



# LEARNINGS FROM THE **TURNKEY RETROFIT** & THE **RENONBILL** PROJECTS

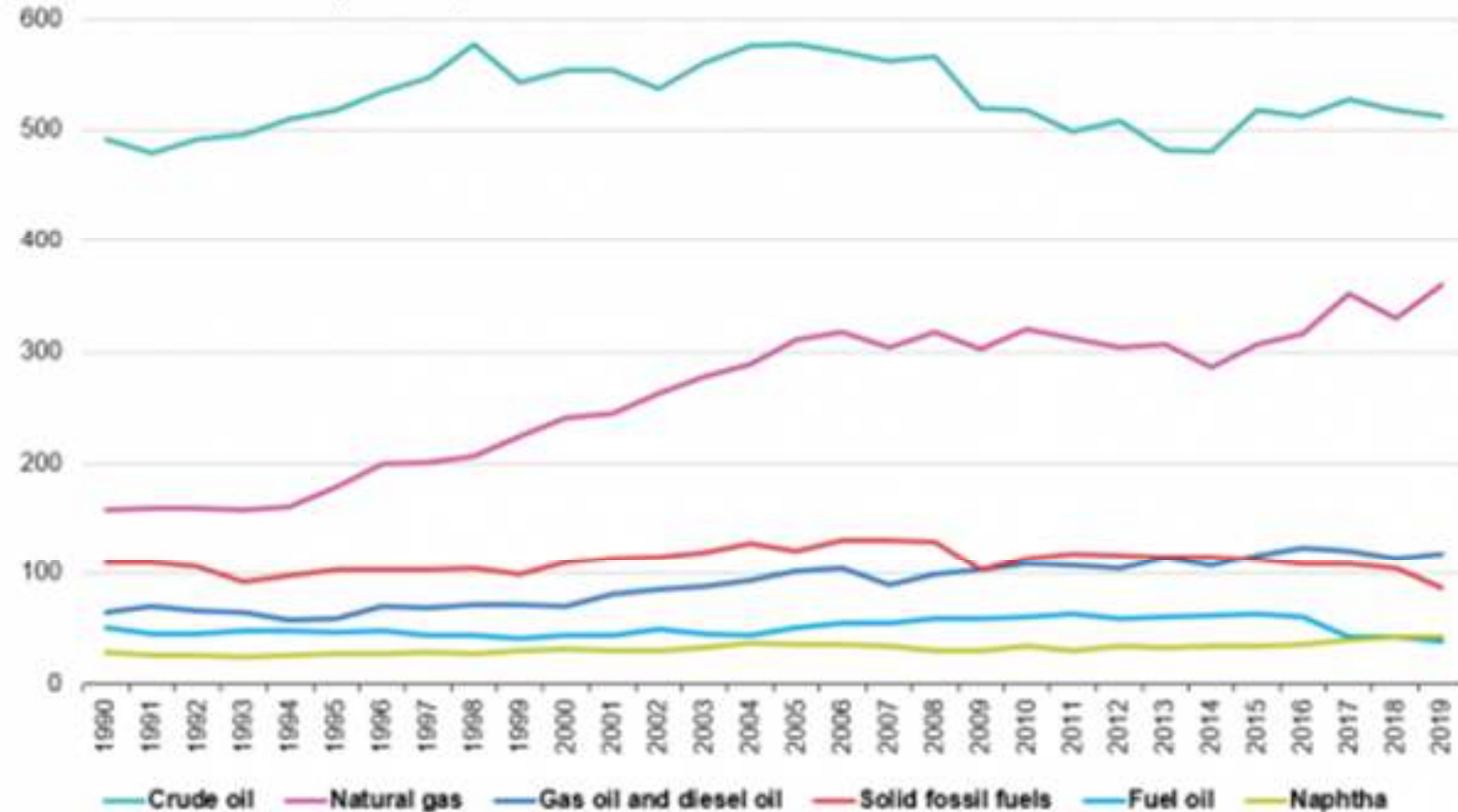
SMAFIN Romania



12/04/2022

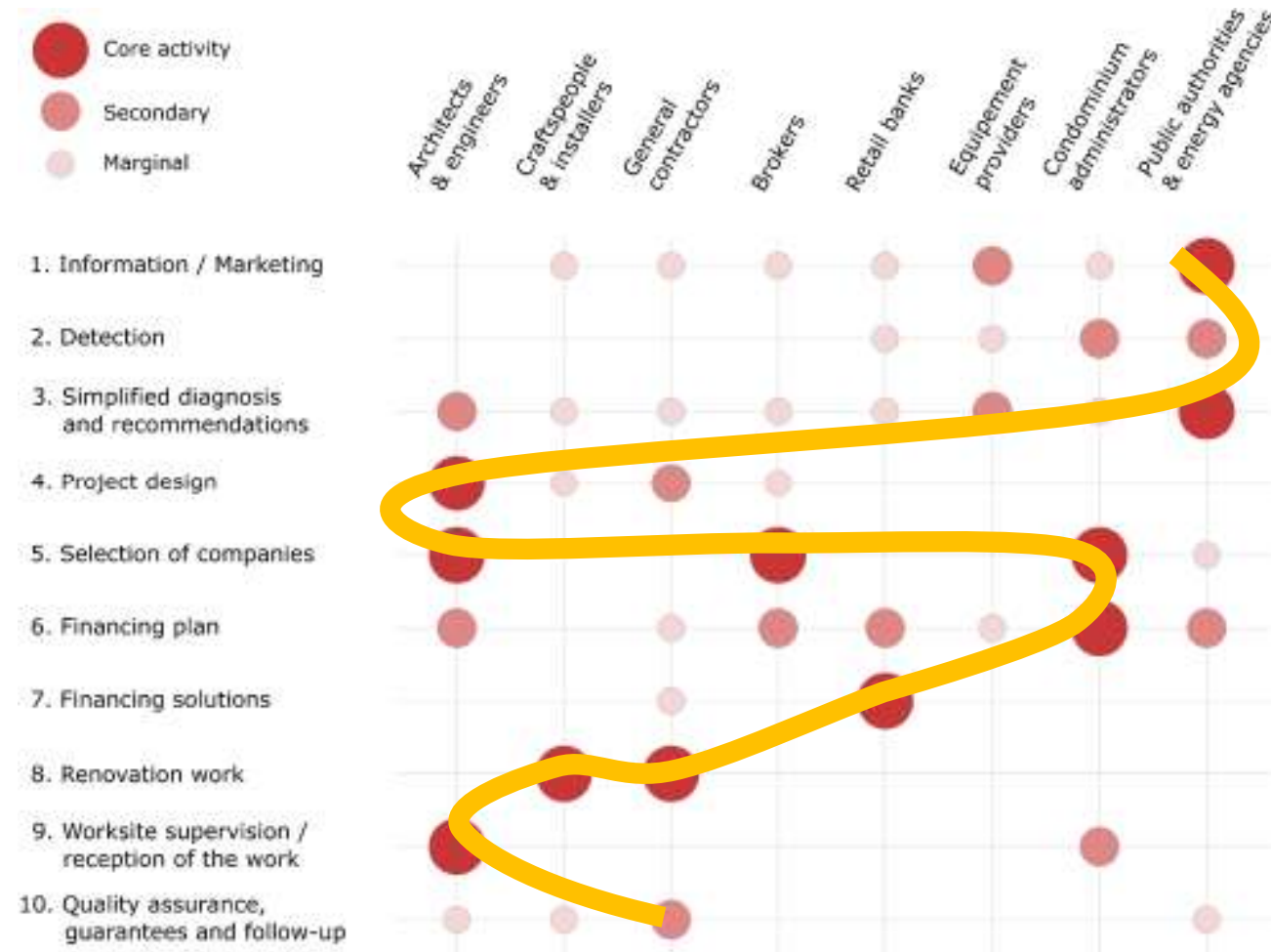
# THE CHALLENGE

**Imports of selected energy products, EU, 1990-2019**  
(million tonnes of oil equivalent)



Source: Eurostat (online data code: nrg\_bal\_c)

# COMPLEX JOURNEY OF RENOVATIONS



Source: Christophe MILIN, CINEA  
European Commission



# TWO PROJECTS TRYING TO ADDRESS THIS PROBLEM





# TURNKEY RETROFIT





# WHAT IS TURNKEY RETROFIT?

Turnkey Retrofit project developed and replicated an integrated home renovation service, with the purpose to transform the complex and fragmented renovation process into a simple, straightforward and attractive process for the homeowner.



