New collaborative business models for home refurbishment to nearly zero-energy levels

Welcome
Ad Straub, TU Delft
Partners

- Delft University of Technology (NL)
- Passiefhuis-Platform (PHP), Belgium
- Flemish Institute for Technological research (VITO), Belgium
- Austrian Society for Environment and Technology (OGUT), Austria
- Segel Consulting Company, Norway
- German Energy Agency (dena), Germany
- Buildings Performance Institute Europe (BPIE), Belgium
- Flemish Contractor Federation (VCB), Belgium
- SINTEF Building and Infrastructure, Norway
Objectives

The objective of COHERENO is to strengthen collaboration between enterprises from the supply side for the realisation of Nearly Zero-Energy Building renovations of single-family owner-occupied houses:

- Eliminating barriers for collaboration
- Providing opportunities for business collaboration
- Promoting the uptake of new business models
- Increasing customer confidence by quality assurance mechanisms

In this way ad-hoc demonstration projects will be replaced by nZEB renovations in a volume market.
Emerging market!

• There is already a big market for upgrading single-family dwellings; building codes for new houses increase the gap between old and new houses. The new standard will gradually become a reference for existing houses.

• The renovation market shows a stable growth rate, while the new construction market is fluctuating

• Public authorities promote energy savings, renewable energy and an increase of the renovation rate from around 1.5% towards 3%

• Consortia that develop quality assured nZEB renovation services for home-owners will be able to take a position as front-runners in this market
Target groups and key actors

• Primary: Contractors
  ➢ Contracting home-owners, often key-responsible actor NZEB renovation

• Secondary: Consulting and Informing Actors
  ➢ Contractually Consult home-owners (energy, quality assurance, project management, …)
  ➢ Inform and Advise home-owners (energy, products, finance, …)

• Tertiary: Financing and Policy Actors
  ➢ Banks, real estate agents
  ➢ Energy agencies
  ➢ Policy makers
Project results

- The establishment of a ‘nZEB radar’ to be used as a tracking tool to identify nZEB single-family house renovations

- **Guidelines with opportunities** for business collaboration in the nZEB single-family house renovation market

- The establishment of **hand-on recommendations on quality assurance practice**

- The **listing of identified frontrunners** in nZEB renovation

- **Business Collaboration Events** to inform and encourage enterprises for nZEB renovations of owner-occupied single-family homes

- Initiating and **developing innovative business schemes of collaborative enterprises**
Emerging market!

What was the main reason to step into the nZEB renovation market?

How did you find collaborative enterprises to develop together a business model?

What is your business idea? What are the value propositions?

What do you recommend other companies that want to step into the nZEB renovation market?
Agenda

14.50 Defining nZEB standards for renovations
Maarten De Groote, BPIE

15.10 How to connect to front-runners and encouraging supply-chain collaboration by Business Collaboration Events
Hannes Warmuth, OGUT

15.30 Opportunities for the uptake of new business collaboration
Frank Eeckhout, Ecotiv

15.50 Coffee break

16.20 Video pitches from companies involved in business modelling from Germany, Austria and Norway and a presentation of a Dutch business model from Haarlem

16.55 Promising modes for new business cooperation uptake
Trond Haavik, Segel

17.10 Discussion about business cooperation uptake

18.00 Networking cocktail
Defining nZEB standards for renovations

Maarten De Groote

Buildings Performance Institute Europe
Which target to aim for?

How to identify nZEB renovations and its key-actors?
nearly Zero-Energy Building

The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby.
Different speeds on the road to nZEB definitions

- Large variations in nZEB definitions
- New buildings: 16 MSs
- Existing buildings: 8 MSs
  - Austria
  - Belgium - Brussels Regions
  - Cyprus
  - Czech Republic
  - Denmark
  - France
  - Italy
  - Latvia
  - Lithuania
  - Slovenia

Different definitions new and existing
nZEB renovation radar

- Identifying example projects and experienced actors with the nZEB renovation radar

- Buildings with additional airtightness test included, e.g. passive house
- EPC excellent examples - energy class A or B renovations below 90-100 kWh/m²/yr
- Partial renovation of walls, floors and roofs at very high U-values + correct ventilation
- Energy performance targets 2015

Highest performance level, e.g. Energy class A++, nZEB 2020 definitions (incl. RES)
Various radars

Austria

Belgium – Brussels Capital Region

Belgium – Flemish Region

Germany

The Netherlands

Norway

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Main challenge

Renovate deeper and faster!

