



SME networks for highly energy-efficient housing

Opportunities and challenges in the growth market

Erwin Mlecnik, OTB TU Delft & Passiefhuis-Platform vzw

2011-06-23

Content

SME networks for highly energy-efficient housing

- Introduction
- Research approach
- Theoretical findings
- Case study
- Analysis
- Conclusion

Innovations are available

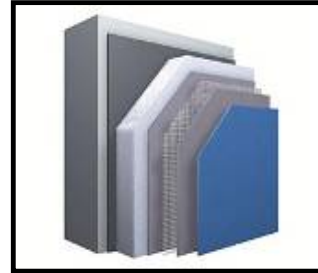
From demonstration project to growth market?



Woning Deinze, Denc!-studio



Woning Gent, Kristof Cauchy



www.sto.be



www.maison-passive.be



Woning Bocholt, E. Ubachs



Woning Spiere-Helkijn, A. Versele



Woning Heusden-Destelbergen
Denc!-studio



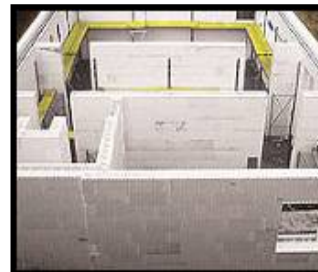
Woning Berlaar, H. Van Aalst



Woning Drongen, D. Desmet



Kantoor Gent, evr-architecten



Isorast, verloren bekisting



Renovatie, De Pinte, A. Versele

Research approach

Growth market of highly energy-efficient housing

- How can SME networks respond?
 - Theoretical insights
 - Actors and activities needed
 - Differences demonstration/ growth market
- Case study: PHP (Flanders)
 - Action-based research 2002-2010
 - Questionnaire/ interviews

Theoretical findings

Opportunities of networks

“Strategic niche management”: socio-technical change requires:

- vision/ expectations
- learning
- network formation

“SME networks”:

- regional focus
- formal relationships
- standard setting
- innovation put to practice
- small or large companies?

Theoretical findings

Actors needed

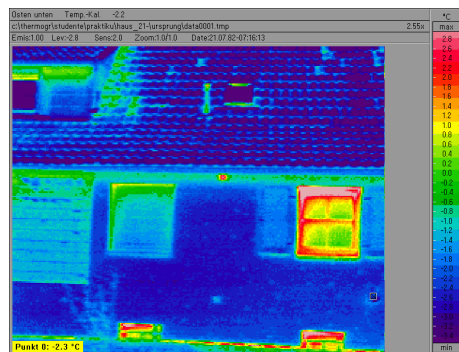
“Innovation diffusion”:



Case study (PHP)

