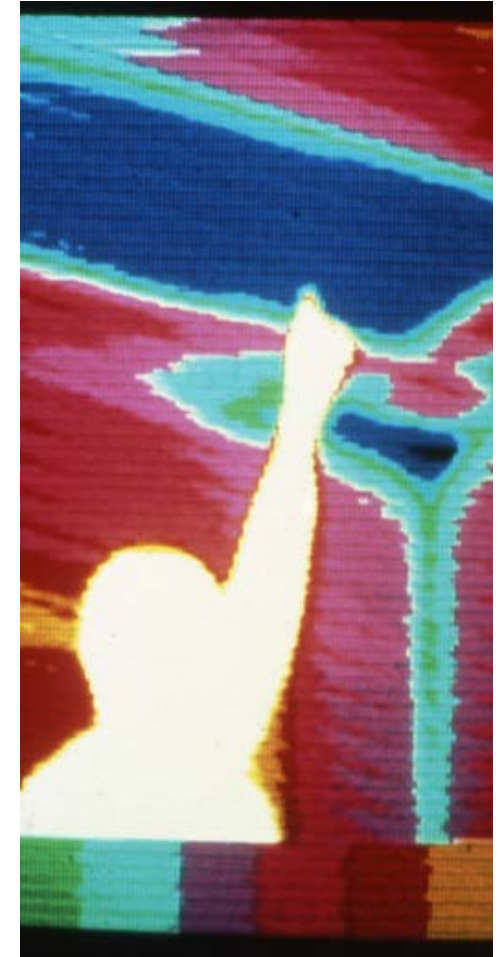
- 1 vote per member
- 1 vote per apartment
- Mostly majority decisions, in some cases a higher majority
- If a flat changes physically:
 - the concerned member approves OR
 - 2/3 of the voting members at the general meeting approves AND approval of the rent tribunal

Decision-making in energy efficiency

- The board is responsible for the maintenance of the house
- Expensive renovations can be decided by the board
- Grey area between renovation and conversions
- Example: the board can buy energy-saving light bulbs, reduce the temperature in the stairwell or change to more energy-effective windows
- Example: the meeting must decide about insulation of the house or geothermal heating

Saving energy

- EU-level: Energy Efficiency Directive
 - 20 % less energy by 2020
- National level: New and amended legislation on the basis of the Directive
 - Example – Individual Heat Metering
- Company level: Riksbyggen´s plan for environmental sustainable development



Difficulties

- Costly: one apartment 55 600-111 300 EUR
20 %-40 % related to energy efficiency
- The construction of the fee
- Short-term focus
- Lack of competence



Good examples

- 2010-2012 "Riksbyggen´s workshop for renovation"
- Joint project between Riksbyggen, KTH and SUST
- Involves technology, environment, economy and process development
- Focus on implementation

Conclusions from the project

- 13 good examples
- Description of method
- Method of calculating
- A process to support coordination



Good example – Tuvehus 6

- Replacement of the plumbing system
- 17 houses including 425 apartments
- Built 1970-1972
- Overhaul by Riksbyggen´s Energy Engineering and scientists from KTH



Good example – Tuvehus 6

- We found:

Bad insulation, insufficient ventilation, old and inefficient fans, big differences in indoor-temperature.

- We did:

Strengthened insulation of attics, directing the indoor-temperature to one common degree, new stops with better ventilation, new fans, heat-recycling, preparation for future individual heat metering.



“Operational decision-making”

- Meetings between Riksbyggens Project Manager and Riksbyggen´s Energy Engineering (EE)
- EE get permission from the board of directors to attend future meetings
- EE describes possible energy savings
- EE get permission to make an energy inventory
- EE presents possible energy savings to the Project Manager
- The Project Manager suggests possible energy savings to the general meeting

Important components

- TIME. Complementary energy saving measures must be presented as early as possible. Long-term planning. Pro-active thinking.
- Technical knowledge about different measures and their interaction. Hire experts if necessary.
- Cooperation between parties although respect of the formal responsibilities.
- Dedicated board of directors and tenant owners.

Riksbyggen develops,
manages and improves
the space in which you
live and work

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