Reaching for zero!

Nearly climate neutral!
Nearly zero-energy!

New buildings 2015-2050

Building stock

2050 building stock

~25%

~75%
Ongoing EPBD review

Long term (NZEB) target or benchmark for energy performance existing buildings
Long term target

Supply side

Demand side
Individual renovation roadmap

Source: Dr. Martin Pehnt, ifeu
Thank you for your attention

Maarten De Groote

Buildings Performance Institute Europe
How to connect to frontrunners and encourage supply-chain collaboration by **Business Collaboration Events**

Hannes Warmuth, OEGUT
1. **Objectives of BCEs**

counter the fragmentation of market players

- Potential starting point for a long term **B2B networking** initiative
- **Encourage collaboration** along the supply-chain (frontrunners)
- Pave the way for the uptake of **new business models**
- 2 BCEs in each participating country
- Introduction of the Business Model Canvas methodology
- **Follow-up** workshops with potential collaboration initiatives
2. **Format of BCEs**

**Challenge to attract frontrunners**

- **Half day** (plus) events in order
  - To allow for short time availability
  - Increase the number of participants (especially SMEs)
- **Pre-registration** via web-based networking platform

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3. Preparation of BCEs
briefing materials and guidelines

- **Action plans** and **analysis** of framework conditions (mapping of actors)
- **Briefing documents** for optimal preparation for moderators
- **Webinar** to train moderators
- **Guidelines** for the implementation of the BCE concept
4. Implementation of BCEs

good starting point
5. Evaluation of BCEs
channels and participating actors

Direct Mails (41%), Newsletters (20%), Building Fairs

Flyers (1%), Matchmaking Website (3%) -> Language barrier? Not target-oriented? Scope of the platform?

Co-organizing networking partners/ associations?

Diagnosis and planning: energy advisors and architects (in AT, DE) + Executing: contractors (in BE)

Financial advisors (!): presenters, hosts or participants

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5. **Evaluation of BCEs**
organisation from the participants perspective

**Presentations**: Pitches could have been shorter

**Method**: Interdisciplinary group work appreciated, “good starting point”, more active networking of tables

**Business Model Canvas**: Not easy to think beyond existing ways of collaboration; model found as for new companies or start-ups not for people with a lot of work experience

**Renovation Example**: Different approaches (e.g. pitch presentation, block 1 of BMC, no example at all)

**Time**: OK, “arrange within working hours”

**Duration**: OK (half-day plus and full day) “time efficient seminar”

**Matchmaking Website**: Organisation of the registration process should be improved.
5. Evaluation of BCEs organisation from the moderators perspective

Time: mostly satisfied

Duration: mostly ok, could be shortened (NO) in order to maintain interest and engagement

Method BMC: difficult to explain in such a short time and keep attention high, more time for explanation and summary(!) required

- Introduction or fully developed model?
- Prefilled model (or blocks)?
5. Evaluation of BCEs
actors experience in nZEB renovation

56% of all respondents do have some experiences in nZEB renovation
in Norway (about 85%)
in Austria (77%)
in the Netherlands (about 66%)
in Belgium 50%
in Germany (nearly the half)
5. Evaluation of BCEs
potential collaboration partners

EXECUTION: contractors

PLANNING AND DIAGNOSIS: energy advisors and architects

FINANCIAL ACTORS: interestingly high?

QUALITY ASSESSMENT: interestingly low?
Expected too expensive for SHF Renovation?

Searching for customers and financing?

contractor
architect
energy advisor
project developer
quality assessment
policy actor
financial advisor
HVAC

Independency not guaranteed?
Not seen as part of a business model?

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6. Conclusions and lessons learned
actors experience in nZEB renovation

80% of all respondents are interested in further workshops (about same level in all countries)

Lessons learned:
- A careful and early preparation is required (esp. Business Model Canvas training)
- Clear communication of aim and scope of BCE needed
- Lower entry barriers for creating a profile on collaboration platform (matchmaking website)
- More target-oriented advertising activities needed, although the main target group (frontrunners) may be small in countries
- Provide more time and space for bilateral networking
- Method of Business Model Canvas was appreciated (structuring ideas and developing concrete business plans)
Thank you.

