

Workshop
Sharing experiences with
Decarbonization Existing Buildings

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Content

- Introduction Experiences Dutch housing associations
- Discussion Experiences, challenges and promising strategies



SUSTAINABLE CHALLENGES

Dutch Housing associations seen as starting engines of sustainability in housing and energy transition

- 2030: 49% reducing carbon emissions in 2030 (compared to 1990)
- 2050: CO₂ neutral
- Phasing out natural gas



But also:

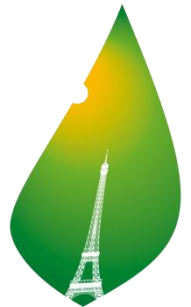
- Material use and Circularity
- Climate adaptation
- Biodiversity
- Soil subsidence
- ...



NEW CHALLENGES

National Performance Agreements 2022

- 450,000 gas-free dwellings end 2030
- No EFG-label dwellings anymore end 2028
- No rent increase for solely insulation measures
- Renovating dwellings to a new 'renovation standard' (future ready insulated)



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Experiences Dutch H.A.

More and more Dutch housing associations bundle renovation projects in **renovation programs** and collaborate with contractors during series of projects: **strategic partnering**, 'co-making'

Renovation programs 4-5 year



Strategic Partnering

- Limited number of contractors
- Careful selection process contractors: similar DNA
- Framework agreements
- Delivery methods renovation projects: Design-Bid-Build (DBB) and Design and Build (DB)



Stepwise renovation process

- Use of functional specifications
- Renovation (and maintenance) scenarios till 2050
- Variety in approaches; typologies dwellings in most cases not decisive
- Stepwise approach:
 - first step no-regret measures insulation (+ renewables: PV-panels): Energy label B (or A)
 - second step (year x) new climate systems

Findings case study research

- Acceleration project delivery
- High tenants' satisfaction renovation process
- Process innovations
- Cost reduction (some cases)

Acceleration by:

- Knowing and trusting each other
- Focus on core competences, co-creation
- Inter-organisational and intra-organisational learning (teams) from project to project

Findings: Enablers

- Open-minded persons and organisational support
- Support for organisational change
- Data building stock
- Clear performance requirements dwelling types
- Clear objectives and KPI's on program and project level
- Uniform processes
- Agreements price levels contractors
- Capable and trustful contractors
- Cooperation between contractors

Discussion Experiences, challenges and promising strategies

1. Program approach and Strategic partnering
2. Stepwise renovation or one big leap forward
3. Coping with uncertainties in cost and revenues
4. Expectations innovations renovation processes
5. Expectations product innovations (by going off-site ...)