

# *Technology Innovation Conference: Energy and Buildings*

## *Workshop 3: REFURB*



# Workshop 3: REFURB

**Chairperson:**  
**Virginia Gómez Oñate**  
**VITO/EnergyVille**  
**Belgium**



# ACTIVATING CONSUMERS TO DEEP ENERGY REFURBISHMENT IN EUROPE



DEEP ENERGY RENOVATION THROUGH  
ONE-STOP-SHOP SOLUTIONS  
FOR PRIVATE HOMEOWNERS

[www.go-refurb.eu](http://www.go-refurb.eu)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649865

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09.30

**Welcome by Virginia Gómez Oñate, EnergyVille / VITO, Belgium**

09.35-09.55

**One-stop-shop solutions for homeowners – The REFURB project**

**Virginia Gómez Oñate, EnergyVille / VITO, Belgium**

REFURB is a consortium of 13 partners aiming to inspire homeowners to move a step further with their energy renovations and achieve zero energy renovation. REFURB gives an overview in a one-stop-shop model and establishes local partnerships and energy solutions close to consumers in the participating countries. Virginia Gomez Onate, REFURB coordinator, will highlight the main results of this project concluding in March 2018.

09.55 – 10.30

**Boosting the latent market of single family building renovation in Belgium**

**Anne Goidts, Bostoën, Belgium**

The Belgian market has traditionally been dominated by single family houses. Within REFURB, how to boost this latent demand has been investigated. Anne Goidts, Bostoën, will highlight some show-cases for Belgium and the Netherlands

10.30 – 11.05

**Full scale consumer participation: experiences from Denmark based on the REFURB customer journey**

**Peter Rathje, Project Zero, Denmark**

The ProjectZero transition project in Sonderborg/Denmark has worked on consumer participation since 2009. Peter Rathje, ProjectZero will talk about the customer journey and how the REFURB-project helped Sonderborg to achieve its full-scale consumer participation.

11.05-11.20

**Break**

11.20 – 11.55

**Addressing the challenge of apartment building renovation**

**Jelena Vidovic, BSC, Slovenia**

Multiapartment buildings have always been a challenge to renovate due to the different profiles of the occupants. REFURB project has also addressed this issue. Jelena Vidovic, BSC, will talk about the compelling offers for these type of buildings and the concrete experience of Eastern countries such as Slovenia and Estonia.

11.55 -12.30

**Stimulating REFURB's impact in Europe**

**Lisa Adema, Leeuwarden, Belgium**

The REFURB compelling offers have been tailor-made for the market segments within the REFURB countries. However, REFURB has also worked on implementation and expansion to other member countries and other market segments. Lisa Adema, Leeuwarden, will talk about hands-on experiences and a methodology for rollout and transfer illustrated with examples from the Netherlands.

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DEEP ENERGY RENOVATION THROUGH  
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FOR PRIVATE HOMEOWNERS

Virginia Gómez Oñate  
VITO / EnergyVille (BE)



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# Outline

- REFURB Concept
- REFURB Project Structure
- REFURB Main Findings:
  - Segmentation
  - Customer Journey
  - Compelling offers
- Estimated results



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# Outline

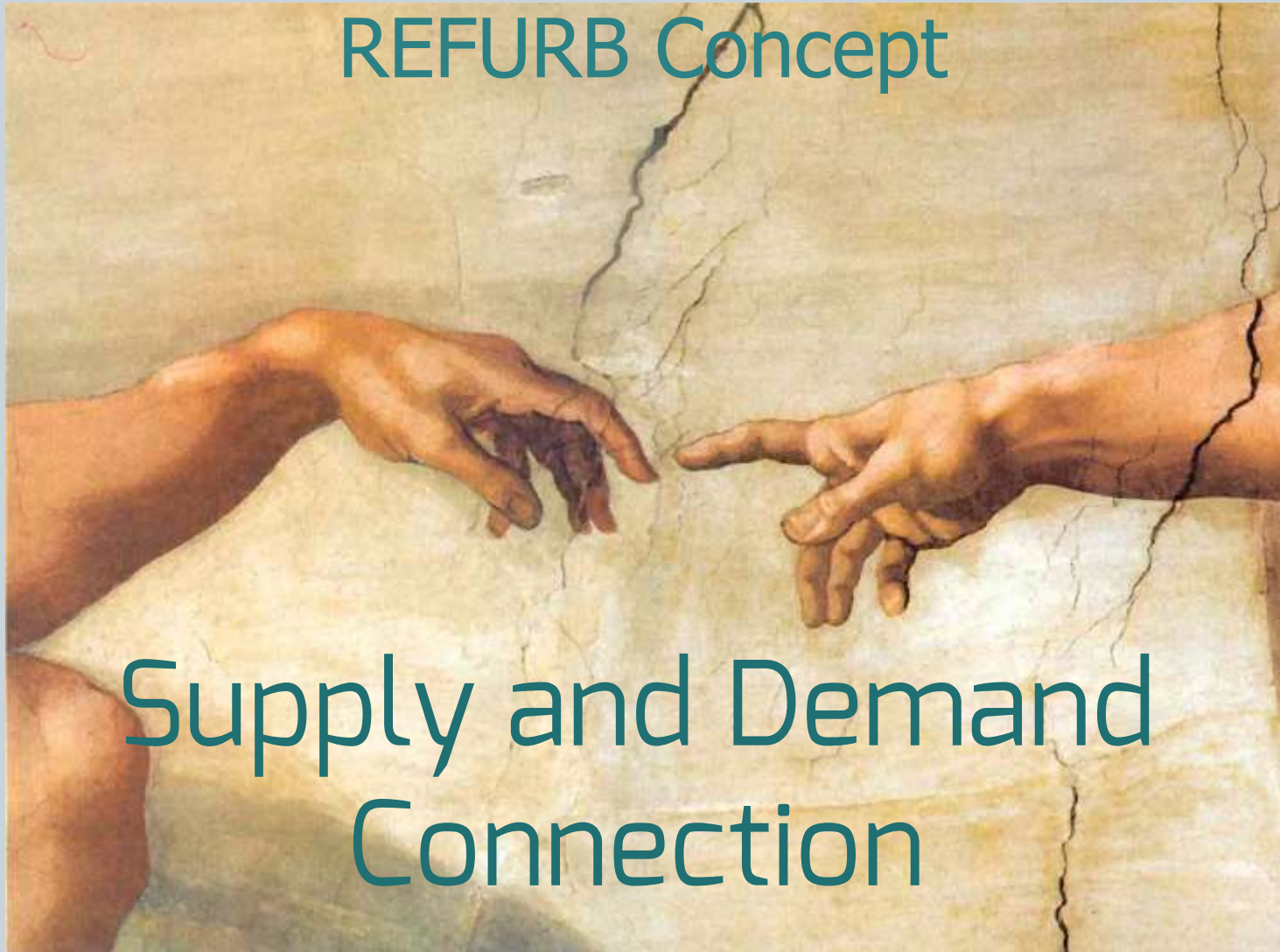
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# REFURB Concept



## Supply and Demand Connection



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# REFURB Concept

- Increasing energy performance of existing buildings by removing **non-technological** market barriers
- **Connecting** demand and supply side
- **Inspire** homeowners to carry out deep energy renovations
- Focus on **'deep renovation'** but with room for staged deep renovations
- Achieve **50-80% reduction** in energy use
- **One-stop-shop** solutions with more homeowner/decision maker focus
- Easy, affordable and efficient



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# REFURB Partners

**BAUVEREIN**  
HALLE & LEUNA gG



**bostoën**

**Buurkracht'**  
SINCE 1977

**clean**  
EMBRACING GREEN SOLUTIONS

**LEIE  
DAL**



Gemeente Leeuwarden

**iSW**

Institut für Strukturpolitik und Wirtschaftsförderung  
gemeinnützige Gesellschaft mbH

**BSC**



**TREA**

provinsje fryslân  
provincie fryslân



AALBORG UNIVERSITET



**vito**

vision on technology

**RECTICEL**  
UNIVERSITY

Bright Green Business  
**ProjectZero**



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# REFURB Project Structure

## WP2

- Individual payment capacity
  - Individual investment priorities
  - Drivers & barriers
- **segmentation**

Analysis of  
the  
**DEMAND**  
side



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# REFURB Project Structure

## WP2

- Individual payment capacity
- Individual investment priorities
- Drivers & barriers

→ **segmentation**



## WP3

- Mutual understanding? It's not about U-values, it's about your values!
- Existing solutions for renovation

→ **one-stop-shops**



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# REFURB Project Structure



## WP4

- Local tailoring
- Customer journey focusing on ALL benefits
- Supportive financial solutions



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# REFURB Project Structure



## WP5

- Guarantee on energy savings?
- Guarantee on sales and quality work



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# REFURB Project Structure



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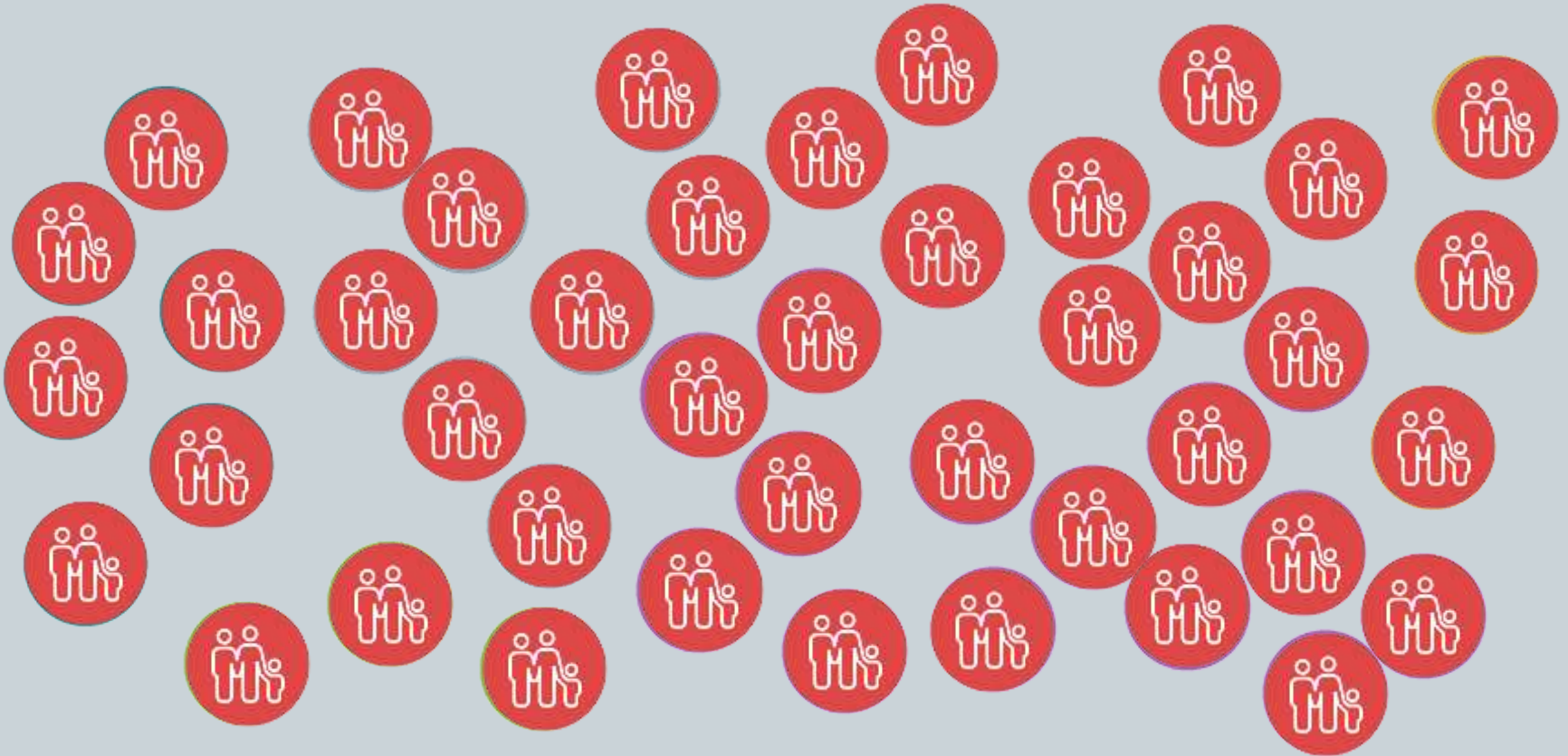
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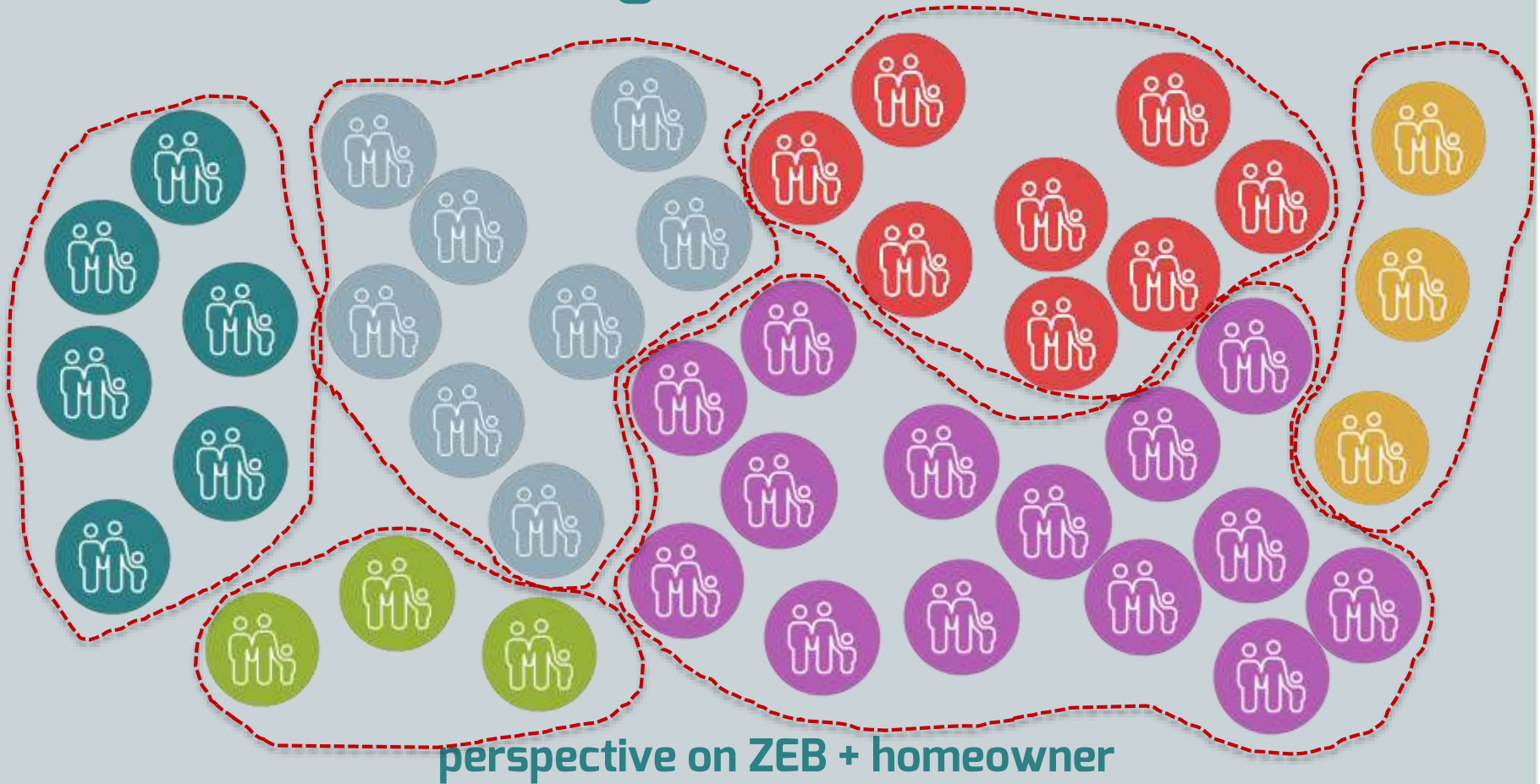
# Latent Demand



