



INFINITE Solutions

The all-round carefree package of Stuttgart

Philipp Wenzel
City of Stuttgart

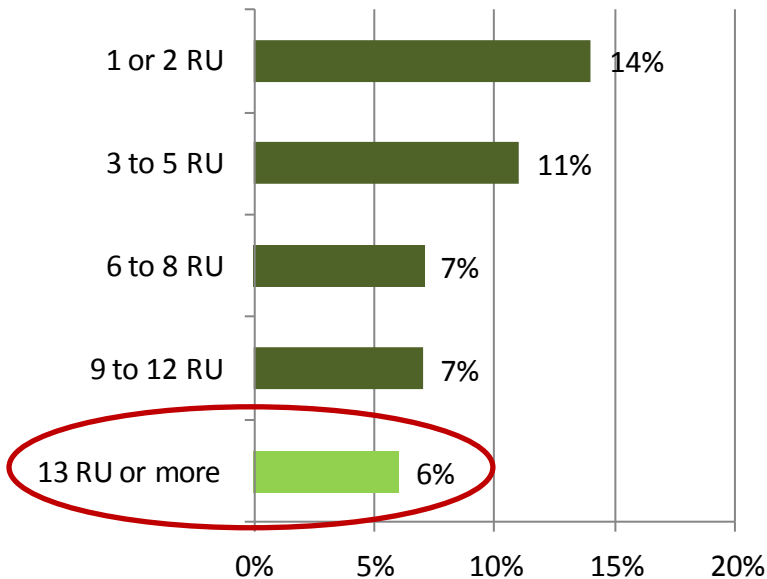
Office for Environmental Protection
Department for Energy Management
Gaisburgstraße 4, D 70182 Stuttgart
Phone +49/711/216-88215 - Fax +49/711/216-88630
E-mail: philipp.wenzel@stuttgart.de



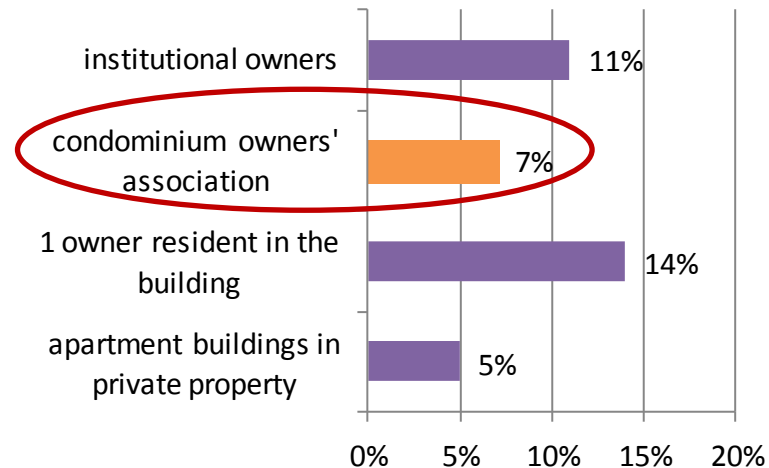
The challenges in Stuttgart

Refurbishment rate in Stuttgart since 1998

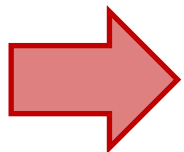
... by building size



... by type of owner



source: Wohnungsmarktbefragung



Very low refurbishment rate in large buildings and in buildings with multiple condominium owners

The all-round carefree package of Stuttgart

In 4 steps to an energy-efficient house



source: EBZ



Step 1: Concept phase

Partner: Energy Advice Center (EAC)



Including:

- Energy diagnosis of the building
 - energetic potential and estimated costs of the refurbishment
- Consultancy for the application for subsidies
 - KfW, Bafa, energy saving program of Stuttgart



Proposal for an individual refurbishment concept



Step 2: Planning phase

Partner: General contractor (building envelope)
local ESCO (technical building system)
EAC (quality assurance)



Including:

- Concrete planning of the refurbishment (incl. energy supply)
- Concrete planning of the costs (incl. contracting for techn. build. sys.)
- Preparation of necessary planning documents for the approval and execution of the refurbishment

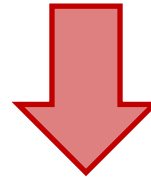
Step 3: Implementation phase

Partner: General contractor (building envelope)
local ESCO (technical building system)
EAC (quality assurance)



Including:

- Coordination of all renovation work by general contractor
- Installation of the technical building system by local ESCO
- Independent quality checks of the renovation work by EAC



Turnkey delivery of the renovated building

Step 4: Use phase

Partner: local ESCO (technical building system)



Including:

- maintenance and operation optimization of the technical building system by local ESCO during the contracting period





Benefits for the customers

- Guarantee of quality through Energy Advice Center ("Refurbishment Standard of Stuttgart")
- Minimization of time and financial requirement for coordination through general contractor
- No cost and time risk for subcontractor services
- No investment costs for technical building system (remuneration by monthly charge)
- Guarantee of the technical building systems during contracting period



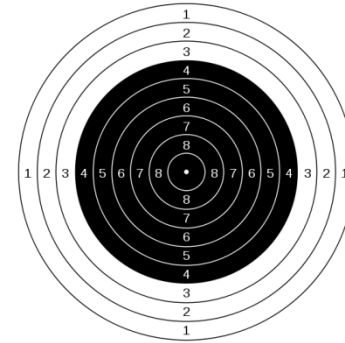
Possible risks

- Lack of cost transparency because of fixed price for whole refurbishment
- Dependence on ESCO during contracting period



Targets of the business model

- Increase of the refurbishment rate
- Reduction of barriers and prejudices against refurbishment (e.g. insulation burns, walls get moldy)
- Increasing the share of renewable energies



Challenges

- Decision making with condominium owners' associations is difficult because of the diversity of interests
- Contracting only works out for technical building system



The choice of our partners

Energieberatungszentrum e. V. (Energy Advice Center)

- Reliant, independent institution (non-commercial association)
- Experienced in energy consulting
- City of Stuttgart provides the chairman

Stadtwerke Stuttgart (local ESCO)

- Key partner for realizing the energy transition in Stuttgart
- Experienced in energy services as energy supply contracting
- Municipal subsidiary

Firma Rahm (general contractor)

- Offers a wide range of construction and renovation services
- high competence in the field of refurbishment
- Expert in turnkey construction



Backup

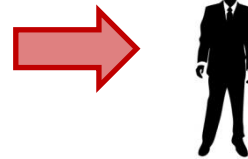
The business model of Stuttgart

City of Stuttgart



- create an awareness of climate protection (dissemination of information)
- refer to the all-round carefree package (e.g. best-practice-brochure, flyer)

Homeowner/ property manager



- interested in a refurbishment
- contacts the Energy Advice Center

Energy Advice Center



- energy diagnosis
- independent consultancy
- independent quality checks of the renovation work

General contractor



- offer preparation
- coordination and execution of refurbishment work

Local ESCO



- installation and maintenance of technical building system
- financing by energy supply contracting