Consultancy
Dissemination

Knowledge

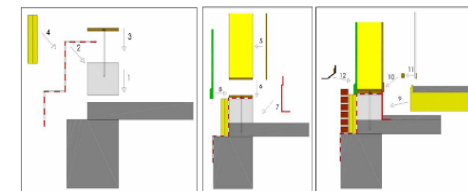


Market Infrastructure

Quality Assurance

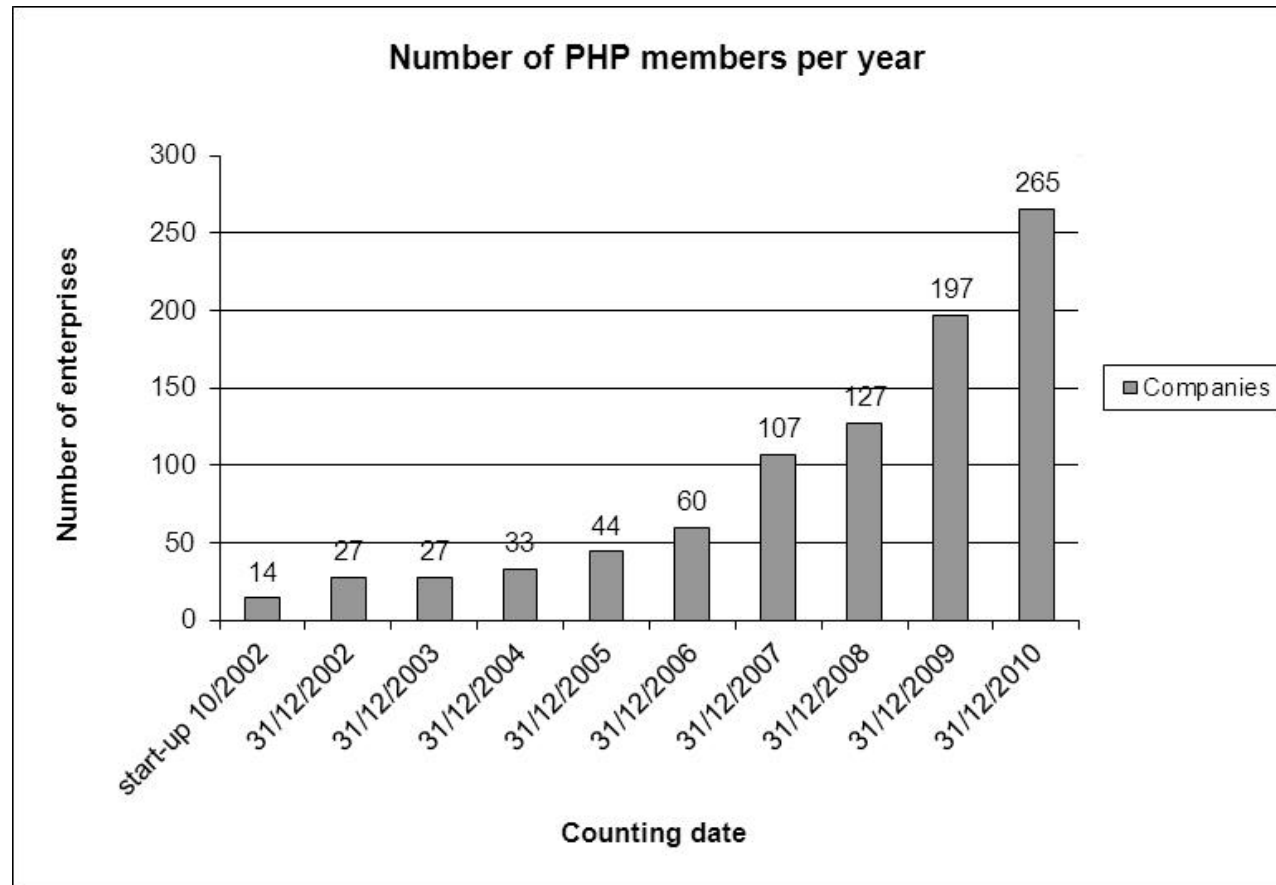


Innovation



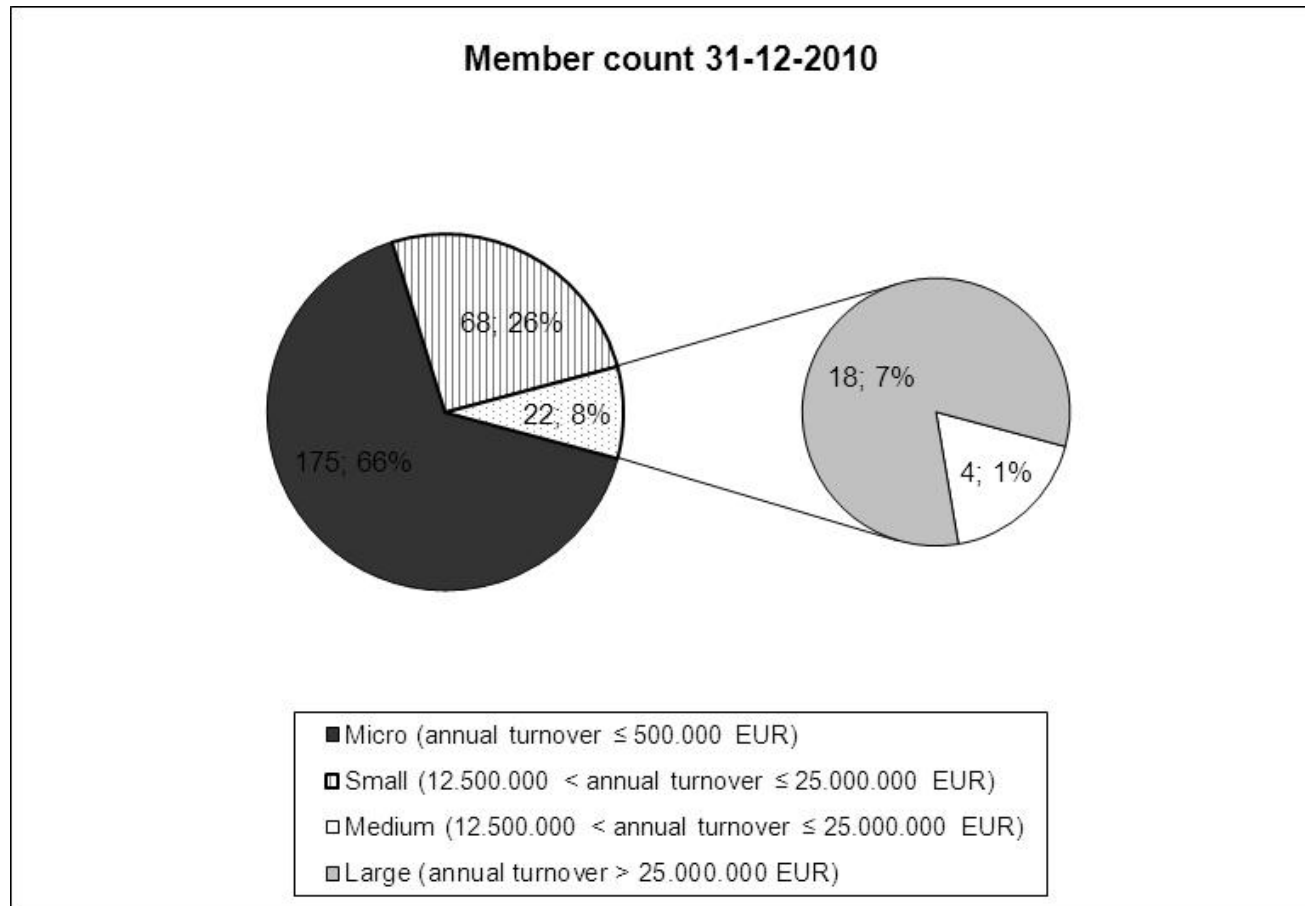
Case study (PHP)