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# Segmentation



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# 6 high potential segments



**young families**



**owners of houses in post-war suburbs with detached houses**



**empty nesters**



**owners of terraced houses with a high energy bill**



**convinced energy savers**



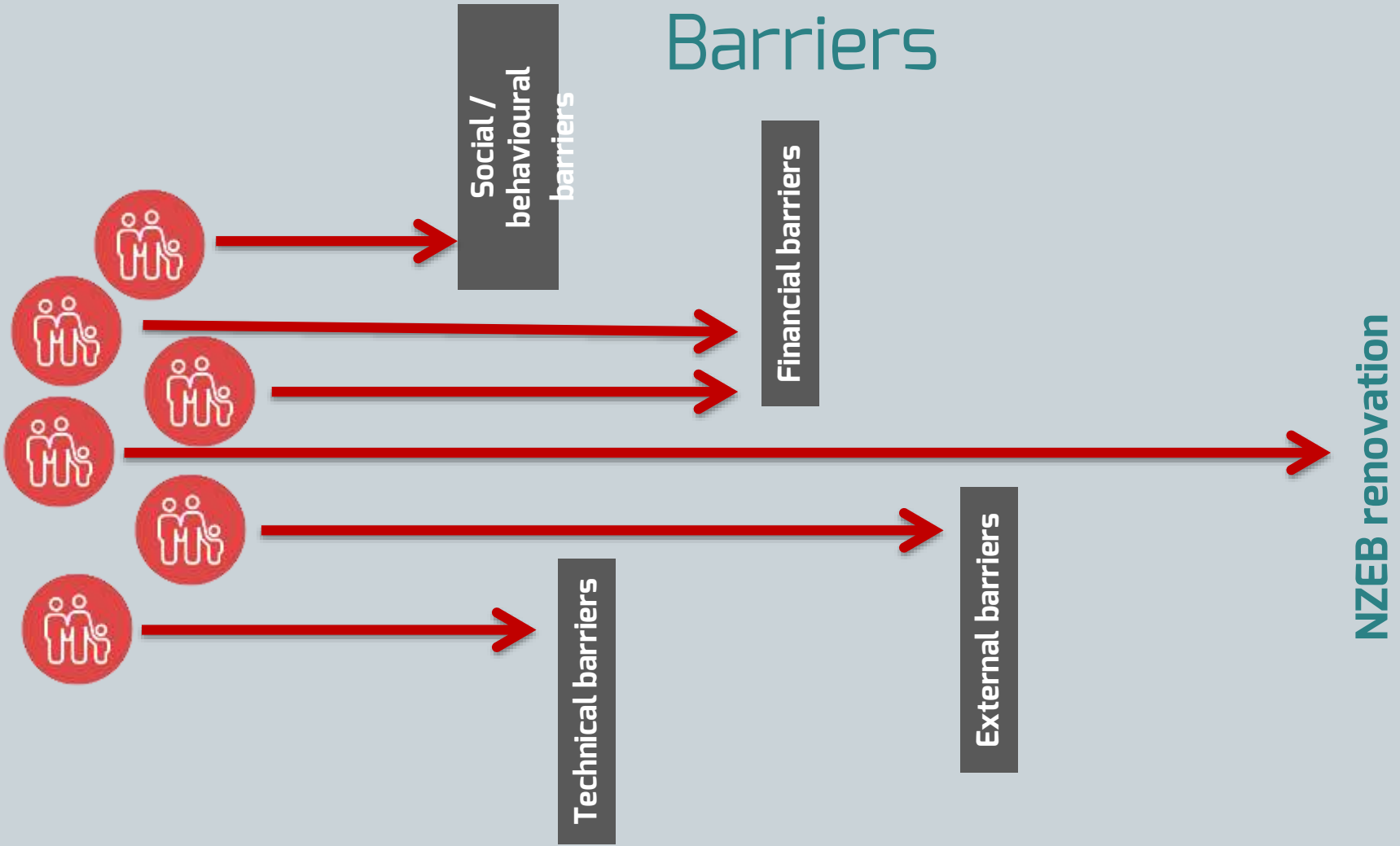
**owners of multi-apartment dwellings**



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# Barriers



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# Drivers



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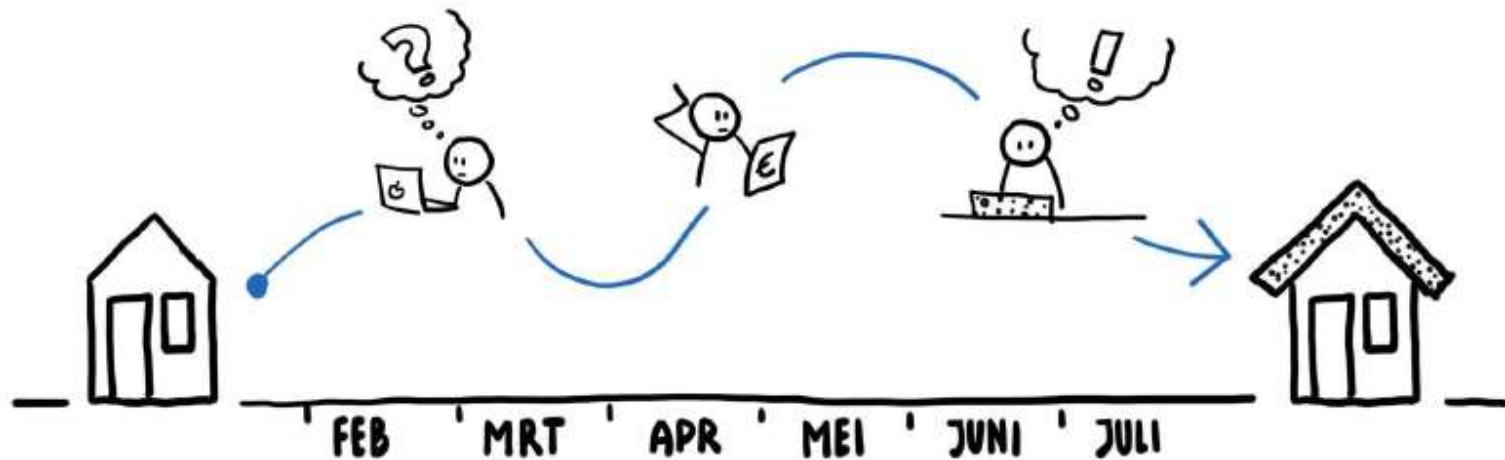
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# Renovation is a process The customer journey

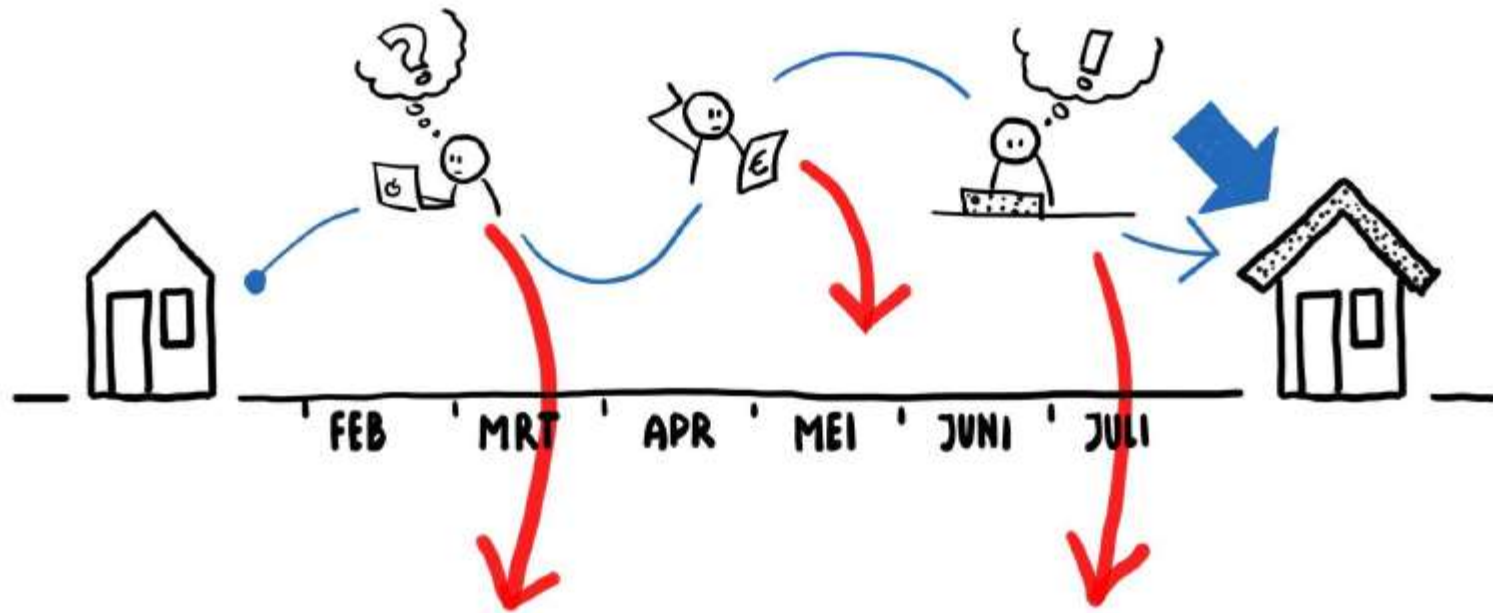


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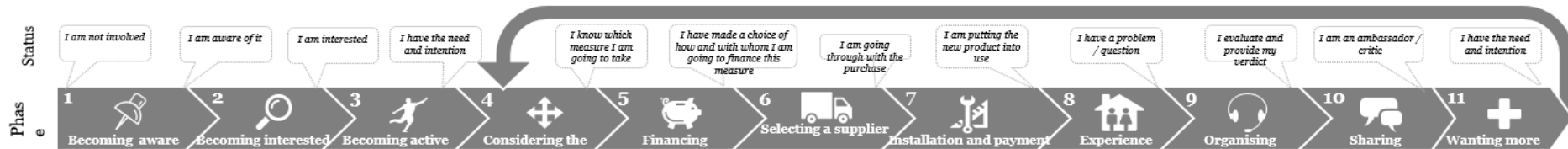
# Renovation is a process The customer journey



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# The Customer Journey and it's stakeholders



## Communication

1. Becoming aware
2. Becoming interested
3. Becoming active

## Coordination & actions

4. Considering the offer
5. Financing
6. Selecting a supplier
7. Installation and payment

## Follow-up

8. Experience
9. Organizing
10. Sharing (ambassador)
11. Wanting more (loop-back)

## Stakeholders to be aligned

- Society, neighbors, family, school kids, ...
- The Municipality
- A local alliance
- Press & social media
- Local banks, craftsmen, advisors, consultants, real-estate agents, the construction industry
- A local alliance
- Craftsmen, society, neighbors, family
- A local alliance
- Press & social media



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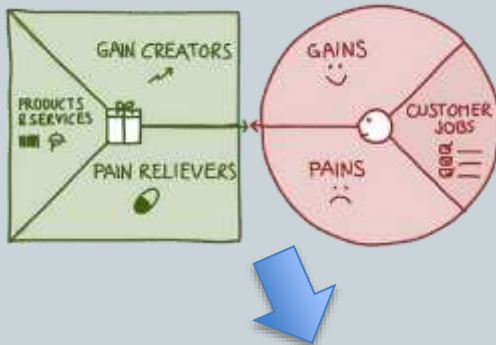


# How to create a Refurb compelling offer in only six steps

1. Focus **your market segment** ex. Young Families (YF) or Empty Nesters (EN) in single detached homes
2. Use the **customer journey** to identify the stumbling blocks and advantages/actions
3. Generate the **value proposition**
4. Describe the **business model**
5. Add the **financial support** (optional)
6. Appoint a **single point of contact** (if required)

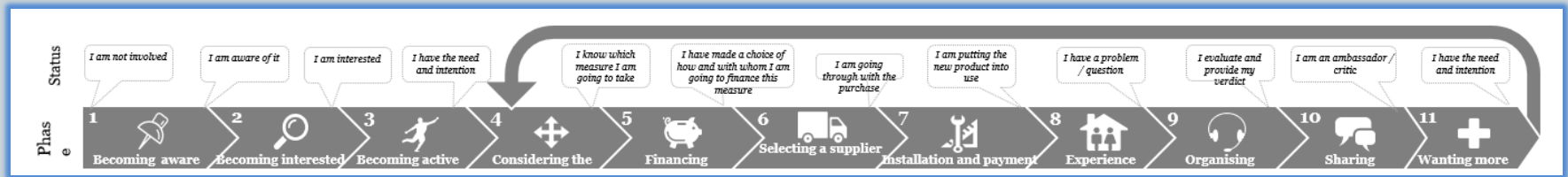


**(3)** To get home-owners on board the journey, you need a value proposition



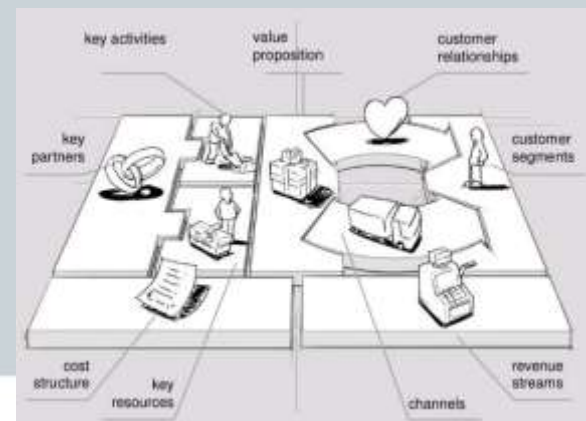
**(5)** Financial support & incentives will improve !

