One-Stop Shops in Europe: their role in the energy transition

Source: Graphics by Sziptner, G. published in (Csoknyai, Barna et al. 2013)

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Macroregional cooperation on promoting green economic transition
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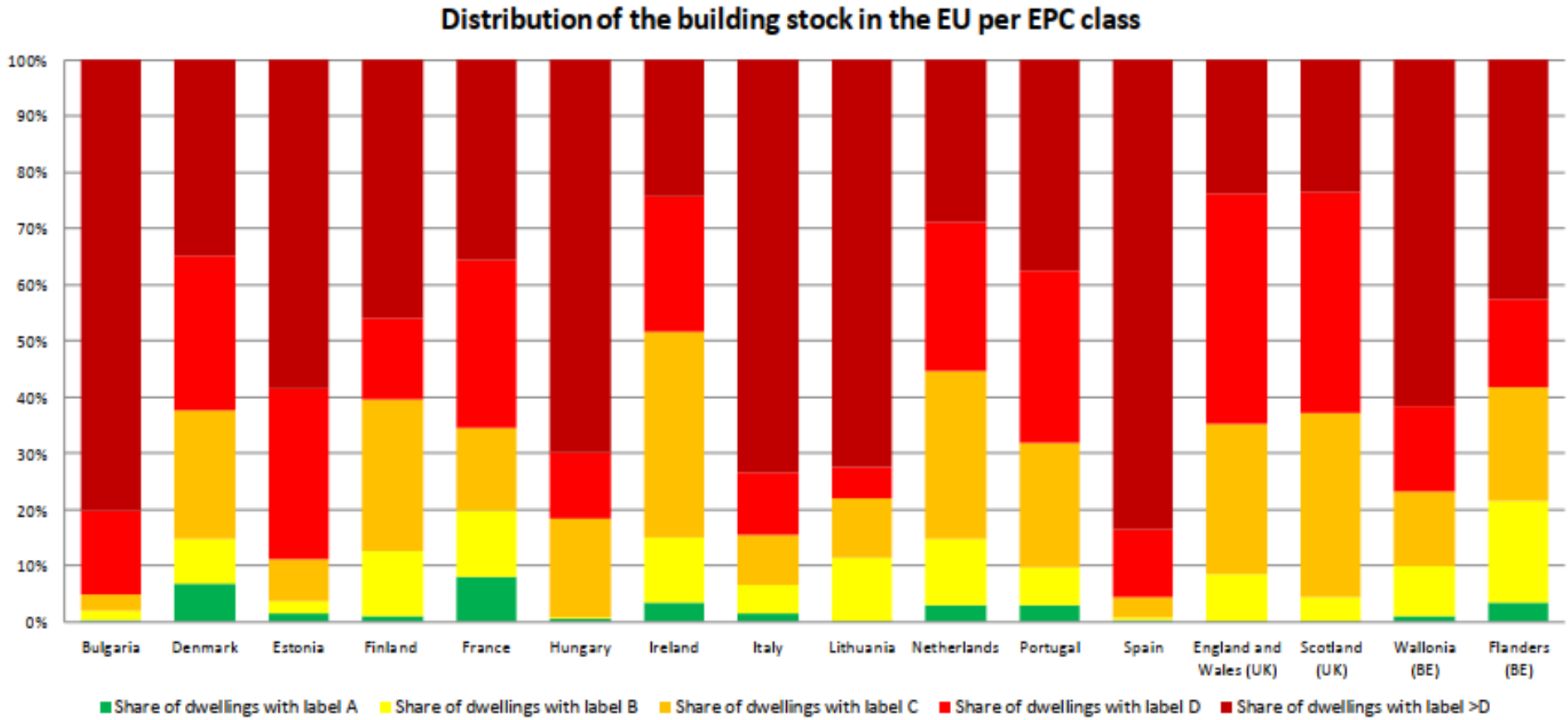
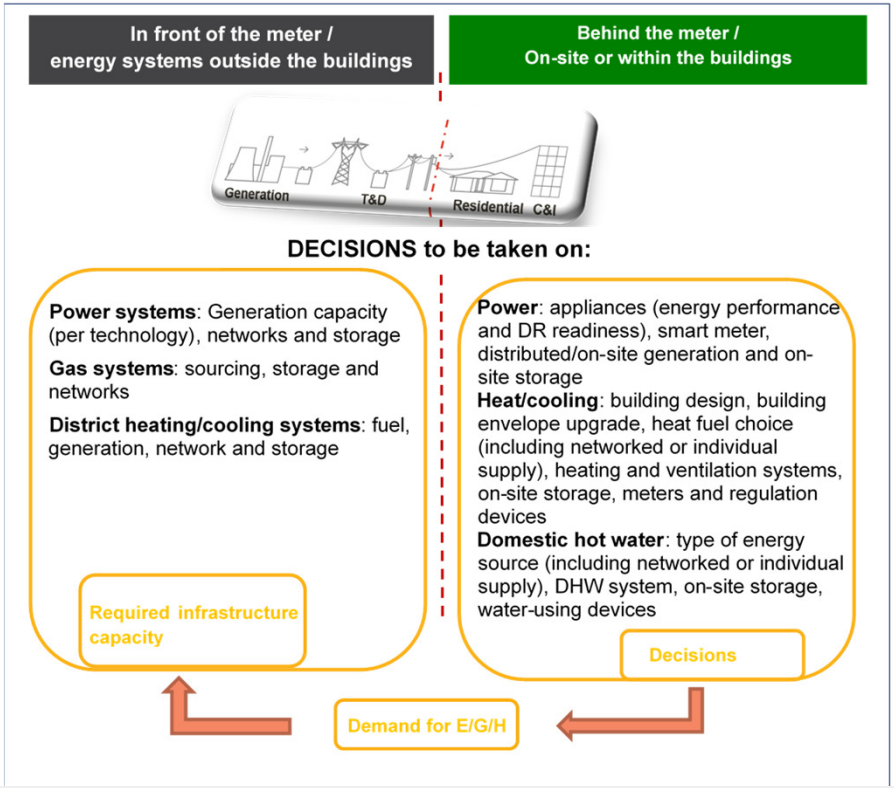
The European challenge – decarbonizing the building stock



