



# CITYnvest

## Energy Efficiency Finance Market Place

Parallel session 'Innovative financing schemes, capacity building and awareness raising'

18 January 2017

Brussels

A green silhouette of a city skyline with various building shapes, positioned above the speaker information.

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Pandelieva (SEC), Rafal Ataz Gomez (InfoMurcia)  
and Elise Steyaert (Climate Alliance)

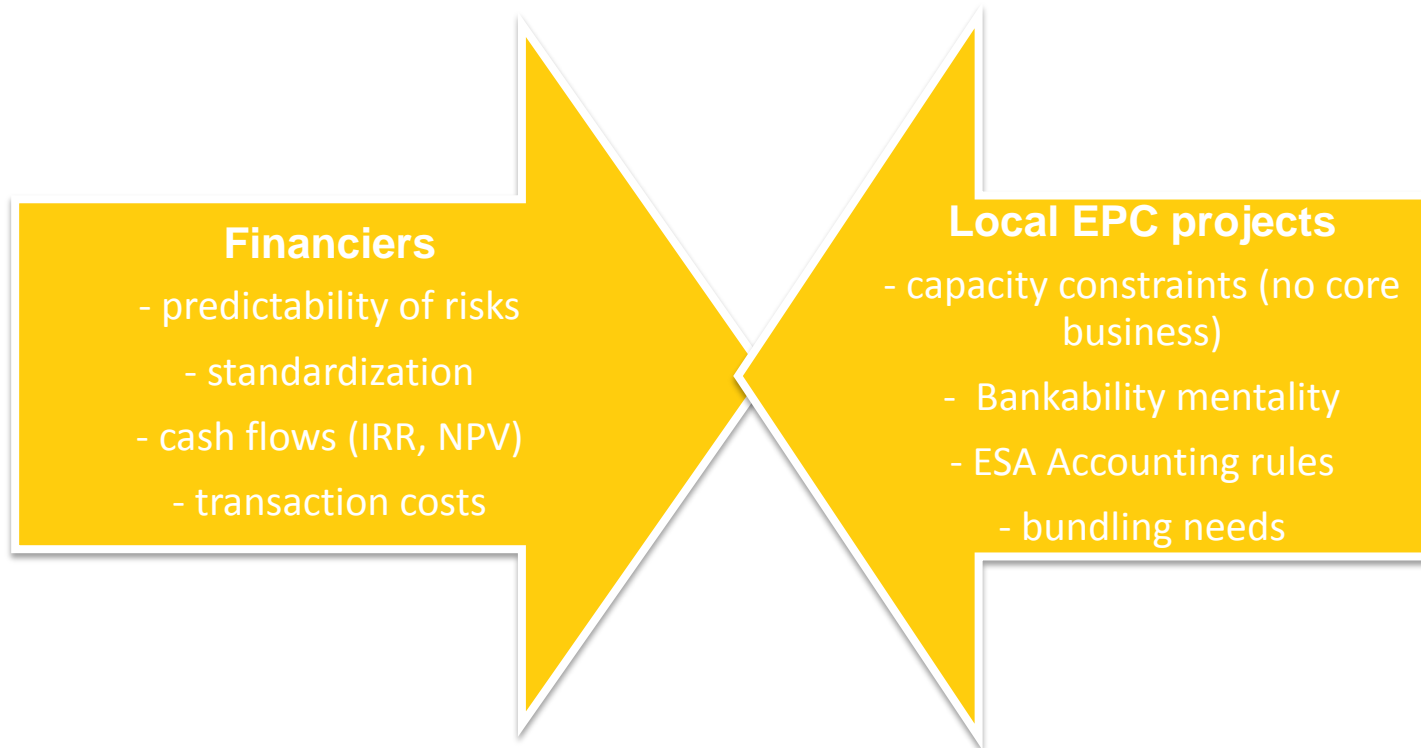


## Structure of this session

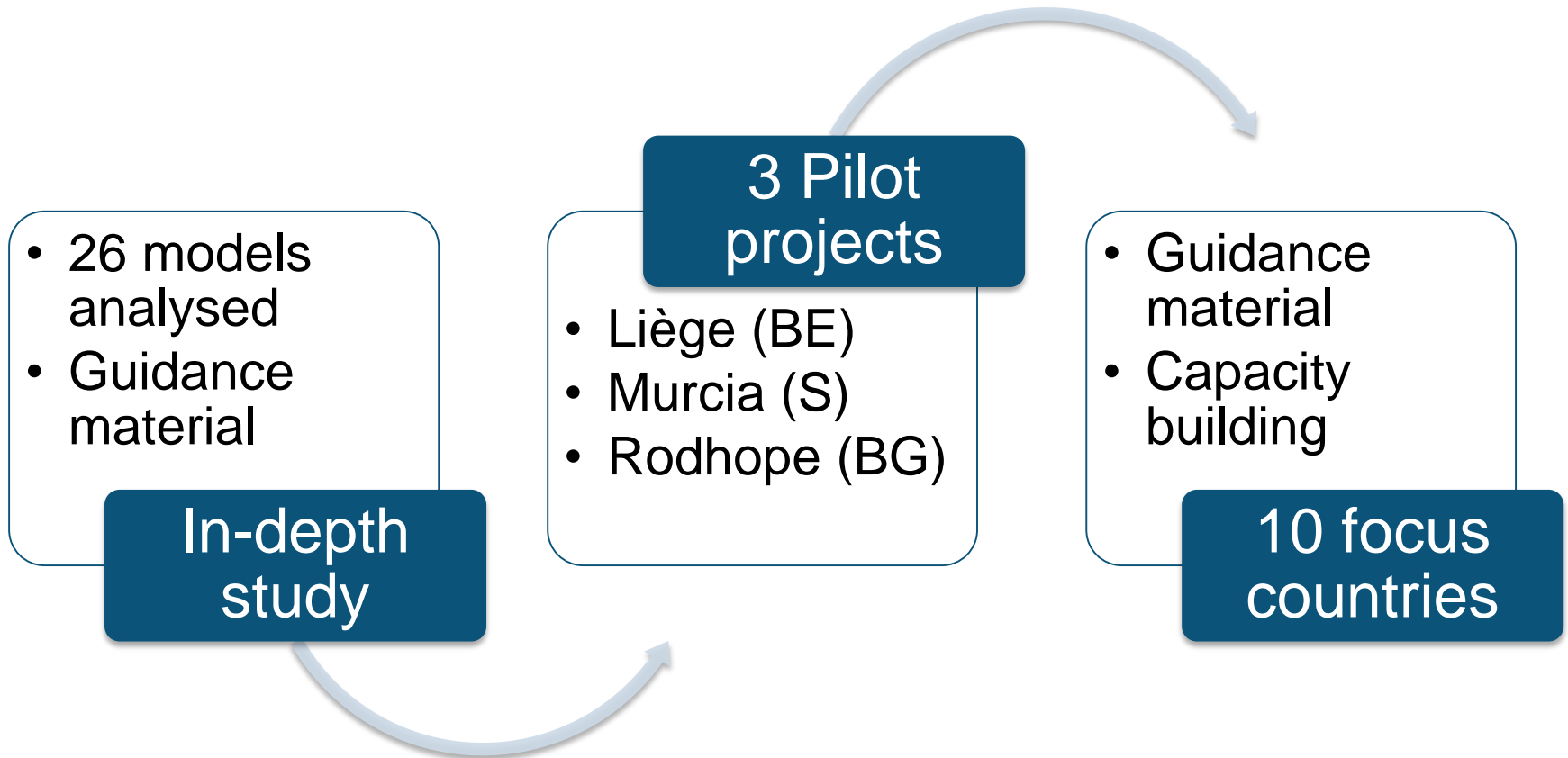
- ❑ The Rationale of CITYnvest
- ❑ Where CITYnvest stands today
  - Guidance and capacity-building
  - Experimenting and implementing in the three pilot regions:
    - Liège – Renowatt
    - Rhodope – Rhodoshop
    - Murcia
  - Wide-scale capacity-building programme on the national level
  - Monitoring of investments and energy savings
- ❑ Key lessons learned and overcoming challenges