**(2)** The Refurb Customer Journey with pre-programmed QA creates a common understanding and platform



**(6)** To keep the journey powered, you need a single point of contact


**(4)** The value creating business model will secure strong stakeholder engagement



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# Country specific REFURB compelling offers

BE	DK	NL	DE	EE	SI
					
<b>ALL-IN-ONE AND STEP-BY-STEP RENOVATION PACKAGES</b>	<b>FIVE PACKAGES FOR COMFORT AND HEALTH</b>	<b>UNBURDENED NZEB RENOVATION</b>	<b>ATTRACTIVE FLATS TO LET OUT</b>	<b>A FAIR NZEB OFFER</b>	<b>AN ECONOMIC SAFE SOLUTION</b>
<b>Target group</b>	<b>Target group</b>	<b>Target group</b>	<b>Target group</b>	<b>Target group</b>	<b>Target group</b>
 Single family houses	 Single family houses	 Any private owned house	 Multi-apartment, Housing companies and cooperatives	 Multi-apartment, private owned	 Multi-apartment, private owned
<b>Construction period</b>					
Any	1960-1980	Any	Any	1960-1980	Any
<b>Specific intervention timing strategy</b>					
Yes	Time of purchase, time of retirement	Yes	When there is a need	When owners can agree	When owners can agree
<b>Single point of contact, independent energy adviser</b>					
Yes	Yes	No	Non Applicable	Non Applicable	Non Applicable
<b>Financial offer</b>					
No	Can be integrated locally	ESCO	KfW funding options	KredEx Package	ECO Fund
 <b>Investments in EUR</b> 60.000+	 <b>Investments in EUR</b> 12.000-67.000	 <b>Investments in EUR</b> 20.000-100.000	 <b>Investments in EUR</b> No limits	 <b>Investments in EUR</b> 55.000-394.000	 <b>Investments in EUR</b> No limits
<b>Webpage with calculation tool</b>					
Yes	No	Non Applicable	Yes	No	No
<b>Energy ambassadors</b>					
Yes	Yes	Yes	No	No	No
<b>Customer Journey consortium</b>					
Industry with energy expert and architects	Regional/local stakeholders	Local community	District solutions	Local community	Construction company driven
<b>Quality assurance issues addressed</b>					
Yes	Non Applicable	Yes	Online tool	Yes	Yes



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# REFURB Results

## Energy savings per year



Target  
50 GWh/year



Estimation  
60 GWh/year end of project  
200 GWh up to 2020

## Estimated investment triggered

€ 138M by end of the project  
€ 516M - € 825M up to 2020



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# refurb

## Thank you for your attention

Virginia Gómez Oñate  
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# BOOSTING THE LATENT MARKET OF SINGLE FAMILY BUILDING RENOVATION



## PRACTICAL EXPERIENCES OF BELGIUM

Anne Goidts, Bostoën (BE)

[www.go-refurb.eu](http://www.go-refurb.eu)



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## OUTLINE

1. Belgian context for renovation of single family houses
2. Compelling offers from Belgium
3. Belgian best-practises



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1. Belgian context for renovation of single family houses
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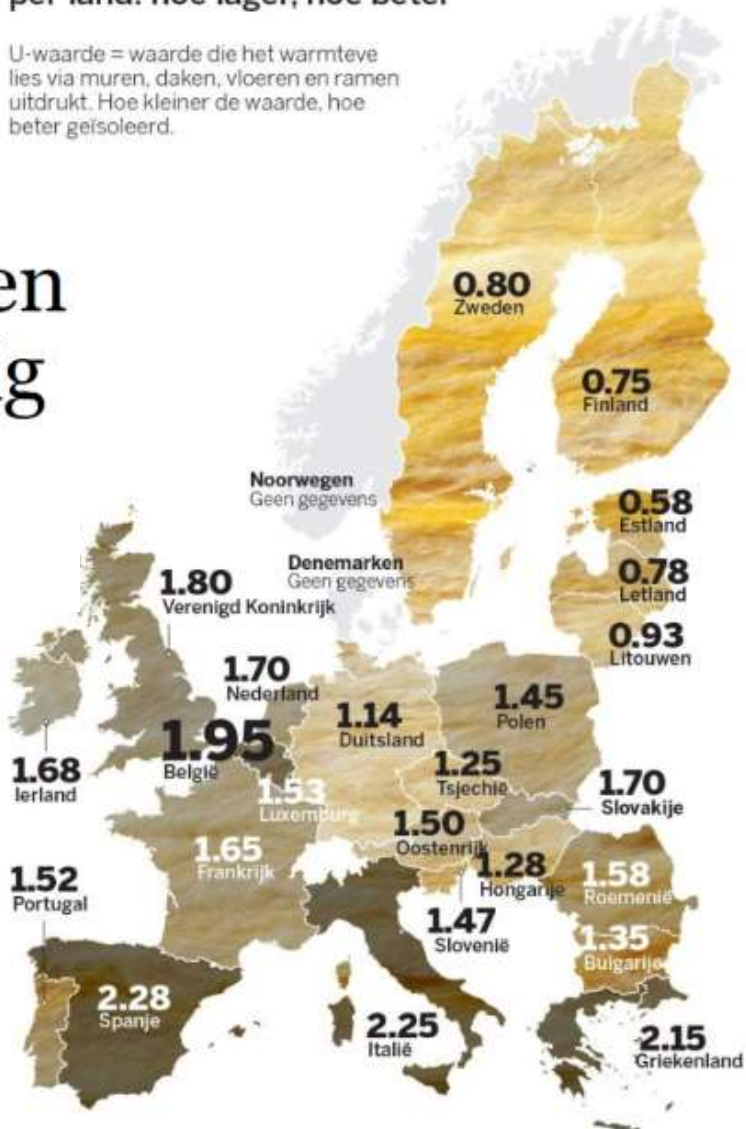
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## De gemiddelde U-waarde van de woningen per land: hoe lager, hoe beter

U-waarde = waarde die het warmteverlies via muren, daken, vloeren en ramen uitdrukt. Hoe kleiner de waarde, hoe beter geïsoleerd.

# ‘Belgische woningen verbruiken zeventig procent meer energie’



© De Standaard, 13/02/2018



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**1.69**  
EU28

**2.95**  
Malta



**2.80**  
Cyprus

Alle waarden van 2014, behalve Oostenrijk, Duitsland, Letland, Portugal en Slovenië: 2015



# Housing stock in Flanders (Belgium)

- 72% of houses are private ownership
- 58% of the single-family houses are from before 1970
- Average energy performance is bad
- Low renovation rate (1% each year)

⇒ Very big potential  
for energy renovation of existing houses



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# RENOVATIEPACT wij doen mee



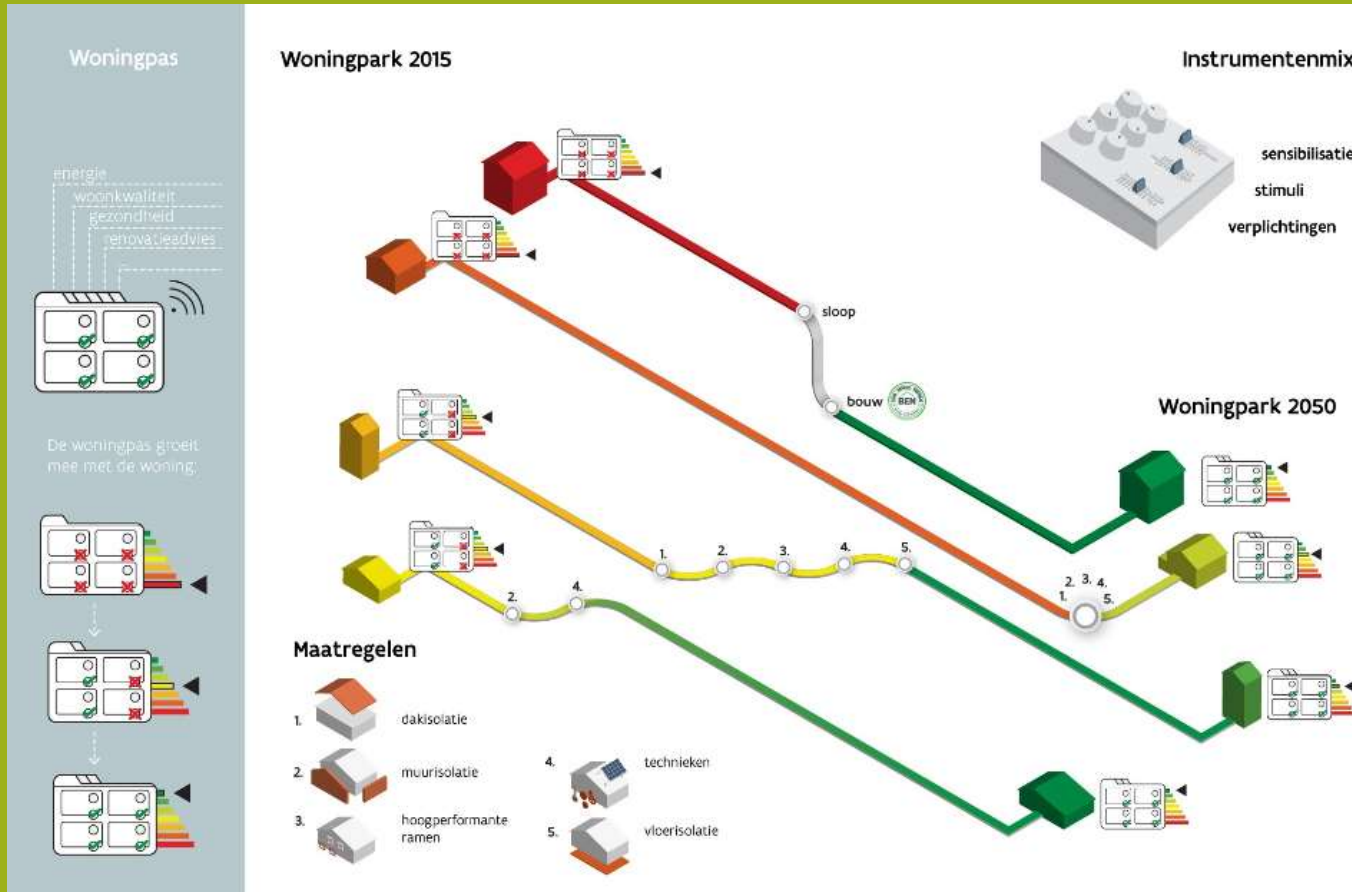
- Long term action plan in different stages
- Upscaling the renovation rate in Flanders
- Energy performance to NZEB
- Cross-sectoral



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# Long term action plan in different stages



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# Woningpas: digital passport of your dwelling



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# Woningpas: EPC+

**Energieprestatie certificaat**

**Algemene gegevens**

- Type EPC: bestaand gebouw met woonfunctie
- Type woning: 3-kamerwoning H open bebouwing
- Bouwjahr: 1988-1995
- Kaartdatum en jaartal: 03.12.2023/2023

**Isolatieniveau van de woning**

Gemiddeld waardeverlies door de buiten van de woning. De huren en het dak zijn relatief goed geïsoleerd.

**Isolatieniveau van de woning - Uitsluitend**

Waardeverlies: van zeer slecht tot heel goed geïsoleerd (niveau 4)

**Energiesnelheid van de verbruiksprestaties**

Waardeverlies: van zeer slecht tot heel goed geïsoleerd (niveau 3)

**Isolatieniveau van de woning - Inclusief dak**

Waardeverlies: van zeer slecht tot heel goed geïsoleerd (niveau 4)

**Energiedienkunde**

- Naam + voornaam: Wessens, Henk
- Titel: Wessens, Delft
- 020 248 2000

**Energie**

**Advies uit EPC**

- Priortiteit 1**: Zo snel mogelijk te realiseren
- Priortiteit 2**: Te realiseren binnen 1-3 jaar
- Priortiteit 3**: Te realiseren binnen 10 jaar

aanpak	advies	prijsbereik
	<b>Tuilenbouw</b> De aanbouwen is noodzakelijk om het gebouw te isoleren.	Waarde isolatie: € 4000 - € 4000
	<b>Spaarwasm</b> De spaarwasm is niet geïsoleerd.	Waarde isolatie: € 10 000 - € 10 000
	<b>Spaarwasm</b> De spaarwasm is geïsoleerd met Poly. maar er is heel weinig isolatie aanwezig om de laagtemperatuurbeheersing te helpen.	Overweging met het isoleren van het spaarwasm met een isolatie van goede kwaliteit.
	<b>Het dak dak</b> Het dak is geïsoleerd met een laagtemperatuur maar er is heel weinig isolatie aanwezig om de laagtemperatuurbeheersing te helpen.	Overweging met het isoleren van het dak met een isolatie van goede kwaliteit.

**Energieclassificatie na uitvoering van de aanbevelingen volgens de verschillende prioriteiten**

Classificatie: **A** (400 kWh/m²) to **G** (100 kWh/m²). Current position: **477 kWh/m²** (Priortiteit 1).



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**IK BENOVEER**  
benoveren = beter renoveren

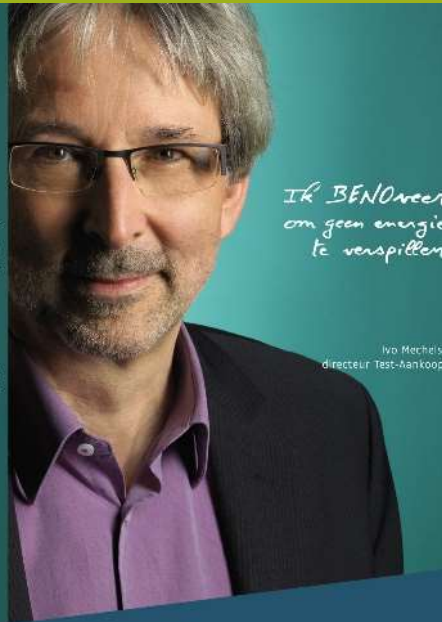
[www.energiesparen.be/ikBENOVEER](http://www.energiesparen.be/ikBENOVEER)

# BENOveren



*IK BENOVEER  
OM MIJN HUIS MEER  
WAARDE TE GEVEN*

Filip Deslee,  
interieurarchitect



*IK BENOVEER  
om geen energie  
te verspillen*

Ivo Mechels,  
directeur Test-Aankoop



*Ik BENOVEER  
om het milieu  
te sparen*

Jan Hauteldat,  
radiopresentator en muzikant



*IK BENOVEER  
OM TE GENIETEN VAN  
MEER WOONCOMFORT*

Leonie Gyssels,  
zangeres

**IK BENOVEER**  
benoveren = beter renoveren



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# Good examples



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# BENOVatiecoach



## Wat doet een BENOVatiecoach voor jou?

1. Inzicht geven in je verbruik en mogelijke energiebesparingen
2. Offerteaanvragen voorbereiden
3. Helpen met de zoektocht naar de juiste aannemer
4. Een oogje in het zeil houden bij de uitvoering van de werken
5. Jouw premie(s) aanvragen
6. Je heel wat administratieve taken uit handen nemen

## Hoeverveel kost een BENOVatiecoach?

In de meeste gevallen zijn de diensten van een BENOVatiecoach volledig gratis. De BENOVatiecoach ontvangt van jouw distributienetbeheerder tot 400 euro per begeleide woning.

Als een coach een toeslag zou vragen, wordt dit bedrag op voorhand afgesproken. Het staat jou als klant vrij om al dan niet met een coach in zee te gaan.



## Wil je zelf BENOVatiecoach worden?

Kijk voor meer info op:

- [www.eandis.be/benovatiecoach](http://www.eandis.be/benovatiecoach)
- [www.infrax.be/benovatiecoach](http://www.infrax.be/benovatiecoach)

Je vindt een overzicht van onze BENOVatiecoaches op:

- [www.eandis.be/benovatiecoach-zoeken](http://www.eandis.be/benovatiecoach-zoeken)
- [www.infrax.be/benovatiecoach-zoeken](http://www.infrax.be/benovatiecoach-zoeken)

## Samen BENOVeren, dat werkt

VOORDELIGER EN MET ONDERSTEUNING  
VAN EEN EXPERT

START VANDAAG NOG JOUW BURENPROJECT!