Austrian Society for Environment and Technology
Hannes Warmuth
hannes.warmuth@oegut.at
Frank Eeckhout, Ecotiv

http://www.ecotiv.com/en-gb
Business model – Bauteam Hamburg.

Bruxelles, 15.10.2015
Peter Pannier (German Energy Agency – dena)
Model BAUTEAM

- BAUTEAM Hamburg → Idea:
  - refurbish with high-quality standards in an efficient way
  - a classic "win-win situation" for all involved in the construction process
    - the client
    - the planner
    - the trades
Model BAUTEAM

• established hierarchy in the construction process

quality and communication losses
Model BAUTEAM

• cooperation within the Bauteam
Business model

the reason why!

• What was the main reason to step into the nZEB renovation market?
  ▪ Convert old buildings into more comfortable low energy buildings after the refurbishment
• How did you find collaborative companies to develop a business model together?
  ▪ Jointly processed and already-completed projects
• What is your business idea? What are the value propositions?
  ▪ Refurbish with high-quality standards in an efficient way
  ▪ Cooperation where each of the partners remain legally separate
  ▪ Refurbish with experienced craftsman, well coordinated with just one contact as a coordinator (architect/planning office)
• What do you recommend other companies that want to step into the nZEB renovation market?
  ▪ Start the dialogue at an early stage (regular construction progress meetings)
  ▪ Mutual trust is a basic pillar of the cooperation
  ▪ Clear rules as basis for cooperation
  ▪ Carry out projects with reliable craftsmen/companies with experience in the energy-efficient renovation

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Thank you.
Business model – AUSTRIA
Johannes Pointner, Enerquent

http://prezi.com/idhlmyolehxc/?utm_campaign=share&utm_medium=copy&rc=ex0share
Business model – NORWAY
Øystein Berg, Energisparhus
nZeb in the Drammen area, Norway

Situation:
Europe and the Europeans must now reduce greenhouse gases. An important contribution is to upgrade older homes to nZEB level.

But, how to renovate old houses to meet the new standards according to energy consumption, good indoor climate and modern comfort?

- Who have the knowledge about this?
- Who are the customers?
- Who shall do the job?

Let’s introduce ourselves and look at a project:

Our case - a house on the farm Mykleset in Norway
Collaborative efforts towards energetic older home renovations in Haarlem area

ir Marijke Gantvoort, arch.
4 Questions to answer in 10 minutes

1. What was the main reason to step into the market?

2. How did we find the collaborative companies?

3. What is the business idea and what are specific value propositions?

4. What are our recommendations for other companies?
1- Haarlem’s existing condition

• ± 2010: 150.000 inhabitants and growing

• Haarlem is a neighbor to Amsterdam and has a relatively wealthy population

• 70 % of the current homes in Haarlem are older than 50 years

• 70-80% of these old homes are in private ownership

• People stay in Haarlem for a long time, own their homes for a long period
1-2 How and When

Serendipity at work..

- City of Haarlem dept. of Environment advertises ambitious energy goals towards 2030 and organises funding (2011)
- Bottom-up initiatives / neighborhood activities are founded (2011)
- Locally active creative architects and construction businesses look for clients (2011-2012)
- City acts as a facilitator at meetings on initiatives in several neighborhoods (2012)
- Local businesses run pilot projects and generate the ideas for collaboration (2013)
- Haarlemse Huizenaanpak is founded as a non-profit foundation with a revolving fund from the province of North Holland (2014)
Haarlem collaboration model

governmental role: inspire customers and facilitate solutions

- Faciliterende en intermediaire spelers (overheden)
- Aanbod (ondernemers)
- Vraag (bewoners)

Energy-use Reduction

solutions = offered by local businesses

customer = homeowners
We are professionals offering you a unique way to improve your home comfort and energy use.
2- Pre-requisites for collaboration

Local architects and independent energy consultants define a working relationship with the local contractors and installation experts.