# Rationale of CITYinvest

EE financing models and EPC market remains far away reality for local authorities because of perception gap:



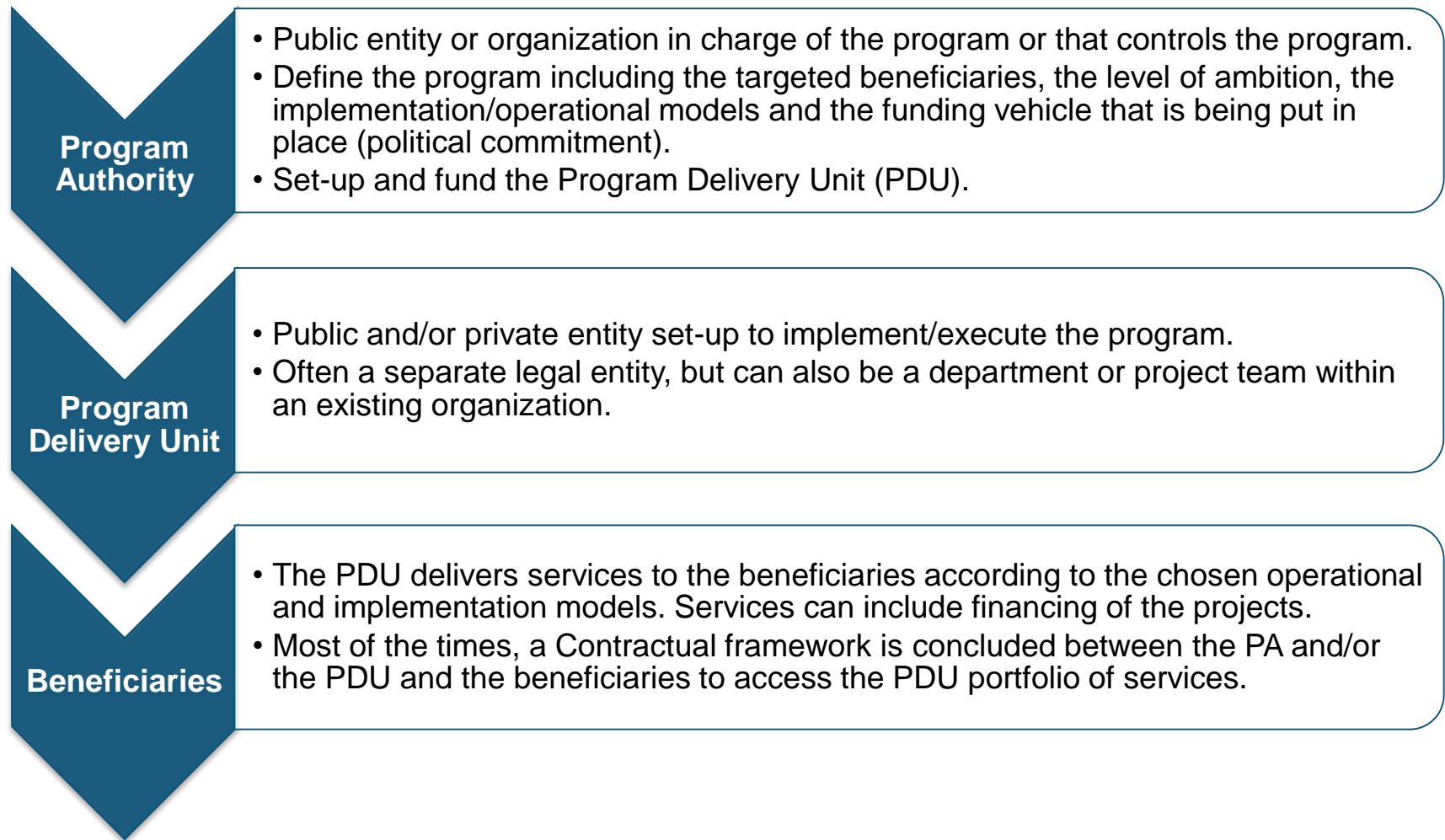
# Holistic solutions framework: what CITYinvest has to offer