**Focus countries** | Spain, Ireland and France

**Client** | European Commission – CINEA

**Funding** | Horizon 2020 (1,66 Million Euros)

**Project duration** | 2019 – 2022



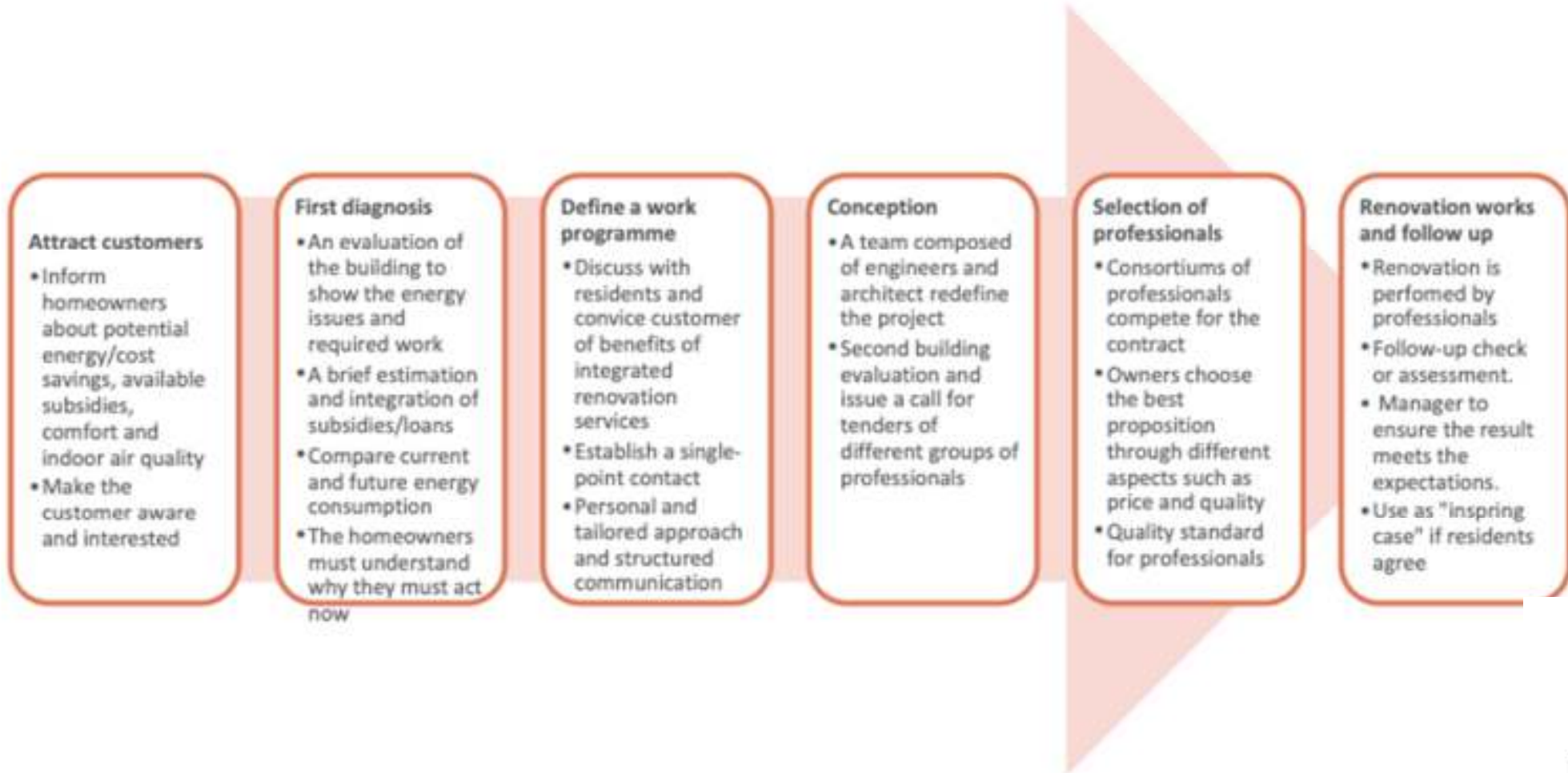


# WHY ONE-STOP SHOPS?

- One stop shops are important tools to **promote and enable renovations**
- Brings together a **wide range of services** and simplifies the renovation journey, including technical diagnosis, alignment of construction value chain, financing support and monitoring of the implemented measures
- Tailor the process and works to the **needs of the end-users**
- Brings together and supports several **Renovation Wave** instruments, including MEPS, Building Renovation Passport and Digital Building Logbooks
- One stop shops make it possible to **integrate wider attention points**, including aesthetic, indoor environment and whole-life carbon emissions



# THE STEPS OF AN ONE-STOP SHOP?



## Attract customers

- Inform homeowners about potential energy/cost savings, available subsidies, comfort and indoor air quality
- Make the customer aware and interested