BPIE (2017)

Can OSS contribute to energy savings?



Points of intervention for improved building stock energy performance:

- ✓ New buildings: minimizing floorspace growth, increasing performance requirements while ensuring compliance;
- ✓ Existing buildings: increasing renovation rate;
- ✓ Existing buildings: ensuring renovation depth;
- ✓ Use phase: supporting sustainable decisions and behaviour.

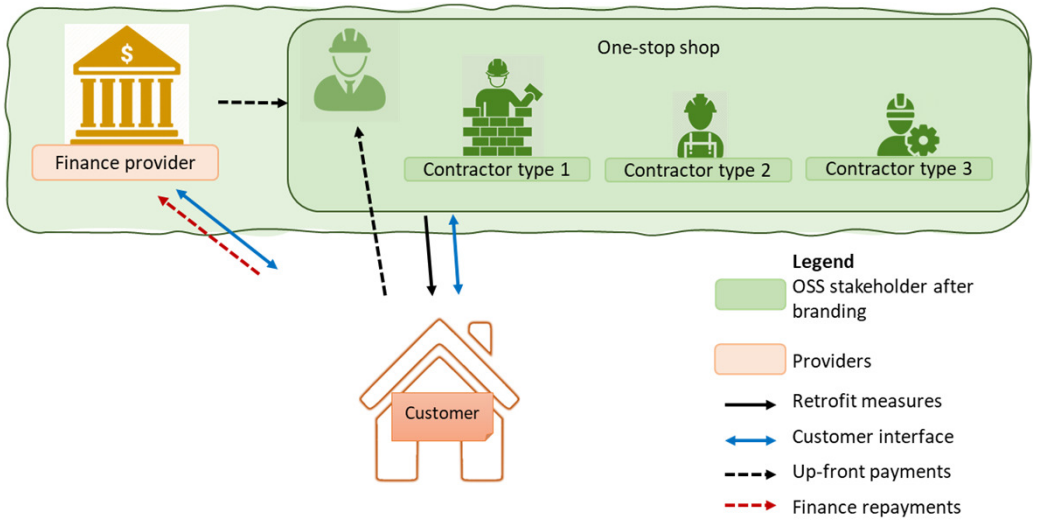
What are one-stop shops (OSS)?