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# Burenpremie: renovating together



<https://www.youtube.com/watch?v=y4vwvxUzMfE>



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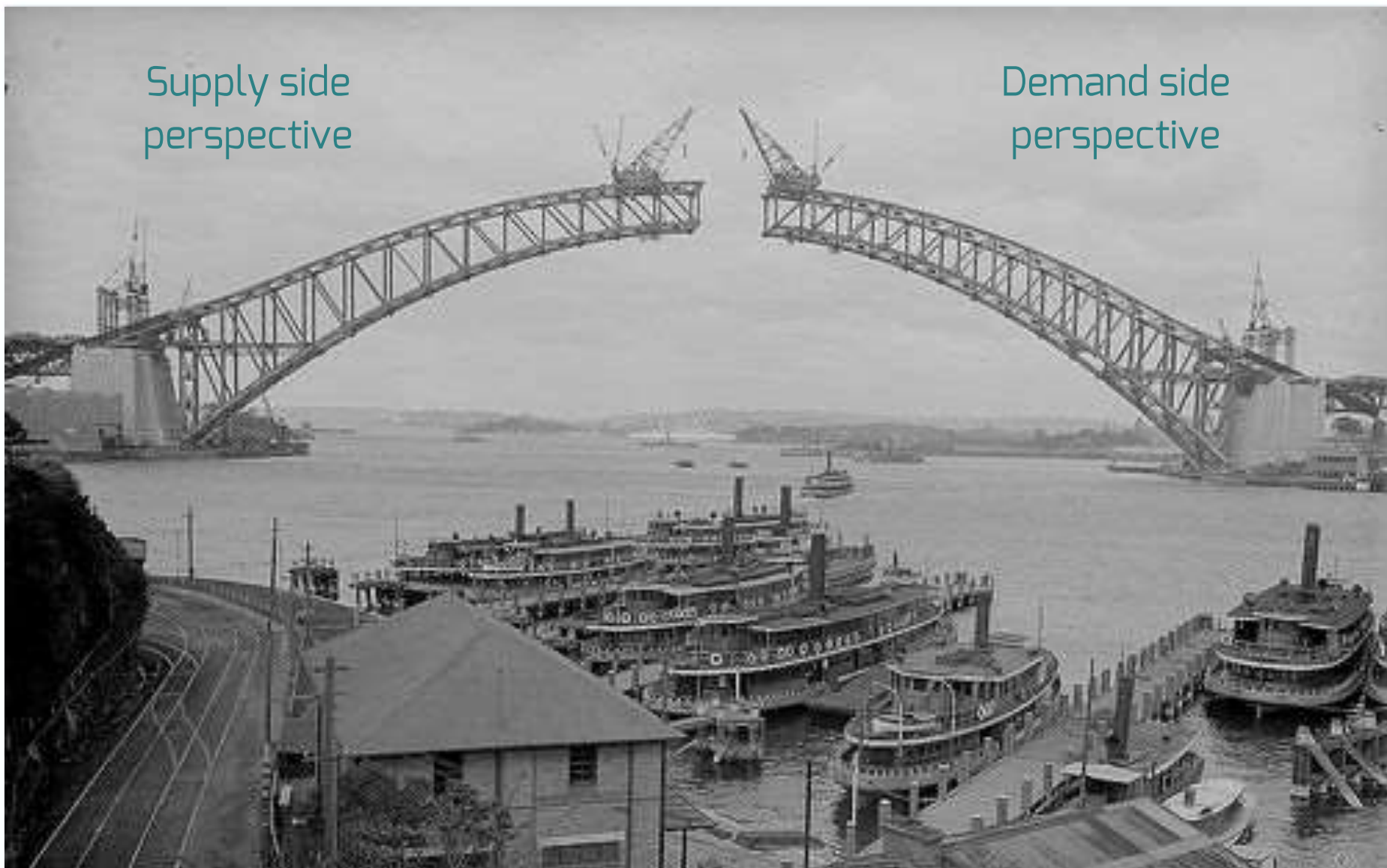
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Supply side  
perspective

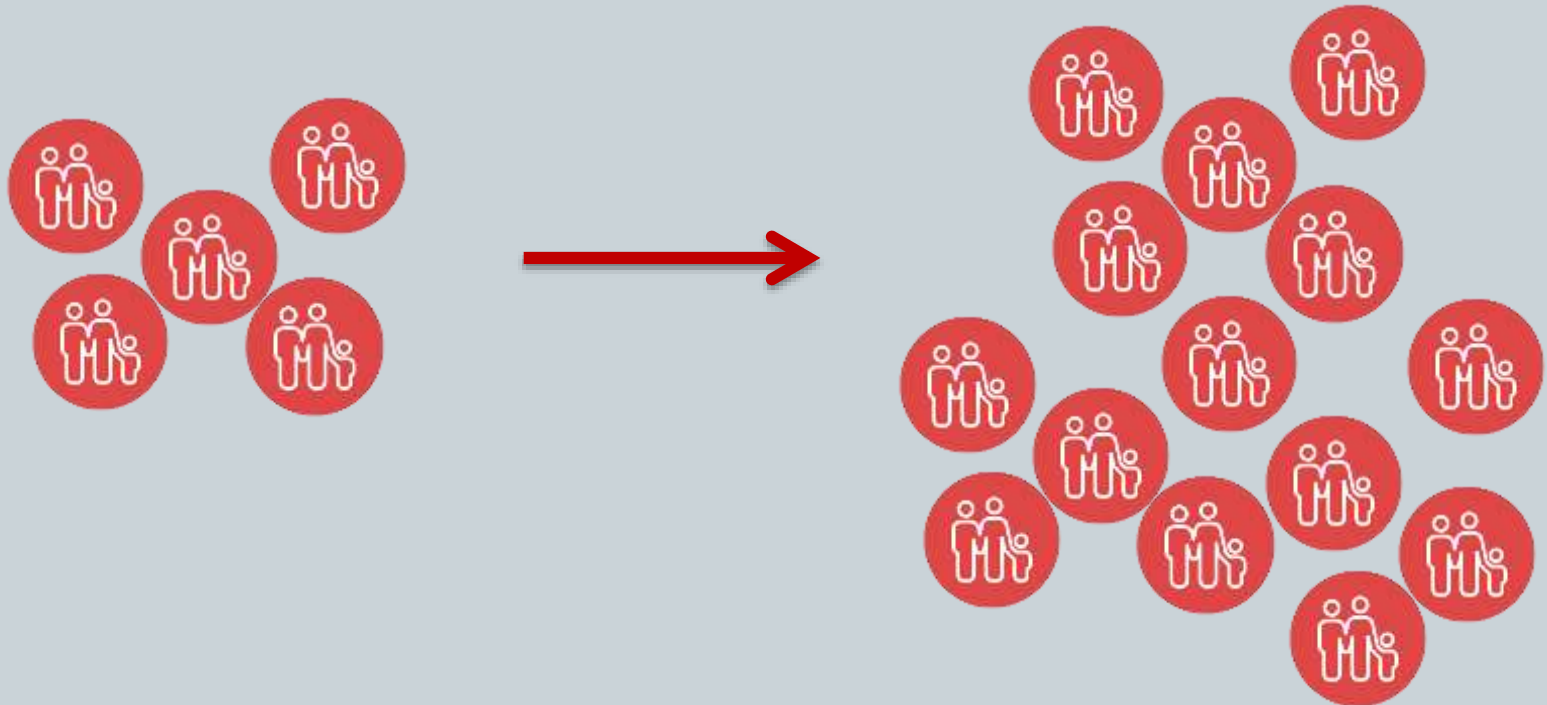
Demand side  
perspective



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# Latent demand for more renovations



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# BRIDGING SUPPLY & DEMAND together



COMPELLING OFFER

ONE STOP SHOP  
NON-TECH LANGUAGE  
GUIDANCE

DEMAND SUPPLY

we have to WORK TOGETHER to create a COMPELLING OFFER

DRIVERS  
DIVERSE  
SEGMENTS  
YOUNG FAMILIES  
EMPTY NESTERS  
HIGH ENERGY BILLS

TOOLS TO CONVINCE HOME OWNERS  
why renovate?

NEEDS

TRAINING  
TECHNICAL SOLUTIONS

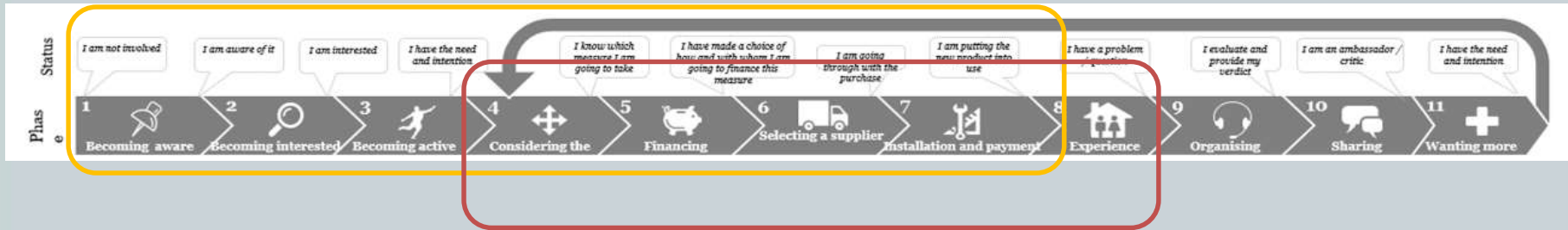
LONG CUSTOMER JOURNEY  
DROP OUTS

modular  
fast



# 2 compelling offers

## Compelling offer Leiedal



## Compelling offer RenBEN



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# Compelling offer RenBEN

(Bostoën, Leiedal and others)

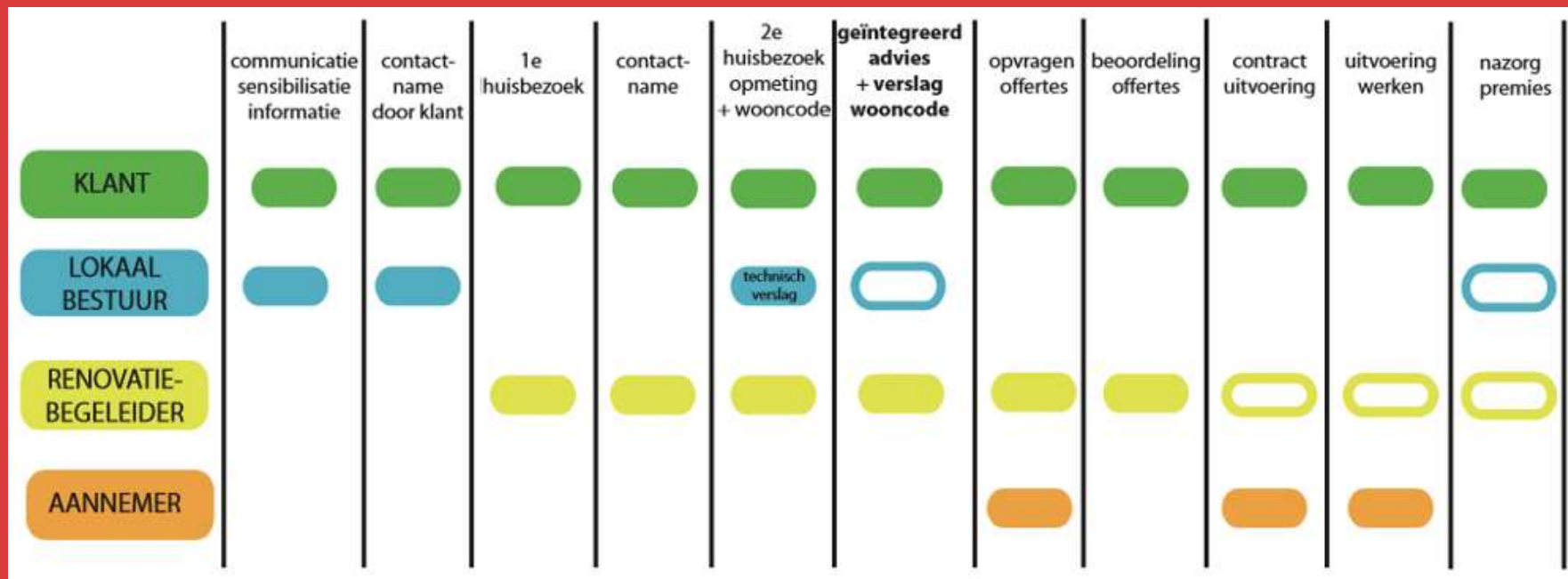
Staged Renovation of private rental houses  
to NZEB (BEN) buildings



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# Working together to unburden the customer during his renovation process



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# Seducing and convincing homeowners

**BEN<sup>+</sup> IS PARAAT ZIJN VOOR MORGEN**  
*Staat je woning in een BEN-jasje en profiteer van de voordelen!*

**KIES NU VOOR BEN EN BESPAAR DUIZENDEN EURO'S!**

**WAT IS BEN?**

**JOUW HUURWONING KOMT IN AANMERKING VOOR DIT PILOOT PROJECT!**



**WAAROM ZOU IK KIEZEN VOOR EEN BEN-ENOVATIE VAN MIJN WONING?**

**DE WONING IS VEILIG EN VERBODEN**

**DE WONING IS VEILIG EN VERBODEN IN PLANNEN**

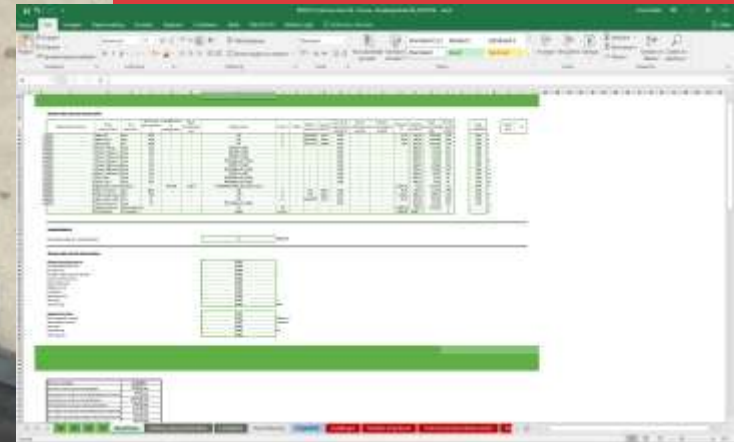
**DE WONING IS VEILIG EN VERBODEN IN PLANNEN**

**DE WONING IS VEILIG EN VERBODEN IN PLANNEN**

**WIST-JE DAT...**

- De renovatie wordt gefinancierd door de Staat.
- De renovatie wordt gefinancierd door de Staat.
- De renovatie wordt gefinancierd door de Staat.
- De renovatie wordt gefinancierd door de Staat.