## First diagnosis

- An evaluation of the building to show the energy issues and required work
- A brief estimation and integration of subsidies/loans
- Compare current and future energy consumption
- The homeowners must understand why they must act now

## Define a work programme

- Discuss with residents and convince customer of benefits of integrated renovation services
- Establish a single-point contact
- Personal and tailored approach and structured communication

## Conception

- A team composed of engineers and architect redefine the project
- Second building evaluation and issue a call for tenders of different groups of professionals

## Selection of professionals

- Consortiums of professionals compete for the contract
- Owners choose the best proposition through different aspects such as price and quality
- Quality standard for professionals

## Renovation works and follow up

- Renovation is performed by professionals
- Follow-up check or assessment.
- Manager to ensure the result meets the expectations.
- Use as "inspiring case" if residents agree



# THE SOLUTION4RENOVATION TOOL

... AND HOW WE CAN HELP YOU



I do not know where to start. I am afraid it will cost too much.



I want a new bathroom/kitchen



I want to get a retrofit assessment



I want to reduce my energy bill

# THE SOLUTION4RENOVATION TOOL

Most users have very limited technical understanding: Ask questions they can understand



Describe your home

1 - Problems to solve

2 - I feel too cold or too hot at home

3 - Weather outside

4 - Windows

5 - Wall insulation

6 - Roof insulation

7 - Basement

8 - House typology

▶ Run Simulation

To run the simulation, we will need you to answer all questions

I have some problems at home (multiple choice)



I have humidity problems : damp stains, blistered paint, moisture, fungal development, etc.



My energy bills are too high.



I live in a noisy environment and it disturbs me even with my windows closed.



No problem





# THE SOLUTION4RENOVATION TOOL



## FINANCIAL AID FOR ENERGY RENOVATION

To find your way around the existing financial aid, the conditions for obtaining it and the steps to take.

ENERGY SAVING CERTIFICATES (EEC) >

ANAH: "BETTER LIVING" PROGRAM >

ECO LOAN AT RATE 0 >

REDUCED RATE VAT >

MY RENOVATION BONUS >

Information about available subsidies is key to get them interested



TURNKEY  
RETROFIT



# THE SOLUTION4RENOVATION TOOL

## TOOLBOX FOR CONDOMINIUMS

It is sometimes difficult to convince the union council to engage in energy renovation work. Come and draw arguments here to involve the co-owners in this project during the next GA. As well as answers to frequently asked questions.

Do you have a renovation project for your condominium? [OPERENE](#), a member of the SOLUTIONS4RENOVATION team, can help you carry it out.

Information about the process and possible options

HOW TO START A RENOVATION PROJECT? >

WHY CARRY OUT AN ENERGY AUDIT? >

ARGUMENTS FOR TRANSFORMING THE AUDIT INTO WORK >

WHAT ARE THE MISSIONS OF THE PROJECT MANAGEMENT TEAM? >

THE CPE OR HOW TO GUARANTEE ENERGY PERFORMANCE AFTER WORKS? >





# THE SOLUTION4RENOVATION TOOL



## RENOVATION ACTIONS

Here are three renovation plans to improve the energy efficiency of your home. The packages are designed to reach different energy performance levels for your home. The 'Essential' package include basic measures to improve your home. The 'Intermediate' and 'Advanced' packages include additional measures if you wish to achieve a higher energy efficiency.

	BASIC	INTERMEDIATE	ADVANCED
<b>ROOF INSULATION</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>WALL INSULATION</b>			
Cavity insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
External insulation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Internal insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>FLOOR INSULATION</b>			
Solid floor insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Suspended timber floor insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>WINDOWS AND DOOR</b>			
Double glazed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Triple glazed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>VENTILATION</b>			
Passive ventilation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demand control ventilation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CHOOSE THE RETROFIT PACKAGE THAT SUITS YOU OR DESIGN YOUR OWN PACKAGE

- I want to do my own renovation plan
- Book an assessment with a renovation advisor

The scale below highlights the estimated current **Building Energy Rating (BER)** of your home and the impact the three renovation plans will have on the rating. A Building Energy Rating (BER) certificate rates your home's energy performance on a scale between A and G. A-rated homes are the most energy efficient while G-rated are the least energy efficient



BRP is a great instrument to include in OSS instruments





**RENONBILL**





# WHAT IS RENOBILL?

**RenOnBill** promotes the development and implementation of **on-bill schemes** in Europe, to scale-up investments towards **deep energy renovations** of residential buildings.