The changing composition of the network



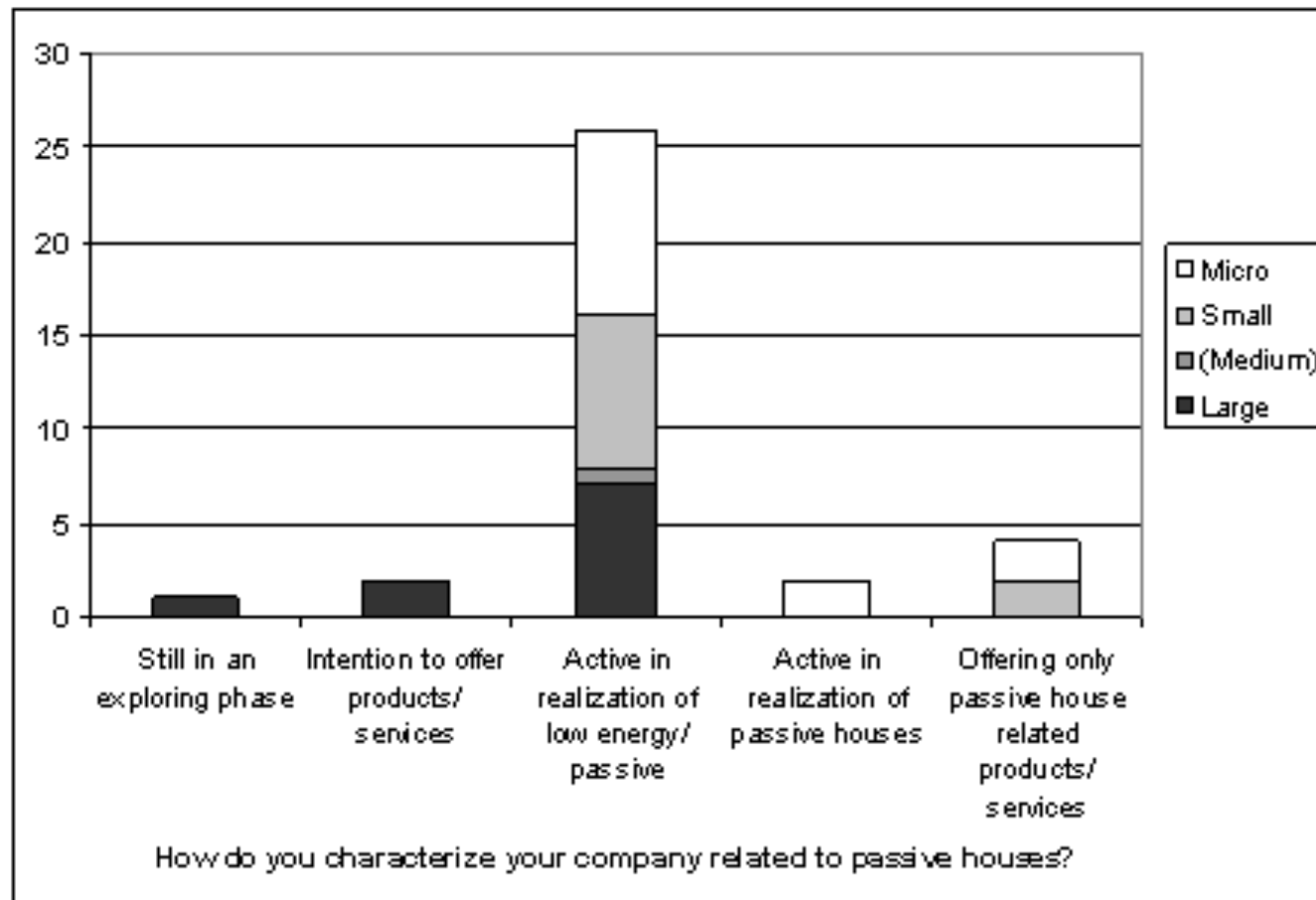
Case study (PHP)

The changing composition of the network



Case study (PHP)

A shift in activities of the members



Case study (PHP)

Breakthrough / early adopters?



