Experiences from Local Authorities Stimulating the Adoption of Low-Carbon Technologies by Homeowners

Mlecnik, E.

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Experiences from Local Authorities Stimulating the Adoption of Low-Carbon Technologies by Homeowners

E. Mlecnik, TU Delft

The role of Local Authorities

- Help to achieve energy transitions on the local level by 2030:
  - 55% reduction of CO_2 emissions
  - Increase the renovation rate from 0.4-1.2% to 2-3%
  - Retrofit 20% of the existing buildings to 0-carbon-ready level
- Strengthen local Adoption of low-carbon solutions to speed up single-family home renovations:
  - Support regulation and incentives on the local level
  - Facilitate local communication and organisation
    - Create Awareness for homeowners
    - Provide easy Access for homeowners

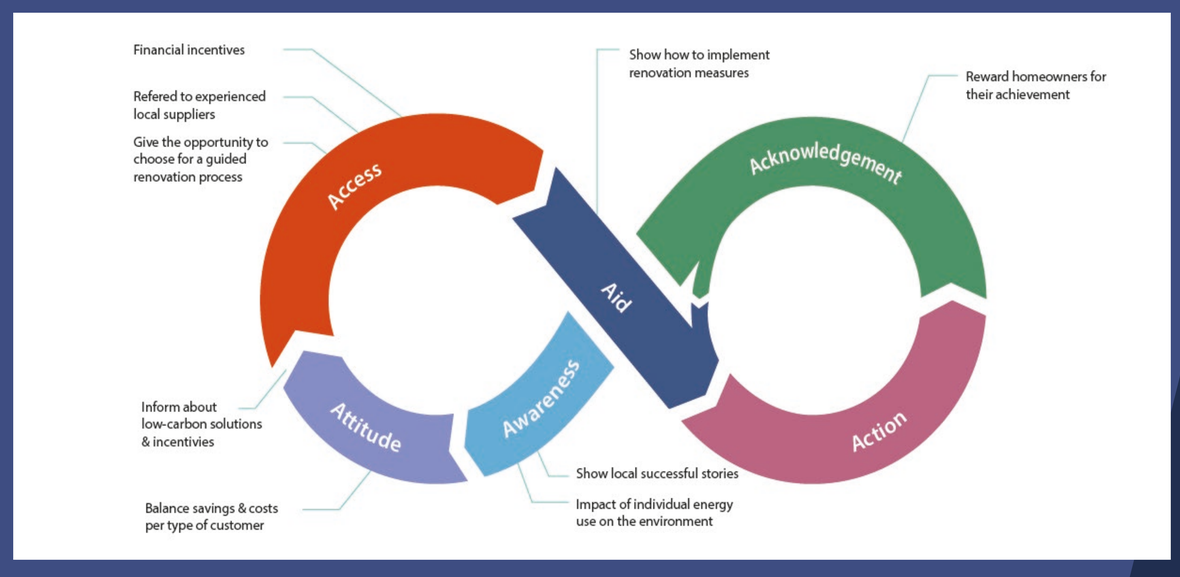
➢ Interreg 2 Seas project (2017-2021): "Triple-A: stimulating the Adoption of low-carbon technologies by homeowners through increased Awareness and easy Access" http://www.triple-a-interreg.eu

➢ Triple-A partners: TU Delft (coordinator), City of Antwerp, City of Breda, Kent County Council, City of Mechelen, Public Service for Energy Efficiency (SPEE) Hauts-de-France, City of Rotterdam, AG EOS (Ostend), Ghent University and Fluvius. Funded by the European Fund for Regional Development (grant number 2S02-029) and the Provinces of South Holland and West Flanders.

Local Authorities can successfully develop more targeted actions and policy instruments when systematically using a homeowner renovation journey model

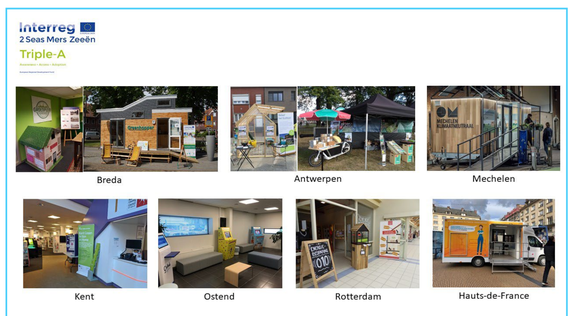
Adopted key innovations

- Local Authorities using an innovation adoption model for developing activities and local policy instruments that directly fit the homeowner renovation journey
- 4 models of demonstration exemplars to increase awareness and provide easier access
- 4 models of pop-up consultancy centers in target areas
- A new set of web modules to strengthen Local Authorities' web portals
- A method to use Home Energy Monitoring and Management Systems (HEMS) to trigger adoption of low-carbon technologies
- Cross-border implementation guidelines for Local Authorities