**Focus countries** | Italy, Lithuania, Spain, Germany

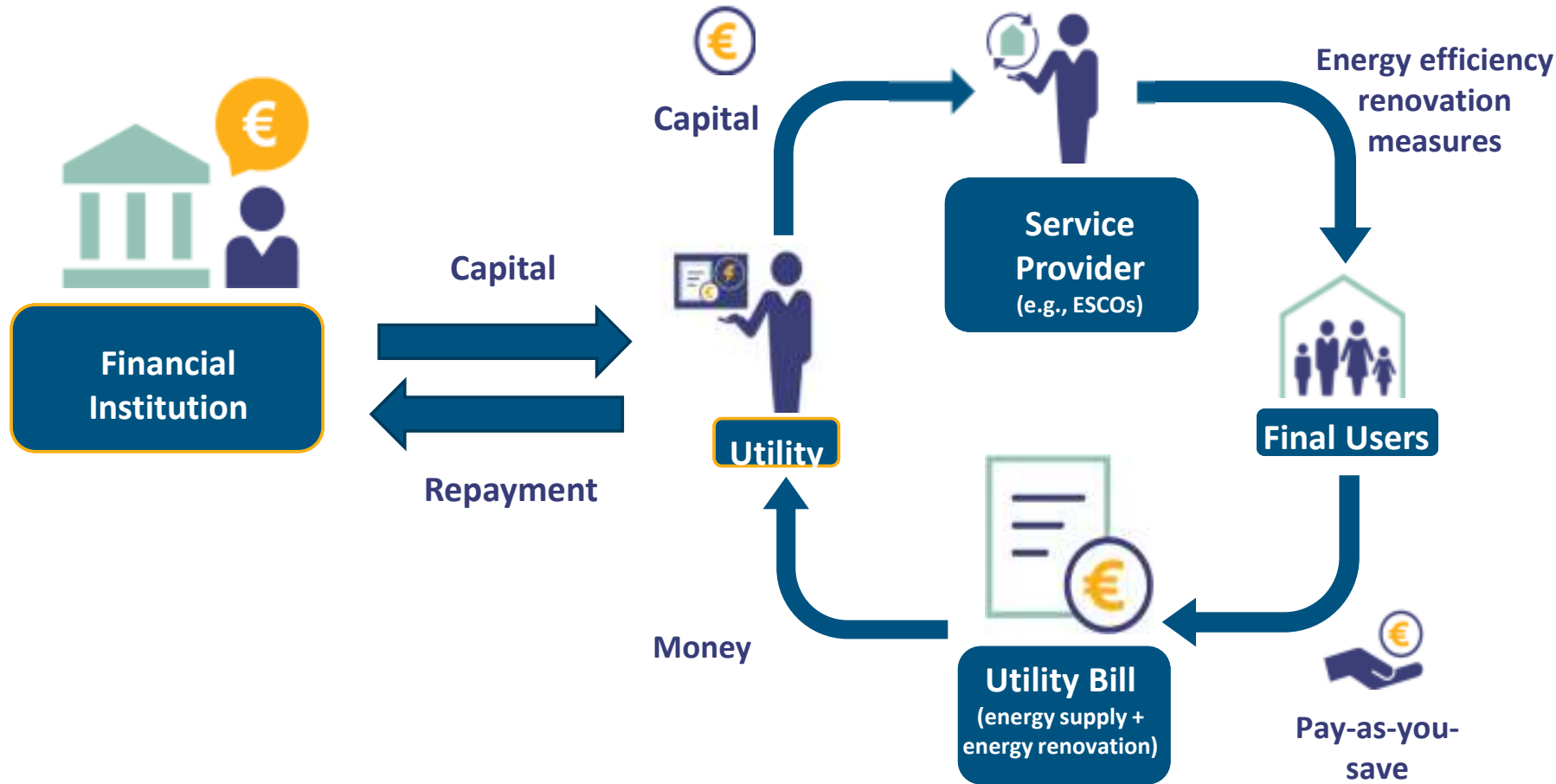
**Client** | European Commission – CINEA

**Funding** | Horizon 2020 (1,66 Million Euros)

**Project duration** | 2019 – 2022



# SNAPSHOT OF ON-BILL SCHEMES



## Main advantages

- No upfront payment for the final user
- Possibility for utilities and banks to deal with very fragmented customer base
- Flexibility to deal with defaults



## Evaluation Procedure

1

### Energy Savings Analysis

- Estimation of energy savings
- Determination of energy efficiency measures
- Cost analysis

2

### Financial Analysis of the Interventions

- Valorisation of the energy savings
- Calculation of the investment indexes (e.g. NPV, IRR,...)
- Evaluation of the uncertainties

3

### Interpretation of the Results

- Selection of the best interventions
- Collection of the most profitable investments
- Sensitivity analysis

A large, dark blue downward-pointing arrow is positioned below the three steps of the evaluation procedure.