## In-depth study: What have we done?

- ❑ Analysed **26 existing models** addressing large scale and deep energy efficiency retrofit programs (including RES) involving public authorities across Europe (11 countries)
  - Ambition, implementation technology, services to beneficiaries, financing schemes
  
- ❑ Provided **benchmark/comparison** along such themes as:
  - Operational schemes: Facilitation/Integration /Aggregation
  - Implementation model: Separate Contractor Based (SCB) and EPC/ESC
  - Financial schemes and related attractiveness and risks
  
- ❑ Provided **guidance material** to support local authorities in their search for financing of their EE and RES programs

## Business models: Common practices



## Business models: What are the main characteristics?

**2 Implementation Models**

- Separate contracting based (SCB)
- Energy Performance Contracting/Energy Supply Contracting (EPC/ESC)

**3 Operational Models**

- Facilitation
- Integration
- Financing only

**7 Operating Services**

- Marketing
- Assessment
- Financial advice
- Facilitation
- Integration
- Aggregation
- Financing

**5 Funding Vehicles**

- Financial Institutions
- ESCO's
- Program Delivery Unit (PDU)
- Investment Funds
- Citizens

## PDU Operational models: What are the differences?

### FACILIATION (16/24)

- Beneficiaries are the tendering and contracting authorities.
- Contracts are signed between beneficiaries and ESCO/Contractors (deliver the retrofit works to the beneficiaries).
- PDU facilitates the projects by assisting the beneficiaries during the preparation, the tendering process and the follow-up of the projects.
- PDU shares no risks.

### INTEGRATION (8/24)

- PDU is the tendering and contracting authority.
- Contracts are signed between PDU and the ESCO/Contractors. PDU delivers the retrofit works to the beneficiaries.
- PDU takes on the preparation, the tendering process and the follow-up of the projects. PDU delivers the retrofit works to the beneficiaries.
- PDU takes on the technical risks.

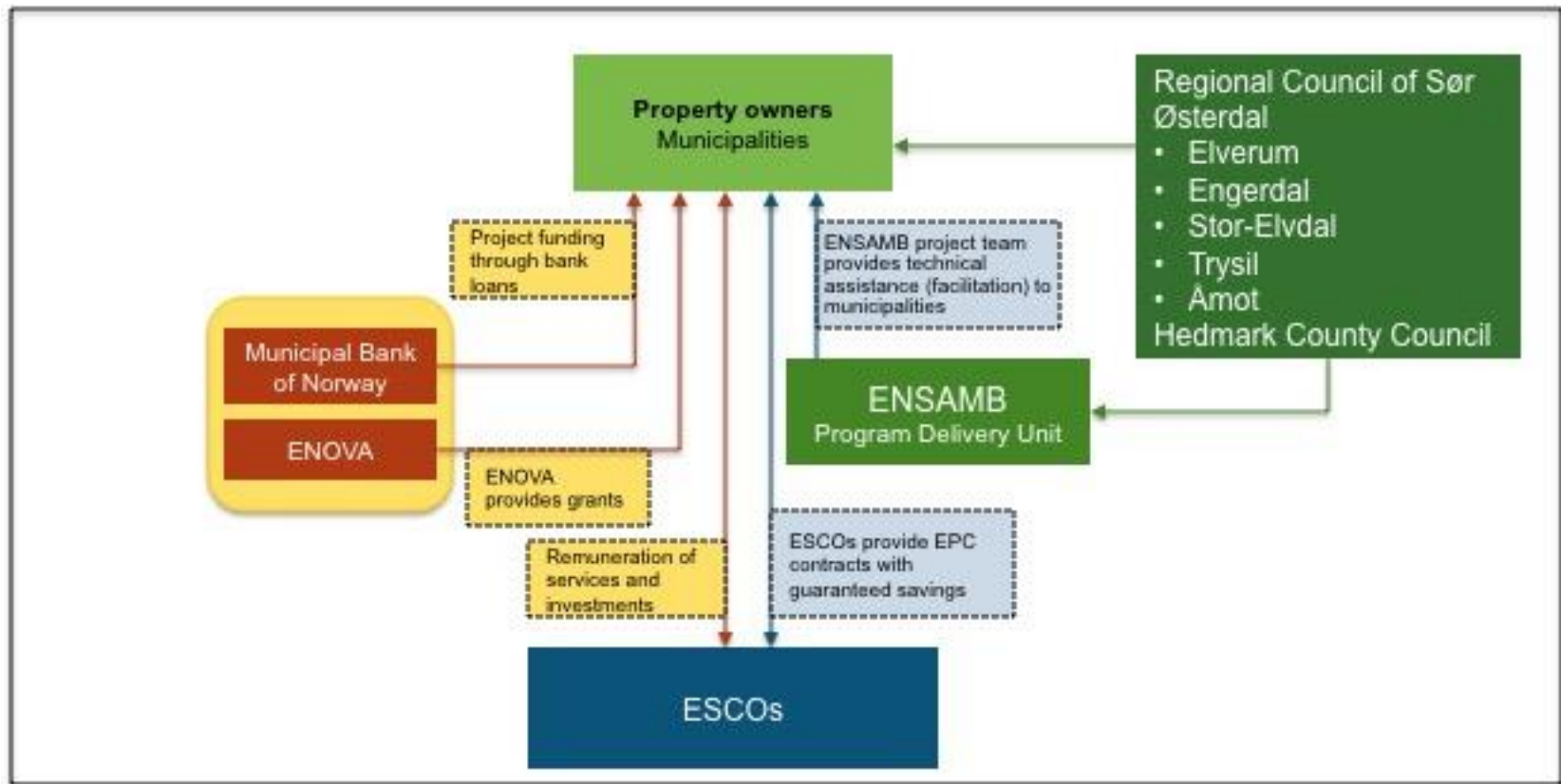
### FINANCING ONLY (3/24)

- Beneficiaries are the tendering and contracting authorities.
- Contracts are signed between beneficiaries the ESCO/Contractors (deliver the retrofit works to the beneficiaries).
- PDU assesses the bankability of the projects and provides financing.
- PDU takes on the financial risks.