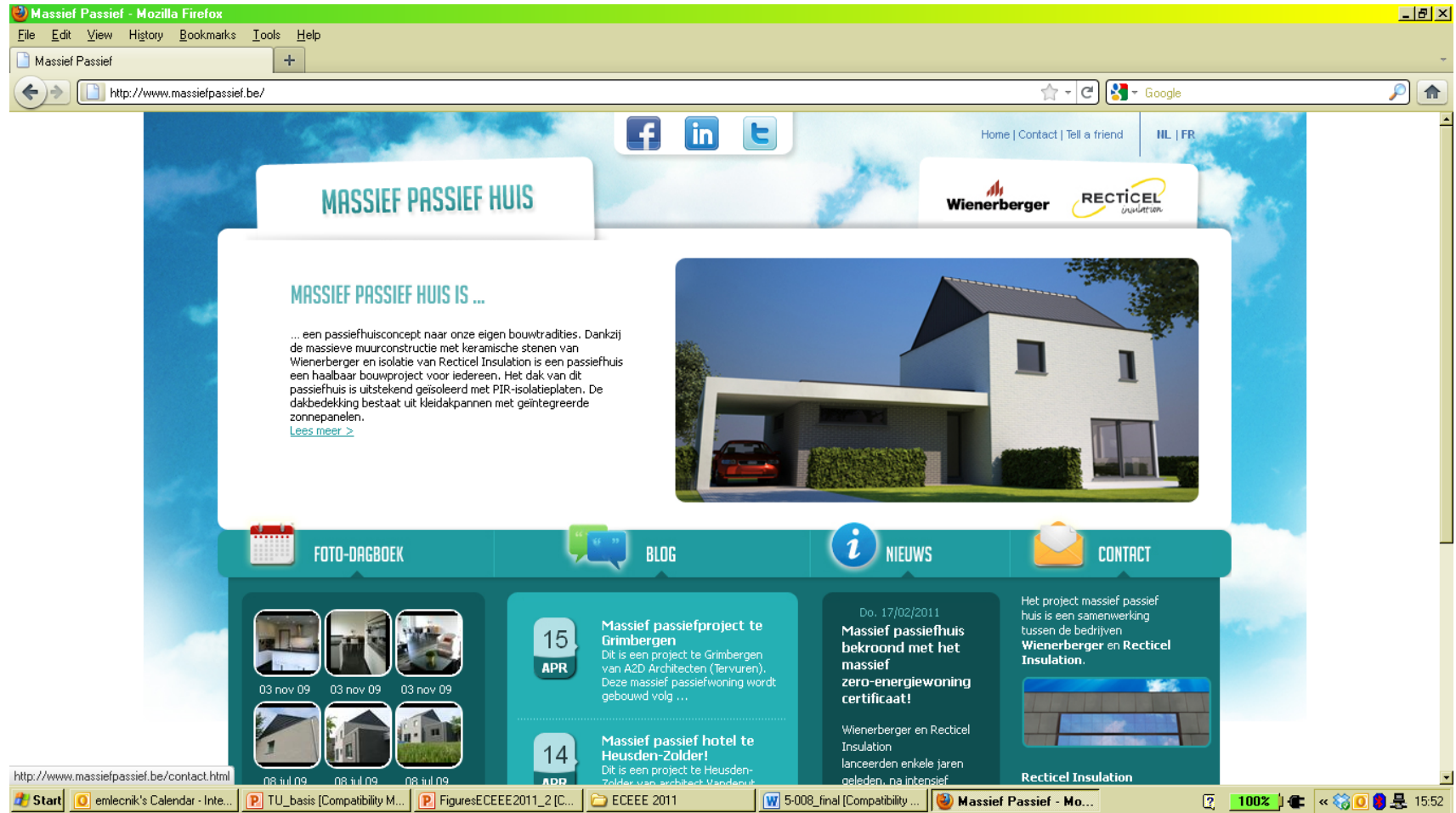
Case study (PHP)

Breakthrough early adopters



Case study (PHP)

Breakthrough early adopters



Analysis

Starting conditions of the network

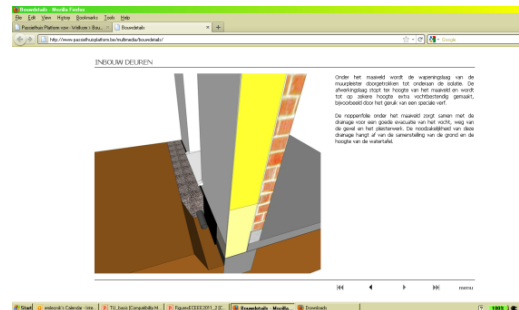
- Vision/ expectations: knowledge transfer
- Learning: concept level/ demonstration
- Network formation: bottom-up/ innovators
- Geographical focus: Flanders
- Formal relation: general assembly/ board
- Standard set: Passive house
- Innovation: creating synergies