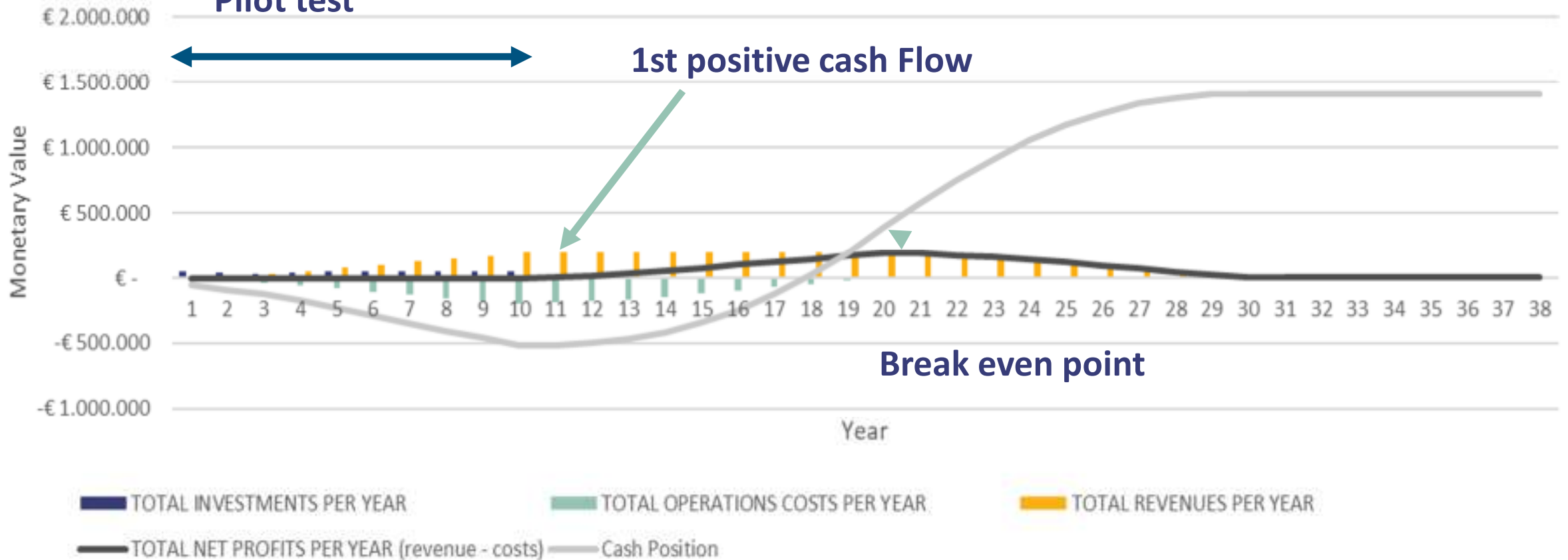
**Procedure which involves multidisciplinary knowledge**



# EXAMPLE OF A FINANCIAL ANALYSIS

Duration of the Pilot test

RenOnBill Pilot Program - P&L Analysis



The tool is available here: <https://www.renonbill.eu/knowledge-sharing/the-renonbill-tool-to-better-evaluate-energy-efficiency-interventions?briefings=on&brochures=on&factsheets=on&infographics=on&language=any&reports=on&scientificpapers=on&tools=on&page=1>



# CONCLUSIONS

- OSS and innovative financial instruments **can alleviate 3 of the main barriers** to energy renovations
  - Lack of financial means and especially the upfront investment
  - Awareness of the benefits of an energy renovations
  - Know-how of how to get a renovation done
- How they instruments can work **depends on the local context**
  - The business models of OSS vary a lot depending on the existing possibilities
  - The possibility of OBF is contingent on regulations, tax rules, and HOA rules etc.
- The quality of the implementation is everything

## Learn more?

- <https://www.turnkey-retrofit.eu>
- <https://www.solutions4renovation.eu/ie/punch-diagnostic-intro-single-family>
  - <https://www.renonbill.eu>

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