One-stop shops offer:

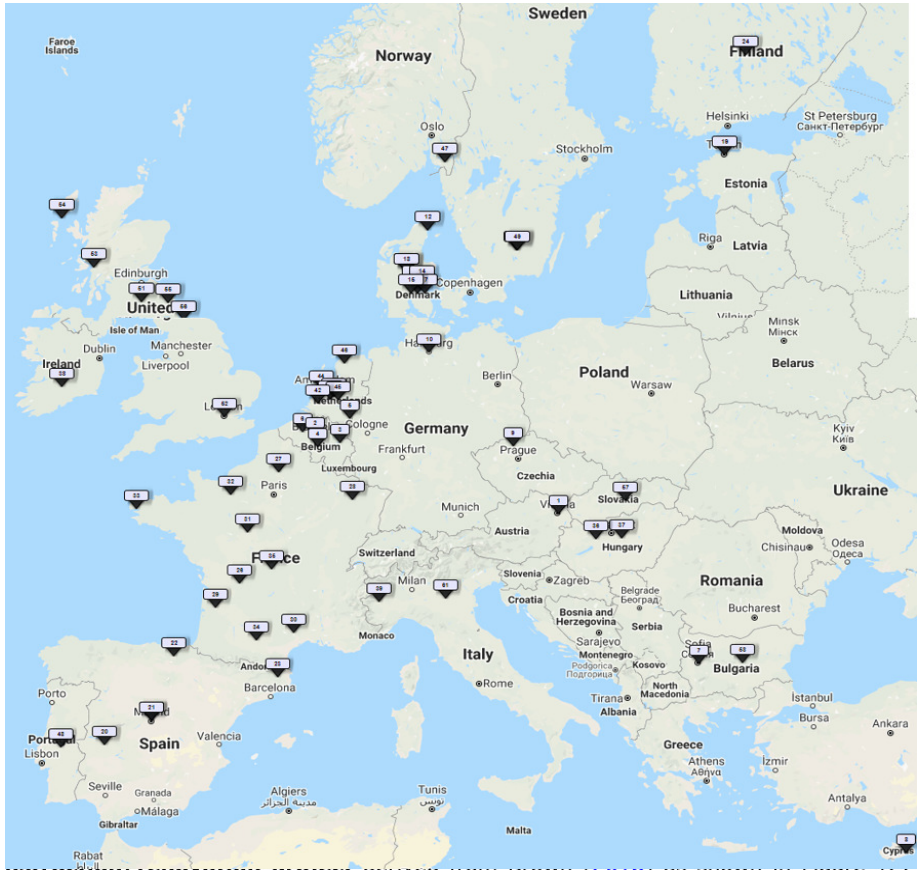
- holistic, integral solutions
- for residential building renovation
- even towards nZEB for reasonable costs and good quality
- facilitation tools from the clients' perspective;
- and innovative business models from the suppliers' perspective.

-> overcomes market fragmentation on both the demand side and the supply side by offering holistic, whole-value-chain renovation solutions.