Analysis

The network in the growth market

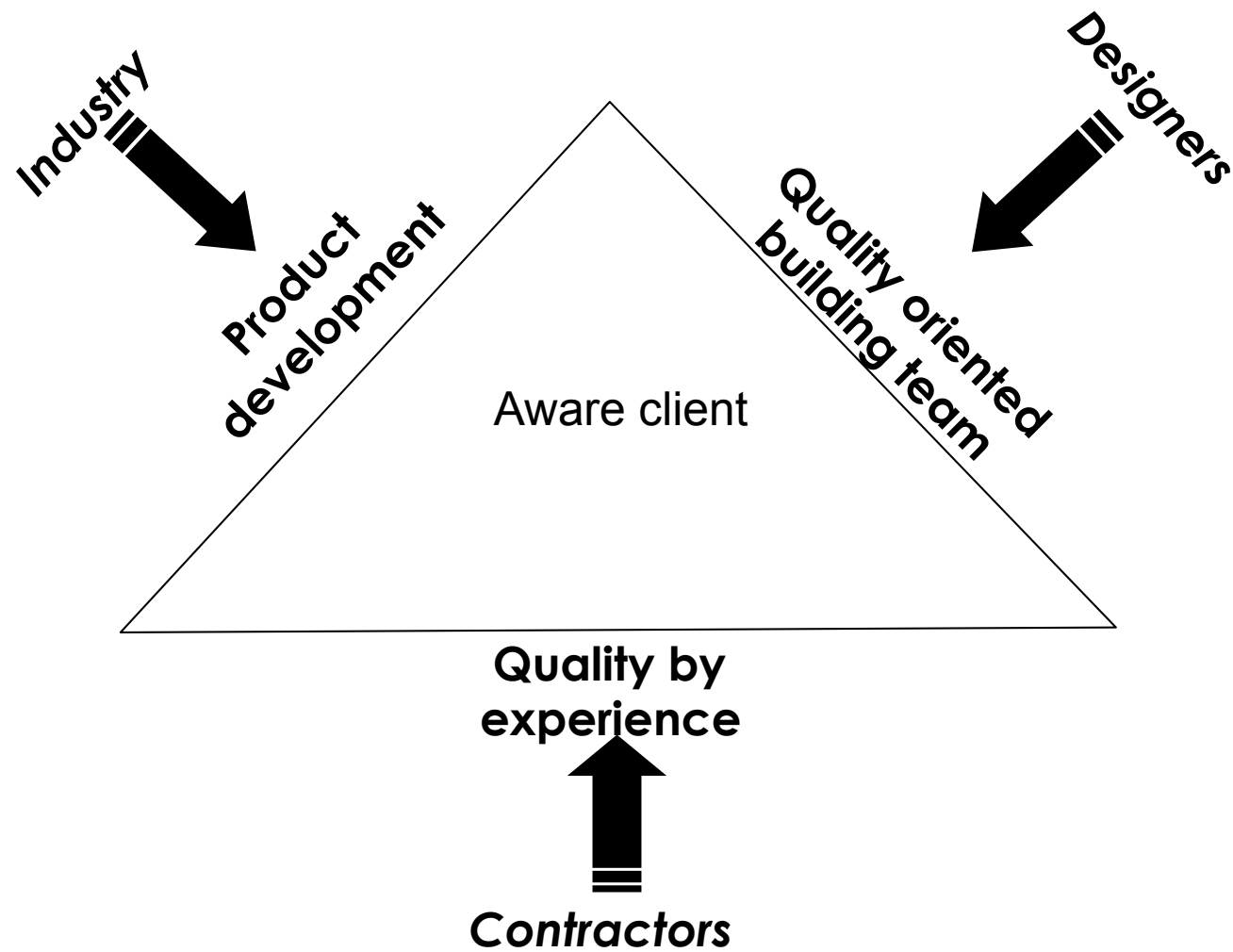
- Vision/ expectations: develop know-how/ quality
- Learning: detailed level/ growth market
- Network formation: peer-to-peer/ early adopters
- Geographical focus: Flanders/ Belgium/ Europe
- Formal relation: GA/ board/ AC/ WG
- Standard set: zero-energy/ passive house
- Innovation: technol.services/ certification