The essential values of the working relationship are put in an agreement:

- professional skills
- trust and respect
- knowledge sharing – learning from each other
- fun of working in collaboration
- no price-fixing but honest bidding in healthy competition
Sustainability Professionals

with respect for older homes and special needs
3- How the client finds the HHA

Client finds the HHA thru activities in the public domain or online / social media

- Advertorials in local media
- Meetings in Neighborhoods
- Markets around sustainable living
- Neighborhood initiatives to collectively improve homes or environment
“Haarlemse Heerlijke Huizenroute”
Haarlem “show your sustainable home” Tour October 2014
3- Values for the client

- Offering the client complete project guidance from starting advise until the after-care
- Showing respect for the existing architectural values by having architectural consultants involved
- The client can choose to have his consultant stay involved until the end
- Independent advise is based on the situation of the client and the home. Financial matters may be taken into consideration as well.
- Short lines for the client to the local government for special loans or subsidies
- Group-offers can be made for collective improvements – with our specialists in collective-improvements (VvE)
Comfortabel wonen met een lager energieverbruik

In Haarlem werken bouwexperts samen om bestaande huizen te behouden voor de toekomst. Door slim te combineren maken zij huizen, onder de noemer Haarlemse Huizenaanpak [HHA] energiezuiniger en comfortabel. Dat is ook goed nieuws voor de portemonnee van de bewoner.

Zo werkt het:

1. Op basis van wonen werken maatwerk advies en
   maatwerk te maken voor een duurzame verbouwing van het huis.

2. Aan de hand van het maatwerkadvies maken we een uiteenzetting
   met referentie van de aangestelde aannemers en installateurs.
   Het bouwteam voert de aanpassing uit. Samen zorgen we voor
   een stapsgewijze verbouwing en beheersen we kosten.

Kosten: Maatwerkadvies ongeveer €315, bij uitvoering €329, korting.
3- Client oriented working model

Additional values for the client

• the client stays in control and defines the needs at “kitchen-table” meeting
• the consultant makes an analysis for a “fixed” price, and describes measures with a global scope of the construction cost involved, with input from local contractors
• client chooses the contractor or installation expert (if HHA does the renovation, it reduces the cost of advice by ± 40%, compensation after finish)
• client agrees to an offer by the contractor, price is set
• client, contractor and consultant meet when the job is finished to inspect if the agreed standards are met to satisfaction of the client
• client fills out a questionnaire for feedback to the HHA
Sustainability Professionals
with respect for older homes and special needs
4- some recommendations for others

• Create a fund for marketing purposes, by donations or subsidies

• Involve key partners to grow your customer base (e.g. banks, realtors, mortgage-brokers and governmental agencies)

• Involve enough contracting companies to offer choices to your clients

• Start by doing pilot – projects, learn from your mistakes... review each other

• Create a “show and tell” e.g. by organizing open Homes, let the client be the messenger

• Make word of mouth effective by showing it on the website
Promising models for new business cooperation uptake for nZEB renovations

Trond Haavik, Segel
15.10.15
Agenda

• What's been done
• Experiences from the processes
• Characteristics of the models
• Results
• Preliminary learnings & recommendations
Cohereno – business models

• Status:
  – Norway: 5 groups completed
  – Germany: 3 groups completed
  – Austria: 2 groups completed
  – Belgium: 3 groups completed
  – Netherlands: 3 groups completed
Define your:

- Customers & needs
- Your unique service
- How to process your service
- How to generate cash flow
Norwegian groups

1. Lofoten, Ureberget
   - Small contractor (6 employees)

2. Trondheim, Timberbygg
   - Contractor (15 empl.), architect company (7), electrician company (27), plumber (9) and a ventilation company (19)

3. Trondheim, A&B
   - Contractor (13), project planning (3), total technical contractor (2277) and a hardware store (62)

4. Hønefoss, Energikanalen
   - Web portal (1), contractor (8 employees), plumber company (6), electrician company (6)

5. Drammen, Energisparhus
What's been done in Norway

Recruiting
Participant at BCE's

Preperation
Phoned each company

Workshop 1
Status + Business Mod.