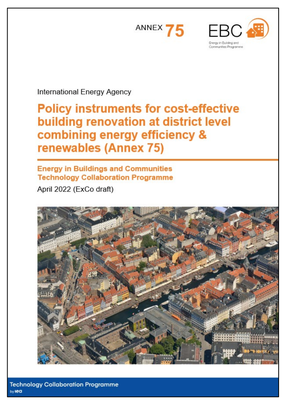


Key results

- Support in 8 target districts for 7 types of customer segments for single-family home renovation
- Adapted financial incentives, including individual subsidies, group subsidies, property tax and VAT incentives
- 2,542 demo low-carbon technologies installed in homes achieving 4,095.7 tons carbon savings per year
- 10 pop-up consultancy centers developed and tested in target areas achieving 11,545 visitors; pop-up initiative picked up by 8 additional Local Authorities
- 20 targeted web modules developed, reaching 52,621 unique visitors
- 606 HEMS installed (56,1% satisfied users)
- "Get-started!" recommendations and guidelines for other Local Authorities (English, Dutch, French)
- 175,000+ stakeholders reached, including 4,479 Local Authorities, 6,042 SME's and 119,499 homeowners



Different types of pop-up consultancy centres developed and tested within Triple-A



Remaining concerns

- Need for better data-driven identification of target areas and customer segments/ needs
- Lack of modularity in existing Local Authority web portals and need for Customer Relationship Management
- Lack of staff, particularly in smaller Local Authority regions
- Barriers related to Public-Private-Civic collaboration, procurement and Global Data Protection Regulations
- Development need for Integrated Home Renovation Services
- Need for specific local policy instruments for vulnerable households and for activating groups and districts

Conclusion

To raise awareness of homeowners for adopting low-carbon technologies and to facilitate access for them to carbon–saving renovation solutions Local Authorities can:

- Use a homeowner renovation journey model to develop more specific actions for target areas and homeowner segments;
- Support adopting new technologies, renovation measures at district level, deep renovation, phased retrofits and any combinations thereof;
- Tailor physical and digital communication and consultancy to (actions in) specific target areas and specific customer segments;
- Use demo exemplars, pop-up consultancy centers, specific web modules and HEMS to activate homeowners to adopt low-carbon technologies;
- Work more closely together with experienced homeowners, citizen energy cooperatives and non-profit organizations that act as intermediary between supply and demand;
- Facilitate group buying actions and specific energy coaching for groups of homeowners;
- Develop services beyond traditional consultancy services including specific aid and financial solutions embedded in Integrated Home Renovation Services.

A follow-up LIFE-CET project entitled 'CondoReno' will create and multiply Integrated Home Renovation Services for private condominiums in the Netherlands and Flanders.

Triple-A main research publications:

https://www.triple-a-interreg.eu/project-reports

Kwon, M., Mlecnik, E, 2021a. Modular Web Portal Approach for Stimulating Home Renovation: Lessons from Local Authority Developments. Energies 14, 1270. https://doi.org/10.3390/en14051270.
Kwon, M., Mlecnik, E., Gruis, V., 2021b. Business Model Development for Temporary Home Renovation Consultancy Centres: Experiences from European Pop-Ups. Sustainability 13, 8450. https://doi.org/10.3390/su13158450
Meijer, F., Straub, A., Mlecnik, E., 2018. Consultancy Centres and Pop-Ups as Local Authority Policy Instruments to Stimulate Adoption of Energy Efficiency by Homeowners. Sustainability 10, 2734. https://doi.org/10.3390/su10082734

Dr. Civ. Eng.-arch. E. Mlecnik
TU Delft, Faculty of Architecture and the Built Environment, Delft (The Netherlands)
E.Mlecnik@tudelft.nl
Triple-A Interreg

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