# Development of tools to support the renovationcoach



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# A roadmap with a staged renovation plan

**Geïntegreerd advies**  
Bakkersstraat 1, Melle

Vlaanderen  
in innovatie

**iwt**

1

**Inhoud**

1. Waarom renoveren naar EEN?	3
2. Wat is de renovatiebegleider voor u doen?	3
3. De huidige situatie	6
4. Wat moet u verplicht uitvoeren?	6
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10. Mogelijke steun en hulp bij verbouwingen	14
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2

**11. Samenvatting**

<b>Huidige situatie</b>	De woning is bijna niet geïsoleerd. Er is geen centrale verwarming en warm water wordt geproduceerd door een elektrische boiler. Een ventilatiesysteem is niet aanwezig.
<b>Dringend aan te pakken</b>	Om in orde te zijn met de wooncode moeten volgende werken zeker gebeuren: <ul style="list-style-type: none"> <li>- Het metselwerk van de buitendakke schoof zit los en is overhellend. Dit moet opgelost worden.</li> <li>- Er zal een spervoterdichte klimatechniek in de badkamer geplaatst moeten worden.</li> <li>- Het plaatsen van een differentieel van max. 30 mA voor de badkamer en wasmachine.</li> <li>- Het bestrijden van opstijgend vocht in binnen- en buitenmuren.</li> <li>- Het plaatsen van een niet afsluitbaar rooster rechtstreeks uitwendig naar buiten is vereist in de leefkamer (setto doorkaaf 6 om<sup>3</sup>/kW).</li> <li>- Rookmelders plaatsen per bouwlaag.</li> <li>- Dakisolatie wordt verplicht tegen 2023.</li> </ul>
<b>Aan te pakken</b>	Om de woning naar BENG te brengen zijn volgende stappen nodig. Bij uitvoering is het belangrijk om lock-ins te vermijden of deze stappen in 1 keer uit te voeren. <ul style="list-style-type: none"> <li>Stap 1 - Zoldervloer isoleren onder hellend dak.</li> <li>Stap 2 - Plat dak vervangen en isoleren.</li> <li>Stap 3 - Ventilatie systeem C of D installeren.</li> <li>Stap 4 - Ramen en deuren vervangen.</li> <li>Stap 5 - Isoleren van de voor- en achtergevel.</li> <li>Stap 6 - Vervangen verwarmingssysteem en productie warm water. Isoleren van de vloer.</li> </ul>
<b>Mooi resultaat</b>	Uw woning is BENG! <ul style="list-style-type: none"> <li>Stap 7 - Isoleren gemene muren.</li> <li>Stap 8 - PV-panelen of zonnecollector.</li> </ul>
<b>aanpak</b>	

15



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# Unburdening the homeowner during the renovation process

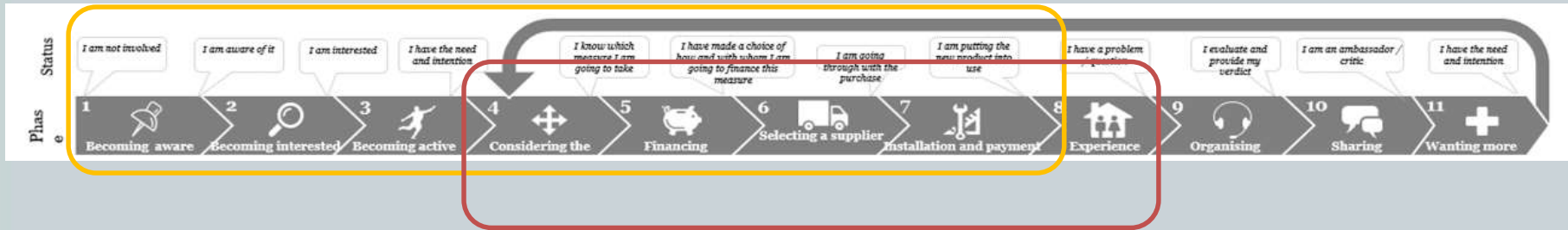


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# 2 compelling offers

## Compelling offer Leiedal



## Compelling offer RenBEN



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# COMPELLING OFFER Leiedal

Application of the insights on how to  
activate the demand side



**My Energy Compass**  
Mijn Energiekompas



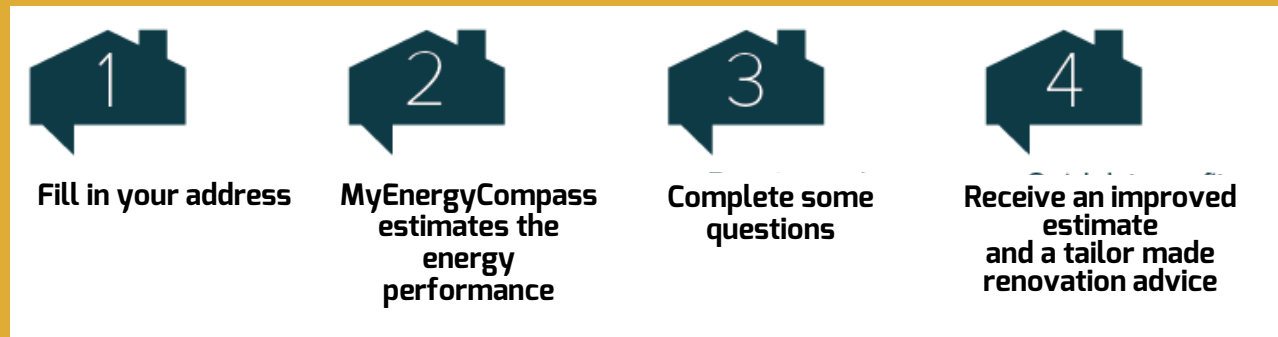
This project has received funding from the European  
Union's Horizon 2020 research and innovation programme  
under grant agreement No 649865



# Application of the insights on how to activate the demand side



[www.MijnEnergiekompas.be](http://www.MijnEnergiekompas.be)



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# Free insight in energy performance



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# Non-technical language

Deel op Facebook

Hoe is jouw hoofddak geïsoleerd? [Meer uitleg](#)

- Niet
- Slecht geïsoleerd
- Goed geïsoleerd
- Perfect geïsoleerd

LEIE DAL Ww refurb Privacy

Deel op Facebook

Wat is de staat van je woning?

- Perfect zoals het is. Kleine verbeteringen kunnen natuurlijk wel.
- De woning is best ok. Stap voor stap plannen we enkele aanpassingen.
- Dringend toe aan een grondige verbouwing. Is verouderd, oncomfortabel, te klein, hoge energiefactuur...

LEIE DAL Ww refurb Privacy



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# Tailor made NZEB-advice

**MijnEnergiekompas**  
Jouw renovatieplan op maat

meiweg 15  
kortrijk

 <b>Woning</b> Jouw woning  <b>G: zeer slecht</b>	 <b>Energiekost</b> Jouw energiekost  <b>HOOG</b>
 Uw woning hoort bij de <b>9%</b> slechtste in de regio	<b>Top 3 maatregelen</b>  1. Oude verwarmingsketel vervangen  2. Vloerisolatie aanbrengen  3. Muurisolatie aanbrengen





1/4

**MijnEnergiekompas**  
Maak je woning toekomstbestendig  
Start nu

Hier vind je maatregelen om jouw woning "BEN" te maken (Bijna-Energie neutrale Woning). BEN is de norm van de toekomst, voor nieuwe woningen en bij renovaties. Ga mee met de tijd.

	Je hoofddak is al goed geïsoleerd (maar niet perfect), je bijdak minder goed. Dit bijdak beter isoleren is het meest dringend, vooral als je de ruimte eronder veel gebruikt. Een BEN-dak heeft minstens 12 à 20 cm isolatie. Het loont waarschijnlijk niet de moeite om direct het hoofddak bij te isoleren, tenzij je van plan bent het dak te vernieuwen.
	Je hebt volle muren als gevels, maar deze zijn niet geïsoleerd. Bij een BEN-renovatie breng je aan de buitenzijde minstens 10 à 16 cm isolatie aan, wat jouw woning aanzienlijk comfortabeler zal maken. Hierover komt een nieuwe gevelswerking, zodat jouw woning een nieuwe look krijgt. Pleister, hout, baksteen, tegels, alles is mogelijk.
	Een niet-geïsoleerde vloer zorgt voor koude voeten. Maar je hebt een radiator, dus het is mogelijk om via het kalkteplafond de vloer van jouw woning (of een gedeelte ervan) te isoleren met minstens 7 à 11 cm isolatie. Zo moet je de vloer niet uitbreken voor een nog comfortabeler en warmer gevoel.
	Je beschikt al over superisolerende beglazing. Deze beglazing laat 3 keer minder koude binnen dan dubbele beglazing, en 10 keer minder dan enkel glas. Let wel: nieuwe ramen zijn winddicht. Ga voor een ventilatiesysteem aangezien dit nu ontbreekt. Zo vermijd je vocht- en gezondheidsproblemen.
	Misschien is je dak geschikt voor een zonnepanelen of zonnepanelen.

2/4



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# Guide through customer journey



**MijnEnergiekompas**  
Maak je woning toekomstbestendig  
Zo pak je het aan

**Maak je woning toekomstbestendig, kies voor een totaalverbouwing.**

Op lange termijn is een totaalverbouwing het meest kostenefficiënt, al vraagt dat een grotere investering. Bij een totaalverbouwing heb je een geïntegreerd ontwerp nodig. Hiervoor kan je te rade gaan bij een architect met energiedeskundigheid.

**Deze mensen deden het u voor**

**Ontdek hier** hoe deze gezinnen hun verbouwing aanpakten. Welke stappen zetten ze? Voor welke oplossingen kozen ze? Wat kostte hen de verbouwing en van welke premies maakten ze gebruik? En wat betekent dat voor hun energiefactuur?

**Verbeter je woning op een slimme manier**

Renoveren doe je doordacht en kostenbewust. Zoek je een onafhankelijke partner om je renovatie in goede banen te leiden of heb je een beperkte vraag over je renovatie? De RenovatieCoach kan je helpen bij het vergelijken van offertes en van controle op de uitgevoerde werken. **Lees hier** meer over hoe de RenovatieCoach te werk gaat en wat hij voor jou kan doen.

**Er zijn concrete mogelijkheden om jouw energiefactuur te laten dalen**

Volgens de ingevulde gegevens verbruikt jouw gezin meer energie dan normaal voor dit type woning. Energieluzig wonen hoeft echter niet ingewikkeld te zijn. Met enkele ingrepen boek je onmiddellijke winsten. De RenovatieCoach zoekt samen met jou de grootste energiebesparingen.

174



Examples



Renovation coach



Pool of contractors



# Some recommendations from REFURB partners

Supply side  
perspective

Demand side  
perspective



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# Some recommendations from REFURB partners

## Supply side perspective

## Demand side perspective

- Define customer segment
- Use 'right moment in time'
- Renovation is a process
- Saving energy is not the main driver for a renovation
- Use customized communication



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# Recommendations from REFURB partners

## Supply side perspective

- Offer integrated product solutions by chain organisation and prefabrication
- Support of supply side by digital tools and training
- Customer-oriented service by single point of contact (SPOC)

## Demand side perspective

- Define customer segment
- Use 'right moment in time'
- Renovation is a process
- Saving energy is not the main driver for a renovation
- Use customized communication



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## OUTLINE

1. Belgian context for renovation of single family houses
2. Compelling offers from Belgium
3. Belgian best-practises



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# LIFE 2016 IP CLIMATE BE REEL!



# BE REEL!

## Belgium renovates for energy efficient living

- Life Call 2016 Integrated Projects Climate Action
- Duration: 7 years (2018-2024)
- Demonstration projects + business models for upscaling



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# BE REEL! partnership

Vlaanderen

> VEA: trekker

> Departement Omgeving



+ WTCB

+ VVSG - Kenniscentrum Vlaamse Steden



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## Vlaanderen

> VEA: trekker

> Departement Omgeving



+ WTCB

+ VVSG - Kenniscentrum Vlaamse Steden

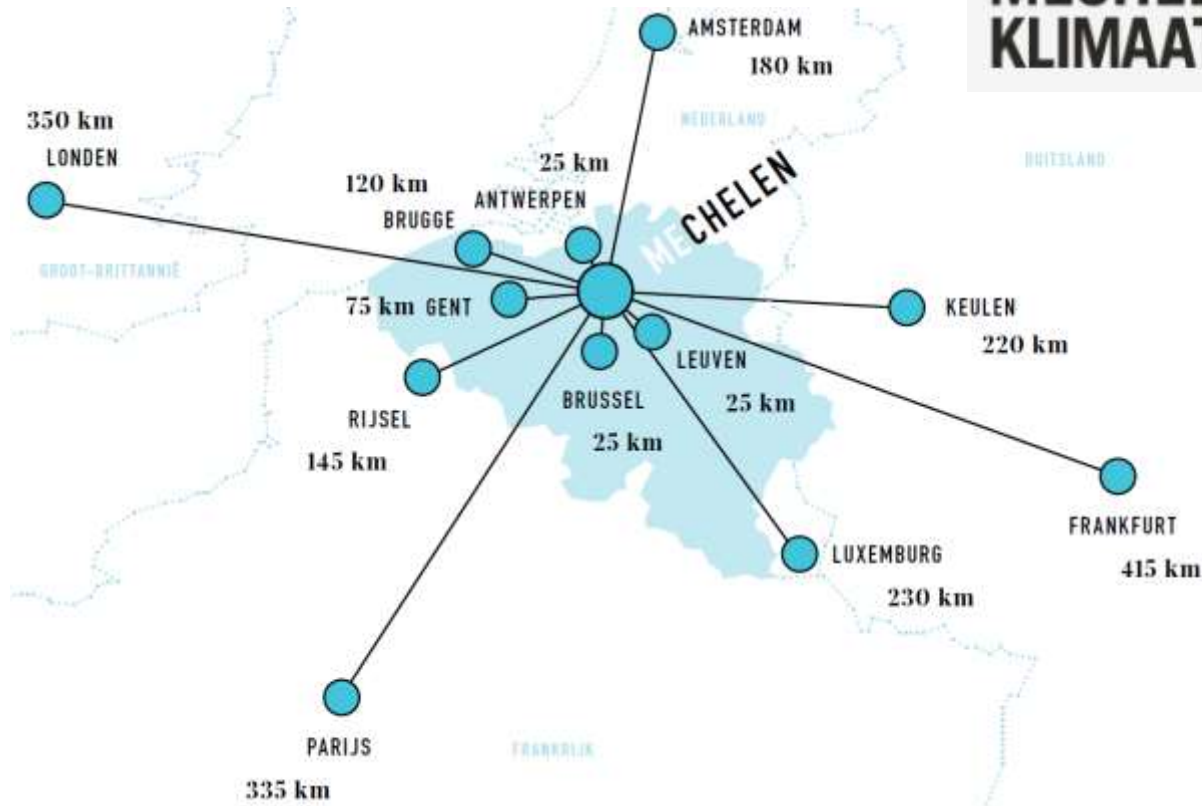


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# MECHELEN KLIMAATNEUTRAAL



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<https://klimaatneutraal.mechelen.be/>

The screenshot displays the website's interface. At the top, a blue navigation bar contains the text "MECHELEN KLIMAATNEUTRAAL" and "STAD MECHELEN". Below this, a green bar lists menu items: "GEBOUW", "GROENE ENERGIE", "MOBILITEIT", "SAMENAANKOPEN", "LEVENING EN PREMIES", "KLIMAATNEUTRAAL", and "CONTACT". A search bar on the right contains the text "Wat zoek je?" and a magnifying glass icon.