Analysis

Success factors

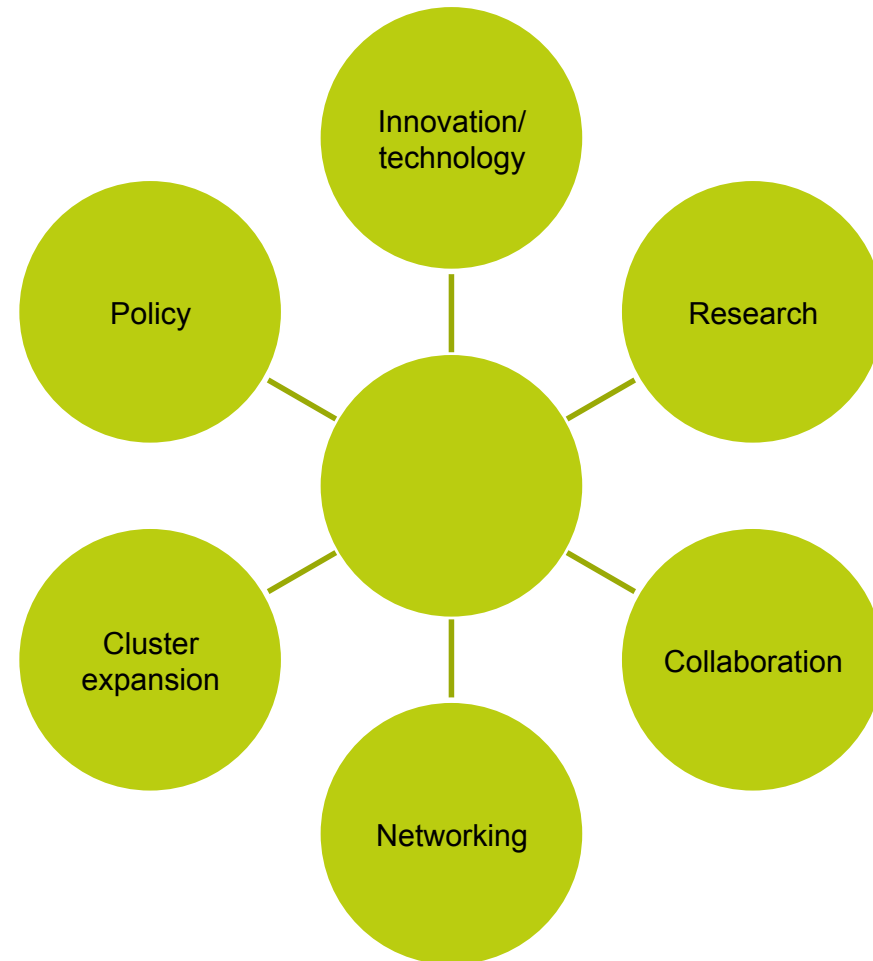
- SME network steered innovators in the construction chain towards highly energy-efficient housing
- Multi-actor SME network based in the construction chain, but focused on steering client's decision



Conclusion

- SME network challenges?

E.g. Sölvell et al. (2003)
Cluster Initiative Greenbook



Conclusion

- Passive house is a recognized innovation opportunity
- SME networks need to define ‘interventions’ according to innovation phase (introduction or growth market)
- Market introduction of a regional SME network:
 - Focus on micro-enterprises from different disciplines
 - Work on conceptual definitions/ demonstration/ knowledge transfer
 - Provide a change agent for innovation and formal relationships
 - Provide a direct link with future clients
- Growth market:
 - Focus on knowledge development, quality assurance, policy links

Questions?

- PASSIVEHOUSE 2011
- 10th edition!
- Brussels, 7 October 2011
- www.passivehouse.be