Integrated home energy renovation



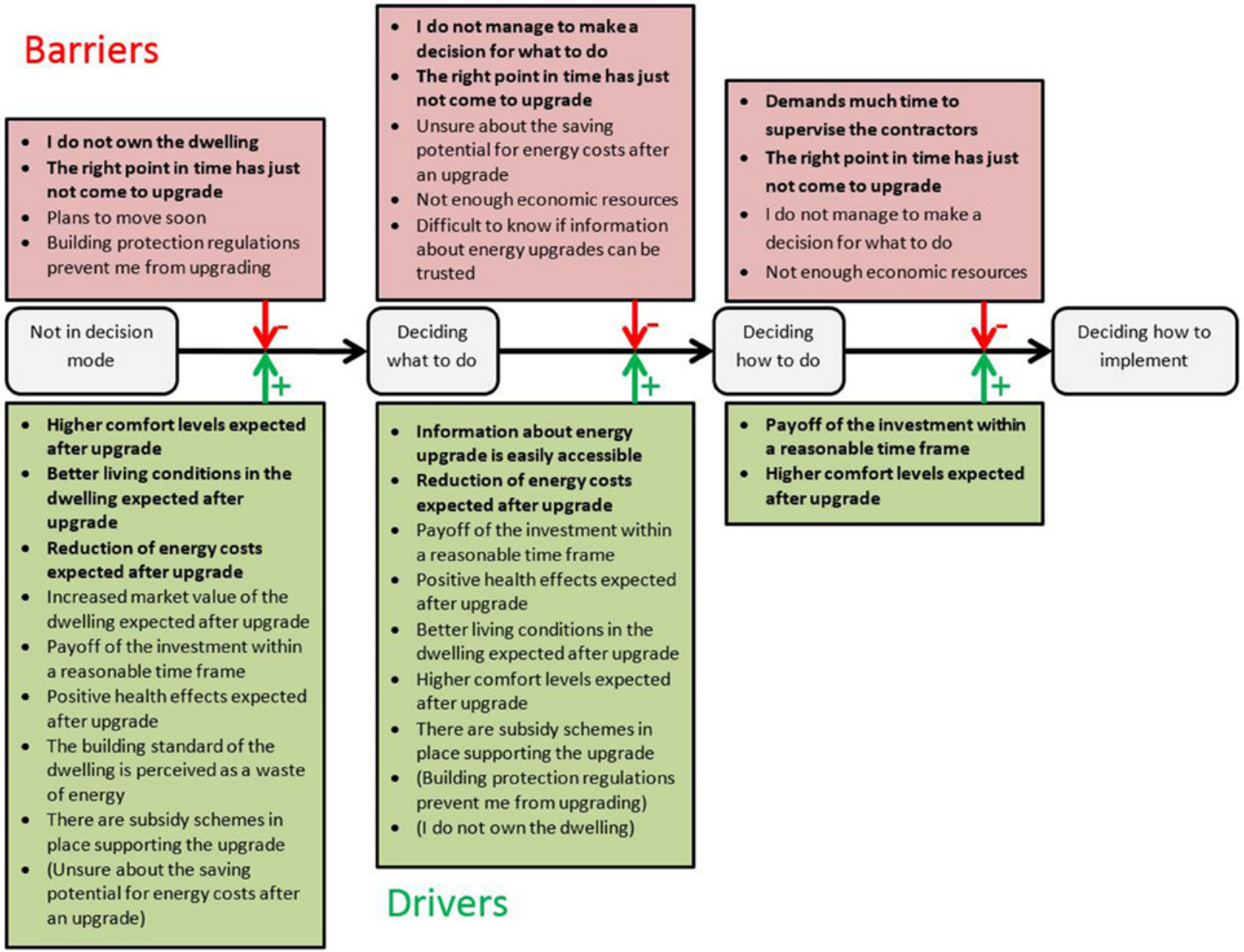
The European OSS map



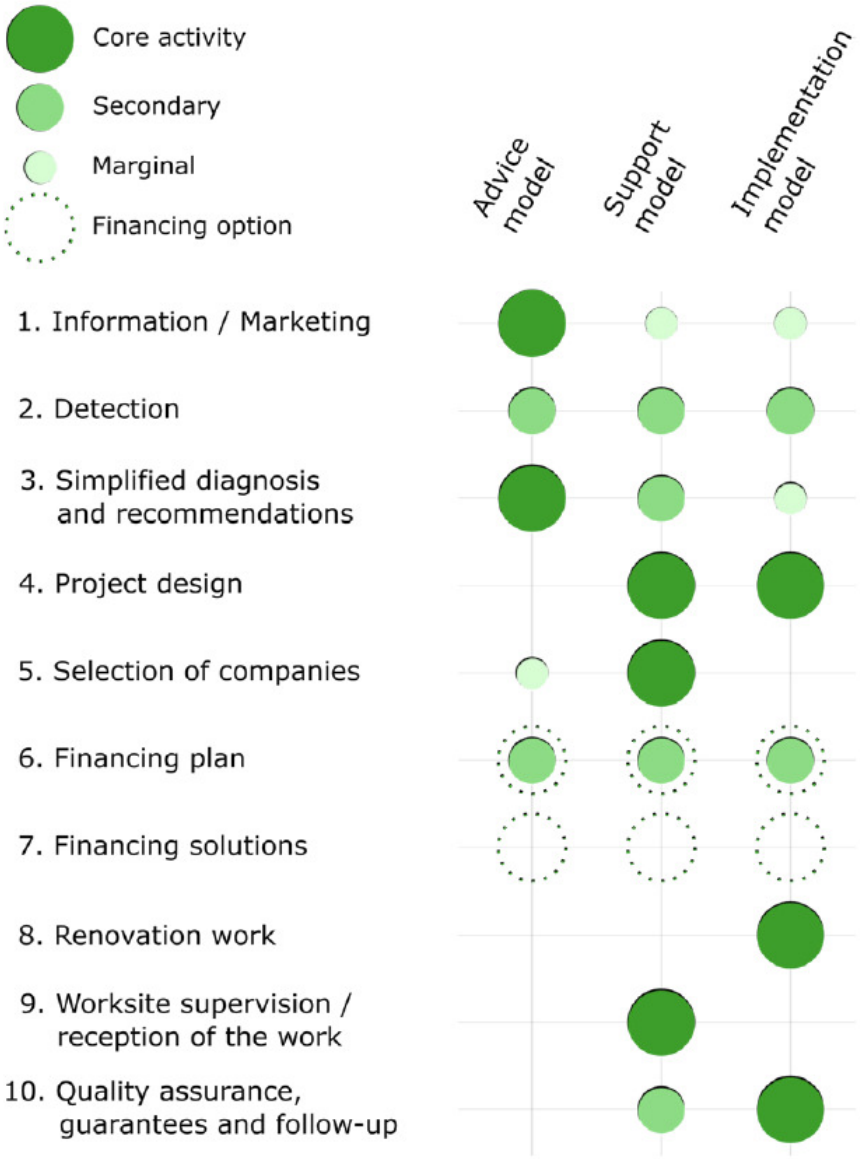
- 63 OSS **in 22 EU MS + NO** = ¼ whole market
- **boom in the last 5-10 years**
- **10-500 projects** per year/OSS