The main content area features a grid of service tiles. On the left is the logo for "MECHELEN KLIMAATNEUTRAAL", which consists of a stylized 'M' made of green and blue geometric shapes.

The grid includes the following tiles:

- Vlaamse Energielening**: A tile with an illustration of a modern building and people walking, with the text "Vlaamse Energielening" at the bottom.
- Stroomversnellers**: A tile featuring a man in a suit and a sign that reads "OVERAL ZONNEPANELEN". Below the man, it says "Stroomversnellers".
- uw school PARAAT VOOR HET KLIMAAT**: A tile with an illustration of a school building and children playing. The text "uw school PARAAT VOOR HET KLIMAAT" is at the top, and "Paraat voor het klimaat" is at the bottom.
- Samenaankoop elektrische fietsen 2018**: A tile with an illustration of people riding bicycles. The text "Samenaankoop elektrische fietsen 2018" is at the bottom.
- Samenaankoop dakisolatie**: A tile with an illustration of a residential building. The text "Samenaankoop dakisolatie" is at the bottom.
- Warm Huis - digitaal advies**: A tile with an illustration of a residential building. The text "Warm Huis - digitaal advies" is at the bottom.
- Gratis renovatie-advies**: A tile with an illustration of a man and a woman talking in front of a house. The text "Gratis renovatie-advies" is at the bottom.
- Renovatiemobiel**: A tile with an illustration of a house and a mobile renovation unit. The text "Renovatiemobiel" is at the bottom.

See2Do!

Triple-A

BE REEL!





**Interreg**  
Vlaanderen-Nederland  
Europees Fonds voor Regionale Ontwikkeling



## Doing by seeing!

Informing and supporting citizens in their energetic renovation journey

Actions Mechelen:

- Demonstration project: Dorpshuis Hombeek
- Thermographic scan of roofs
- Digital tool 'Warm Huis'
- Tailored renovation advice
- Pool of contractors



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 Europees Fonds voor Regionale Ontwikkeling



**MECHELEN**  
**KLIAMAATNEUTRAAL**



**interreg**  
 Vlaanderen-Nederland



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EUROPESE UNIE



**MECHELEN  
KLIMAATNEUTRAAL**



**Warm Huis - digitaal  
advies**



**Gratis renovatie-advies**



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 Vlaanderen-Nederland  
 Europees Fonds voor Regionale Ontwikkeling



**MECHELEN**  
 KLIMAATNEUTRAAL

**MECHELEN KLIMAATNEUTRAAL**

**Beter wonen**  
 Maak de woning energiezuinig, betaalbaar voor iedereen.

**Renoveer slim, woon energiezuinig**  
 Energiezuinig renoveren is niet mogelijk in 2021. Het eerste stappenplan om het energieverbruik van uw woning te laten dalen.

**Meer comfort, minder kosten**  
 Kosten die door de aanpak van de problemen, vaak wordt geparkeerd aan de hand van meer comfort, zijn lager dan de kosten van de aanpak.

**Mijn stappenplan**

**Dakisolatie**  
 Isolatie van het dakgebied: 100% uitbreiden buiten

• Kosten	€ 1.000
• Investing per m <sup>2</sup>	€ 100
• Bespar.	€ 100
• Verbruik minder energie?	100% (100 kWh)
• Bespar.	€ 100 (100 kWh)

**Gevelisolatie**  
 Isolatie van de gevel

• Kosten	€ 1.000
• Investing per m <sup>2</sup>	€ 100
• Bespar.	€ 100
• Verbruik minder energie?	100% (100 kWh)
• Bespar.	€ 100 (100 kWh)

**Ramen**  
 Isolatie van de raamoppervlakte: 100% uitbreiden buiten

• Kosten	€ 1.000
• Investing per m <sup>2</sup>	€ 100
• Bespar.	€ 100
• Verbruik minder energie?	100% (100 kWh)
• Bespar.	€ 100 (100 kWh)

**Venotatie**  
 Uitgevoerde maatregelen: 100% uitbreiden buiten

• Kosten	€ 1.000
• Investing per m <sup>2</sup>	€ 100
• Bespar.	€ 100
• Verbruik minder energie?	100% (100 kWh)
• Bespar.	€ 100 (100 kWh)

**Verwarming**  
 Isolatie van de verwarmingsinstallatie: 100% uitbreiden buiten

• Kosten	€ 1.000
• Investing per m <sup>2</sup>	€ 100
• Bespar.	€ 100
• Verbruik minder energie?	100% (100 kWh)
• Bespar.	€ 100 (100 kWh)

**Zo wil ik wonen**

Met dit stappenplan renoveer je je woning tot een energiezuinige woning van

**Beter wonen**  
 Gaat je energiegebruik van 100 kWh naar 0 kWh.

**Meer comfort, minder kosten**

**100% uitbreiden buiten**  
 € 1.000  
 € 100/m<sup>2</sup>  
 € 100

**100% uitbreiden buiten**  
 € 1.000  
 € 100/m<sup>2</sup>  
 € 100

**100% uitbreiden buiten**  
 € 1.000  
 € 100/m<sup>2</sup>  
 € 100

**100% uitbreiden buiten**  
 € 1.000  
 € 100/m<sup>2</sup>  
 € 100





**Interreg**   
EUROPEAN UNION

2 Seas Mers Zeeën

**Triple-A**

European Regional Development Fund



**MECHELEN  
KLIMAATNEUTRAAL**

# Triple-A

stimulating the **ADOPTION** of low-carbon technologies  
by home-owners through **AWARNENESS** and easy **ACCESS**



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement **No 649865**



**Interreg**   
EUROPEAN UNION

2 Seas Mers Zeeën

**Triple-A**

European Regional Development Fund



**MECHELEN  
KLIMAATNEUTRAAL**

## Actions Mechelen:

- Demonstration project:  
30 deep energy renovations
- EPC before and after renovation
- Renovation mobile
- Smart meters



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 **refurb**

**Interreg**   
EUROPEAN UNION

2 Seas Mers Zeeën

**Triple-A**

European Regional Development Fund



**MECHELEN  
KLIMAATNEUTRAAL**



Mechelen opens renovation mobile



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# BE REEL!



Actions Mechelen:

- **Demonstration projects** voor **collective renovation of houses**
  - 75 deep renovations
  - 50 shallow renovations
- Testing EPC+, Woningpas en Renovation advice, developed by VEA
- Pilot projects for **business cases** for renovation planners
- Demonstration project for **collective renewable energy** (PV-panels) for **vulnerable families**
- **Budgetneutral renovations** for **vulnerable families** m.b.v. alternatieve financiering
- **Energy invoice communication**



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See2Do!

Triple-A

BE REEL!



Warm Huis

EPC+

HEMS

Energiepunt

Samenaankoop dakisolatie

Demonstratiewoningen  
collectieve renovatie

Demo Zonneklaar

Demo's

Warmteluchtfoto

Renovatie-advies  
Woningpas

HEMS

EPC+

Warmteloketten

Vlaamse Energielening

Renovatiemobiel

Communicatieve  
energierekening

CRM (Duurzaam Bouwloket)

Ambassadeurs

Demo  
Hombeek

Gratis  
renovatie-advies





## CONCLUSION:

### SINGLE FAMILY BUILDING RENOVATION IN BELGIUM

1. Customer journey for energy renovations is already taken up in a lot of projects
2. A lot of attention to cross-sectoral involvement of both demand and supply side
3. Segmentation is especially used to address the vulnerable target groups with special needs
4. These concepts are also taken up by long term
5. Still looking for the perfect financial solution

To be continued... 😊





# refurb

## Thank you for your attention

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[www.go-refurb.eu](http://www.go-refurb.eu)



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# ACTIVATING CONSUMERS TO DEEP ENERGY REFURBISHMENT IN EUROPE



How the Refurb-project can accelerate  
Sonderborg's ProjectZero-transition toward a  
ZEROcarbon community by 2029

Peter Rathje  
ProjectZero (DK)



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Starts Green Business

ProjectZero



[www.go-refurb.eu](http://www.go-refurb.eu)

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# agenda

- Sonderborg`s transition toward ZEROcarbon by 2029, including the role of buildings
- Our learnings so far
- How Refurb fits into our Next Step Journey
- Conclusions
- Feedback from audience



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# Transitioning Sonderborg (Denmark)

from farming, industry, knowledge to Bright Green Business

- fresh seawater
  - great nature
  - tourism
  - **experience economy**
- 
- farming
  - industry
  - knowledge
  - **Bright Green Business**
  - **the Danfoss Company HQ**

- 76,000 citizens
- 440,000 pigs, 250,000 hens
- 500 km<sup>2</sup> area
- District heating networks
- Natural Gas pipeline



Copenhagen

Sønderborg



**722,000 ton  
of emissions  
(baseline 2007)**



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Bright Green Address  
ProjectZero



**ProjectZero** is an enabler  
for Sonderborg to become a  
**ZEROcarbon community** by 2029,  
based on sustainable growth  
and creating new **Green jobs**

**20 years ahead of a fossil free Denmark**

The **ProjectZero** approach is holistic  
and includes a Public Private Partnership, technology,  
solutions, business, participation ... and a new thinking!



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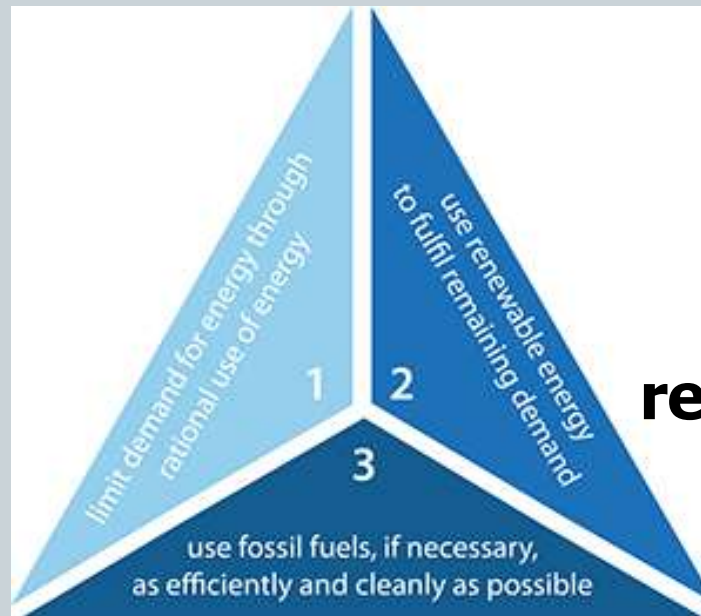


# Energy efficiency being our #1 priority

Transitioning the energy-system using only step 1 + 2

**#1:**

**Energy  
efficiency**



**#2:**

**Energy from  
renewable sources**



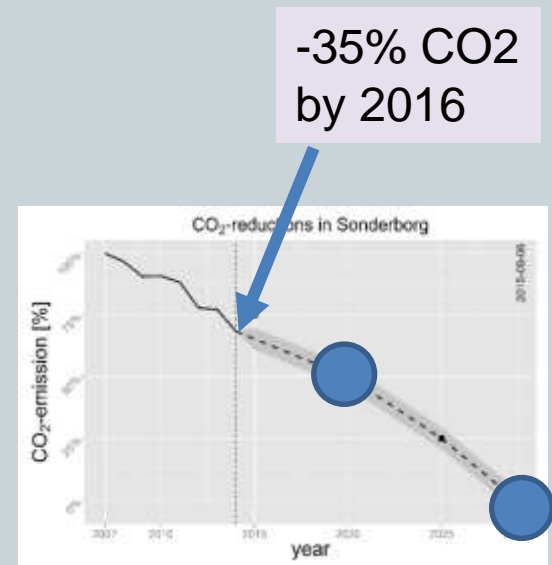
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# ProjectZero

## - major achievements

- **35% CO<sub>2</sub>-reduction during 2007 – 2016**
  - Overachieved our 2015 milestone (25%)
  - Now targeting a 50% reduction by 2020
- **800+ Green Jobs Created**
  - In the construction industry
  - Green district heating
  - Energy consulting
- **A lighthouse beacon for Sonderborg**
  - Setting a new direction with future common goals
  - Strong community participation
  - Enterprises and educations alignment
  - Best practice national and international cooperation



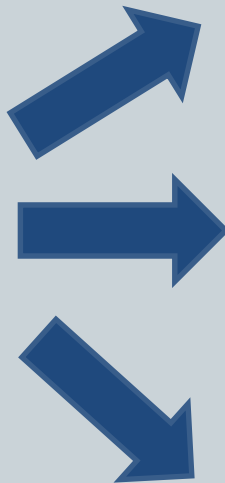
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# Lead by examples

A joint community ZEROmindset started with the ZERO+ house

The ZERO+ house



- new homes
- new municipal buildings
- new schools
- companies going ZERO+
- shops going ZERO+
- schools going ZERO+
- families going ZERO+
- sports going ZERO+
- urban development going ZERO+

Frank Gehry



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Triple Green Leadership

ProjectZero



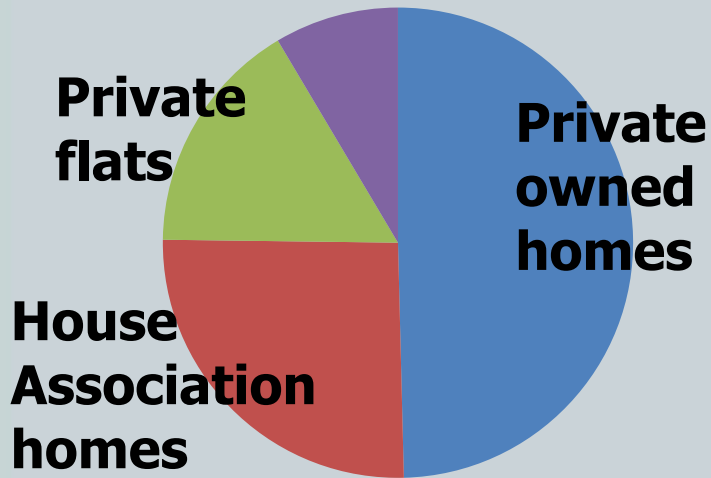
Energy  
efficiency  
improvement -  
requires  
participation  
from all society  
stakeholders



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# ProjectZero challenges the energy consumption in Sonderborg`s homes



- 37,500 dwellings**
- average is 65 years old
  - with a poor EPC
  - but most with smart meters



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# The ZEROfamily

115 participating families (2009)

I'm a big  
**ZERO**  
ProjectZero.dk

I'm a big  
**ZERO**  
ProjectZero.dk

I'm a big  
**ZERO**  
ProjectZero.dk

Impact

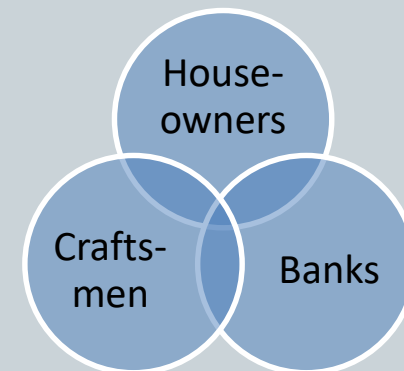
- 25% energy savings
- 45% water savings