The main difference between the models is the contractual relationship with the ESCO or contractors and the resulting impact on the risks and public balance sheet of the PDU.



# Municipal example: ENSAMB

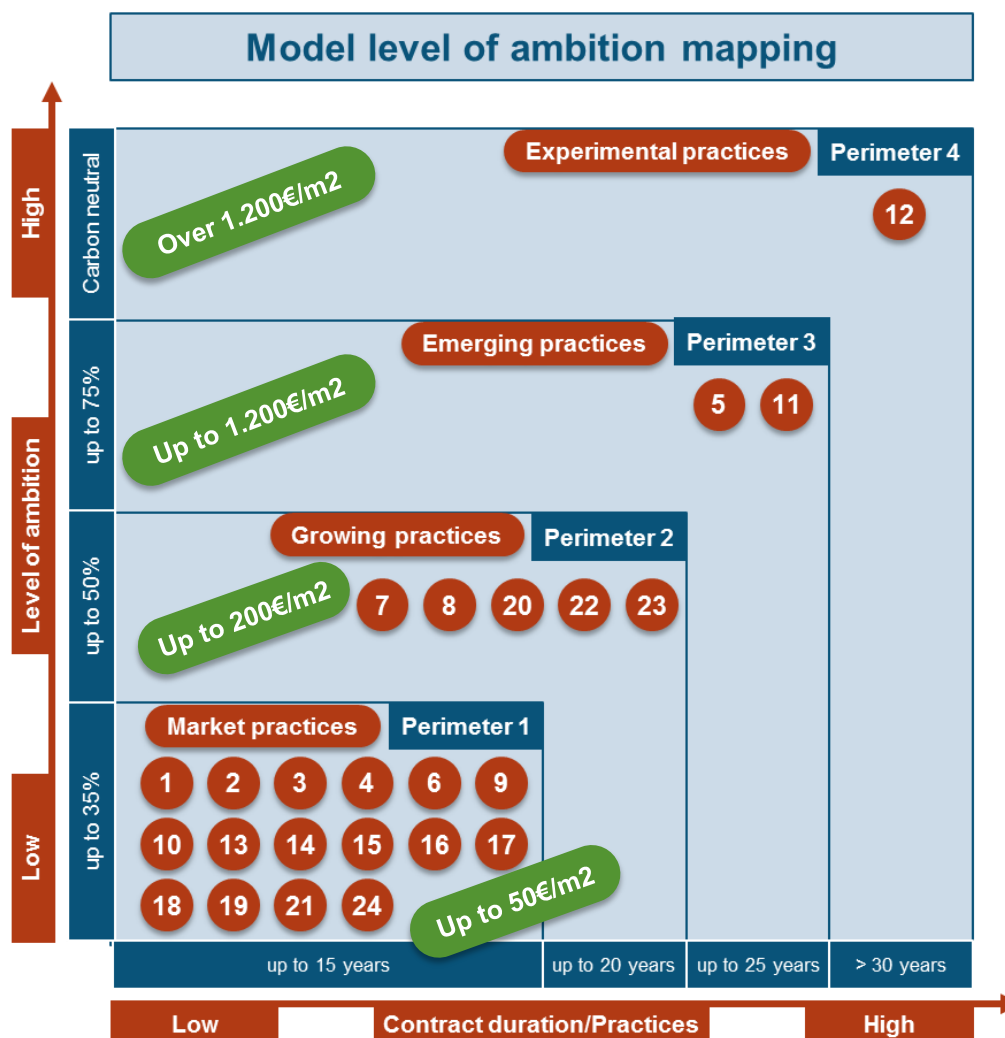


**Models positioning:** Models involving facilitation are mainly financed via Financial Institutions or ESCOs while models using integration are mainly financed through the Program Delivery Unit (PDU) or an investment fund.