RenoBooster (Vienna), HomeGrade (Brussels), RenoWatt (Liege), CLEAR-BE (Belgium), Huisdokter (Limburg), Vlaams E. (Flanders), Rhodoshop PDU (Rhodope), EEE C. (Sofia), Aradippou OSS (Aradippou), Litoměřice OSS (Litoměřice), Bauteam Hamburg (Hamburg), Energiesprong-DE (Germany), Frederikshavn OSS (Frederikshavn), BedreBolig (Denmark), CLEAN GBG (Denmark), BetterHome (Denmark), CleanTech (Denmark), ProjektLavenergi (Denmark), Sustain Solutions (Denmark), KredEx (Tallin), OSS-Ex (Extremadura), CLEAR-ES (Spain), Opengela (Basque Country), HolaDomus (Olot), ENRA (Finland), SEM Ile-de-France Energie (Paris), ARTEE (Nouvelle-Aquitaine), Picardie Pass (Picardie), Oktave (Région Grand-Est), BME (Bordeaux), AREC (Occitanie), Région Centre-Val de Loire OSS (Val de Loire), Normandie OSS (Normandie), Brest OSS (Brest), EIE (Toulouse), Energiesprong-FR (France), RenoHUb (Hungary), Projekt Doktor (Hungary), Superhomes (Tipperary), PDA Piemonte (Piemonte), CLEAR-IT (Italy), Center for Sustainability (Parkstad), Reimarkt (Netherlands), WoonWijzerWinkel Rotterdam (Rotterdam), CLEAR-NL (Netherlands), Haarlemse Huizenaanpak (Haarlem), Stroomversnelling (Netherlands), Slim Wonen (Leeuwarden), Bolig Enøk (Ostfold), CLEAR-PT (Portugal), Vaxjo OSS (Småland-Blekinge), Retrofit Works (UK), Ecofurb (London), ALIenergy (Argyll & Bute), TIG (The Western Isles), Renovation Underwriting (UK), Energiesprong-UK (UK), MunSEFF, SlovSEFF (Slovakia), REECL (Bulgaria), SIRE (Spain), Zerohome (Denmark), Mantova OSS (Mantova), FinEERGo (various EEU),

Barriers to renovation decision-making



The OSS value chain



Increasing the impact of OSS

Types of OSS:

- Government-driven: climate and/or energy targets.
- Industry: to extend businesses or improve customer care.
- ESCO: complex offerings extended
- Facilitators: Consultants extending services
- Cooperatives: societal benefits
- Store OSS: A large store or a warehouse with new service.

Financial mechanisms:

- Energy Performance Contracting (EnPC)
- Referred bank loans
- Financial instruments & investment funds
- Property Assessed Clean Energy (PACE)

Interactive elements:

- Combine with refurbishment aims: point of transaction
- Collaborate with transaction (estate agent) companies
- Pre-fabricated technical elements
- Pooling of buildings
- Digitalisation
- Financial instruments
- EPC or other information tools

Deep renovation examples

Name: **Espace-Info-Energie**
Country: FR

- Toulouse-based OSS
- Public office
- Active in energy transition and financial aid at home
- "Positive Energy Families" since 2008, and other awareness raising and motivating projects
- 2015-2016: 8,000 participating households, totaling 8,500,000 kWh of energy savings, equivalent to taking 4,000 cars off the road.

Name: Energiesprong
Country: NL

- originally government-funded pilot (2016)
- whole house retrofits at no extra costs
- 5000 houses in NL
- Transfer to FR, UK, DE, N-IT
- aims at nZEB standard
- new technologies, incl. prefabricated facades, insulated rooftops with solar panels, smart heating, and ventilation and cooling installations.