# The ZEROhome program

started the engagement of 18,600 homeowners



- House construction, thermostats, insulation, installations, green district heating, heat pumps, appliances, mindset, ..
- **Concept**
  - easy, safe and economic viable for owners
  - strengthen craftsmanship competencies
  - secure financial support
  - lean processing across sectors
- **Impact**
  - 1,600 homes visited by “Charlie”
  - 65% have initiated retrofit with average €21,000 generating €15 mio in craftsmen sales
  - Energy savings up to 45% per household



syddansk  
vækstforum

FORNYELESFONDEN  
LØSN OPSTILLING OG ERHVERVSMESSIG FORNYELSE



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# Changing society thinking and mindset

creating 16,000 young smart ambassadors

- UNESCO Learning City
- Academy & University
- High School
- Elementary & Mid school
- Kindergarten



# ZEROsport – a “we-platform” addressing 25,000 facility users

- **An energy efficient facility**
  - The building envelope
  - Technical installations
- **With Green energy supply**
  - PV, wind, heat pumps ...
  - Green district heating
- **Engaging the facility users**
  - Attitude & behavior
    - Meters and visualization
  - Transport
    - Biking
- **Closing the loop**
  - at home or at work



**RENOVER**  
**PRISEN 2014**

**Danmarks bedste renovering**

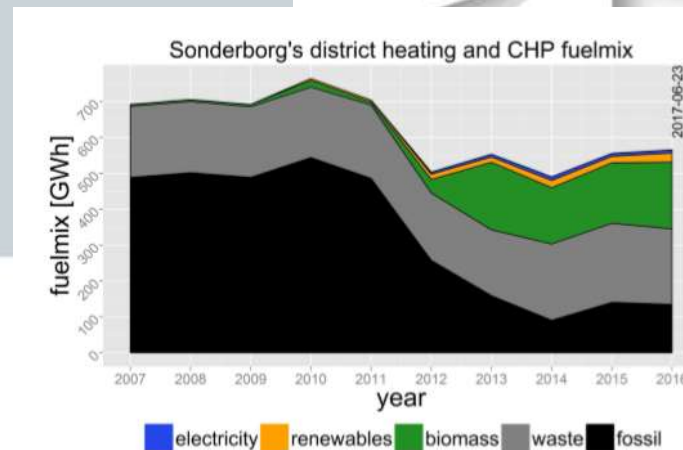


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# Green District Heating as the heating backbone

With multiple green fuel sources



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# Sonderborg´s Next Step Journey ?

How does Sonderborg proceed it´s journey towards ZEROcarbon and how does the supply and demand side unite and cooperate focused on a joint homeowner customer journey ?



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# Supply and Demand Connection



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Empire Green Business  
ProjectZero



# How to create a Refurb compelling offer in only six steps

1. Focus on market segment ex. Young Families (YF) or Empty Nesters (EN) in single detached homes – look out for the right timing!
2. Implement the customer journey to identify the stumbling blocks and advantages/actions
3. Generate the value proposition for the focused segments
4. Develop the business model for the stakeholders
5. Add the financial support incentives
6. Appoint a Single point of contact (if required)

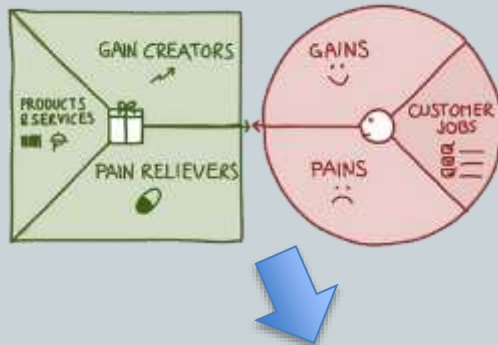


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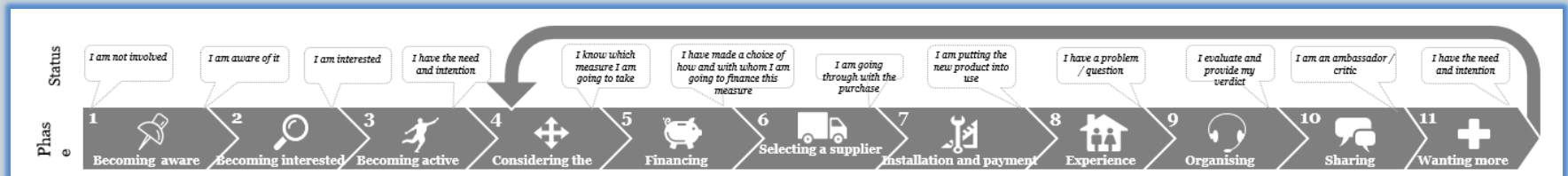


**(3)** To get home-owners on board the journey, you need a value proposition



**(5)** Financial support & incentives will improve !

**(2)** The Refurb Customer Journey with pre-programmed QA creates a common understanding and platform












**(6)** To keep the journey powered, you need a single point of contact

**(4)** The value creating business model will secure strong stakeholder engagement



# Country specific Refurb-offers

BE	DK	NL	DE	EE	SI
					
<b>ALL-IN-ONE AND STEP-BY-STEP RENOVATION PACKAGES</b>	<b>FIVE PACKAGES FOR COMFORT AND HEALTH</b>	<b>UNBURDENED NZEB RENOVATION</b>	<b>ATTRACTIVE FLATS TO LET OUT</b>	<b>A FAIR NZEB OFFER</b>	<b>AN ECONOMIC SAFE SOLUTION</b>
<b>Target group</b>	<b>Target group</b>	<b>Target group</b>	<b>Target group</b>	<b>Target group</b>	<b>Target group</b>
 Single family houses	 Single family houses	 Any private owned house	 Multi-apartment, Housing companies and cooperatives	 Multi-apartment, private owned	 Multi-apartment, private owned
<b>Construction period</b>					
Any	1960-1980	Any	Any	1960-1980	Any
<b>Specific intervention timing strategy</b>					
Yes	Time of purchase, time of retirement	Yes	When there is a need	When owners can agree	When owners can agree
<b>Single point of contact, independent energy adviser</b>					
Yes	Yes	No	Non Applicable	Non Applicable	Non Applicable
<b>Financial offer</b>					
No	Can be integrated locally	ESCO	KfW funding options	KredEx Package	ECO Fund
 <b>Investments in EUR</b> 60.000+	 <b>Investments in EUR</b> 12.000-67.000	 <b>Investments in EUR</b> 20.000-100.000	 <b>Investments in EUR</b> No limits	 <b>Investments in EUR</b> 55.000-394.000	 <b>Investments in EUR</b> No limits
<b>Webpage with calculation tool</b>					
Yes	No	Non Applicable	Yes	No	No
<b>Energy ambassadors</b>					
Yes	Yes	Yes	No	No	No
<b>Customer Journey consortium</b>					
Industry with energy expert and architects	Regional/local stakeholders	Local community	District solutions	Local community	Construction company driven
<b>Quality assurance issues addressed</b>					
Yes	Non Applicable	Yes	Online tool	Yes	Yes



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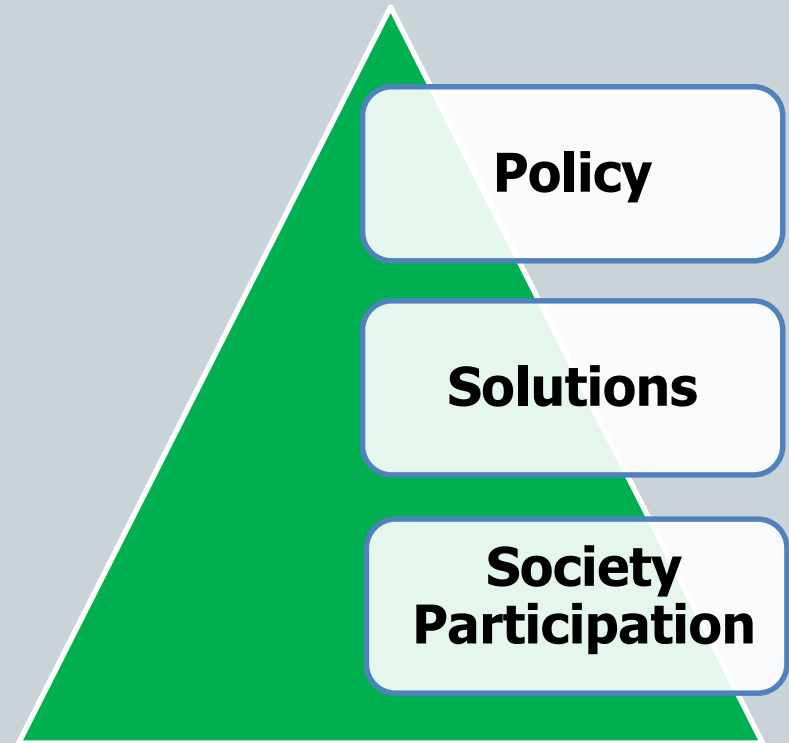
Bright Green Building

ProjectZero



# A consistent cross-pressure across society/community

- Policy framing by local, regional, national government
- Solutions offers by the business society
- Society participation (from one to all) created along a **joint Customer Journey**
- Making cooperation and communication key and king!



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Does the Sonderborg initiatives and experiences make sense in your community?

- Show **RED** for NO
- Show **GREEN** for YES



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Bright Green Business  
ProjectZero



Have your community already implemented initial renovation measures - and are now struggling with how to proceed?

- Show **RED** for NO
- Show **GREEN** for YES



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# Are your community ready to implement a joint Customer Journey based on the REFURB concept?

- Show **RED** for the public sector
- Show **GREEN** for the building sector



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# refurb

## Thank you for your attention

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ProjectZero (DK)  
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[www.go-refurb.eu](http://www.go-refurb.eu)



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# RENOVATION OF MULTIAPARTMENT BUILDINGS



## PRACTICAL EXPERIENCES FROM SLOVENIA

Jelena Vidović  
BSC KRANJ (SLO)

[www.go-refurb.eu](http://www.go-refurb.eu)



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# Outline

- SUBSIDY SOURCE: ECO FUND
- ORGANISATIONAL STRUCTURE OF MULTIAPARTMENT BUILDINGS
- COMPELLING OFFER
- RENOVATION!



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# Outline

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# ECO FUND IS SLOVENIAN ENVIRONMENTAL PUBLIC FUND

- the most **important policy initiative** with regards to energy renovations in Slovenia;
- promotes investments** complying with the National Environmental Action Plan



**Eko sklad**  
Slovenski  
okoljski  
javni sklad



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# ECO FUND

- only specialised institution in Slovenia that provides **financial supports for environmental projects**
- financial assistance is offered mainly through **soft loans** from revolving funds
- **lower interest rates** than prevailing commercial market rates and it is able to lend for significantly **longer periods** than commercial banks
- **grants** are offered since the year 2008



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# ECO FUND OPPORTUNITIES FOR PRIVATE HOMEOWNERS



Irreversible financial incentives and favorable loans for:

- the use of **renewable energy sources**
- increased **energy efficiency of residential buildings**
- electric **vehicles**
- **water protection**
- efficient **water use**
- **waste** management



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PRIVATE  
HOMEOWNERS



COMPANIES

LOCAL  
GOVERNMENTS



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# ORGANISATIONAL STRUCTURE OF MULTIAPARTMENT BUILDINGS

## KEY PERSONS:

- BUDILDING MANAGER
- REPRESENTATIVES OF OWNERS
- OWNERS OF APARTMENTS

+SAVING FUND  
+ECO FUND  
+RIGHT MANAGEMENT!



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# RENOVATION!



# Outline

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# COMPELLING OFFER

**market segment:** owners of apartments in multiapartment building



Planina, Kranj



Planina, Kranj



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# VALUE PROPOSITION

1. **LOW OPERATIONAL AND MAINTENANCE COSTS AFTER THE RENOVATION**
2. **ENOUGH SAVINGS**
3. **ECO FUND SUBSIDY AVAILABLE**



Source : Shutterstock



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# OTHER DRIVERS



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# OTHER DRIVERS: RENOVATION OF BUILDINGS IN THE NEIGHBOURHOOD

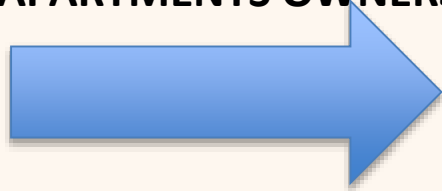


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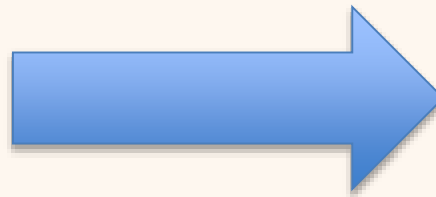
# CREATION OF BUSINESS MODEL

**BUILDING MANAGER  
APPROACHES  
APARTMENTS OWNERS**



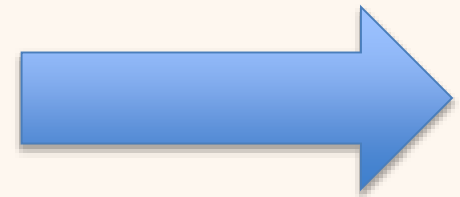
- timetable
- subsidy
- financial situation
- benefits
- savings

**OWNERS REPRESENTATIVE  
CONVINCES THE OWNERS**



- decision making process: 75%
- meetings with renovation companies
- presentation on improvement of life quality after the renovation