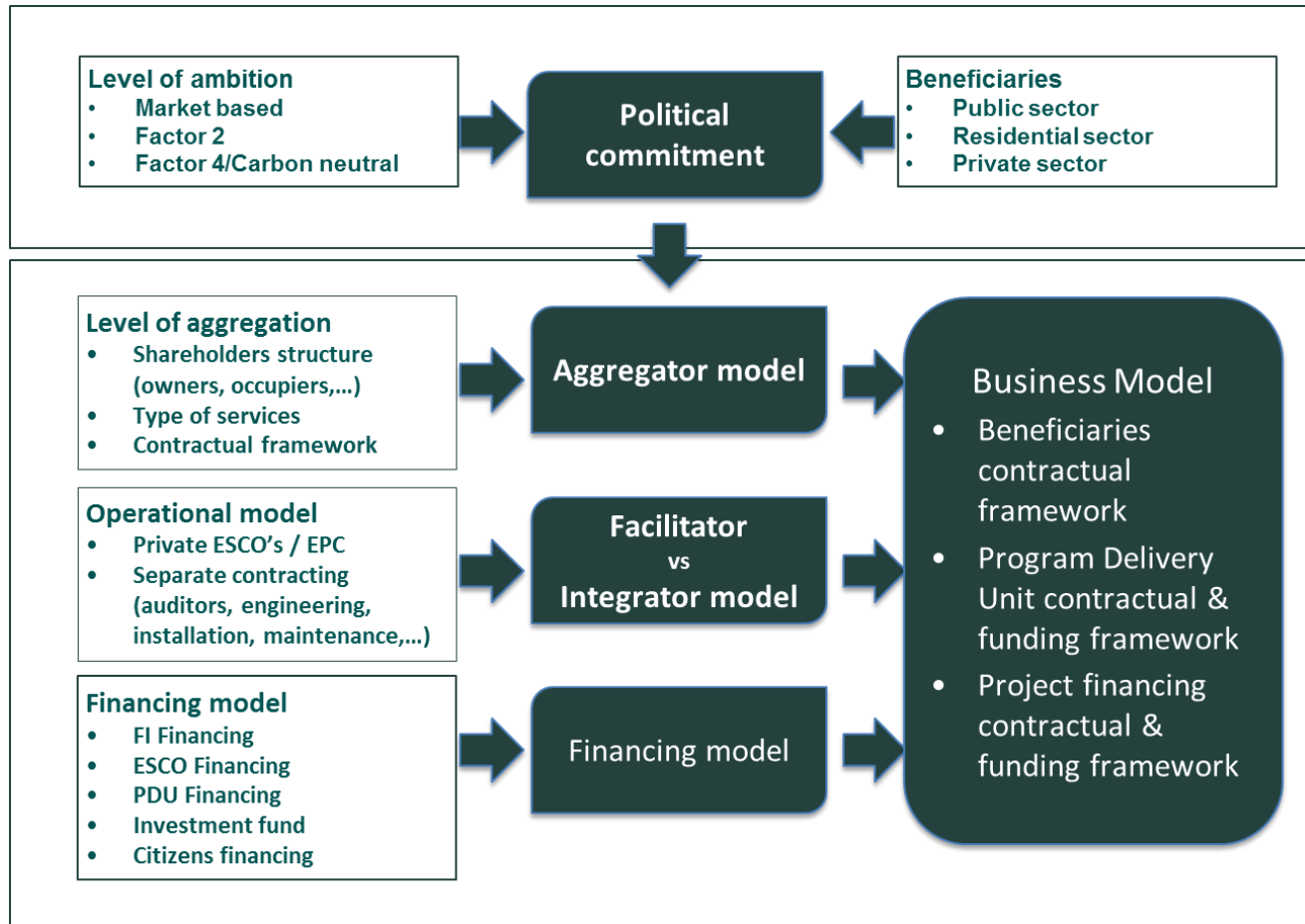
|                                 | Facilitator                     |   | Integrator     |   | Financing only                 |
|---------------------------------|---------------------------------|---|----------------|---|--------------------------------|
|                                 | No aggregation                  | Aggregation   | No aggregation | Aggregation   |                                |
| Esco financing                  | REDIBA<br>Eco'Energies<br>EERFS | Berlin ESP<br>RE:FIT<br>VEB<br>Rotterdam GB<br>EE Milan<br>PadovaFIT! | -              | -   | N/A                            |
| Financial institutions          | REDIBA<br>Eco'Energies<br>EERFS | Berlin ESP<br>RE:FIT<br>VEB<br>ENSAMB<br>Energie POSIT'IF             | Warm Up North  | -   | N/A                            |
| Program Delivery Unit financing | OSER                            | Fedesco<br>Ox Futures   | OSER           | Fedesco<br>Energie POSIT'IF<br>Eandis EDLB<br>EscoLimburg 2020<br>SPEE Picardie | N/A                            |
| Investment Fund                 | EERFS<br>SUNSHINE               | -   | -              | EscoLimburg 2020<br>Cambridgeshire<br>MLEI                                      | Energy Fund Den Haag<br>KredEx |
| Citizens financing              | -                               | Ox Futures<br>Brixton Energy Co-op                                    | -              | -   | Climate Community Saerbeck     |

**Level of Ambition:** The great majority of the models target Perimeter 1 or “standard market practice”, though factor 2 (50% savings) models gain in attention, factor 4 (75% savings) remain marginal.

| Models |                          |    |                                  |
|--------|--------------------------|----|----------------------------------|
| 1      | REDIBA                   | 2  | Berlin Energy Saving Partnership |
| 3      | RE:FIT                   | 4  | Vlaams Energiebedrijf            |
| 5      | OSER                     | 6  | Fedesco                          |
| 7      | Eandis EDLB              | 8  | ESCOLimburg 2020                 |
| 9      | Eco'Energies             | 10 | Energy Fund Den Haag             |
| 11     | Energies POSIT'IF        | 12 | Climate Community Saerbeck       |
| 13     | Cambridgeshire MLEI      | 14 | Ox Futures                       |
| 15     | Rotterdam Green Building | 16 | Energy Efficiency Milan          |
| 17     | ENSAMB                   | 18 | Brixton Energy Co-op             |
| 19     | EERFS                    | 20 | SUNSHINE                         |
| 21     | Warm Up North            | 22 | SPEE Picardie                    |
| 23     | KredEx                   | 24 | PadovaFIT!                       |



# Decision mapping



1. Read the CITYinvest Comparison report
2. Make use of the tools at your disposal on our website:
  - Recommendation-decision matrix.
  - Strategic action plan template
  - Evaluation toolkit.

# Capacity building Step-to-step guidance tools

**Increasing capacities in Cities for innovating financing in energy efficiency**  
 A review of local authority innovative large scale retrofit financing and operational models

December 2015

**Recommendations Matrix**  
 The document is compiled within Work Package 2, Task 4.4 "Genesis, transferability and framework for choosing about scheme design"  
 Developed by Energiwatt  
 100% funded  
 2015-2018

| Reference          | 2              | 3              | 4              | 5              |
|--------------------|----------------|----------------|----------------|----------------|
| Responsible WP     | 2              | 3              | 4              | 5              |
| Project Start Date | 1 January 2015 | 1 January 2015 | 1 January 2015 | 1 January 2015 |
| Project Duration   | 3 years        | 3 years        | 3 years        | 3 years        |