Homework
Check customers needs and value propositions

Workshop 2
Revise model + Vision+ Strategies +action plan

Document
Business plan
Experiences from the processes in the Norwegian groups

• Very satisfied participants
  – But was too little time
  – Chairing the WS:
    • One process consultant
    • One technical expert
Characteristics of the models (1)

• Customer segments:
  – Single family home owners with good economy and with houses built in these periods:
  – Customer needs
    • Starting points
      – need a facelift, defaults to be repaired or change in life situation
    • Other needs:
      – good process; from decision to construction
      – "soft factors" such as improved comfort, get a modern house and easier to use
      – reduced operational costs and get documented quality
      – being able to live in the house during retrofitting
Characteristics of the models (2)

• Value propositions to ease the "journey"
  – "Soft" factors:
    – Better indoor comfort
    – Contribute to climate change/good conscience
    – More home security
    – Reference customers to confirm credibility
  – "Hard" factors:
    – Improved aesthetics and functions
    – Increased value of the house
    – Tidy construction site
    – Sound economy for the whole process
    – Maintenance-free home for many years
    – Lower operating costs
    – Documentation
    – Some included assistance with financing and grants
Characteristics of the models (3)

• How to build confidence through customer relationships
  – Good communication & follow up
    • After sales guarantee/service and control
    • Make the owner proud of his home
    • Honesty and predictability
    • Credibility by using known brands and references
Results in Norway

- 5 business models have been formed
- The groups are targeting the market:

- An implementation program is to be started!
  - Funding from Innovation Norway for three groups
Experiences from NL

• Existing collaborative structures that offer integrated nZEB solutions to the owner-occupied market
• Integrated solutions are seen as a threat (not known by the public) and seen as an opportunity
• Channels and customer relationships are the most problematic puzzle pieces
• Independent advice is considered as important, but conflicts with the business ideas
• Involvement of especially small contractors (larger contractors are more interested in more profitable markets)
Experiences from Belgium

• All groups focused on a higher end of the market
• All groups develop a client oriented approach:
  – All groups put an energy audit as the first step of their offer
  – All groups want to offer a single point of contact and unburdening
• All groups focus on internal communication an quality control
• All groups included an architect:
  – An architect in the collaboration can be a real added value, but legally this is a challenge (in Belgium)
  – Selecting a customer segment is common practice for businesses, but less so for architects
• Make groups with partners of compatible size
Experiences from Austria

• Existing strong collaboration structures in the field of analysis, planning, (contracting), quality assurance
• Lack of routines / collaboration on advertising, marketing activities, distribution
• Get real estate agencies/broker and banks on board of the collaboration
• Even frontrunners haven’t found a strong business model yet (clients are enthusiastic idealists)
• Solutions: From SFH to MFH, Generation 50+, multi-generation solutions, buy old instead of build new, retrofit as solution as well
Experiences from Germany

Most important experiences

• Three collaboration structures have been established.
• One group in Hamburg (Bauteam) starts the work soon, having projects in pipeline. Starting @ the beginning of 2016.
• Two Groups in Kassel have been activated. Need more time for discussions and decisions.

Goals group 1:
• establish a regional renovation network in the city of Kassel and neighbourhood
• carry over the accompaniment of the process via round tables

Goals group 2:
• stabilisation of the network
• establish the network within the next two years on the local market and later throughout Germany
Learnings & Recommendations (1)

• Learning from identified weaknesses:
  • Establishing a tight cooperation takes time to build trust between the partners and find the "right" model for the group
  • Important to get the first pilot project short time after the business model development
  • All partners in the group must put high priority on this development work
  • Make sure that all needs defined for the targeted customer segment is well responded in the value proposition and the rest of the business model
  • QA should have a strong focus during the whole process
Learnings & Recommendations (2)

• Checklist for new groups (1):
  • Clear idea of target groups
  • A strong holistic perspective
  • One contact point and sender of invoices
  • Check their ideas towards existing customers
  • Make use of existing reputation
  • Good starting point is cooperation with companies you already know
  • Including hardware store into the group opens a broader marketing channel
Learnings & Recommendations (3)

• Checklist for new groups (2):
  • Make a strong commitment with each other within the group, for example by establishing a separate company together
  • Open calculation model build confidence and distribute risk in a fair way between the group and the customer
  • Find new type of partners as for instance WEB portals addressing this issue and cooperation with local municipalities
  • Include assistance in how to achieve funding and financing of upgrading projects
Thank you for your attention!

Trond Haavik
www.segel.no
http://www.cohereno.eu