**RENOVATION  
WITH COMPANIES**



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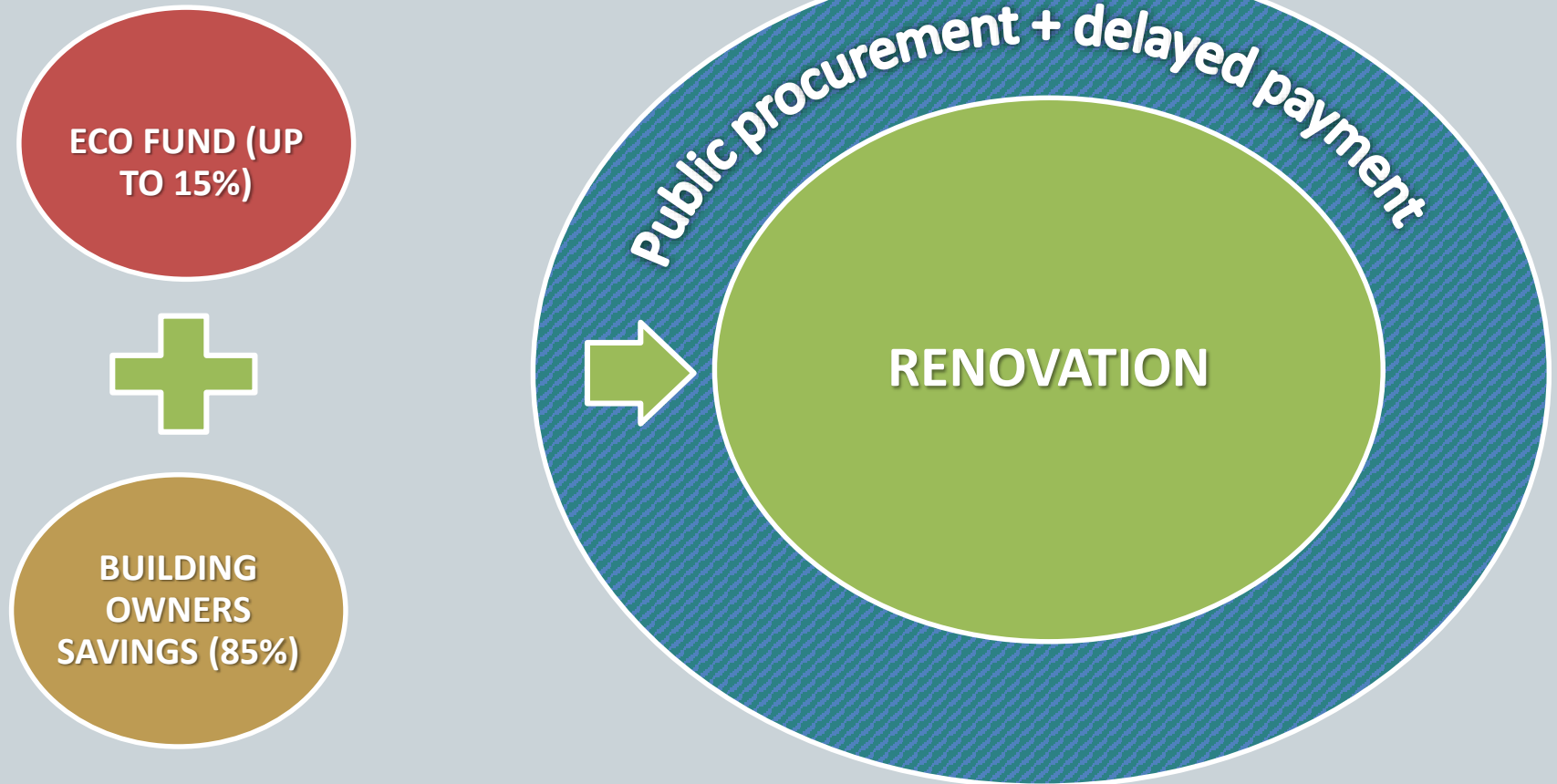


# KEY PERSON AND SINGLE POINT OF CONTACT: BUILDING MANAGER

- implementation of decisions made by the owners;
- composition of the monthly calculation of costs, distribution and collection of costs;
- preparation of a maintenance plan and the management of a reserve fund on the basis of the adopted plan;
- representation of owners in legal transactions;
- reporting to owners about their work at least once a year;
- the numbering and marking of dwellings and other premises and the collection of data, necessary for the registration;
- CARE FOR REGULAR MAINTENANCE OF COMMON PARTS OF THE BUILDING.



# FINANCIAL Structure



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# Outline

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**BASEMENT  
INSULATION**

**ROOF  
INSULATION**

**FACADE  
REPLACEMENT**

**SPECIAL PUBLIC  
PROCUREMENT  
REQUIREMENTS:  
ACCEPTABLE PAYMENT  
MODEL**

**BUILDING  
FURNITURE  
REPLACEMENT**

**ALL OTHER  
CONSTRUCTION  
WORK**



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# refurb

## Thank you for your attention

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# ACTIVATING CONSUMERS TO DEEP ENERGY REFURBISHMENT IN EUROPE



DEEP ENERGY RENOVATION THROUGH  
ONE-STOP-SHOP SOLUTIONS  
FOR PRIVATE HOMEOWNERS



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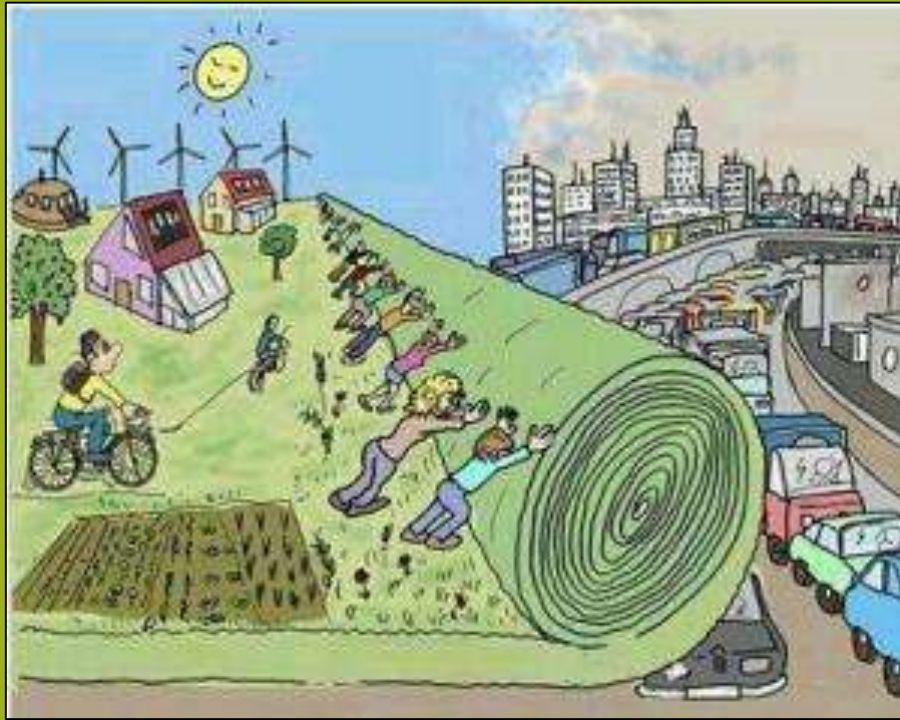
# Rollout of the REFURB approach

- Rollout = Having impact with the REFURB approach
- This can be done in different ways
- Ways to have impact are illustrated with some NL examples



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# NL rollout and transfer REFURB approach



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# Background information: NL policy context

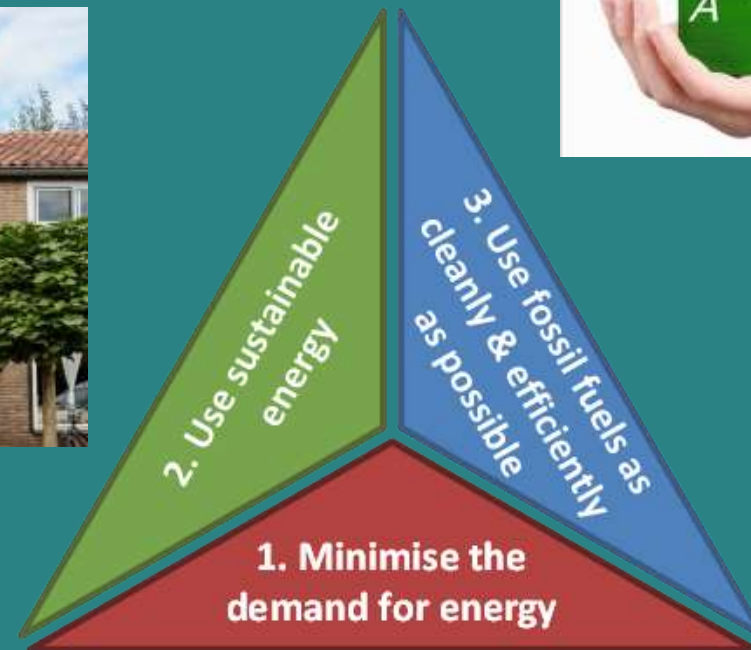
- Energy neutral by 2050 – no fossil fuels
- Natural gas to be completely phased out
  - It is a fossil fuel; not renewable
  - Earthquakes in Groningen; damaging
- Built environment needs green upgrade
  - All electric
  - Sustainable heat – excess or green
  - Window of opportunity for renovation



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# NOM: Nul op de Meter concept (Net Zero Energy, NZEB)



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# Building the brand, create a customer journey

www.slimwoneninleeuwarden.nl

## BEREKEN WAT JIJ KUNT BESPAREN

OP ZONNEKAART LEEUWARDEN

### ENERGIELOKET GEMEENTE LEEUWARDEN

Geef jij ook een maandsalaris uit aan energie? Dat kan anders! Met isolatie bespaar je geld en is je huis winters warm en zomers lekker koel. Zonnepanelen? Ook dat is een goede investering! Lastig? Nee hoor! Het energieloket staat voor je klaar!

- 1: VERBRUIK IK TEVEEL ENERGIE? DOE NU DE ENERGIECHECK!**
- 2: HOE KAN IK BESPAREN? EEN ENERGIEBESPAAR-SCAN VAN JOUW HUIS IN 3 MINUTEN!**
- 3: WIE SCHAKEL IK IN VOOR ENERGIEBESPAARENDE MAATREGELEN? KIES VOOR KWALITEIT VAN LOKALE AANBIEDERS**
- 4: HOE GA IK DIT BETALEN? VRAAG HET SUBSIDIE-PAKKET AAN!**

GA NAAR ALLE SLIMME STAPPEN >

OP ZOEK NAAR EEN VRAAGBAAK?

**Coach Klaas**  
Single- point of contact

- Start with low hanging fruit
- Support and advice
- One-stop shop NZEB



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# Facilitate neighbourhood focusgroups



Arjen Goodijk, Slim Wonen in Leeuwarden,  
municipality of Leeuwarden



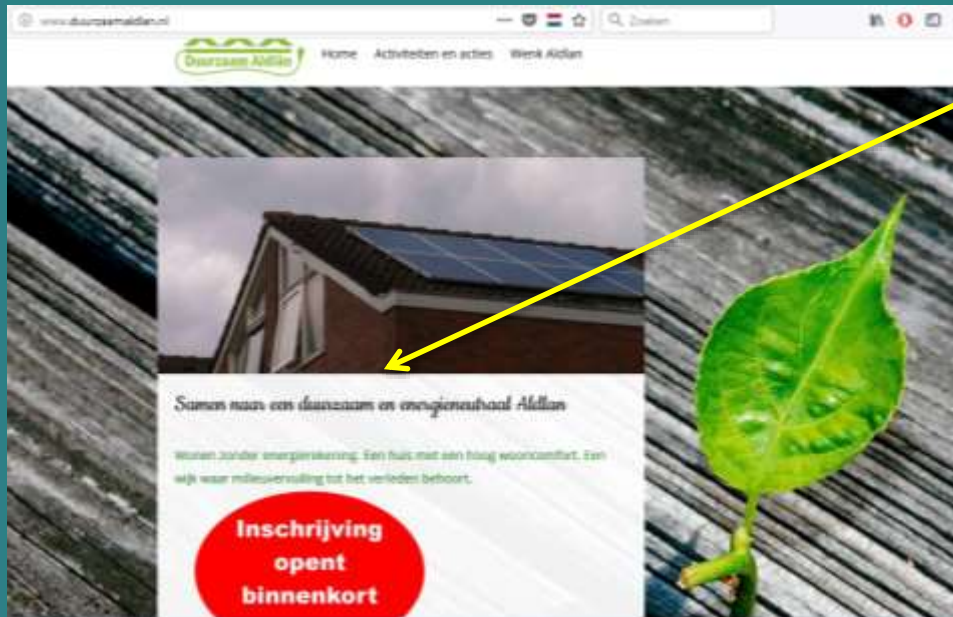
Aldlân



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# A neighbourhood NZEB compelling offer



**NOM concept was developed within neighbourhood, tailored to fit all**

**•Sustainable! More comfort!  
Save money!**

- No more fossil fuels
- No more natural gas
- No more energy bill

***First NOM energy renovations in Aldlân will set off in 2018!***

[www.duurzaamaldlan.nl/](http://www.duurzaamaldlan.nl/) [www.slimwoneninleeuwarden.nl](http://www.slimwoneninleeuwarden.nl)



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# Extending the power of the neighbourhood:

The image shows a screenshot of the Buurkracht website and a video thumbnail. The website header features the Buurkracht logo and navigation links: Home, jouw voordeel, Wij bieden, Buurten, Actueel, and Contact. A user profile icon labeled 'Inloggen' is visible. The main content area has a red background with the headline 'Buurkracht is samen energie besparen' and the sub-headline 'Is Buurkracht al actief in jouw buurt?'. Below this is a search form with fields for 'Postcode', 'Huize:', and 'Type:', and a 'CHECK MIJN POSTCODE >' button. A large cartoon illustration of a person with question marks around their head is positioned to the right of the search form. At the bottom of the website, there are five statistics: 3.453.355 BESPARING, 1.350.068 BESPARING, 262 BUURTEN, 983 BUURTACTIES, and 11.368 BUURTEN. To the right of the website screenshot is a video thumbnail showing a group of diverse people smiling, with the Buurkracht logo above them. Below the video thumbnail is a small text caption: 'Op de hoogte blijven van de acties van jouw buurtgenoten? Meld je aan. Het is gratis, gratis en vrijblijvend.'



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# Boosting the NZEB market: The Fryske deal (1)

- Lets have a look at this YouTube video first:  
<https://www.youtube.com/watch?v=39G1cmxFNzQ>
- Large social housing sector in the Netherlands has great potential – economies of scale
- It actually turns transfer the other way around for this NON concept!
  - From rental sector -> residential sector



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# Boosting the NZEB market: The Fryske deal (2)

- 3000 rental dwellings renovated to NOM
- Example of private- public cooperation
- Consortium: 3 large building companies, 4 municipalities (Leeuwarden included), province of Fryslân, 2 (social) housing corporations and several intermediaries
- Will develop a fitting, affordable and transferable NOM concept



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# Let the sun shine on Leeuwarden!!!!



Rental  
dwelling  
Leeuwarden:

Measures:


- All electric
- Insulation
- Heatpump
- Energy coach, also afterwards



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# Ways to have impact with the REFURB approach:

- By creating a strong 'brand' for energy saving
- By creating a (short) customer journey + energy coach
- With a neighborhood approach to NZEB; bridging the gap
- Tailored one-stop-shop solutions to NOM; no regret
- With solid private – public cooperations
- Economies  of scale



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# More REFURB impact examples:

## Denmark

The HAPPI project: Transfer to the rental sector:

- Cooperation between housing associations  
Sonderborg region
- 56 departments will be screened
  - To develop a catalogue of projects
  - Bundle projects -> compile compelling offers for tenants
- Customer journey tailored to drivers/ barriers tenants
  - Their decision- making is much alike homeowners



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# More REFURB impact examples:

## Belgium


- Exchange knowledge, mutual learning:
  - New quality standards <-> voluntary subsidy schemes in Belgium
- Impact on other EU projects
- Warmer Wonen Leiedal continued
- Energy coach; adopted by DSO Eandis
- Stimulate innovative solutions supply side



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# Discussion; what would work well in your country?

- By creating a strong 'brand' for energy saving
- By creating a (short) customer journey + energy coach
- With a neighborhood approach to NZEB; bridging the gap
- Tailored (segments) one-stop- shop solutions; no regret
- With solid private – public cooperations
- Economies  of scale; bundling



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# Thank you for your attention

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Municipality of Leeuwarden (NL)



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# *Departure Technical Site Visits: Building Innovations*

*Friday 2 March 2018*

**Departure: 13.20, Stadthalle**

**Arrival: 17.45 Train station Wels / Bahnhof Wels  
18.00 Stadthalle**



See you back at the

# World Sustainable Energy Days 2019

**27 February – 1 March 2019**

**Wels/Austria**



**Deadline:**

**Call for Papers**

**10 October 2018**