**Innovative Financing Models**

| Public                                     | Public-Private                      | Private                             | Citizen                             |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| Vaams Energiebeheer                        | Warm Up North                       | SUNSHINE                            | Community based renewables-Saarbeck |
| SPEE Picardie                              | PadovaFit                           | Community based renewables-Saarbeck | Briton Energy Co-op                 |
| Rotterdam Green Buildings                  | Energy Fund Den Haag                | Briton Energy Co-op                 |                                     |
| REDIBA                                     | Energies POSITIF                    |                                     |                                     |
| REFIT                                      | EERIS                               |                                     |                                     |
| Oxifutures                                 | Community based renewables-Saarbeck |                                     |                                     |
| OSER                                       | BERLIN                              |                                     |                                     |
| KredEx                                     |                                     |                                     |                                     |
| Refecto                                    |                                     |                                     |                                     |
| ESCOLMBURG2020                             |                                     |                                     |                                     |
| ENGAMB                                     |                                     |                                     |                                     |
| Energy Fund Den Haag                       |                                     |                                     |                                     |
| Energy Efficiency Milan Covenant of Mayors |                                     |                                     |                                     |
| EERIS                                      |                                     |                                     |                                     |
| EcoEnergies                                |                                     |                                     |                                     |

**Scheme Decision Map Barriers Tool**

This barriers guidance tool of the **CITYNVEST** project helps local authorities to overcome specific barriers when designing and implementing their energy efficiency renovation programmes. Common barriers range from low demand from building owners to limited staff resources in the local authority or a lack of Energy Service Companies on the market. Depending on the barrier a local authority faces, the tool below recommends specific actions and helps identifying appropriate models that tackle such similar challenges.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 648776. The sole responsibility for the content of this website lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the ECSEW nor the European Commission are responsible for any use that may be made of the information contained therein.

**Strategic planning & action plan template**

- Decision mapping
- Strategic analysis
  - Program Authority/Program Delivery Unit roles and functions
  - Beneficiaries, type of projects and level of "ambition"
  - Implementation model
  - Operating Services
  - Level of "aggregation"
  - Financing & Funding Vehicle
- Choice – What are you proposing to do
- Action plan for implementation

## Step-By-Step Guidance

CITYNvest step-by-step guidance for local authorities to implement innovative financing models for energy efficiency in buildings

### Overarching EU support

- European financial support: FAQ
- European advisory services: FAQ

### Step 1 – Get Inspired

- Learn from your peers: have a look at the 26 case studies (select your language) and read the Report 'Review of local authority innovative large scale retrofit financing and operational models'. A comparison tool is coming soon here!
- Convince stakeholders and get political decision-makers committed: coming soon.

### Step 2 – Building blocks of the Action Plan

- Define roles and functions of Program Authority (PA), Program Delivery Unit (PDU)
- Decide the level of ambition, 'type' of projects and beneficiaries
- Estimate the impact
- Choose implementation methodology (Separate Based Contracting, Energy Performance/Supply Contracting)
- Specify operational services framework
- Develop financing framework (project financing, contractual and funding framework)
- Recommendations tool
- Mitigate potential risks and likely-to-encounter barriers when designing your action plan: CITYNvest Barriers Tool
- Fill in the Action Plan Template

### Step 3 – Operationalize a Dedicated Team

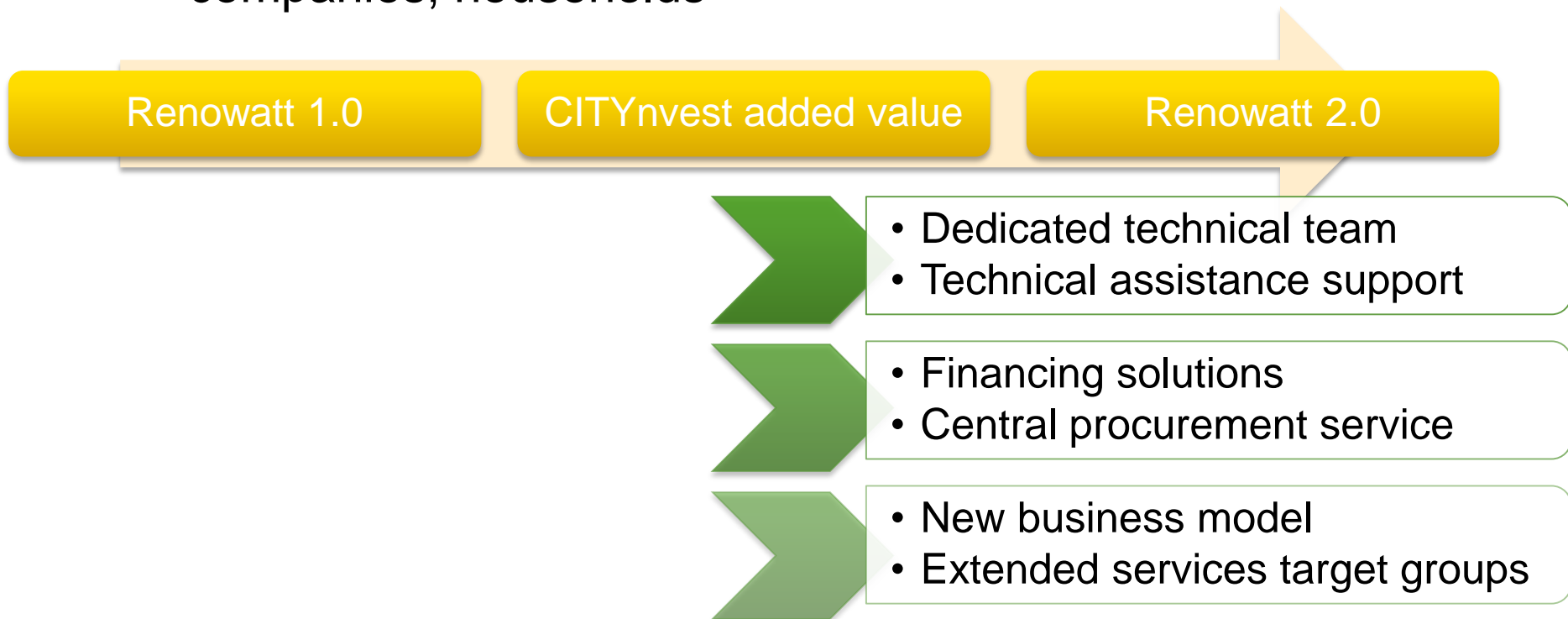
**A guide for the launch of a One Stop Shop on energy retrofitting**  
 Based on RenoWatt's experience in Liège

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 648776.