Name: HomeGrade
Country: BE

- municipality, department
- free-of-charge
- financial, step-by-step technical and administrative assistance on energy renovation projects
- provides support to ambitious projects due to the stringent building standards in Brussels
- Social, technical and financial innovations (energy poverty alleviation)

Replicability

Renovation journey step	One-stop shop element	Rating
Attract customer	Direct marketing	
	Social marketing/ awareness-raising	
	Website	
Initial Assessment	Indication of potential energy and cost savings	
	Automated building renovation passport	
Work Programme Conception	On-site visit (social interaction)	
	On-site visit (digital help to expert)	
Work Programme Definition	Contract	
	Project planning	
Selection of professionals	Identification and matching of professionals	
Renovation and Follow-up	Training and skills	
	Quality assurance process (certification/ training)	
	Quality assurance process (follow-up)	

Not replicable | Laboriously replicable | Somewhat replicable | Easily Replicable | Fully Replicable

Thank you for your attention!

Acknowledgements, sources:

- Boza-Kiss, B., Bertoldi, P., Della Valle, N. and Economidou, M. 2021. One-stop shops for residential building energy renovation in the EU: Analysis & policy recommendations. JRC Publication
- Volt, J., McGinley, O. et al. 2021. Underpinning the role of One-Stop Shops in the EU Renovation Wave. BPIE
- Milin, C. and Bullier, A. 2021. Towards large-scale roll out of "integrated home renovation services" in Europe. ECEEE Summer Study

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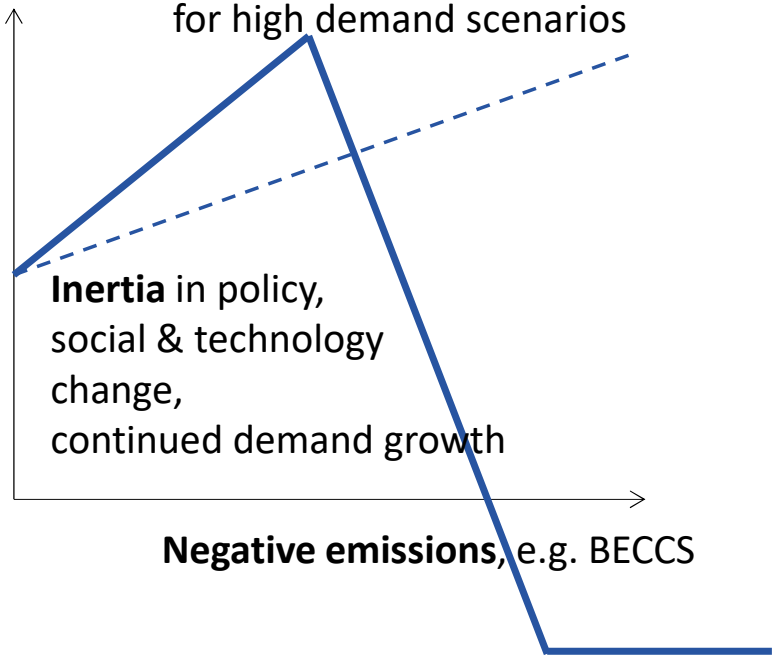
Support slides

The global challenge – finding the 1.5°C pathway

Overshoot as
supply-side options
scale slowly, but need massive
long-term deployment
for high demand scenarios

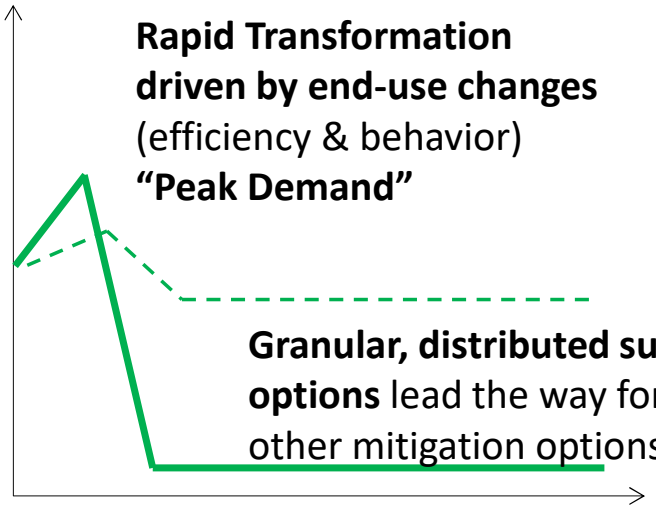


Inertia in policy,
social & technology
change,
continued demand growth

Negative emissions, e.g. BECCS

Conventional wisdom

Rapid Transformation
driven by end-use changes
(efficiency & behavior)
"Peak Demand"



Granular, distributed supply side options lead the way for scaling other mitigation options,