# Pilot Region Liège

## Renowatt: One-Stop-Shop to launch EE urban Retrofitting

- Client support, project bundling and financing opportunities
- Clients: public authorities, hospitals/elderly care, private companies, households



# Pilot Region Liège

- ❓ Challenges and lessons learned so far:
  - Convince public authorities
  - Expensive procedure to prepare tender, importance TA and neutral facilitator
  - Time dedication
  - Expertise ESCO field
  - Management of EPC contracts
  - EPC is not silver bullet
  - Political commitment = starting point (but check election timing!)
  - Communication, communication and communication, at all level of the municipalities



# Pilot region Rhodope – Main challenges

## Organizational:

- Lack of administrative capacity to tackle sustainable energy projects;
- Lack of collaboration among municipalities.

## Financial:

- ESCO market underdeveloped;
- Projects too small to gain critical mass for favorable financing terms.



# One-Stop-Shop Rhodoshop

Creation based on GRE-Liege Model

- **Central procurement agency** →
- **Project bundling in pipelines** →
- Search for suitable **financiers matching the specific project requirements** and negotiate on secured conditions →
- Ensure **launching tenders** for public procurement of building and street lighting refurbishment works →
- **Monitor** project results

## ACTION PLAN

1. Collect data and identify potential projects;
2. Calculate potential savings and investment needed;
3. Investigate local TPF/ESCO market;
4. Assess different operation models and present to local policy makers - General Assembly of ARM;
5. Define operational model for the programme and get approval by local policy makers;
6. Write the application for funding.
7. ...



# Critical Factors for Success

- Knowledge of local situation: having **dedicated staff and local support** crucial (ARM and Smolyan Municipality);
- Presence of local **political commitment** to sustainability and stimulating local jobs
- Find the most active and influential municipality and get it on board (it will attract others): enhancing **collaboration between municipalities**
- Undertake the work for **One-Stop-Shop establishment** (which is huge!)
- Keep in constant touch, answer all questions, provide continuous support: **Build local capacity for sustainable energy project development and implementation**: technical and economic feasibility, financial planning



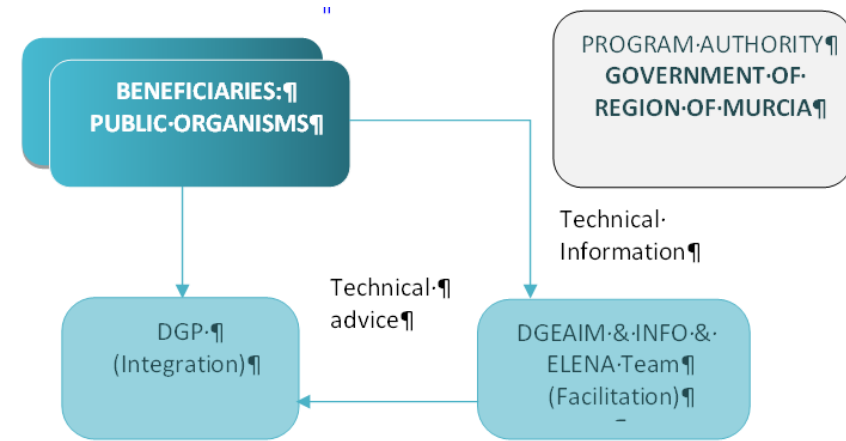
## Pilot Region Murcia

- ❓ **Frame:** Regional Energy Plan 2016-2020 that contains the Plan of Energy Efficiency in public buildings.
- ❓ **Target:** energy efficiency plan for the renovation of the building stock owned by the regional government
- ❓ **Wide strategy:** renovate the public buildings owned by the Murcia Region (409 buildings – 107 GWh – 26,6 millions € energy base line) with a preliminary estimated investment of 44,39 millions € that should lead to 23% energy savings (24,66 GWh, 64,119 GWhep, 6,12 millions € savings) and 16,005 avoided tons of CO2 per year.

# Murcia CITYinvest Action Plan

## Key players

- **Program Authority (PA):** Murcia regional government
- **Program Delivery Unit (PDU):** Directorate General for Energy DGEAIM
- **Supporting bodies:** DGP & INFO



## Type of buildings

- 100 for large buildings, 79 projects for medium-size buildings and 230 projects for small buildings

| Stages          | Number of buildings in stages and sizes |        |       | Finish Date |
|-----------------|---|--------|-------|-------------|
|                 | Big                                     | Medium | Small |             |
| I               | 47                                      | 8      | 7     | 2017/03     |
| II              | 38                                      | 12     | 0     | 2017/03     |
| III             | 15                                      | 35     | 0     | 2017/07     |
| IV              | 0                                       | 24     | 30    | 2017/09     |
| V               | 0                                       | 0      | 50    | 2017/11     |
| VI              | 0                                       | 0      | 50    | 2018/01     |
| VII             | 0                                       | 0      | 50    | 2018/03     |
| VIII            | 0                                       | 0      | 43    | 2018/05     |
| <b>Subtotal</b> | 100                                     | 79     | 230   |             |



## Energy Conservation Measures (ECMs):

- Façade renovation (mix between windows replacement and opaque facades placement)
- Inside lighting renovation (relighting with leds)
- Boiler retrofitting (biomass boilers)
- Air conditioning retrofitting (technical equipment replacement)
- Energy management (commissioning and regulation of the equipment)

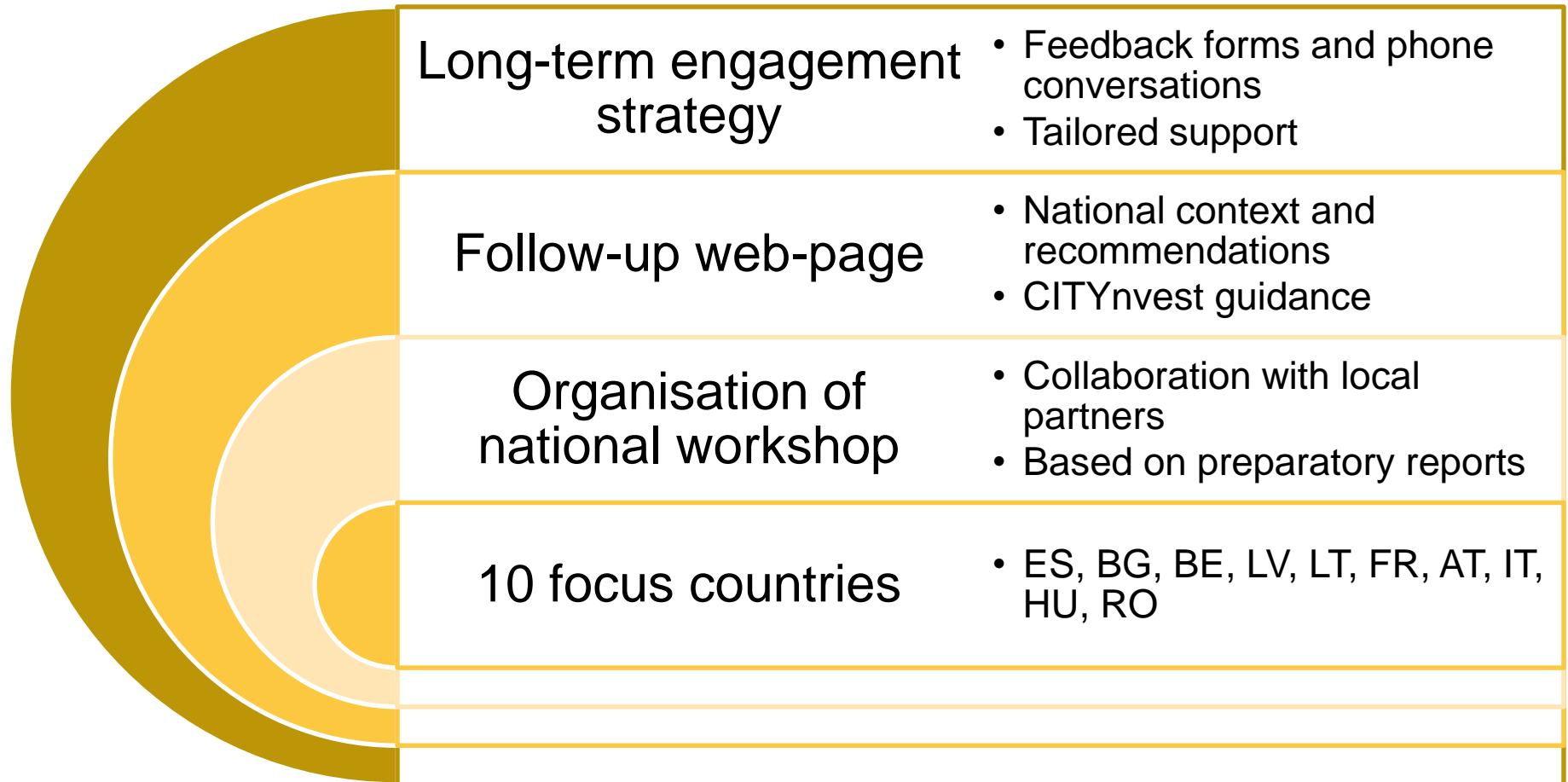
## Key issues:

- Hybrid Integration/Facilitation model
- Financing model based on ESCOs

## Current stage of progress

- For the first group of 24 buildings contracts will be signed with an ESCO (Energy Services Company) that will acts as a unique contractor and assure all the technical risks of every contract. If the experience is positive this model will be extended to other groups of buildings, although other financing options have not been ruled out.

# National Capacity Building programme





## Monitoring of investments and energy savings

- Complete **overview of the proceedings** of CITYinvest via defined objectives and KPIs (3 phases of development: quantitative and qualitative part)
- Translate the local examples to a **categorization and typology** in order to increase the knowledge on the innovative financing schemes and the appropriate business models (complementing Recommendations Matrix)
- Closing the loop of the **guidance and capacity-building materials**



# Project coordination key lessons learned (1)

## ❑ Management

- No need of fancy software: good communication will do
- Don't build WPs as isolated islands: strength is in synergies
- Make sure those who carry out the work = beneficiaries
- Progress reports are an absolute asset for activity reports
- Participants portal will get rid of children diseases. Efficient helpdesk will hopefully remain
- Network with coordinator peers

## ❑ Development of guidance materials

- Think earlier on its dissemination
- Build-in sufficient time for feedback loops

## ❑ Barriers in pilot regions

- Financing and accounting rules
- Dependency on local commitment (plan well in advance of elections)
- Dependency on TA/PDA
- Standardization and aggregation needs
- Sensitivity of ownership





## Project coordination key lessons learned (2)

### ❓ Capacity-building in 10 focus countries

- Strong partnerships are a must if you want a lasting impact
- The workshops = only starting point. Follow-up activities needed

### ❓ Monitoring timeline

- Three pilot regions do not have same cycles and characteristics

### ❓ Communication and dissemination

- Should be at the core – think from the start
- Starts with C & D between partners



## Key lessons learned on the replication process

- ❑ **Time to market** remains very long: operationalizing PDU 3 to 5 years. **CITYinvest helps to speed up** the process for the pilot regions.
- ❑ **TA is key** to stimulate the development of PDU structures. The need **for long term equity** should be investigated.
- ❑ Building a program and a PDU requires a **strong commitment from PA**. Stimulating local public authorities at the EU level should be investigated.

# Next steps

Visit [CITYinvest.eu](http://CITYinvest.eu) to stay up-to-date

**Work towards acceleration of EE investments**

**Showing evidence: implementation 3 action plans in the pilot regions**

**Monitoring of successes and failures of investments**

**Building further synergies with initiatives (CoM) and SEIForums**

**Channelling recommendations to EU**



**Questions?**

# Thank You

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Rafael Ataz Gomez and Elise Steyaert**

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