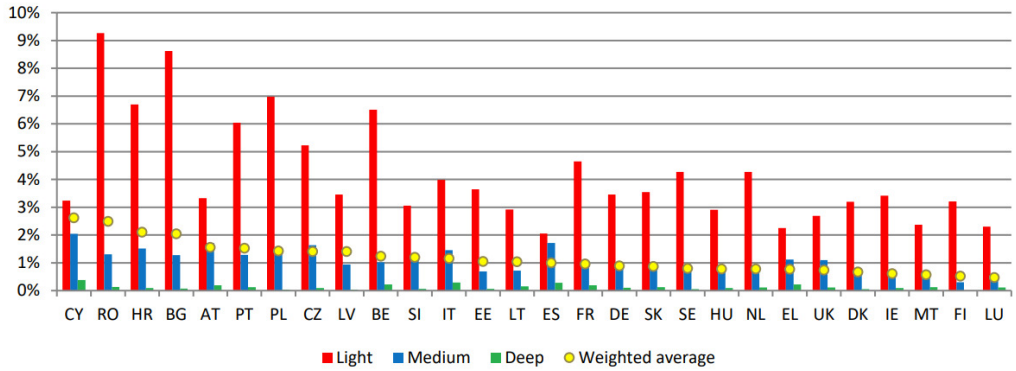
"Grand Restoration"
sink enhancement via
returning land to nature

Demand-side solutions

Source: Low Energy
Demand Scenario literature

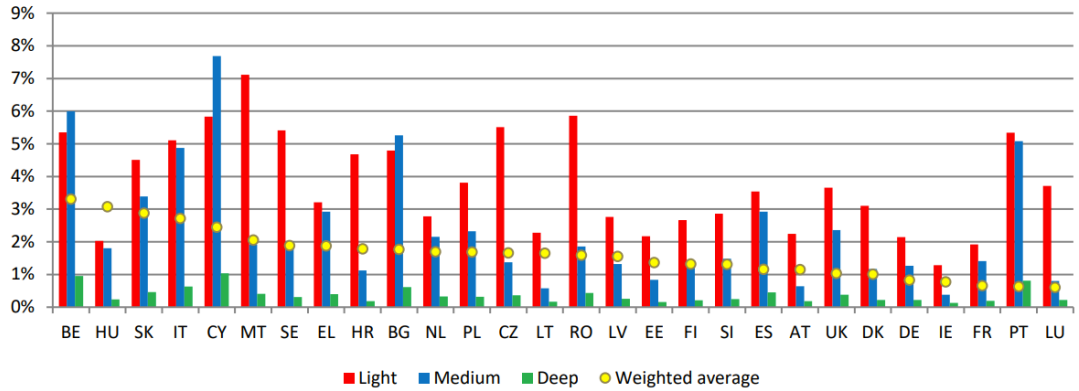
Renovation data

Figure 3. Renovation rates in residential buildings in the EU28 Member States by renovation level, annual average 2012-2016.



Source: JRC, 2020

Figure 4. Renovation rates in non-residential buildings in the EU28 Member States by renovation level, annual average 2012-2016.



Source: JRC, 2020

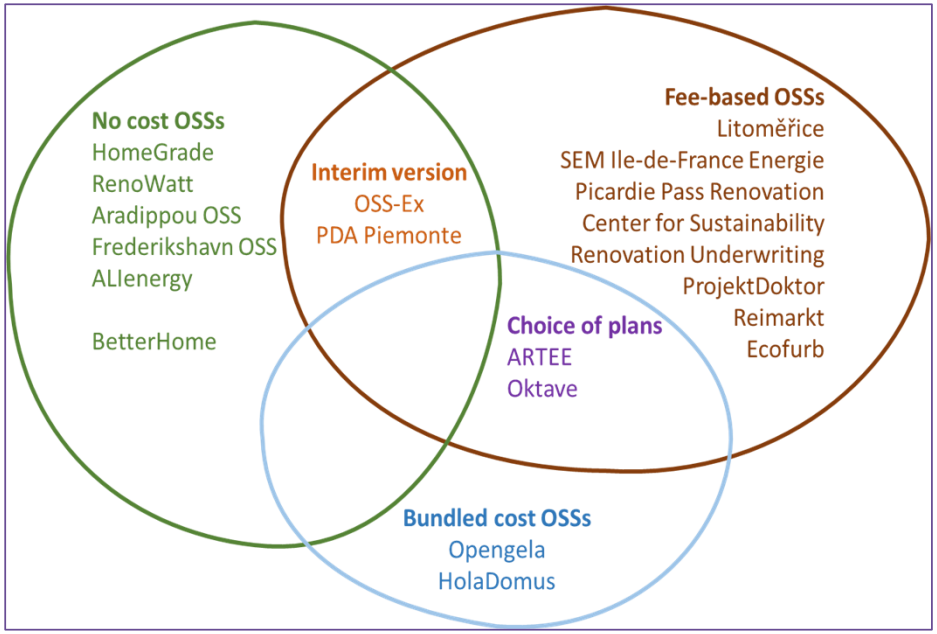
Costs and price of the services

Costs incurred

Typical costs reported by the observed 23 OSSs are:

- human resources, such as one or few architects or engineers, marketing specialists, an IT specialist, and a financial expert
- office space, which ranged from traditional corporate offices, where the team works if the OSS is solely online to large info spots. There are a few exceptional cases in our OSS list:
- IT tools for customer engagement
- IT support to the craftsmen

Price to be paid by customers



Three perspectives

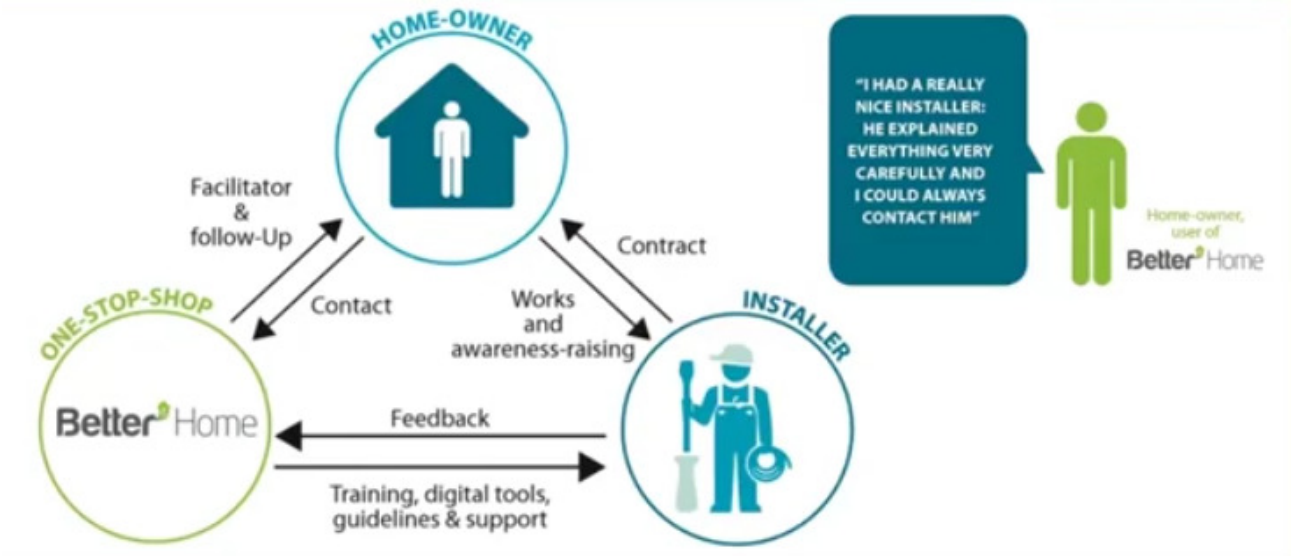
	Owners (demand side)	Contractors (supply side)	Financiers (banks)
Barriers	• Hassle • Lack of technical knowledge • Too many options • Lack of time • Bad experience • Lack of understanding of importance	• Need for adverts/self-promotion • Too much transaction time/cost • Impact from „bad" contractors (lack of trust) • Need to deal with complaints • Need to diversify its simple&single offer	• Lack of understanding of the potential • Lack of technical knowledge • Lack of experience in evaluating EE projects/clients • Lack of capacity to evaluate projects
Solution	• Act as project coordinator • Single point of contact	• Tools • Handle customers (pre and post contracts) • Model contracts and/or act as contractor	• Connect banks to good clients • Help clients access financing • Best match

What makes OSS successful?

Home renovation one-stop shops:

- ✓ … locally embedded, know the local market, the local clients and the local conditions;
- ✓ … have an interactive relationship with the clients;
- ✓ … can follow-up on finished projects, carry out stepwise renovation;
- ✓ … accelerate building refurbishments by informing, motivating, as well as by assisting building owners to follow through energy efficiency investments, by providing support from the start to the end;
- ✓ … facilitate interested, but not yet committed energy users/asset owners to actually implement an energy saving measures or other sustainable projects;
- ✓ … can facilitate access to financing and occasionally offer better rates;
- ✓ … potentially improve the average renovation depth in terms of energy performance through the holistic approach;
- ✓ … (some) reach out to vulnerable populations, such as tenants of social houses.

Industry example: BetterHome



Local authority initiative example: Picardie